ÉNERGY – 1995

National energy policy needed

(55)

ONLY wise management of the nation's limited and finite natural resources will ensure their continued availability to future generations.

Star 7/1/95

WHAT do trees, water, electricity, gas, oil and coal have in common? As energy sources they provide the public with heat, light, the ability to cook, and fuel for transportation, to name a few. Many of these energy sources are taken for granted by the majority of South Africans who derive benefit from their use. They are part of modern-day living.

Most of these energy sources are finite, although trees, grown for fuel, and water can be recycled. Alternative energy sources such as nuclear, waste-to-energy incineration, gasified coal, wind and solar energy are other options not yet widely available or viable for everyday use.

Managing these resources wisely today will ensure that tomorrow's generations can share in the luxury of light and heat. While the technologies as to how these resources are utilised will most likely change, the sources of energy might not. Sustainable use is the key to their future availability.

The increase in demand for energy is dependent upon a number of factors in South Africa. These include the population growth rate, economic growth, the continued success of the electrification programme in meeting RDP targets, the availability of water, and regional socio-economical-political stability. With the drive to electrify millions of homes over the next five years in South Africa, the demand for electricity will increase.

The RDP seeks to improve the lives of these people through the provision of energy. The issue of supplying energy and the demands brought about by growth and prosperity of the region, however, bring challenges to local suppliers and distribution of electricity. Cases overseas indicate that mismanagement of this demand can lead to interruption of supply, which can inconvenience customers.

What South Africa needs now is a national energy policy that will comprehensively address the issue of growth and development in an emerging economy. To delay the management of energy would be unwise. It is in the best interest of the public, special interest groups, industry (small and large), municipalities and communities alike to ensure that energy management is part of the country's planning process.

The public also needs education and awareness on how to use energy resources wisely. It is one thing to provide electricity and another to inform recipients on how best to utilise the energy without wasting it unnecessarily. South Africa's climate exhibits extreme temperature variations. Building codes and practices for the construction of new homes, as part of the RDP, might consider designs, modifications and materials which promote energy conservation.

Offices could also reintroduce windows that open to allow less dependency on air-conditioning as well as preventing the indoor air quality from deteriorating.

■ *Catherine Fedorsky is Eskom's generation group environmental manager.*

Eskom workers in protest demo

(55) ARG 8/1/95

Staff Reporter

ABOUT 50 members of the predominantly white Mineworkers Union demonstrated for several hours outside Eskom's regional office in Bellville today to protest about the electricity utility's implementation of its affirmative action programme.

At Koeberg nuclear power station, members handed a memorandum to management outlining their grievances.

These included concern about the proposed phasing out of subsidies for housing, lights, water and transport.

The memorandum expressed union concerns about continued assistance to the "underprivileged" to the exclusion of similarly afflicted whites.

Protesters emphasised that the union would not disrupt power supplies to the Peninsula or cause disruption at the nuclear plant.

"At Koeberg we have decided not to take the day off. We will hand over a memorandum during lunchtime," said Koeberg branch union chairman Derrick Douglass.

The union was not against affirmative action but had a problem with the way in which it was being implemented by Eskom, he said.

An Eskom spokesman said: "We (Eskom management) will not comment at this stage because we don't want to bedevil negotiations."

Eskom considers gas power

(55)

By KEVIN DAVIE

POWER utility Eskom is to investigate establishing gas-fired power stations supplied by a network of pipelines which in time could cover much of southern Africa.

World Bank staffers say such a pipeline network could eventually link the Pande gas field in Mozambique with the Kudu field off Namibia and be extended to include Angolan gas fields.

Allen Morgan, Eskom's chief executive, says the group is investigating "as an anticipatory long-term measure" the acquisition of suitable sites for gas-powered power stations.

He says Eskom is investigating the option of piping gas to suitable sites where it could be used to power gas turbines driving electrical generators.

Several gas sources in and around South Africa are being assessed as potential energy sources.

The development is dependent on factors such as final volumes produced at the gas fields and contractual arrangements.

Eskom's Ian Tudhope says Eskom has had discussions with the World Bank. He stresses that Eskom's inquiry is "embryonic" and that a full gas pipeline network could take several years to develop.

Mr Tudhope says gas is "the fuel of the moment". Worldwide there is a "dash for gas".

Gas is clean-burning, relatively easily transported, as economical as electricity if not more so and is environmentally friendly.

Mr Tudhope says gas also offers the potential for cheap use in poor areas.

Power stations can be established further from the coalfields of the eastern Transvaal, closer to consumer markets.

Mr Tudhope says a plant for gas-fired stations is relatively cheap and does not use too much water.

He says should Eskom decide to move to gas power stations this will have obvious implications for the development of future atomic energy plants in South Africa.

Mr Tudhope says the potential exists for Eskom to become involved in the funding of the pipeline network, but adds it is possible it will establish contracts with pipeline operators who "bring the feedstock to us".

BT 8/11/95


ALLEN MORGAN

Eskom signs for 33bn yen

ST (BT) 15/1/95 (55)

By SVEN LUNSCHE

ESKOM has received a 33-billion yen (R1,05-billion) loan from Japan to help finance its electrification programme in black townships and rural areas.

The loan agreement with the Export-Import Bank of Japan (Exim Japan) was signed on Friday in Tokyo by Eskom chief executive Allen Morgan.

Eskom says the loan will be used to expand transmission and distribution lines in unelectrified areas in line with goals set out in the SA government's Reconstruction and Development Programme.

The loan is the first under a $1,3-billion, two-year programme of development assistance announced by the Japanese government in July last year.

The loan comes at an opportune time for Eskom. The utility has been considering raising overseas funds but this has become prohibitively expensive in the wake of the sharp devaluation of the Mexican peso.

Increased electricity demand 'a good sign'

(123)(SS) BD 18/1/95

MUNGO SOGGOT

ESKOM generated about 3,5% more electricity last year than in the previous year — another signal of an increase in industrial activity.

Eskom energy management manager Brian Statham said yesterday most of the increase had gone to the national power supplier's industrial customers.

Econometrix economist Tony Twine said: "Energy consumption is usually a pretty good indicator of the rate of economic activity and it usually follows the same pattern as GDP figures. The fact that most of this increase went to the industrial sector is reassuring. It shows that the economy is back to work."

Another economist said significant decreases in the electricity price index in October and November — listed in the Central Statistical Service (CSS) monthly producer inflation figures — suggested there was a surge in electricity generated in the fourth quarter, for which GDP figures were not yet available.

An Eskom spokesman said that the decreases in the electricity price index reflected an increase in electricity generated, which spread the utility's overheads over a wider field.

Statham said the 3,5% annual increase was particularly heartening as it came off a high base from 1993. In 1993 there was a 4,1% jump off a low base from 1992.

He said last year's 300 000 new household connections had accounted for a small portion of the increase.

Meanwhile, Twine said there was further evidence of a pick-up in industrial activity in a 3,4% increase in diesel sales in the nine months to September over the same period the previous year. "Diesel consumption is another excellent industrial activity indicator."

Latest CSS figures showed there had been a 9,8% increase in petrol sales in the same year. But Twine said this rise was less significant as it had come off a low base from 1992 when petrol sales had been hit by a lack of confidence in SA's future.

□ Eskom's national electrification projects manager Jan Engelbrecht said recently the Northern Transvaal, KwaZulu/Natal and Gauteng would be this year's main beneficiaries of Eskom's electrification programme, which aimed to make 300 000 new connections at a cost of about R936m. He said 145 000 of the connections would be made in rural areas.

The utility planned to make 60 500 connections in the Northern Transvaal, 48 000 in KwaZulu/Natal and 46 900 in Gauteng — at a cost of R3 120 a connection.

BUSINESS

Solar power lights the way

(55) Star 18/1/95

■ BY ROSS HERBERT

One in five South Africans live in areas that will never be economical to provide with conventional electrical power, according to Eskom.

And that fact, along with references to the need for solar power in the RDP, has led suppliers of solar-power equipment to believe South Africa represents the great solar market of the future.

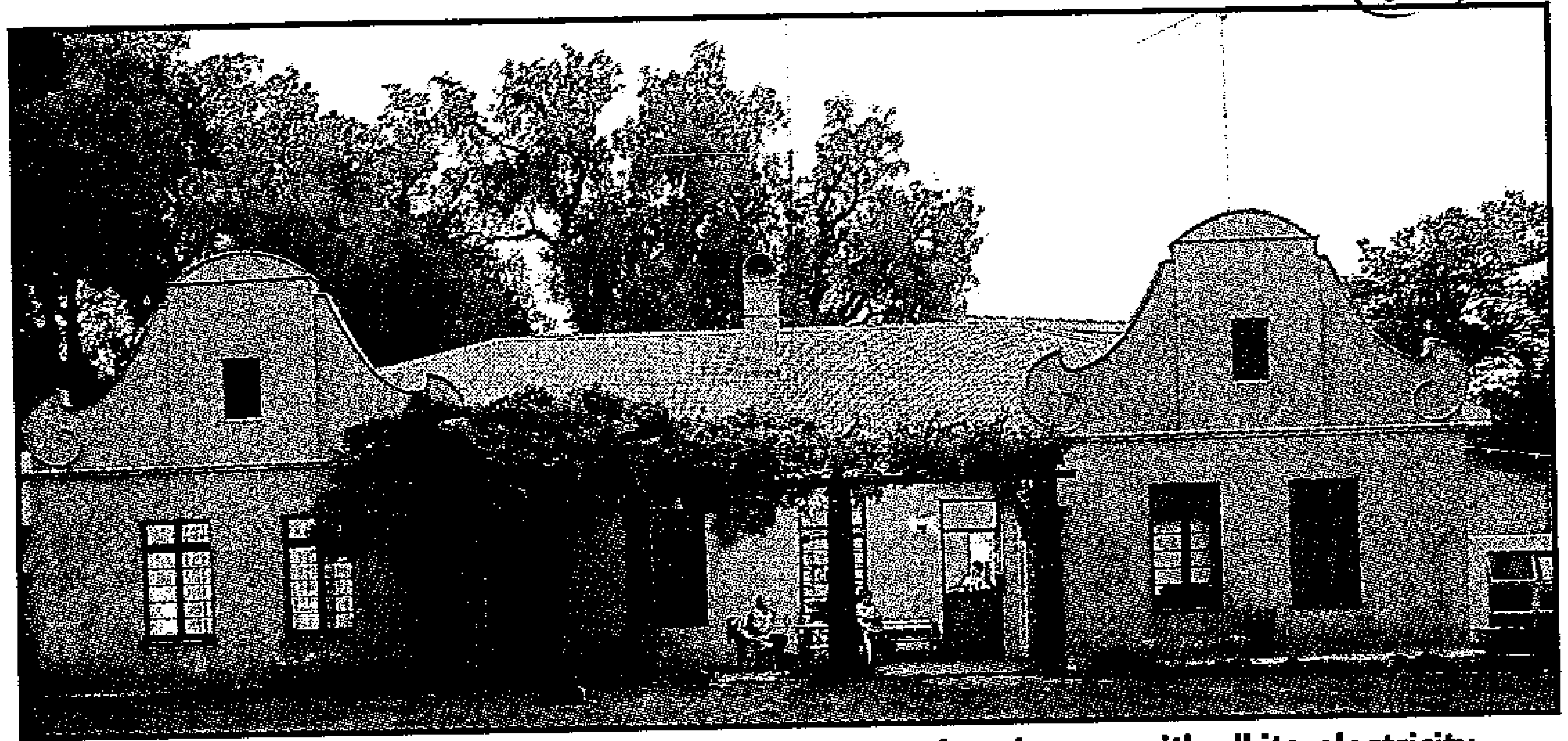
By Eskom's estimates, which critics say are optimistic, 54 percent of South African homes still lack electricity for lights, television or refrigeration.

While electricity is relatively cheap to produce, the cost of running power lines, particularly to distant settlements, can be enormous.

According to David Ligoff, small-customer pricing manager at Eskom, it costs about R35 000 per kilometre to run power lines to communities that don't have power.

That means those furthest from the major cities will have to wait the longest and pay the most for electricity.

However, solar power costs the same whether close or far from the power grid.



Panel power — Solar power provides this Karoo farmhouse with all its electricity.

The typical solar system has an array of roof-mounted panels that convert sunlight into electricity, a set of batteries to store power for use at night and an inverter to change the battery's DC current to 220 volt AC power.

Once purchased, a solar system can provide power for 20 years.

According to First National Battery, which signed an agreement last August to market solar systems for the US firm Solar-Ex and is negotiating with Michigan-based United Solar, a solar system providing enough power for six lights, a television and small refrigerator would cost R5 000.

When that upfront cost is spread over the useful life of a solar system, it can be significantly cheaper for customers in outlying areas.

To provide power for a television, lights and refrigerator for a home 2km from the nearest power line, Ligoff said Eskom would have to charge about R890 a month, which works out to R113 600 over a 20-year period.

For a plot 10km from a power line, the cost rises to R4 330 a month or R1 039 200 over 20 years.

For comparison, the cost of providing electricity in a town that already has service is a mere R41 per month.

Eskom also is marketing solar power systems, but its costs are higher than the imported systems.

Ligoff said a solar system providing enough power for lights, television and a 50 litre refrigerator would cost R270 a month. After five years and a total outlay of R16 200 the customer would own the solar system.

Solar is not without drawbacks. Appliances such as stoves, kettles or geysers require significantly more power than a R5 000 system can provide. And batteries must be changed every five to 10 years depending on use.

According to Eskom, as many as 20 percent of South African homes are so remote from the power grid that it will never be economical to provide them with conventional electricity from the nation's power grid.

"It has taken a while to get acceptance of solar power within our own organisation," Ligoff said. "We've taken the approach that solar has a major role to play in rural development for clinics, schools, water pumping and light and entertainment."

Usko looking to Eskom for growth

Star 19/1/95

(55)

■ BY CHARLOTTE MATHEWS

A sharp increase in the supply of conductors for Eskom is expected in the coming year after a number of large projects were delayed in 1994, Usko chairman Flores Kotzee said in the group's latest annual report.

Usko makes copper, aluminium and steel wire products and also has interests in companies involved in making copper and aluminium rod, paper, textile and enamel-coated copper and aluminium products, and making special cables and aluminium extrusions.

In the year to September 1994 the group reported a turn around to earnings of 7,40c a share from 1993's loss of 18,26c a share after a lower loss from its subsidiary Thames Wire and Cable.

Copper demand

Kotzee said the operating profit of copper products had improved marginally in the past year but cable and aluminium products showed slightly lower operating profits.

At present there is increased demand for copper products, mainly because of growth in the economy.

As well as a local and international upswing, other recent positive developments include the attention being given to housing and electrification programmes.

For these reasons the combined sales of Usko's products are expected to be higher in the current financial year than last year.

However, because of local and foreign competition in the cable market, volumes remain under pressure, Kotzee said.

He said the group's exports in 1994/95 are expected to remain similar to those in the previous year.

Usko shares were trading at 65c yesterday, where they are on a p:e of 8,8, well below the electronics sector average of 15,5.

However, the company fits in more with the engineering than the computer companies and, by comparison with the engineering sector average of 19,3, looks even worse rated.

Limited power for the people

ST(BT) 22/1/95 (55)

By WILLIAM SAUNDERSON-MEYER

HALF of all formal households in the townships have been connected to the electricity grid, according to a study by the University of Cape Town's Energy Development Research Centre.

However, almost all informal and squatter dwellings remain unconnected, the report shows. Most of these households rely on expensive and less convenient energy sources such as wood, coal, paraffin, candles and batteries, depending on climate and access to cheap coal.

Even once households are connected, multiple fuel use remains common, the study found. Depending on what funds are available, two or three fuels can be used at the same time.

The research shows that all households able to afford it use electricity for lighting as it consumes little energy but contributes substantially to better living standards. The most sought after appliances — almost universal in electrified households — are televisions, radios, and hi-fi's.

Refrigeration, despite the high capital cost, is ranked highly by low-income households. They are the next most common electrical appliances, found in 83% of electrified homes. Then follow irons, used in 79% of households.

Refrigeration allows the bulk purchase of perishable goods, enabling households to extend incomes. It also holds income-generating possibilities, cooling drinks in shebeens and preserving perishables in spazas.

Cooking is arguably the most important energy service sought by households, according to the EDRC, as it consumes the most energy and time.

But stoves are not a priority purchase in newly electrified homes because cooking is often only one of a range of services delivered by the same appliance-energy carrier combination. A coal or paraffin stove, for example, can be used simultaneously for cooking, water heating and space heating. Hence, in the PWV, for example, almost two-thirds of the electrified households surveyed still cook on coal stoves.

Researcher Anthony Williams says the most important aspect of the research is that it highlights the manner in which decisions about electrification, fuel use and appliance purchases are made.

"The principal end users and managers of household energy are women. Yet we know little about how women make decisions about expenditure priorities, particularly when survival is an issue," Mr Williams says.

Household income and fuel efficiency are not the only important criteria. Social and personal relationships also play a role in decision-making.

"It is thus imperative that women, the principal end-users of domestic energy, be included in a negotiation process to ensure the success of electrification projects."

SA growth: Eskom feels the pressure

CT 26/1/95 (55)

JOHANNESBURG. — Economic expansion in South Africa, particularly in the medium-sized industrial sector, was starting to put pressure on Eskom's electricity supply, a top Eskom official said yesterday.

"The margin between total capacity and demand is becoming relatively tight," Eskom energy management manager Brian Statham said at a nuclear information conference.

"We're not in a capacity crisis, but the message that must get through is that Eskom is not in a slack situation. We will keep as close to the margins as possible while maintaining flexibility," he said.

He said there were two main reasons for the increase in demand, up 3,5% last year on an annual basis and forecast to rise 3,5 to 4,0% this year.

These were the programme to bring electricity to deprived areas of the country, and economic growth, particularly at the medium industrial level.

This reflected "general across-the-board growth in the economy which is quite exciting," he said.

The utility is committed to electrifying 300 000 households a year to 1999 as part of the government's reconstruction and development programme.

Statham put peak demand at 24,797 megawatts (Mw), while Eskom normally had 800 Mw immediate reserve capacity. Total capacity was around 30 000 Mw, but this included plant down for maintenance.

He said construction was going ahead at the big Majuba powerplant in Natal to be fed with coal from the Eastern Transvaal. The first unit would be on stream in 1996, the second the following year and the third in 1998, each with 680 Mws capacity.

Eskom also expected to start getting power from the Cahora Bassa hydroelectric dam in Mozambique in 1997.

In addition, talks were under way with Zimbabwe and Zambia on importing electricity from Lake Kariba

Demand for electricity is catching up with Eskom

(55) (123)
BD 26/1/95

ECONOMIC expansion in SA, particularly in the medium-size industrial sector, was starting to put pressure on Eskom's electricity supply, a top Eskom official said yesterday.

"The margin between total capacity and demand is becoming relatively tight," Eskom energy management manager Brian Statham said.

"We're not in a capacity crisis, but the message that must get through is that Eskom is not in a slack situation. We will keep as close to the margins as possible while maintaining flexibility," he said.

There were two main reasons for the increase in demand, up 3,5% last year on an annual basis and forecast to rise 3,5%-4% this year, he said.

These were the programme to bring electricity to deprived areas of the country, and economic growth, particularly at the medium industrial level.

This reflected "general across-the-board growth in the economy which is quite exciting", he said.

The utility is committed to electrifying 300 000 households a year to 1999 as part of the government's reconstruction and development programme.

Statham put peak demand at 24 797MW, while Eskom normally had 800MW immediate reserve capacity. Total capacity was around 30 000MW, but this included plant downtime for maintenance and other reasons, he said.

He said construction was going ahead at the big Majuba power plant in Natal which would be fed with coal from the Eastern Transvaal.

The first unit would be on stream in 1996, the second the following year and the third in 1998, each with capacity of 680MW.

Statham said Eskom still had power plants with 6 000MW capacity in mothballs. However, it took about three years to recommission such plants, Statham said. — Reuter.

Pelindaba uranium plant to shut down

(55) Star 26/1/95

■ POLITICAL CORRESPONDENT

The Cabinet has approved the shutdown of the Atomic Energy Corporation's (AEC) uranium enrichment plant, known as the Z-Plant, at Pelindaba outside Pretoria, Mineral and Energy Affairs Minister Pik Botha announced yesterday.

In a statement issued in Pretoria, Botha said the decision, taken at the Cabinet's special meeting yesterday, will take effect on March 1, a year earlier than originally planned.

However, the plant's shutdown will not interrupt the continued operation of Koeberg because enriched uranium will be imported from abroad at a far lower price.

Botha said the decision would affect 2 700 employees, for whose severance packages R25 million will be needed in 1995/96 and 1996/97.

Botha said that in 1978 the US government had refused the export of enriched uranium which was to be sent to South Africa under a contract between the US Department of Energy and Eskom.

"This meant that Koeberg, then under construction, would not have been commissioned

▶ To Page 3

Uranium plant shutdown

◀ From Page 1

due to a lack of fuel.

"It would have entailed a loss to Eskom of approximately R1 million per day, in addition to the unutilised capital expenditure of about R4 000 million at that time," Botha said.

Pretoria subsequently instructed the then UCOR (later incorporated into the AEC) to design and construct an enrichment plant to provide for Eskom's needs.

Botha said it was known then that the plant would not be commercially viable and that a more cost-effective fuel supply strategy would have to be adopted.

He said now that South Africa was no longer an international pariah, Eskom will soon be able to obtain enriched uranium on the world markets at prices "substantially lower than the production cost at the Z-Plant".

Botha said the plant's cash-flow deficit amounts to R85 million a year, and would increase to at least R210 million if operations were to be continued because the current low electrical power tariffs enjoyed by the plant will end on March 31 next year.

Botha also said the AEC has been repositioning itself from "a virtually fully State-owned or State-funded parastatal into a commercially driven organisation.

"Grants from the State for this financial year amount to R576 million less than in 1990 — only four years ago," Botha said.

Uranium plant to close early

CT 26/1/95

JOHANNESBURG. — The government decided yesterday to shut down the country's uranium enrichment plant in March, a year earlier than planned, Minerals and Energy Affairs Minister Mr Pik Botha said. (55) [redacted]

He said the plant, at Pelindaba, known as the Z Plant and commissioned in 1987, had provided enriched uranium for Koeberg's nuclear reactor.

"With the normalisation of South Africa's international relations, Eskom will soon be able to obtain enriched uranium on the world market at prices substantially lower than the production cost of the Z Plant," he said. — Reuter

Pelindaba uranium plant to close soon

MUNGO SOGGOT (55)

THE Atomic Energy Corporation's uranium enrichment plant at Pelindaba would be closed on April 1, Mineral and Energy Affairs Minister Pik Botha said yesterday.

Its closure would save the AEC up to R210m a year, while 500 jobs would be lost.

The plant, which supplied Eskom's Koeberg nuclear power station, was commissioned in 1987 after the US banned exports of enriched uranium to SA.

He said the Cabinet yesterday approved the closure a year earlier than originally planned. "With the normalisation of SA's international relations, Eskom will soon be able to obtain enriched uranium on the world market at prices substantially lower than the production cost of the plant." The closure would not affect Koeberg.

The plant, known as the Z plant, had a cash flow deficit of R85m a year, which would jump to R210m from next year when the contract with Eskom for cut-price electricity expired. Retrenchment packages would cost R25m. The plant would incur an operating loss of about R29m in 1995/96 and R47m in 1996/97 as it would operate less efficiently during the four-year shutdown period. BD 26/1/95

A Mineral and Energy Affairs Department spokesman said state grants to the AEC would fall to less than R100m a year by 1998 from about R250m.

Botha said the AEC was moving from being a "virtually fully state-funded parastatal" to a commercial organisation.

(55) Star 26/1/95

Eskom put under pressure to meet demand

Economic expansion in South Africa, particularly in the medium-sized industrial sector, was starting to put pressure on Eskom's electricity supply, a top official of the State power utility said yesterday.

"The margin between total capacity and demand is becoming relatively tight," Eskom energy management manager Brian Statham told reporters at a nuclear information conference.

Reasons

He said the two main reasons for the increase in demand were the programme to bring electricity to deprived areas of the country, and economic growth, particularly at the medium industrial level.

The utility is committed to electrifying 300 000 households a year to 1999 as part of the Government's Reconstruction and Development Programme.

Statham said construction was going ahead at the Majuba power plant in KwaZulu/Natal and Eskom expected to start getting power from the Cahora Bassa hydroelectric dam in Mozambique in 1997.

Importing

In addition, talks were under way with Zimbabwe and Zambia on importing electricity from Lake Kariba.

He said Eskom still had plants in mothballs, but it took about three years to recommission such plants. — Reuter.

ELECTRICITY (55) FM 3/2/95

Shock to the system

Key decisions will have to be taken soon about electricity distribution, in line with the reorganisation of local government.

Johannesburg chief electrical engineer Martin Pomeroy says the arrangements for the central Witwatersrand may be regarded as a good prototype for metropolitan areas: the Transitional Metropolitan Council (TMC) has been appointed to take over the functions of previous local authorities.

What remains to be decided is whether the TMC will set up its own electricity department or delegate electricity distribution to new local government subunits.

Andrew Boraine, executive director of the Institute for Local Governance and Development, warns that final authority over electricity distribution now rests with the National Electricity Regulator, a body chaired by former Eskom chief Ian McRae.

The regulator can set a ceiling for tariffs by local authorities. It can also decree that surplus revenues from electricity must be used only for electrification and not to cross-subsidise loss-making municipal services. At least R9,5bn of local government revenue of around R22,5bn now comes from sales of electricity. ■

'Pollution could force SA into nuclear power'

MUNGO SOGGOT BD 3/2/95

SA WAS the world's second worst carbon dioxide polluter in proportion to gross national product after China, the Atomic Energy Corporation's Don Mingay said yesterday.

He told a Price Waterhouse business breakfast that increasing worldwide pressure to slow global warming would discourage SA from increasing dependence on coal-fired power stations, which produced carbon dioxide. Instead, it would import hydro-electricity from the Congo.

But there was a "strategic limit" to the amount of electricity a country should import, so it was likely SA would have to consider nuclear power.

Coal-fired power stations currently provided 92% of SA's electricity, while nuclear contributed 5%.

He said China released almost double the amount of carbon dioxide per unit of GNP of SA, while France produced the least, 10 times less than SA.

France sourced almost 85% of electricity from nuclear plants — evidence of the correllation between fossil fuel use and carbon dioxide emissions.

If SA became a signatory to the Framework Convention on Climatic Change — formed to address global warming at the Rio Earth Summit in 1992 — it would have to make an independent assessment of the impact of its carbon dioxide emissions on the environment. It would also have to produce plans to address the situation, which would encourage it to look at alternative energy sources.

Most of the increase in global power needed over the next couple of decades would come from developing countries, which unfortunately were least equipped to control energy waste releases.

Japanese aid to Eskom well spent, says banker

(55)

JOHN DLUDLU

JAPAN's Export/Import Bank's $300m advance for Eskom's electrification drive had been well spent, deputy governor Akira Nanbara said yesterday.

Speaking after a visit to Ivory Park squatter camp, which was being electrified by Eskom, he said rebuilding the country would require 99% pespiration and a bit of luck.

BD 7/2/95

The money formed part of the $500m package of the bank's loans to SA, pledged last year as part of Japan's $1,3bn aid programme.

Nanbara said another loan to the Development Bank of Southern Africa could be concluded soon.

Nanbara, who was leading a high-level economic mission to SA, held general discussions with Minister without Portfolio Jay Naidoo yesterday. "Mr Naidoo told us that government would prefer assistance to small companies as opposed to bigger ones who can make it on their own."

It was unclear how the Development Bank planned to spend the money, but Nanbara said he would be happy if it went towards developing small business.

He said he was impressed by Naidoo and the new government. "They are prudent and disciplined."

He would like to see a more balanced flow in trade between Japan and SA in which SA diversified its exports.

White union to stage Eskom mass action

RENEE GRAWITZKY

(55)

ABOUT 4 000 members of the all-white Mineworkers' Union will embark on a national mass action campaign at Eskom power stations today — under the banner of "Operation Turning Point".

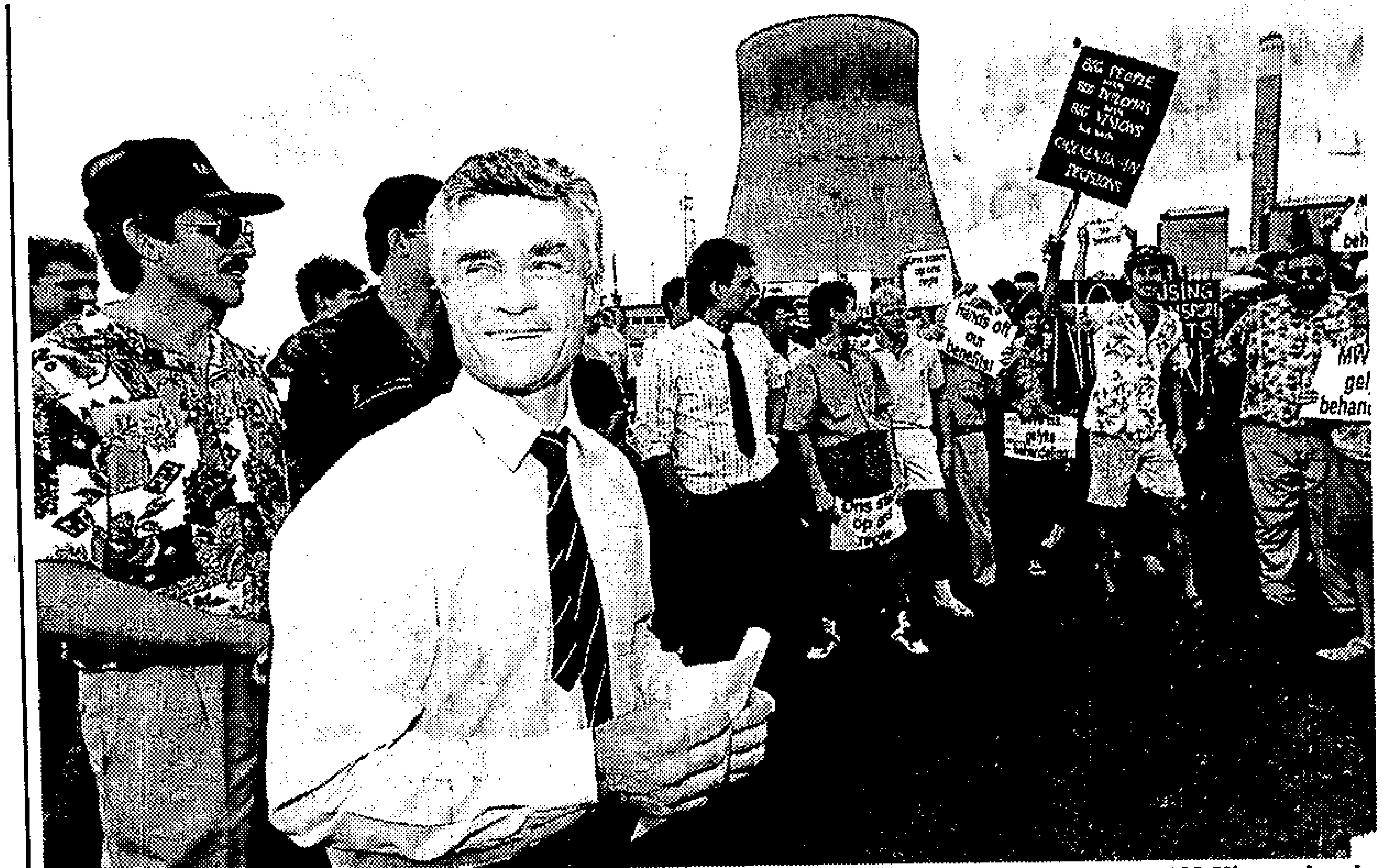
This action is in protest against the company's proposed changes to workers' benefits and its alleged unfair application of its affirmative action programme which, the union claims, could jeopardise the job security of 12 000 whites.

White workers have taken a day's leave to embark on protest marches.

If no response is received by February 15 the mass action will enter phase 2 and could become "uncontrollable". The union's Flip Buys said emotions were running high and the union could not guarantee that future action would remain peaceful. Nor could sabotage be ruled out.

The union said that negotiations over the change in benefits, including housing and transport subsidies, deadlocked after the company remained firm on its decision to reduce such subsidies. The union believes this is part of the company's strategy to "redistribute" employee benefits across the board to all other employees. SD 8/2/95

Buys questioned whether Eskom's facilities could continue operating if the company relied on its affirmative action appointees in the event of all members taking part in mass action.



Eskom's Kendal power station manager Peter O'Connor after receiving a memorandum from about 160 Mineworkers' Union members during their protest action yesterday.

Picture: NICKY DE BLOIS

Affirmative action protest at all Eskom power stations

(55) RENEE GRAWITZKY

ABOUT 1 800 members of the all-white Mineworkers' Union (MWU) took part in countrywide protest action at Eskom power stations yesterday.

White worker's grievances are related to the company's affirmative action programme and the proposed changes in employment benefits.

Protests outlined included: "whites are not planning to sign our future away because of affirmative action, the approach of blacks without experience or qualifications will not be tolerated", and "members' children will not get a chance to have a career at Eskom".

Eskom said it was not prepared to compromise on affirmative action, but assured the programme would not lead to involuntary retrenchments.

"What it does mean however is that many more opportunities for development and upward mobility of black and other previously disadvantaged employees will now exist," Eskom said.

B09|2|95

The company said the proposal for phasing out accommodation, transport and water and electricity subsidies, granted to employees in remote power stations, was part of the company's overall rationalisation programme of standardising employment conditions.

The disparities that existed "are no longer defendable", said the company.

Trade unions are supposed to respond to various alternatives discussed by February 15. Only thereafter will the company be able to "determine the next steps".

Solar power lights the way

ARGT 11/2/95 (55)

ROSS HERBERT

JOHANNESBURG. — One in five South Africans live in areas that will never be economical to provide with conventional electrical power, according to Eskom.

And that fact, along with references to the need for solar power in the RDP, has led suppliers of solar-power equipment to believe South Africa represents the great solar market of the future.

By Eskom's estimates, which critics say are optimistic, 54 percent of South African homes still lack electricity for lights, television or refrigeration.

While electricity is relatively cheap to produce, the cost of running power lines, particularly to distant settlements, can be enormous.

According to David Ligoff, small-customer pricing manager at Eskom, it costs about R35 000 per kilometre to run power lines to communities that don't have power.

That means those furthest from the major cities will have to wait the longest and pay the most for electricity.

However, solar power costs the same whether close or far from the power grid.

SA may be linked to Congo power grid

(55) (123)

BD 13/2/95

MUNGO SOGGOT

SA COULD be linked to a southern African electricity grid which sourced a large portion of its electricity from hydroelectric schemes on the Congo River by 2010, Southern African Development through Electricity (Sadelec) chairman Ian McRae says.

The major obstacles were the lack of an appropriate political body to nurture the scheme, political instability in Zaire and Angola's civil war.

However, links between Malawi and Mozambique's Cahora Bassa hydroelectric scheme — due to feed SA by March 1997 — and stronger links between Zambia and Zaire were feasible in the near future.

Former Eskom CE McRae, who also chairs the National Electricity Regulator, said it was crucial that a proper political structure was set up to focus on developing the grid.

The Southern Africa Development Community should open its doors to Zaire, Kenya and Uganda. Then non-governmental bodies such as Sadelec, set up last year to facilitate and fund electrification projects in the region, could fill the gap.

He said studies showed Zaire's Congo River could generate up to 100 000MW of electricity.

The river could be used for hydroelectric schemes without disrupting its flow for too long.

Interest groups within Zaire were clearly keen on developing this potential, which could be a major foreign exchange earner.

Zaire's electricity utility — which had Belgian and French technical support — had conducted and was conducting feasibility studies into several schemes.

The strategic need for countries to limit imports to between 10% or 15% of total power should evaporate gradually as the region eased into a tranquil, post-apartheid era.

Although coal would be SA's major power-generation option for decades, it could be cheaper in future to import electricity than to pour money into new power stations, which were a major source of pollutants.

65

Openness will benefit nuclear industry

MARCEL GOLDING

NUCLEAR issues, more than most others, are polarising and controversial. On the one hand, there are the proponents of nuclear power who usually denigrate the anti-nuclear lobby as ill-informed, utopian carrot-eaters, while on the other there is the anti-nuclear lobby which tends to demonise nuclear advocates as megalomaniacs who worship at the high altar of technological advancement.

There is probably some truth in both positions. But this obscures the likelihood that most members of either group have similar desires for a secure and fulfilling existence for themselves and their children. However, they differ in the way they believe these objectives can be attained: for one group nuclear power is an essential component of the social, economic and industrial infrastructure necessary to achieve the objective, for the other it is a technology to be avoided.

Socially, these differences manifest themselves in the form of the nuclear debate, involving protests, referendums, campaigning, sloganeering and so on. It is not only its controversial nature that makes nuclear power a political issue, but also the fact that it is a social undertaking which demands massive financial and technological investment. And because it is a political issue, questions about nuclear power need to be decided upon in a political process, which in a democratic society involves an open, well-informed public debate as opposed to small committees making big decisions.

As SA moves away from its apartheid legacy, the process whereby nuclear policy is made will also need to shift. For an industry long cloaked in secrecy this shift will not be easy, but it does need to happen if the industry is to contribute to SA's reconstruction and development.

The task facing the industry is to establish transparency and credibility. These characteristics are interconnected: a truly transparent institution will automatically gain credibility, while a credible body is more than likely to be transparent. To establish credibility, the industry will need to break with its past, displaying a genuine transparency; but it will have to proceed sensitively so as not to appear insincere or opportunistic. Simple one-sided news releases or sham public affairs exercises will not convince the sceptical public.

Internationally, SA's nuclear authorities have shown an encouraging openness in the extent to which they have divulged information about their earlier nuclear weapons programme and in their quick commitment to various international treaties that are meant to stop the proliferation of nuclear weapons. Some have argued, however, that these steps were taken to increase the previous government's moral advantage on the international stage, particularly during the early stages of the Kempton Park negotiations.

Internally, the nuclear industry has been much less adept in exposing itself to public scrutiny and debate, and the industry's efforts in this regard are much less convincing than those in the international arena. First steps towards a more transparent interaction with the public were made last February at a conference on nuclear policy, jointly organised by the ANC and the Cape Town-based Environmental Monitoring Group.

That meeting, for the first time, brought together the industry, its detractors, the public, and a wide variety of civic bodies to debate a nuclear policy for a post-apartheid SA.

Despite differences among stakeholders, there emerged a common recognition that SA owned and operated a sizeable and sophisticated nuclear infrastructure with a future that needed to be considered carefully, rather than blindly protected — or blindly shut down.

Unfortunately, the nuclear industry appears to be trying to deny the lessons learnt at last year's conference, as suggested by its handling of the recently held Nuclear Information Conference, co-sponsored by the SA nuclear industry and the International Atomic Energy Agency. Absent were the anti-nuclear lobby, the civic organisations, trade unions and non-government organisations.

The conference organisers had neglected to invite — or given very short notice to — many obvious stakeholders in the industry, as well as groups and individuals with an established interest in it, and they failed, bar one or two exceptions, to solicit papers from quarters outside the industry. Whether this was done wilfully or was an oversight is not at issue. The point is that the nuclear industry missed an opportunity to deepen the process of dialogue begun at last year's ANC/Environmental Monitoring Group conference — a dialogue that is necessary if policy for the nuclear industry is to reflect the complexities surrounding the issue.

BD 14/2/95

Notwithstanding the unrepresentative conference, the industry will not be able to avoid an open discussion about its future role in SA. This is because its historic role in the apartheid regime's dual policies of military supremacy and self-sufficiency cast doubts on its compatibility with the country's new development priorities. And, as with all old apartheid projects such as Mossgas and Armscor, there will be public pressure to establish what role the nuclear industry can play. There can be no doubt that such an investigation is needed, given the extent of investment in the industry.

Rather than trying to limit the extent of the debate about nuclear issues, the industry is more likely to gain credibility by embracing and encouraging that debate.

However, in doing so it must be sensitive to the widespread distrust of the industry, and it should co-operate with all stakeholders to guarantee a safe, secure and environmentally sustainable future for the country.

With an informed public, better decisions can be made.

☐ **Golding chairs the parliamentary standing committee on Mineral and Energy Affairs.**

Eskom could be forced to open mothballed stations

(55)

STANDERTON — State utility Eskom could soon be forced to bring mothballed power stations back on stream as excess capacity dwindled, a spokesman for Anglo American Coal Corp (Amcoal) said.

"There is a concern they may be hard-pressed," Amcoal's marketing director Hugh Stacey told analysts at its New Denmark Colliery.

Amcoal, like other local coal producers, would bid to supply any reopened coal-fired stations and would need to increase production.

Stacey said Eskom had 38 000 megawatts of installed power, of which 6 000 megawatts had been mothballed. This left 32 000 megawatts but because Eskom had to retain spare capacity to allow for overhauls, its supply amounted to 30 000 megawatts.

Demand rose 7% to peak at about 25 000 megawatts in mid-winter last year and with projects such as Alusaf's Hillside aluminium expansion due to start up this year, a rise of 4%-5% was likely this year.

Stacey said Eskom would probably have to reopen at least three power stations initially. BD 17/2/95

A decision to do so might have to be taken within the next year if it was projecting a long-term annual growth rate of about 5%.

Between 7-million to 12-million tons of additional coal a year would be needed. Amcoal's New Denmark Colliery, which serves Eskom's Tutuka power station, had 80% of its design capacity of an annual 10-million tons installed.

It planned to increase production to 9-million tons this year, but it was still waiting for a decision by Eskom to enable it to go ahead with the completion of capacity to 10-million tons, he said. — Reuter.

Solar power to the people

THE COUNTRY'S medium-term electricity needs could well be met through the use of solar electricity, and government thinking appears to be moving in that direction. (SS) CP 19/2/95

Eskom and the Department of Mineral and Energy Affairs are already exploring this option, with an Eskom project successfully underway at Jojweni, a remote village in the former Transkei.

"The question is who is going to pay," said Neville Williams, founder and president of the United States-based Solar Electric Light Fund (Self).

The non-profit organisation aims to address how 70 percent of people in the Third World can obtain "environmentally friendly" electrical energy.

"We are looking at establishing projects in the Eastern Cape, Kwazulu/Natal and Gauteng," said Williams.

The projects would be modelled on success stories in remote parts of Vietnam, Nepal, Sri Lanka, India and East Africa.

Williams said local communities had a direct say in the projects.

Job spin-offs

He showed the media a video which demonstrated job spin-offs for locals who were able to develop entrepreneurial skills while providing a community service.

An Eskom video on the Jojweni projects showed how a battery of solar units which had taken two days to install had powered lights in local homes and a school and had been used to keep medicines cool at a local clinic.

Williams said solar units cost a fraction of linking up remote villages to the power grid.

He said the World Bank was providing seed money for solar projects. He argued for "grassroots" as well as government funding for such projects.

"The issue (of solar power) is being discussed at the highest level," said Williams, referring to Mineral and Energy Affairs Minister Pik Botha.

A Self brochure stated that solar photovoltaic (PV) power offered developing nations an immediate and direct alternative to kerosene lamps, diesel generators, fossil-fuelled utilities and expensive power-grid connections.

However, one workshop delegate asked the key question: "Do you electrify squatter homes or give those people decent housing?" – Ecna

Eskom poised to take $150m loan

MUNGO SOGGOT

BD 24/2/95

ESKOM is poised to take up a $150m European syndicated loan instead of the Deutschmark bond issue it had planned for next month before the Mexican financial crisis hit global capital markets. (55)

Analysts said when SA launched its $750m sovereign issue in December Eskom had indicated its first issue would be around $150m, so the loan [illegible]y to be in that region.

An Eskom spokesman said the power company had decided to pursue a loan instead of a bond issue after an international roadshow.

Eskom said it had some existing European bonds, including a DM300m bond, which would expire in 1997.

It intended to launch a bond in the US in the second half of the year, barring poor market conditions.

One analyst speculated that the finalising of the loan could hinge on the fate of the financial rand which would affect its pricing. Eskom's and SA's credit rating would improve once the finrand went.

Eskom said at the beginning of the year it would approach the markets for about R4,3bn. Its domestic capital market needs had been satisfied through the issue of electrification participatory notes worth R1,2bn.

ELECTRICITY (55)

Cash up front

FM 24/12/95

A computerised vending machine which enables consumers to use prepayment elec- tric[illegible] has started a [illegible] month test run [illegible] Midrand squatter camp, Ivory Park. The self-service terminal, a joint project involving Eskom, First National Bank and Spescom, may ultimately change the way all consumers pay for electricity.

Eskom project leader Etienne Bramley says the power utility is exploring ways of enabling residents to buy electricity credits outside office hours. In time, Eskom hopes to sell tokens through bank automated teller machines (ATMs) and from retailers' check-out points.

The Ivory Park terminal was designed and built by FNB's technology innovations group headed by Gerry Cassidy. It is a cash machine for residents who do not necessarily have bank cards and is operated by touching graphics on a screen.

Cassidy says the graphics should overcome language barriers or technological ignorance.

The terminal prints out a 20-digit numeric token for cash. Ivory Park uses an electricity credit transfer technology developed by Spescom called Cashpower 2 000, which was recently merged with Siemens' prepayment business.

The printed code contains the ide[illegible]tification number of the custom[illegible] payment meter and the amount of electricity bought. Residents gain access to electricity by keying the code into the meter in their homes.

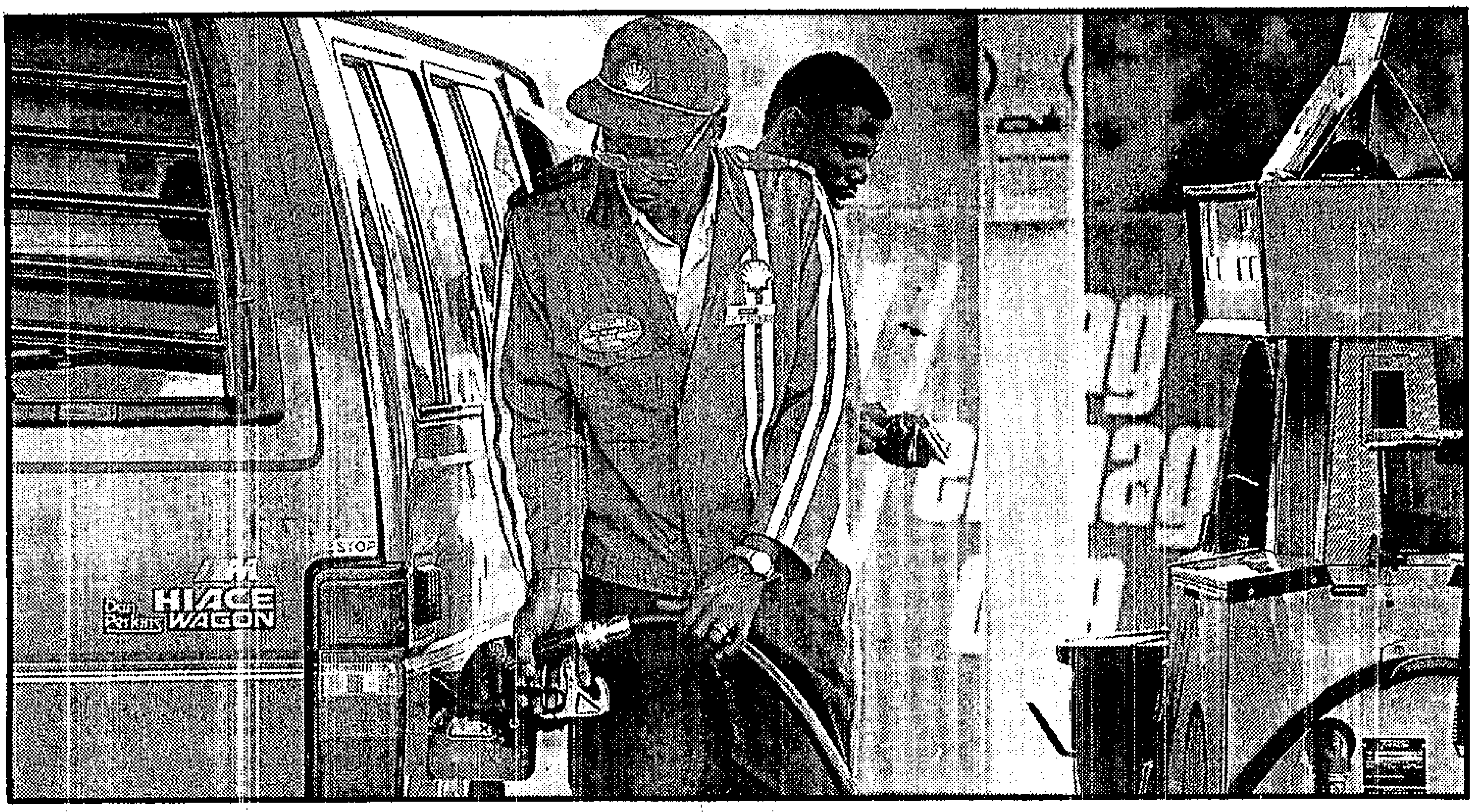
Light relief . . . *after-hours electricity*

Spescom's prepayment system is one of five Eskom has installed in various areas. Bramley says Eskom is introducing a common vending system. Because of the number of systems currently used, residents are limited to buying tokens at their local Eskom office.

This problem is being solved by the utility which is developing technology for its centres to accept payment for any of the electricity credit systems in use.

Bramley says once electricity tokens are available at cash machines, ATMs and supermarket tills, prepayment meters will probably be used in most areas as they eliminate the need for meter readers. ■

SI



PUMPING METAL . . . leaded fuel, essential for only about 10% of cars already on the road, will be available for 15 years

Unleaded petrol ready for sale

(56) (183) ST 5/3/95 (BT)

By DON ROBERTSON

THE government is expected to give the go-ahead for the introduction of unleaded petrol in the next two weeks, but no indication has yet been given as to how it will be priced.

The Department of Mineral and Energy Affairs is currently assessing the decision taken by the previous government to introduce unleaded petrol in limited quantities in July and nationally by October.

Oil companies, petrol stations and motor manufacturers are ready for the big turn-on.

In the normal course of refinery expansion, oil companies have installed additional facilities to produce unleaded petrol, but to make it economically feasible they need to capture about 20% of total fuel sales in the first year.

To achieve this, it has been recommended that unleaded petrol be sold at a discount, as has been done elsewhere in the world.

This will be achieved either by the government accepting a smaller excise tax on the unleaded petrol or by using a politically unacceptable method of increasing the price of leaded petrol. Unleaded petrol, with additional additives to maintain octane ratings, costs about 3c/l more to produce.

The SA Petroleum Industry Association, representing most oil companies, believes there should be a significant price discount, while Sasol, not a Sapia member, suggests there should be some price difference, but only for a limited period.

The Unleaded Petrol Co-ordinating Committee, consisting of Mineral and Energy Affairs, vehicle manufacturers, oil companies, the Automobile Association and the SA Bureau of Standards, says, however, that about 90% of cars sold in the last 15 years will be able to use unleaded petrol. Of these, about 65% will be able to switch over without any adjustments to the vehicle, while 15% will need to retard the ignition by perhaps two to three degrees at a cost of between R50 and R100.

A further 10% of cars, made before 1980, may have problems with valve settings, but this may be overcome by filling the car with leaded fuel once in every four fillings.

Only 10% of cars now on the roads will be incompatible with unleaded petrol, but leaded petrol will be available for about 15 years.

Tests on motorcycles will be conducted soon to establish which may run on unleaded petrol.

Harmful exhaust emissions in South Africa are well within world health standards and as a result, it will not be necessary to fit catalytic converters for between three to four years, although most cars sold in 1996 will have the fitting. Exhaust catalysts reduce harmful carbon monoxide, nitrogen oxides and unburned hydrocarbons.

Rather, South Africa plans to introduce unleaded petrol to enable the motor industry, which contributes 18% to the GDP, to keep in touch with advances in engine technology.

Nuclear power still an option for SA

(55) (28)

BD 17/3/95

GAVIN STAFFORD

SA should not discount nuclear power as a future option despite the closure of the uranium enrichment plant at Pelindaba, the Atomic Energy Corporation's CEO Waldo Stumpf said yesterday.

It could become a more attractive energy source as more compact plants were designed and safer techniques were developed, he said. The corporation had no plans to establish an alternative facility in the near future, but was looking into the viability of a cheaper molecular laser enrichment process.

Stumpf said the decision to stop production, mainly for Eskom's nuclear power station at Koeberg, was "strategic", as Eskom would be able to obtain cheaper uranium from international sources now that SA's isolation had ended. SA would import enriched uranium from France, Russia, the European Union and the US.

Stumpf was speaking to journalists invited to tour the Z-Plant uranium enrichment facility at Pelindaba outside Pretoria — the facility is to be shut down at the end of the month.

Nuclear fuel production MD Pieter Venter said even though the corporation had reduced the cost of running the plant over the last few years, closing it down would save R85m a year. The expense is due to the cost of electricity used to run the plant.

Reacting to the closure, nuclear scientist Kelvin Kemm said it would be a major loss to SA in terms developing new technologies and training scientists. It would also fuel the exodus of scientists from the country.

SA was to reliant on coal as its major source of energy, and the country should work towards greater diversity in fuel use, Stumpf said.

Kemm said SA, one of only half a dozen countries with uranium enrichment capacity, was pulling out of a business which was growing as the use of nuclear energy increased worldwide. SA's "wait and see" policy would only make it more difficult to re-enter the uranium market if it ever decided to do so.

Eskom envisions 270 000 jobs

MICHAEL URQUHART

ABOUT 270 000 jobs could be created by SA's electrification programme by the turn of the century, Eskom chairman John Maree said at the sub-Saharan Oil and Minerals conference yesterday.

Maree said Eskom was electrifying homes at a rate of 1 000 a day, and hoped to complete 300 000 this year and 1,75-million by 1999. Local government programmes should see a further 750 000 homes electrified over the same period.

He estimated this process would create 19 000 direct jobs a year, plus further indirect job creation. For every 100 homes electrified, seven to 11 small businesses were created, he said. (55)

Eskom would spend R1bn on its electrification programme this year. It planned to electrify 4,25-million homes by 2012, with local government electrifying a further 2,1-million. This represented a total investment of about R23bn.

He said one of the major reasons for the establishment in SA of large electricity-intensive projects such as Alusaf and Columbus was low electricity tariffs.

Improved efficiencies and excess capacity had allowed Eskom to reduce its tariffs in real terms, making it the second cheapest electricity supplier in the world. But at the growth rates in electricity usage forecast by Eskom, SA would become an importer of electricity by early next century if no new capacity was built.

At a conference dinner, Mineral and Energy Affairs Minister Pik Botha called for a sub-Saharan organisation to co-ordinate the flow of electricity in the region.

He said the region had ample resources to meet its energy needs, but a system was needed to ensure that these resources reached the areas where they were needed. He envisaged an electricity grid stretching from the major supply centre of Zaire to SA and southern Europe, with grids leading off to the less affluent countries.

BD 28/3/95

● Picture: Page 3
● See Page 14

Default creates huge Eskom debt

Star 30/3/95

55

BY DEREK TOMMEY

The non-payment philosophy in the townships has left Eskom with problem debts amounting to R923 million, says Dr John Maree, chairman of the Electricity Council.

Eskom has taken over about R360 million worth of assets which it has been able to offset against the debts.

He said that sentiment in the townships was changing which had made it easier for Eskom to collect payments and to cut off electricity supplies.

He said that about half the professional and supervisory posts at Eskom were expected to be filled by blacks by the turn of the century.

Maree has good news about Eskom's progress in 1994. He said the country's electricity giant now ranked among the world's five biggest generators of electric power.

He said: "Eskom is continuing to reduce the cost of electricity in real terms. It is forging ahead with its electrification plans, bringing power to 254 383 more houses last year and it plans to wire another 300 000 houses this year."

Dr John Maree

Maree said Eskom's commitment in 1991 to reduce the price of electricity in real terms by 20 percent between 1992 and 1996 would be met. Eskom has now committed itself to bring down electricity prices in real terms by a further 15 percent between 1994 and 2000.

Eskom's chief executive Allen Morgan reports that revenue rose by 11,8 percent to R15,4 billion as a result of a net tariff increase of 7,6 percent and an increase in sales volume of 3,9 percent.

Operating expenditure rose by 10,7 percent to R9,96 billion after including a net provision for arrear debts of R201 million. Net interest and finance charges increased by only 1,2 percent to R3,19 billion, mainly as a result of the improved debt-equity ratio.

Net income amounted to R2,27 billion which was 37,8 percent more than in 1993. Net income on a current value basis amounted to R407 million compared with R14 million in 1993. This resulted in a real return on assets of 4,3 percent (4,1 percent).

Accumulated reserves increased to R16 billion.

Eskom increases net income

MARCIA KLEIN

SIGNIFICANT savings and improved efficiencies enabled Eskom to increase net income. It also reduced the real price of electricity and absorbed the high cost of funding new connections, which grew at a rate of almost 5 000 homes a day.

The utility yesterday reported an 11,8% revenue rise to R15,4bn (R13,8bn) for the year to December after a net tariff increase of 7,6% and a 3,9% sales volume rise. Net income rose 37,8% to R2,3bn (R1,6bn). BD 30/3/95

Chairman John Maree said despite the high costs of electrification, overall cost reductions and high levels of efficiency enabled it to increase the price of electricity by just 7% during the year.

The price of electricity was currently 73% of that of a decade ago in real terms, and would continue to drop in real terms. Eskom would increase its price by 4% this year and probably by the same percentage next year. It was committed to reducing the price by 20% in real terms between 1992 and next year.

During the year, Eskom electrified 254 383 homes and was on track to meet its target of 1,75-million homes between last year and 1999. (55)

Capital expenditure on electrification was R808m for the year. Eskom was increasingly funding capex from its own cash flows, and the electrification drive would be funded from earnings and borrowings. Its 15-year electrification participation note (EPN2) had raised R1,2bn.

Eskom's foreign borrowings included a $300m facility with Japan's Eximbank over an 18-month period, a five-year $100m syndicated loan and a $30m loan from the Bank of Taiwan. It was also looking at a

☐ To Page 2

Eskom

(55) BD 30/3/95 ☐ From Page 1

bond issue in the US.

Improved cash flows saw gearing come down to 170% from 306% in 1985. Gearing of 100% was targeted for the end of 1998.

Maree said non-payment remained "one of the most significant financial threats" facing Eskom. Cutting off services was beginning to have the desired effect, but problem arrears of R923m remained. These had all been fully provided for.

CE Allen Morgan said productivity gains of R625m in the core business had funded electrification and abnormal expenditure. Productivity gains were R93m.

Thursday March 30 1995 SOWETAN

BUSINESS Pik calls for Sub-Saharan cooperation in oil and minerals

Standing together

55

By Isaac Moled

■ FUTURE PLAN Body to make policy, develop resources, meet needs:

30/3/95 Sowetan

SUB-SAHARAN countries must create a body that will determine the establishment of an effectively functioning energy infrastructure, Minister of Minerals and Energy Mr Pik Botha said this week.

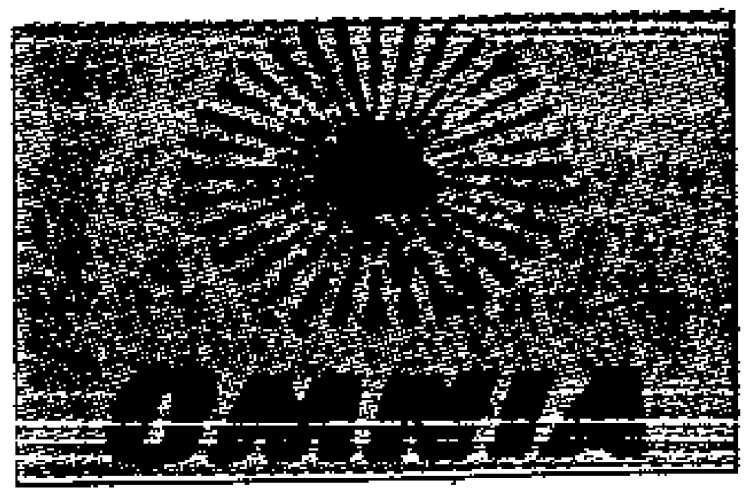
Addressing a Sub-Saharan Oil and Minerals conference in Johannesburg, Botha said Sub-Saharan countries need to establish working regional and sub-continental structures covering the whole Sub-Sahara. The body should determine policy, develop resources, identify and match needs and supply and provide for rural electrification.

"They should not be mere shadows of state energy ministries, dependent on them for planning and unable to decide on or spend more than a pittance without state consent," Botha said.

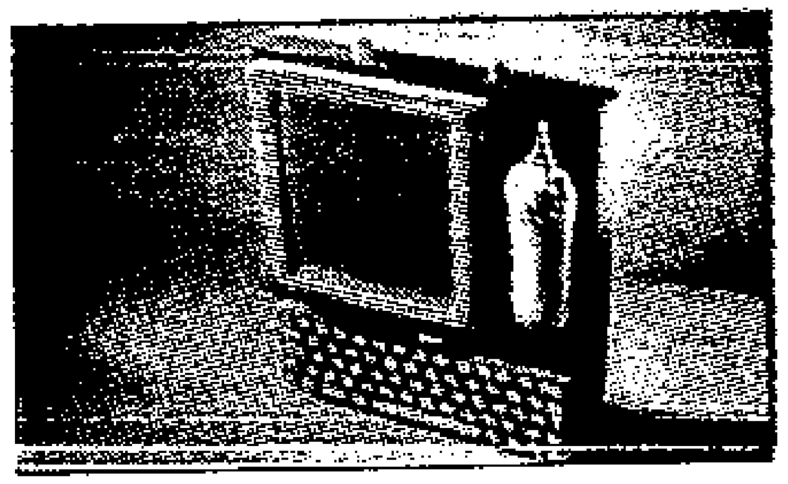
The second leg of the energy development strategy, according to Botha, involved creating and empowering strong utilities.

"Governments will come and go. But the utilities must remain," Botha said, adding that the quality of leadership of these utilities was vital, as they would be required to ensure the practical implementation of energy policy and planning.

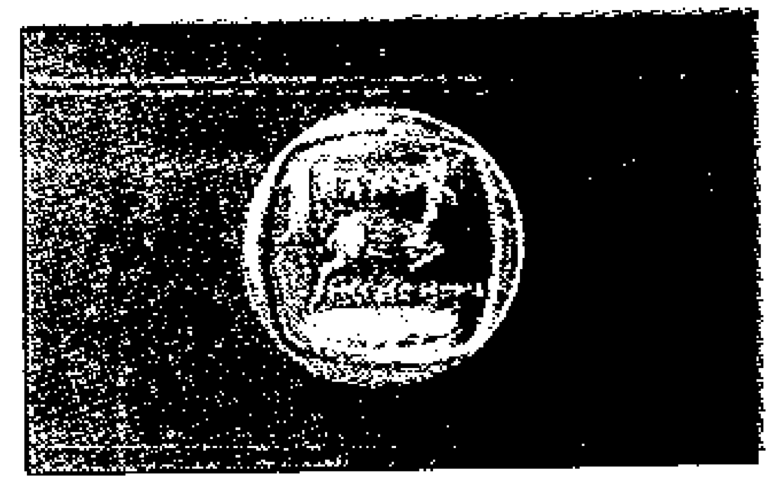
Pik Botha



FIZZLING
NEWS
OMNIA HOLDINGS REPORTS 6,3 PERCENT DECLINE IN PROFIT



BRAVE NEW WORLD
INNOVATION
PHILIPS AND OLIVETTI EXPLORE FUTURISTIC OFFICE EQUIPMENT



SHRINKING RAND
FORUM
WHY THE UNIT WILL SLIDE DESPITE ALL THE OPTIMISM

Boycotts leave Eskom R923m poorer

(55) CT(BR) 30/3/95

Sentiment in the townships is changing, but non-payment of electricity bills has left Eskom with huge problem debts

By Derek Tommey

The non-payment philosophy in the townships has left Eskom with problem debts amounting to R923 million, says John Maree, chairman of the Electricity Council.

These debts would have been higher but Eskom had taken over about R360 million worth of assets which it had been able to offset against them.

The debts have not been written off but full provision has been made for them in the balance sheet.

Maree said that sentiment in the townships was changing, which had made it easier for Eskom to collect electricity payments and to cut off electricity supplies to users who were not paying their bills..

He said about half the professional and supervisory posts at Eskom were expected to be filled by blacks by the turn of the century.

"There is a tendency generally to assume that affirmative action black advancement is synonymous with the lowering of standards. That's not our experience. In fact the four blacks on our management board are immensely competent people. They are doing their job and making an immense contribution to Eskom."

Maree has good news about Eskom's progress in 1994: it is now ranked among the world's five biggest generators of electric power.

He said Eskom was continuing to reduce the cost of electricity in real terms and was forging ahead with electrification. It brought power to 254 383 houses last year and plans to wire another 300 000 houses this year.

Maree said that Eskom's commitment in 1991 to reduce the price of electricity in real terms by 20 percent between 1992 and 1996 would be met.

The company has committed itself to cutting prices in real terms by a further 15 percent between 1994 and 2000.

John Maree

"We have managed to maintain relentless downward pressure on our costs and to balance this with unparalleled investment in national electrification while strengthening our balance sheet."

Eskom was providing electricity services to an additional 1 000 houses every day, he said.

The electrification programme was costing about R1 billion a year.

Chief executive Allen Morgan reported that revenue rose by 11,8 percent to R15,4 billion as a result of a net tariff increase of 7,6 percent and an increase in sales volume of 3,9 percent. Operating expenditure rose by 10,7 percent to R9,96 billion after including a net provision for arrear debts of R201 million.

Net income amounted to R2,27 billion which was 37,8 percent more than in 1993. Net income on a current value basis amounted to R407 million compared with R14 million in 1993.

This had resulted in a real return on assets of 4,3 percent (4,1 percent).

Accumulated reserves increased to R16 billion.

Eskom had virtually completed its local fundraising but could tap the American market later this year if rates there improved, he said.

Sunday Times SECTION 2

The people of Mookgophong have seen the light. And the entrepreneurs among them have been quick to cash in on the 'magic box' of electricity

The PROFITS of POWER

ST 2/4/95 (55) 127

SIGN OF THE TIMES: For Wilhelmina Tema and her family, the coming of electricity has opened a fridge door of opportunity — and she has wasted no time in advertising her flourishing little frozen-goods business

Pictures: CHRISTINE NESBITT

By CHRIS BARRON

ANNA MAGOA should be worried. They're building a national highway through her bedroom, and by July 1 the bulldozers will be there. Meanwhile the tumbledown structure she calls home is being dismantled brick by broken brick.

The funny thing is that she has never been happier.

In August last year self-taught electrician Steve Seroto hammered on her door.

By the time he left she had a meter box and three-point wall-plugs in the kitchen.

Until then electricity in Mookgophong, a township of 15 000 people next door to Naboomspruit an hour's drive north of Pretoria, had been the prerogative of a privileged few. Apart from three local schools and the police station, only 61 homes out of 1 192 had it. For normal folk the costs were prohibitive.

As the chairman of the Local Government Co-ordinating Committee, Ruben Kekana, puts it, the right-wing Naboomspruit Town Council bled them. He says they demanded installation fees of R1 200 and thereafter costs of R200 a month were about average.

For the likes of Mrs Magoa, with a husband working 100km away in Pietersburg and three children constantly bawling for food at home, the big E-word was an unattainable dream.

Then came an election and talk of something called Reconstruction and Development. White Afrikaners with names like Poen Herbst and Andre Bonthuys, who are taking very seriously Eskom's RDP target of installing electricity in up to 250 000 homes in 1994 and 300 000 homes this year, told curious residents they had come to light up their lives. They erected poles and slung cables.

Mr Seroto, a member of the local civic organisation, explained that it would cost them only R45 for installation, and their lives would never be the same again.

Two months later Mrs Magoa and her husband scraped their savings together, borrowed a bit here and there and bought themselves a fridge.

Her husband had wanted a stove first, but she had a plan in mind. Ice.

With temperatures in the upper 30s and a school full of children down the road, it was the obvious way to go.

Now she has a sign outside her house and makes anything from R16 a day selling "ices". With the proceeds she has bought herself a freezer and expanded her business to tripe, fish and mango pickle, which she makes and freezes.

She has an assistant whom she pays R30 a week.

With Madonna belting out *Slave To Love* from a TV screen in the corner, she says she has been compensated R23 000 for her house and has been allocated another site close enough to her market area for business to continue thriving.

Another part of Mookgophong and 23-year-old Wilhelmina Tema leads the way proudly into the house she, her husband and four sisters have been building since 1991 at a cost, when finished, of R20 000.

She, too, has a sign up advertising "ices" — plastic bags of frozen homemade cooldrink — and a newly acquired fridge working overtime to produce them. Not as conveniently placed as Mrs Magoa, her trade brings in some R20 a month at 20c an ice.

Not much, perhaps, but it has given her a sense of purpose she never had before.

She remembers being in her grandfather's corrugated iron shack when it burnt to the ground after a candle was knocked over. Every night she thanks God it will never happen again.

Electricity costs her R40 a month. She saves R28 on paraffin, R4 on candles and R9 on batteries for her television.

Of the 1 192 dwellings in Mookgophong, 597 are tin shacks. Joyce Monyamane has lived in one of them for most of her life, and had no intention of moving.

But since Mr Seroto came calling with his magic box, she's never looked at her home in quite the same way again.

"I want a fridge and a geyser for hot water," she explains. She still uses a primus stove and still finds herself lighting candles at night before she remembers that all she need do is flick a switch. "My house is too small for those things, now. I need a proper house."

Electricity, says Mr Kekana, has brought a sense of permanence, and with it a desire for a more substantial home than sheets of tin provide.

All over Mookgophong shack dwellers are building new brick-and-cement structures alongside their shacks. There's no doubt that electricity has been the spur, says Mr Kekana.

He is just back from the funeral of a (white) Naboomspruit councillor's wife.

Two years ago he wouldn't have been allowed inside the church. "Electricity", he smiles, "is not the only miracle."

OUT WITH THE OLD ... shack dweller Joyce Monyamane is still getting used to the idea that her candles have been replaced by a flick of the switch, but already she's beginning to think that perhaps she needs a bigger house, a geyser for hot water and a fridge

Eskom lights way to growth

55

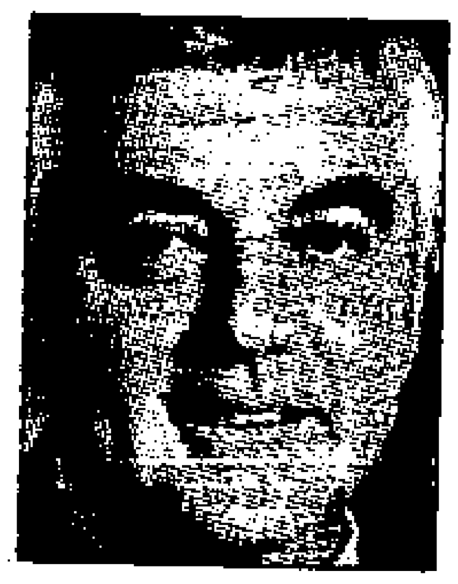
CT (BR) 13/4/95

With first-quarter volumes up 5 percent and new connections in industry up 60 percent, the outlook is extremely positive

BY JOHN SPIRA
GAUTENG BUSINESS EDITOR

Eskom's volume flow, probably the most reliable of all economic indicators, is buoyant, strongly indicating that heightened levels of growth are being achieved by the South African economy.

Allen Morgan, chief executive of the world's fifth-largest electricity utility, says Eskom's sales volumes for the first quarter of 1995 were 5,1 percent ahead of the same period last year, thanks to growing demand from industry and commerce.



Allen Morgan

"It's a performance which should be viewed against the background of a depressed mining sector. The gold mining industry is one of our biggest customers. A decline in offtake by the gold mines has, however, been largely offset by increased demand from ferro-metals and coal."

If he had to project GDP growth, he would certainly be looking at a minimum of 3 percent.

"Our barometer is that we tend to grow between 1,5 and 2 percent above GDP, so economic growth of 3 percent is distinctly possible."

Morgan warns that labour disruptions could upset such a prediction. "Labour problems, should they continue, will negatively affect not only economic growth but also confidence. Business won't want to expand production and to increase employment."

Yet he is optimistic, especially since Eskom is coming off a high 1994 base. "Last year we estimated growth of 0,3 percent and landed up with 2,2 percent. Coming off that base, we were conservative in our growth estimates for 1995."

He points out that every new house built under the RDP umbrella is electrified. Eskom's target for 1995 is to electrify 300 000 homes.

"We're about 25 percent behind schedule, but that's not unusual for the beginning of the year, since we establish infrastructures and only later catch up on connections and build up volumes. We're confident we'll meet our target."

Morgan doesn't see the lack of affordability hampering the mass housing initiative in the long term. "We've noted a 60 percent increase in industrial connections. From that perspective we're seeing economic growth and, hopefully, the result will be higher levels of employment, creating affordability."

CENTRAL ENERGY FUND (55)

Minding the store

FM 14/4/95

One of the few legacies of apartheid that may still be put to good use is SA's capability of storing vast amounts of oil.

Though prospects are still some way off for an agreement in which Iran would store millions of barrels of oil in SA's giant underground reservoirs, the Central Energy Fund (CEF) hopes to land a contract soon.

CEF GM Kobus van Zyl says progress was made in further negotiations when Iranian officials were in SA recently for an energy conference. But for now the Iranians are under no pressure to sign up as the country doesn't have surplus oil stocks on hand, says Van Zyl.

It is understood the State-run National Iranian Oil Co is interested in using two tanks with a combined capacity of 15m barrels.

They are part of a purpose-built facility at Saldanha Bay to store some of SA's strategic reserves during the apartheid years when supplies of oil came under pressure because of sanctions.

With sanctions gone, the stockpile was reduced from a year of domestic consumption to seven months. It is in the process of being reduced to four months — and could go lower still. Normal international standards are 91 days.

The money earned from the sale of the surplus since 1990 has already come to a sizeable R3bn, which was put into the general revenue account. Further sales could raise up to R500m more.

It is understood the agreement could go beyond a simple deal to store crude oil.

Instead, the reservoirs could be used as part of a joint venture trading agreement that would sell oil to markets in East Africa and Latin America — both much closer to SA that they are to Iran.

But a number of potential customers for the storage reservoirs have been deterred by rents and other fees.

It is understood these include rent of US 7c/barrel a month; wharfage unloading fees of 1,78% of the freight-on-board value of the cargo; and port costs of $60 000 for each supertanker visit. Van Zyl disputes this and says no figures have been put on the table yet.

Iranian oil sales to SA stand at 300 000 BPD, out of an import requirement of 420 000 barrels. Tehran restored trade relations with SA last year after the abolition of sanctions. ■

Government energy policies under fire

BD 19/4/95 (55)

TIM COHEN

CAPE TOWN — The SA Petroleum Industry Association told members of Parliament's mineral and energy affairs committee yesterday that the department's budget was "misleading" and complained bitterly about the lack of government policy on the industry's future.

Giving evidence before the committee in terms of parliamentary committees' new authority to investigate departmental budgets, the association bemoaned a general lack of transparency on critical issues.

It questioned the equalisation fund levy on petrol, diesel and paraffin, pointing out that the levy amounted to R1,5bn a year — more than twice the department's stated budget of R716m.

It was mostly being used to subsidise synthetic fuel production.

"You need to consider whether this allocation of taxpayers' money, coming as it does from the total onslaught years, is in accord with the thinking of the reconstruction and development programme," association director Colin McClelland said.

Sapa reports that the association said Sasol's subsidy had to be compared with the subsidies for mines (R24m) and the Atomic Energy Corporation (R500m).

Chairman of the association's board of governors, John Drake, told the committee the levy and the uses to which it was put should be disclosed in the budget.

The association was in favour of phased deregulation, but was concerned that for protracted periods, government had given no indication of whether regulation of the industry would continue.

McCelland suggested that the committee consider carefully how the Central Energy Fund organisation should be structured to fit new national priorities.

"Apart from the issue of synfuels, what are the planned investments and costs of fund operations?" he asked.

It was with grave concern that the association learned that the fund indulged in considerable derivative trading, McClelland said.

"We advised the Minister of our concerns last December, before the Barings Bank collapse, and he said that audits would take place.

"We would like to ask what the outcomes of these audits were."

He questioned government's latest position on Mossgas, asking whether further investment to extend the life of the gas fields had been decided on and whether more money would be spent on Soekor.

Notwithstanding the fact that there had been an understanding since 1991 that unleaded petrol would be introduced, government was finding it difficult to implement this, he said.

● See Page 9

ELECTRICITY (55)

Power broker FM 21/4/95

A drive to entice large international investors to finance an integrated sub-continental electricity infrastructure is under way under the auspices of the Southern African Development through Electricity (Sad-Elec).

Chaired by Eskom former CE Ian McRae, Sad-Elec is a nongovernmental organisation registered in Botswana.

With eastern Europe already clamouring for infrastructural investment, the organisation's chances of financial help appear limited given the scepticism with which projects in Africa are regarded.

But Sad-Elec Johannesburg-based planning GM Judi Koncz insists it will continue to seek investors in feasible infrastructural and market development projects.

Discussions are taking place with potential investors regarding transmission lines and power generation plants in Malawi, Mozambique, Zambia and even Ghana.

"Though we work closely with the 11-country Southern African Development Community (SADC), Zaire, Kenya and Uganda must also form part of our regional focus. But one can foresee this extending across the continent," she says.

Already Egypt is considering importing power from Zaire for re-export to Europe. And studies show the export potential of Zaire's 100 000 MW hydro resource through Morocco or Algeria to Spain and then into Europe, she adds.

A proposed transmission line between Malawi and Mozambique (about 90 km) is one of Sad-Elec's priorities; other linkages being considered are between Zambia and Malawi (about 300 km) and Zambia and Tanzania (600 km). "We are looking at financing options for some of these. Because of long lead times, we are also engaged in dialogue with potential investors for expansion of generation on the Zambezi as well as in Zambia."

Sad-Elec helps to promote the development of markets for electricity.

"The SADC's achievement of forging a regional identity should not be underestimated. In the global context, this is a real asset which should be used as a foundation on which to build."

Sad-Elec's board of trustees includes regional power sector experts from Botswana, Mozambique, SA and Tanzania, along with international developmental specialists from Norway, Malaysia, the US, Australia and African Development Bank. ■

AVIATION FEATURE

Eskom switched on by foreign buy-up offers

CT(BR) 24/4/95 (55)

In his effort to enhance the parastatal's efficiency, its chief executive, Allen Morgan, is considering overseas bids to buy unproductive power stations

Several foreign utilities have asked Eskom whether it would be willing to sell some of its mothballed power stations and allow the foreigners to operate them, the company's chief executive, Allen Morgan, has revealed.

It is a measure of the nature of the Eskom leader — and his determination to enhance the efficiency of the enterprise — that he hasn't rejected out of hand the notion of foreigners running South African power plants.

"Certain foreign utility operators have asked us if they could come up with an offer for these units. We've encouraged them to do so, since at the end of the day it's what those power stations produce in rands a megawatt that's going to be important.

"If they're able to produce at a price lower than we can (or even at an equivalent cost), we'd be obliged to give the offers serious thought," the 47-year-old Morgan has said in an interview.

"If a deal was done, that party would then sell electricity through our transmission system. One of the advantages to Eskom is that it would help us to benchmark our operations in a local context."

Morgan's commitment to Eskom runs deep. When he joined the organisation in 1971 after obtaining an engineering degree from Stellenbosch University, he became the third generation of his family to work for South Africa's leading power utility company.

Morgan, who became Eskom's chief executive in March last year, isn't at all surprised by the overseas approaches, pointing out that throughout the world, with very few exceptions, the privatised utilities are looking for offshore unregulated business involving the planning, design, construction and operating of power stations.

He says the foreign utilities are looking at several options, besides the outright purchase of the mothballed plants.

"They don't necessarily have to buy the plant; they could lease and operate it. Further, there's a lot of duff coal floating around, suggesting that deals could be struck with one or more coal mining companies."

How could foreign operators hope to succeed if Eskom doesn't find it profitable to operate the mothballed stations?

For one thing, Morgan suggests, they might well feel that they are more efficient than Eskom. If so, they deserve to succeed.

"More importantly, demand is coming back. We need to bring back Arnott (50 percent mothballed) and we've got to get Majuba 1, 2 and 3 on line in the near future. Additionally we have to get Cahora Bassa restored, after which we'd start looking at Camden, Komati, Grootvlei and Majuba 4, 5 and 6.

"The rand-a-megawatt yield will determine the merit order of bringing back the various plants. So if you get an operator coming in at a good price, and it is more attractive to us than bringing back some of the less profitable plants, then we would seriously need to consider the offer."

Selling off mothballed power stations would be tantamount to a partial privatisation of Eskom. How much further down the privatisation road does Morgan see Eskom going?

"Taking a long-term view, it's going to be healthy to generate competition. And the time to introduce competition is when we're looking for additional capital to create more generation capacity. At such a time we could be looking at competitive independent power producers.

"Over a transition period of a decade or two, we could see an unbundled situation throughout the industry, not just on the generation side."

Yet one of the prime objectives of a privatisation programme would be to raise funds for the government's RDP expenditure. Morgan's scenario wouldn't achieve that goal.

"At the end of the day, I see no good reason for Eskom to privatise. Competition is healthy if it produces efficiencies, and changes certain cultures for the better. In a private sector environment, you'd take away bureaucracy and produce far more innovation."

Morgan, who initiated Eskom's national programme to electrify underdeveloped areas, contends that although Eskom is state-controlled, it has come a long way down this line through its commercialisation focus.

"Eskom's prime motivation is to provide the world's lowest-cost electricity for the nation's prosperity. It is inbred in our culture to achieve this aim by encouraging competitiveness and driving down costs for growth.

ESKOM'S OPTIONS *Privatising Eskom doesn't make sense, its chief executive, Allen Morgan, believes*

So competition shouldn't worry us — nor does it. But the sale of Eskom assets now doesn't make sense.

"The question of raising capital for the RDP is not directly relevant in Eskom's case, since Eskom is already driving hard on the RDP to get electrification and development going."

He doubts that funds raised from the privatisation of Eskom would be used to enhance electrification, because "the mindset of a privatised company is going to be shareholder wealth — not necessarily looking after RDP responsibilities".

In the longer term, if Eskom had to be benchmarked and was found to be inefficient, then one of the ways of making it more efficient would be privatisation. "What you don't want to do in any parastatal environment is to reduce jobs though privatisation. The name of the game today is to create jobs.

"What we could do is to corporatise some of our service functions. Rather than using them all in-house, where some are inefficient, we could contract them out to the marketplace and create more value there."

John Spira

SA denies co-operation with Iran

African and foreign nuke experts meet

Star 25/4/95 (55)

BY HELEN GRANGE

The Atomic Energy Corporation (AEC) is meeting African nuclear experts in Johannesburg this week to share information on nuclear programmes, amid speculation from Washington that Iran may be looking to South Africa for help in developing nuclear weapons.

A working group of the African Regional Co-operative Agreement, a regional arrangement for co-operation in nuclear science and technology, met for a five-day conference in Johannesburg yesterday.

Representatives of the 20 African member states and the International Atomic Energy Agency, as well as a number of European countries, are attending.

The discussion is focused on facilitating training and capacity building, sharing of infrastructure and exchange of key information in nuclear technology.

Meanwhile the AEC's chief executive Dr Waldo Stumpf has poured cold water on a London Sunday Times news service report saying the US is concerned at what it sees as growing links between South Africa and Iran.

The report says that according to US intelligence sources, South Africa has enough scientists, equipment and expertise to make it a perfect partner for Iran, whose race to acquire weapons of mass destruction has set alarm bells ringing around the world.

It adds that Iran has been trying to buy equipment and technology from Russia and China, and the CIA believes that unless its programme is stopped, it will have nuclear weapons by the turn of the century.

Responding to the report, Stumpf said South Africa had "absolutely no nuclear co-operation with Iran".

"We have destroyed our nuclear weapons capabilities and we have no intergovernment co-operation agreement with any country.

"Without that, there cannot be any export of nuclear capability or expertise," he said.

The Sunday Times report said the issue would be discussed between American and South African officials in Washington this week.

Nuclear co-operation urged in Africa

ARG 25/4/95

JOHANNESBURG. — A senior official of the International Atomic Energy Agency has called on African states to map out a co-operative approach to the use of nuclear science and technology on the continent.

The appeal was made at the sixth annual technical conference of the African Regional Cooperative Agreement (Afra) on nuclear scientific and technical co-operation, which opened in Johannesburg yesterday.

"If Afra does not take itself in hand, no-one else will do it," Qian Jihui, head of the department of technical cooperation of the Vienna-based agency, told Afra's 20 member states.

Foreign Affairs director-general Rusty Evans said South Africa, the only country so far to destroy all its nuclear weapons, supported the extension of the Nuclear Non-Proliferation Treaty, but felt the treaty lacked emphasis on the transfer of nuclear science and technology to other nations. — Reuter.

(55)

SA may face tax on energy consumption

STEPHANE BOTHMA

PRETORIA — South Africans could face tax on domestic energy consumption and a road fuel duty as government tries to combat air pollution, which contributes to global warming, Environment Affairs Minister Dawie de Villiers says. BD 25/4/95

At the International Geosphere-Biosphere Programme conference on global environmental change, which began yesterday, De Villiers said SA was the biggest producer of greenhouse gases in Africa. "With the extra requirements of the reconstruction and development programme, production will in the short term increase rather than decrease."

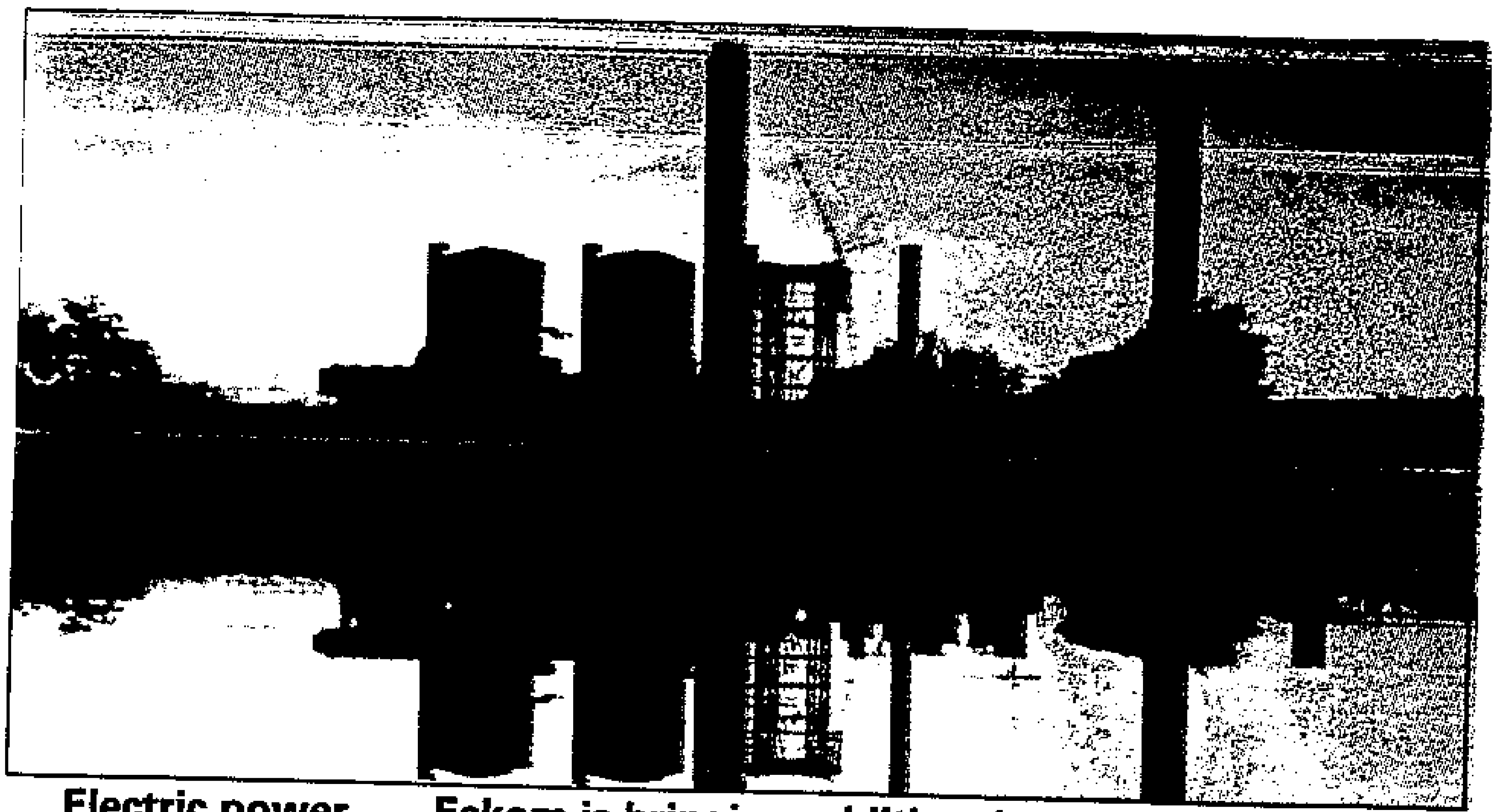
A tax or duty on domestic energy consumption, a road fuel tax and an energy saving trust could be used in a local climate change action plan to finance the basic energy needs of the less privileged.

Release of greenhouse gases should be included in integrated environmental management parameters. Overstepping limits "should lead to taxation or penalties". A road fuel duty could lead to faster development of electrical transport and better use of other options for private transport and deliveries in urban areas to cut down on pollution.

Burning waste and agricultural residue should not be unrestricted. Although fire was an indispensable tool in veld managment, unseasonal and unauthorised veld burning should be curtailed and penalties considered for transgressors.

An information programme should be launched to help local trade, industry and the public sector adopt efficient energy-saving technologies.

The conference continues today.



Electric power . . . Eskom is bringing additional capacity to account

Teething problems

(55)

FM 28/4/95

■ Commissioning of the Majuba power station is back on track

Eskom's Majuba power station has been in limbo for a number of years. But the first of its three-pack, 676 MW generating units is to be commissioned next year. Units two and three will follow in 1997 and 1998, respectively. The total capital investment is R4,8bn.

Says Brian Statham, Eskom's energy management manager: "Generating units 4, 5 and 6 are also going ahead but the commissioning dates have not yet been finalised. I expect a decision will be taken by the middle of the year. Until then, the issue is subject to review and will depend on the strength of the economy, as well as the power-intensive Alusaf aluminium plant at Richards Bay coming on stream. Another factor which might have an impact on the decision is the availability of 950 MW of Cahora Bassa power as from 1997."

Statham says HCB, the company responsible for Cahora Bassa, is understood to be issuing international tenders worth about R500m this year for refurbishment work.

Majuba's chequered history includes a postponement of the first unit's commissioning from 1992 to 1996. This delay was caused by a combination of two factors — Eskom was sitting on a generating surplus of about 15 000 MW in the midst of what was then a severe recession, coupled with grave political uncertainties. In addition, Majuba had a lot of trouble obtaining the coal reserves needed to sustain its projected 40-50-year life cycle.

"In view of the air pollution problem on the Highveld it was decided to move the power station further south, but this, unfortunately, also meant that we were moving away from the high-quality coal seams. And when Rand Coal found that, due to geological problems at the Majuba colliery, they would not be able to supply us with sufficient, good-quality thermal coal, we had a real problem. The priority was to suspend operations until we could find an alternative coal supply," says Statham.

Since then, Rand Coal has been taken over by Trans-Natal and in April last year the decision was taken to rail in coal from the Ingwe mine at Ogies in the Eastern Transvaal. "This coal is of good quality and is much easier to mine than was the case at the (now closed) Majuba colliery. The result was that, rather than adding costs, the solution will deliver coal to the power station at prices comparable with those originally envisaged for the project," he says.

Even the R100m cost of an 18 km rail link being constructed from Palmford on the main railway line to the power station is being factored into the settlement arrangements with the mining house, says Statham.

It seems as if Eskom has come up with an appropriate solution to a problem which, at one stage, seemed to threaten the Majuba project. ■

Power to the people

■ Eskom's plans for households will have spin-off benefits (55)

FM 28/4/95

Eskom hopes to electrify 1,75m homes by the turn of the century as part of its contribution to the RDP target of 2,5m by 2000. The balance of connections (about 800 000) will be done by the rest of the distribution industry — mainly local authorities.

What makes Eskom's huge effort possible is that it is sitting with surplus installed generating capacity. There was a 24 798 MW peak electricity demand in 1994 against Eskom's installed generating capacity of 39 746 MW.

Apart from Eskom's mothballed capacity, additional power should come on stream when 1 400 MW flows into the grid from Mozambique's Cahora Bassa hydro plant in 1997. The Majuba power station, with a potential capacity of more than 3 000 MW, is also to be recommissioned within the next few years.

Eskom, with its 23 power stations, generates 97% of all electricity in SA and more than 50% of that consumed in Africa. Its 25 000 km transmission network is part of an asset base of R44,4bn. This statutory body generated a R1,6bn surplus in 1993.

Even though Eskom can easily meet its installation targets, the programme does

Township electrification . . . can Eskom meet its ambitious targets for the number of new connections?

have problems. An average monthly household consumption of more than 350 kW/h is required for the programme to be financially viable. But current experience is that monthly sales are less than a 100 kW/h. At this level a subsidy of R50 per customer per month is required to recover the initial capital investment of R3bn plus interest charges over 15 years.

"About 95% of Eskom's new customers operate on its so-called Homelight 1 tariff, which places the connection cost initially on the power utility's shoulders. The tariff is structured to allow the customer to redeem the connection costs over 15 years at an average monthly consumption of 350 kW/h," says Eskom national electrification projects manager Jan Engelbrecht.

He says the temporary negative financial impact that the electrification programme will have on Eskom "will have to be paid for by a combination of cost reduction strategies and general tariff adjustments. This will be done within the framework of our commitment to reduce further the real price of electricity by 15% over the next five years to become the world's cheapest supplier."

Hopefully, as new households gain economically, their power consumption will gradually increase, eventually enabling them also to pay for the capital cost of connection.

Eskom's research shows that seven to 11 out of every 100 houses electrified will establish new small businesses. With informal business failure rates in the region of 25%, and with an average of two jobs created per small business, Eskom estimates that a net gain of about 134 000 new informal businesses will be created by 2000.

Other economic benefits from electrification include the creation of more than 19 000 direct jobs during the period 1994-1999 in the construction, local manufacturing and service sectors; 12 Mt of firewood saved annually and 1,2m man-hours released as firewood collection decreases; families spending an average of R8 103 (1994 rands), over 10 years, on electrical appliances; and better education.

Eskom's national electrification programme has steadily grown from 31 000 direct connections in 1991 to 145 000 in 1992, 208 800 in 1993 and 250 000 in 1994. Combined with incentives of R400/household to farm workers and subsequently to local authorities, Eskom has been instrumental, directly and indirectly, in electrifying about 890 000 homes since 1991. From 1995 onwards, it aims to electrify 300 000 households each year until 1999.

Local and other authorities plan to pitch in with an additional 150 000 connections a year from 1996 onwards. The new Electricity Regulator (appointed on January 1) still has to decide which local authorities will be authorised to connect and distribute electricity.

While Eskom clearly has the logistics of the exercise under co[illegible], paying for it is another matter. It has arranged this through the creation of special Electrification Participation Notes (EPNs). The first EPN issue, for R600m in June 1993, followed Eskom's internally budgeted R500m electrification costs for the 1992 financial year, and was underwritten by the Life Offices Association. But, with the 1994 electrification budget growing to R835m, Eskom decided to combine its new capital requirements with a buying back of the first EPN issue in a new, consolidated EPN issue of R1,168bn (of which R600m is new money). It was issued in October.

"Together with a recent US$300m loan from Japan, we should have sufficient funds to meet our current budgeting targets, including the R1bn electrification budget for 1995. But, obviously, more EPN funds will have to be taken up in future to meet our total capital budgetary requirements (in current rand terms) of about R6bn by 1999," says Eskom financial analyst, electrification planning, Koos Schoeman.

Eskom's electrification programme is complicated by the fact that it is working, to a certain extent, in a political vacuum. Local authority elections will be held in October and constitutional powers of the new provincial governments still have to be finalised. But this political uncertainty has not stopped the utility from proceeding apace with its own plans. Playing a major role in ensuring community participation in the electrification programme are the joint and regional electrification forums. These allow Eskom to assess the needs of communities, ensuring that its programmes elicit popular support.

And by the time the Regulator has decided on the local authorities' powers and the provincial governments know where they stand on electrification, Eskom should be in a position to join its efforts with others.

Eskom, with standardisation of equipment and processes, computer networks and regional masterplans, which fit in with existing distribution networks, prepayment metering and better delivery systems (often developed for people in informal settlements), is trying to ensure that all costs are reduced to a minimum. ■

Synergies at work

■ Timing of the Polifin project could've been better, it seems

FM 28/4/95

Like other major capital projects in the process of completion (Alusaf and Columbus), the R636m Polifin Midlands restructuring project at Sasolburg seems to have been blessed with excellent timing.

When it was announced in June 1993, PVC prices were depressed and faith in the future was all that underpinned the link between chemical giants Sasol and AECI.

Now, 20 months later, the market has

Eskom comes clean on the environment

(56) Star 28/4/95

BY ANITA ALLEN
SCIENCE WRITER

Eskom has chosen to celebrate the first anniversary of the new South Africa with the release of its first environmental report, and by so doing becomes the first large corporation in South Africa to go public on its environmental performance.

Underlining its commitment to the environment, Eskom now employs 50 full-time environmental specialists, while another 47 technically qualified employees deal with environmental issues as part of their duties.

Highlights of the 38-page report show:

- Eskom's power stations are emitting fewer gases that cause the greenhouse effect, and using less water per unit of electricity produced.
- Eskom believes improved air quality can best be achieved by applying limited capital resources to residential electrification, rather than installing improved pollution control equipment.
- For "a long time to come", Eskom will continue to rely on coal-based power stations for electricity generation.

Under environmental issues fundamental to marginalised communities, the report commits Eskom to:

- Reducing the real price of electricity by 15%, so as to become the world's lowest cost producer of electricity. At present it is the second lowest.
- Electrifying 300 000 homes a year to the end of the century.
- Spending R50-million a year to supply small electricity generating units to clinics and schools in rural areas.

In the process of burning 76,9-million tons of coal in 1994, Eskom's power stations have emitted 122 000 tons of particulates (fine ash and visible smoke), 143 000 000 tons of carbon dioxide, 1 167 000 tons of sulphur oxides and 961 000 tons of nitrogen oxides.

Of 22-million tons of ash waste produced during 1994, 800 000 tons (3%) was sold for making cement and bricks. Rehabilitation has been completed for 60% of the ash dump sites no longer in use. This involved shaping, covering with soil and planting with suitable vegetation.

Eskom now administers some 240 000 km of powerlines. Its policy is to route these lines with minimal impact on communities, agriculture and wildlife.

By reviewing its current environmental status in the open, Eskom has set up a standard against which future performance can be evaluated.

Paraffin prices to drop by 1c

The price of domestic paraffin will drop by 1c a litre from Wednesday, the Central Energy Fund has said. The downward adjustment of 1c is a result of economic factors.

The paraffin price has fallen by 4c since the start of the year, while petrol and diesel prices have risen by 12c and 1c a litre over the same period.

Petrol and diesel prices have moved up mainly because of the strengthening of prices on international markets.

The March Budget also announced a 2c-a-litre increase in fuel taxes. The next 1c adjustment due to higher tax comes into effect on Wednesday.

Paraffin will cost 90,43c a litre from that day on the coast and 101,43c in Gauteng, the fund said. — Sapa.

(55) Star 28/4/95

83-year-old nabs thief

Oslo (Norway) — As if being captured wasn't bad enough, an armed bank robber had to suffer the indignity of being nabbed by an angry octogenarian passer-by here this week. The 83-year-old hero suffered a broken nose, a black eye and a few cuts but still managed to hang on until others joined in. — Sapa-AP.

Policy for storing of maize reserves needed

LOUISE COOK

SA NEEDED a "meaningful" policy for storing strategic maize reserves because of the country's erratic production, Maize Board GM Peter Cownie said at the weekend.

He told the Fertiliser Society of SA's AGM in Johannesburg that there was no official policy for the holding of central strategic reserves as a safeguard against a poor crop in the following year.

"However, one of the dangers of a large strategic reserve is that it can be used to keep domestic prices at unacceptably low levels for the producer," said Cownie. BD 9/5/95

The storage option was also mooted by National Maize Producers' Organisation (Nampo) chairman Cerneels Claassen last week when he said Nampo had "put a plan on the table" to store maize at the beginning of this season, but it had been rejected.

SA faces a shortage of about 1-million tons of white maize after a bumper crop last year. Millers have put prices up by about 20% after having to import maize at R700/ton.

In terms of the new maize marketing scheme which started this month after single-channel marketing was scrapped, the Maize Board was no longer in a position to keep prices below the price of imported maize when SA faced shortages, said Cownie.

Low prices were "desirable from a national viewpoint to ensure maize products remain affordable, particularly in the inland of the country", he said.

"It is also desirable from an industry viewpoint as maize products can lose significant market share to other starch products if prices become too high."

Cownie said SA currently enjoyed a steady market for maize for human consumption. But increased demand from population growth had largely been cancelled out by a drop in maize consumption.

Cownie said that in terms of the new marketing system, the Maize Board would accept maize from any farmer unable to find a commercial buyer and pay a floor price.

Branding may be legislated

NICOLA JENVEY

DURBAN — The Livestock Brands Act may be reviewed and branding may become compulsory as a measure to combat the R80m-a-year stock theft problem, Agriculture Deputy Minister Thoko Msane said.

Addressing the National Stock Theft conference yesterday Msane said owners benefited from branding as it proved possession, the SA Police Service (SAPS) could easily trace stolen animals, the pounds could trace owners and the consumer benefited through savings in a more efficient livestock industry.

SAPS deputy national commissioner Zolisa Lavisa said the number of cattle stolen had increased from 24 986 in 1990 to 46 138 last year — less than half were recovered.

The theft of sheep and goats had increased to 125 884 from 80 802 over the same period. Only 25 525 were recovered last year.

Should the law change, farmers would have six months to register a brand and unidentified stock could not be sold.

Benefits in regional power

BD 9/5/95 (55)

EDWARD WEST

CAPE TOWN — The electrical grid system being discussed for southern Africa had the potential to supply the whole continent and even export hydro-power through Egypt to Europe, according to a report by energy researchers at the Institute of Futures Research at the University of Stellenbosch.

Regional co-operation in the commercial energy sector offered mutual benefits to southern African countries, they said. Although SA had 82% of sub-Saharan Africa's generating capacity of 48 646MW, its capacity for its own needs would be fully utilised by 2000.

After that, SA would need to secure 1 000MW to 1 500MW additional capacity each year. Either coal or nuclear power stations would have to be built, involving major financial commitments.

Both options would involve adverse environmental effects. SA was already among the 15 countries with the world's worst atmospheric pollution from industrial sources, the researchers said.

Countries in southern Africa had the potential to supply SA's future requirements at lower cost and with less environmental risk. Zaire had the largest resource for electricity generation in Africa, with a total potential of 100 000MW.

Its current output was 3 533MW, or 3,5% of potential capacity. Export capacity could generate significant foreign exchange. In addition, grid interconnections offered technical advantages such as maintaining lower reserve requirements for any given level of reliability, which would in turn allow a reduction in costs.

Two initiatives examining electricity co-operation were under way.

Regional co-operation in the commercial energy sector would minimise the costs of energy supply, reduce environmental effects, raise regional trade levels, provide foreign exchange and add momentum to the long-term vision of full economic integration among Southern African Development Community countries.

Pik's projects 'dressed up for RDP'

(55)

■ BY PATRICK BULGER
POLITICAL CORRESPONDENT

Cape Town — A parliamentary committee has slated Pik Botha's Mineral and Energy Affairs Department for dressing up ordinary departmental expenditure as RDP projects.

The criticisms are contained in a budget report by the portfolio committee on Mineral and Energy Affairs headed by the ANC's Marcel Golding. It was tabled yesterday on the eve of the National Assembly debate today on the department's budget vote.

According to the department, about R247-million of its R716-million budget was intended for RDP expenditure.

However, the report found that "the budget certainly has not complied with the full objectives of the RDP or gone sufficiently far in meeting them".

"The general view contained in the submissions and comments was that the budget for 1995/96 has not been sufficiently changed to address national priorities.

"While the committee supports any effort to give effect to the RDP, on scrutiny many of the items claimed as RDP-related actions are seen to be ordinary departmental expenditure."

The report also criticised the department's affirmative action achievements, noting that "the objective to ensure that both the department and the ministry reflect the population of the country is absent".

Star 9/5/95

Electrification of rural areas 'a priority'

55

Deputy Business Editor

A LACK of development in South Africa's rural areas could frustrate attempts to raise living standards in the cities, Public Enterprises Minister Stella Sigcau said today.

She was addressing the opening session of a two-day meeting of managing directors of electricity utilities in Africa and the Indian Ocean.

Ms Sigcau said unless rural areas were developed, cities would become congested and urban development plans would be difficult to implement.

ARG 10/5/95

"Electrification of the rural areas must be a priority."

Without electricity, other RDP projects could not be viable.

Pik outlines 'full-scale assault' on firewood crisis

(55) STAR 10/5/95

A blitz was being planned on South Africa's firewood problem, and proposals would be submitted to the Cabinet during the current session of Parliament, Mineral and Energy Affairs Minister Pik Botha said yesterday.

Introducing debate on his budget vote, he said 12-million tons of trees disappeared in smoke in the rural areas every year, and more than 13-million South Africans depended on firewood and other biomass fuels.

The increasing time spent by rural women in having to travel further and further every day to collect firewood meant they had less and less time to engage in meaningful and productive economic activity.

His department headed an interdepartmental committee planning a "full-scale assault" on this problem, and its proposals would be submitted to the Cabinet this session.

These include better planning of tree-felling and planting by local people; encouraging and helping those who use trees to plant replacements; bringing in firewood from industrial forestry waste; developing alternative fuel sources; and providing people with electricity.

The department planned to supply 15 000 rural schools and 2 000 clinics with alternative sources of electricity within the next 10 years, he said.

The department will investigate forming an independent parastatal company within the Central Energy Fund group to provide planning and financial backing in conjunction with the RDP office. — Sapa.

Over 23 000 homes electrified

MUNICIPAL REPORTER

OVER 23 000 homes in Khayelitsha have been connected to the electricity supply grid in just over a year, and electrifiers intend to raise the total to 40 000 by the end of next year.

This was said yesterday at an international electricity conference at the Waterfront by Mr Alain Roucole, general manager of Phambili Nombane (Forward with Electricity) — the partnership providing electricity to Khayelitsha.

French company Electricite de France and Eskom are partners in the electrification.

Mr Roucole estimated Khayelitsha's population to be half-a-million, living in about 50 000 dwellings, of which 10 000 were formal and 40 000 were shacks. No shacks had electricity at the beginning of last year.

Mr Dickson Khulani, of the SA National Civics Organisation, said no electricity was provided when Khayelitsha was established in 1983. A few of the formal houses had been electrified in 1986, and three years later the civic associations started to campaign for more electrification.

"At that time we did not think informal houses would ever be electrified," he said.

The electrification of Khayelitsha had been planned "in line with Reconstruction and Development Programme principles, though we did not know about the RDP then."

MEETING THE BENEFICIARIES: Mr Jean-Michel Fauve, president of the international division of Electricite de France, meets some of the children whose lives are being improved. PICTURE: PETER STANFORD.

CT 11/5/95 (55)

Delegates get an electric welcome

(SS)

ARGT 11/5/95

□ *Visit to Khayelitsha project*

DELEGATES to the Electricite de France (EDF) conference took a breather from the proceedings to visit the Phambili Nombane electrification project in Khayelitsha for a first-hand look at its success.

The delegates, managing directors of electricity utilities companies from mostly French-speaking Africa, as well as Indian Ocean countries, were led by EDF chief executive officer Francois Ailleret.

The impressed delegates were taken to the shack of Fikiswa Plata, who operates a vending point for Phambili Nombane in Macassar squatter camp.

Mrs Plata praised the work done by Phambili Nombane, saying that many residents could not do without the service the project provided.

On their arrival in Khayelitsha, the delegates were welcomed by the township's mayor Vuyani Ngcuka.

Mr Ngcuka said the challenge facing everyone in the country was not only the provision of services, such as electricity, but also jobs. He praised Phambili Nombane and its partners, EDF and East Midlands Electricity of England.

Phambili Nombane has electrified more than 23 500 homes since 1994. The project aims to electrify more than 500 000 homes in Khayelitsha in the next three years.

Picture: JACK LESTRADE.

BONJOUR: EDF international division president Jean-Michel Fauve is welcomed by Macassar squatter camp children. Mr Fauve accompanied delegates from the EDF conference who visited Khayelitsha to inspect the work of Phambili Nombane in the township.

Cahora Bassa back on line

By SVEN LUNSCHE

THE construction of the powerline between the Cahora Bassa dam in Mozambique and Eskom power stations in Gauteng won official approval on Friday with the award of an R80-million tender to supply over 1 900 transmission towers.

Local company ABB Feralin will have to supply the towers within 17 months when construction of the line begins. The construction, estimated at R300-million, could be delayed as extensive tracts of the 900km powerline were mined during Mozambique's 20-year civil war.

Mozambique's state-owned Hidroelectrica de Cahora Bassa, which awarded yesterday's contract, has decided to remove the mines rather than build a completely new line. The contract to remove the mines will be awarded over the next few weeks.

Once complete Cahora Bassa will provide up to 2 000 megawatts of power, the bulk of which will go to Gauteng.

(55) ST (BT) 14/5/95

Labour communications manager Francois de Villiers looks on. Picture: ROBERT BOTHA

'Cheap deal' for Eskom

JOHN CAVILL (55)

LONDON — The $100m international five-year revolving credit signed by Eskom and eight banks on Friday would set a benchmark for other SA borrowers, said a spokesman for JP Morgan, senior lead manager for the syndicated loan.

BD 15/5/95

Priced at 0,875 percentage points over LIBOR (London Inter-Bank Offered Rate for six months dollars), currently 6,125% or funds drawn during the first three years and LIBOR plus 1,125% percentage points for the last two, the facility was a "cheap and flexible deal" for Eskom.

Even though the credit had not been guaranteed by the government, Eskom had been able to raise the credit 1,5 percentage points cheaper than the $750m loan issued by the Republic of SA in December.

The Industrial Development Bank was reported to be in the market for a three-year syndicated loan at a similar rate of 0,875% percentage points over LIBOR.

Commenting on criticism that the five-year term of the credit was "not right" for SA because it took the lenders past the date of President Nelson Mandela's retirement, the spokesman said the banks had taken account of the political factors.

"But we also looked at business we were lending to. "This was a client-driven deal. A one-year facility would have been inappropriate for a business like Eskom."

R100m boost for SA Housing Trust

ROBYN CHALMERS (122)

THE struggling SA Housing Trust has been given a new lease on life with the approval of a R100m loan from the Development Bank of Southern Africa to be used for housing at the lowest end of the market.

The trust is the largest financier of low-cost housing in SA and has been hard hit by bond boycotts over the past decade, posting a net loss of R63m for the year to June 1994.

Development Bank northern region GM Solly Nortje said recently the loan had been approved on a 12-year basis in consultation with government, but the money would be transferred only after government had approved certain conditions.

The bank required the ministries responsible for Housing, Finance and the reconstruction and development programme to underwrite the loan. There had been agreement in principle on this issue.

BD 15/5/95

Government's back-up was needed as the trust was a public finance company with a range of nominal voting shareholders, but with the state as provider of its equity funds and to be guarantor of the trust's loans.

Nortje stressed that the loan did not indicate the bank was entering into a new field as a secondary financier of housing, but it was the first time the bank had moved into the long-term mortgage market.

Operations GM De Villiers Botha said the loan had been approved on the understanding that the trust would use the funds to build homes on serviced sites held by the trust for the lowest end of the housing market.

Botha said the bank had launched an investigation of the trust late last year to ensure it had the institutional capacity to make loans to low-income earners and to service them.

Trust executive chairman Chris Ball said last week that the trust had the largest capacity in SA to make housing loans available to low-income households. It also had a development division with significant capacity as well as 6 000ha of land to be used for housing.

Ball said the biggest challenge was financing low-income households, as there was not yet a proven market for financing in this segment. There had been a number of failures when organisations had attempted to address the market, including the trust.

Ball said more than 28 000 houses, with a gross loan value of R700m, had been financed through trust subsidiary Khayalethu Home Loans.

Substantial provisions had been made against the loan assets. This was mainly because of the nationwide boycott of payments.

He said the net loss for the current financial year would be greater than the previous year unless there was a change in payment patterns in May and June.

Power debt at R293-m

(55)

Sowetan 19/5/95

■ REDUCED TARRIFF Eskom 'on track' to fulfil its RDP promise:

ARREARS IN payments for electricity countrywide total R923 million. This figure, for December last year, is contained in Eskom's annual report which was tabled in Parliament this week.

Eskom chief executive Allen Morgan said efforts were being made in cooperation with all levels of Government and civic leaders to get people to pay.

At the end of last year, there was an improvement in payments in some areas, including Soweto.

"There is a growing realisation that the country cannot afford to provide services if customers are not paying for these."

He said Eskom was on track to fulfil a 1991 promise to customers to reduce the price of electricity by 20 percent in real terms by 1996.

Eskom was confident of meeting its reconstruction and development programme commitment of reducing the price of electricity by 15 percent between this year and 2 000.

Mr Morgan said Eskom had achieved commendable financial results with revenue for the past financial year having increased by 11,8 percent to R15 417 million.

This was caused by a net tariff increase of 7,6 percent and a 3,9 percent increase in sales.

The increase in sales was caused by an upswing in the business cycle. Operating spending was R9 963 million, an increase of 10,7 percent.

Costs included decommissioning fossil-fired power stations (R192 million), management rationalisation and early retirement (R110 million) and medical aid post-retirement benefits of R51 million.

Net income was R2 268 million, a 37,8 percent increase over 1993.

Accumulated reserves were R16 005 million, Morgan said.

— *Sowetan Correspondent.*

NUCLEAR POWER

Swords into ploughshares

Good sense has prevailed in our nuclear industry — and it could make money

FM 19/5/95 (55)

Looming amid the green hills of the Magaliesberg, the serrated profile of the Pelindaba nuclear complex long provoked the question of what went on behind it. In 1993 government ended the guessing game with the sweeping if belated confession that the Valindaba plant in the complex had enriched uranium to weapons grade and supplied it to Armscor for fabrication into nuclear weapons.

Ironically, the great nuclear complex built up as part of the Nationalists' desperate effort to hold on to power has now fallen into the hands of a government controlled by their former enemy, the ANC — as has SA's other major nuclear commitment, the Koeberg power plant north of Cape Town. After some loud initial squawks from fringe antinuclear groups in the ANC alliance, a blessed silence has descended and Koeberg hums in its efficient, clean and unthreatening way, contributing 1,8 MW of electricity to Eskom's grid (6% of total output in 1994).

Stumpf ... *masterminding the transition*

With the economics of power generation dictating that another nuclear plant should not be built for many years, it seems Koeberg will be left alone to see out its economic life (perhaps another 25 years).

But should SA still operate a substantial nuclear industry to enrich uranium and even — as it was forced to do during sanctions — to make fuel elements for Koeberg, which can now buy them from abroad? SA could theoretically continue to enjoy the benefits of nuclear power without running its own nuclear industry.

Now that SA has renounced nuclear weapons and has signed the Nuclear Non-Proliferation Treaty (NPT), the fate of the leftover nuclear facilities should arguably be determined by technological and economic considerations. These seem to point towards a continuing, if scaled-down, nuclear establishment, pursuing sensitive nuclear technology under the supervision of the major nations' watchdog against nuclear proliferation — the International Atomic Energy Agency.

Coincidentally, the NPT is now up for renewal and press reports suggest SA's international representatives have played a constructive role against proliferation in this sensitive and far-reaching parley.

SA is also promoting the associated concept of a nuclear weapons-free African continent (along the lines of a similar accord in Latin America).

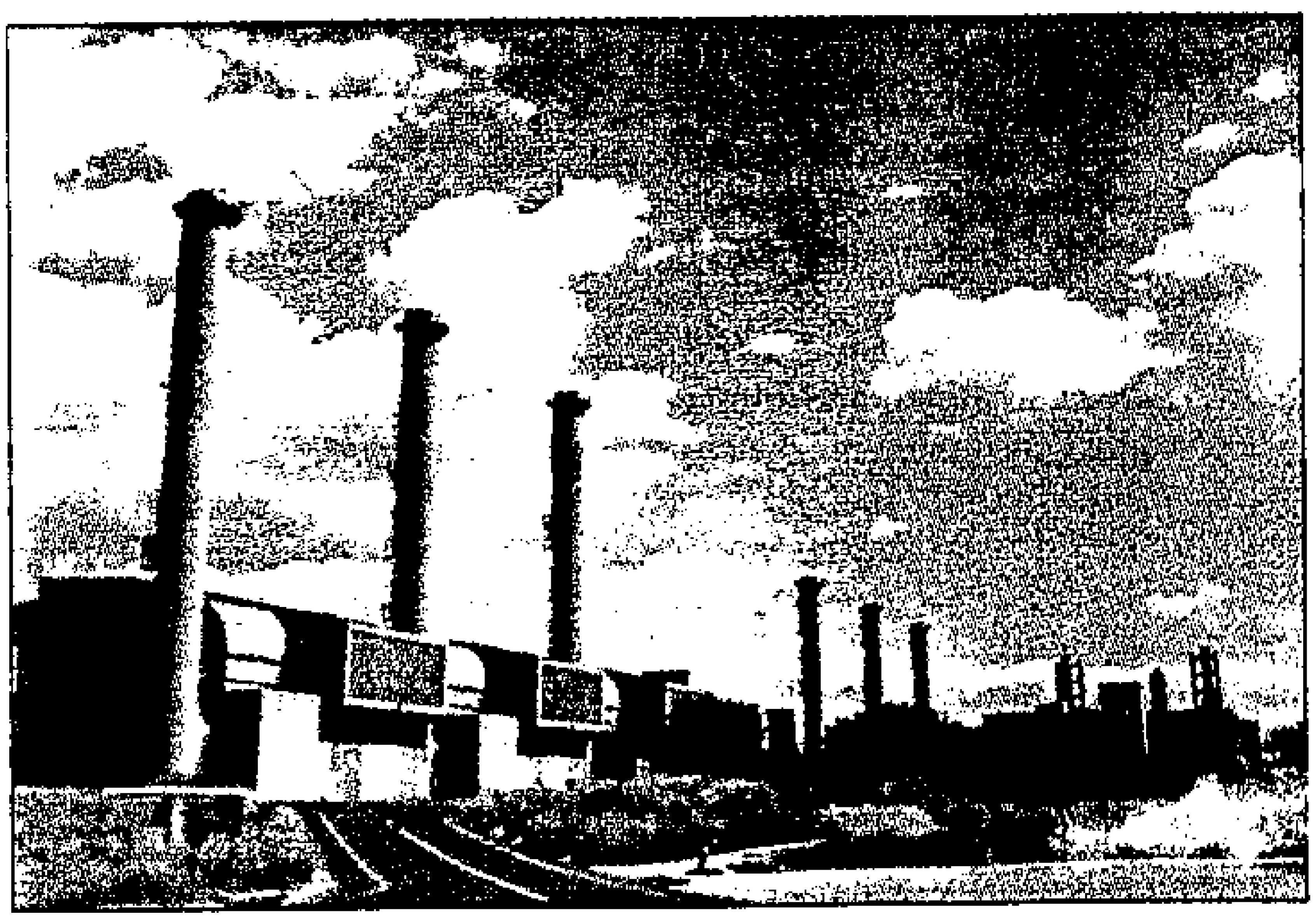
In the past few years SA's Atomic Energy Corporation (AEC) has been following a long-term strategy to reposition itself to exploit nuclear technology for peaceful purposes — and on a financially self-sustaining basis.

For one of the world's major uranium producers to disband its laboriously built-up human capital in nuclear physics and engineering and give up claims to any long-term stake in uranium enrichment would have been folly.

That this was the sensible decision is evidenced by the way the new government has allowed the AEC to continue on its chosen path. When SA eventually decides to build another nuclear power plant, there could be significant local inputs. In the immediate future, there is also a good prospect of SA earning substantial sums by exporting enriched uranium.

A word of scientific explanation: uranium, as it occurs in nature, contains 0,7% of the key isotope (atomic variety) uranium 235, the balance being uranium 238. The uranium 235 isotope can undergo nuclear fission — a property required for a nuclear power plant and to make a bomb.

For a pressurised water power reactor — the type installed at Koeberg — in common use around the world — the concentration of U235 has to be stepped up to around 4%. To make an efficient nuclear weapon, over 90% enrichment is needed.



Nuclear plant ... *generating foreign currency*

The first enrichment was accomplished in the US during World War 2. It required the conversion of natural uranium to the hexafluoride, which can be manipulated in gaseous form.

The Manhattan Project (which produced the atomic bomb) employed the laborious and expensive process of gaseous diffusion, taking advantage of the slight differences in physical properties of the two isotopes to separate them. When knowledge of nuclear technology became widespread, different countries, including SA, put enormous efforts into developing improved enrichment procedures.

The AEC developed a special vortex tube process which required uranium hexafluoride to be passed through a tube at high speed, separating the two isotopes by using the small difference in mass.

Apart from manufacturing weapons-grade uranium, of which a stockpile remains, the AEC was forced by sanctions (which cut off nuclear fuel supplies to Koeberg) to make substantial quantities of 4% enriched uranium and to achieve the technically difficult second stage of manufacturing it into fuel elements. It is still doing this — for now.

AEC CEO Waldo Stumpf has given the *FM* some fascinating insights into current strategic thinking about nuclear technology. The most sensitive item is, of course, the remaining stockpile of "highly enriched" (weapons-grade) uranium.

The existence of this material provoked some alarm in certain American quarters, lest it be sold by the new SA government to aggressive and irresponsible states — a fear that has been proved groundless.

Stumpf makes the point that while the nations of the world are deliberating about the renewal of the NPT, a nuclear-penitent SA is doing its utmost to enhance the effectiveness of the International Atomic

Energy Agency through setting higher standards of co-operation.

He says that the agency's safeguards — for obvious reasons — apply most stringently to this material. But they apply also to the disused equipment for producing it and to a new AEC programme to develop a cheap, laser-based enrichment process. Meanwhile, the stockpile lies under constant and stringent agency surveillance.

But the question of what to do with it remains. The highly enriched uranium does not have much value in exchange because the post-Soviet world is awash with it.

SA's stockpile might conceivably have had a "political" value because the US in particular might have wanted to buy it to eliminate a real or imagined proliferation risk.

But SA has never explored the sale option seriously because the stockpile does have a considerable value-in-use. It is being used to fuel the Safari research reactor at Pelindaba to manufacture commercially valuable radio-isotopes.

Of these, molybdenum 99 (for diagnostic use in medicine) is the most important. And the AEC's product is of high quality and competitively priced.

A further reason for following this disposal route, says Stumpf, is that SA wants to do its bit to enhance the prestige of the International Atomic Energy Agency and so feels it should not negotiate over the stockpile with anyone else.

How long will it take to consume the weapons-grade uranium in this beneficial way? Stumpf says this depends firstly on the AEC's future success in winning more large-scale export contracts, over and above those already sealed with mainland China and India.

The AEC could yet pull off big deals in North America, Japan and Europe.

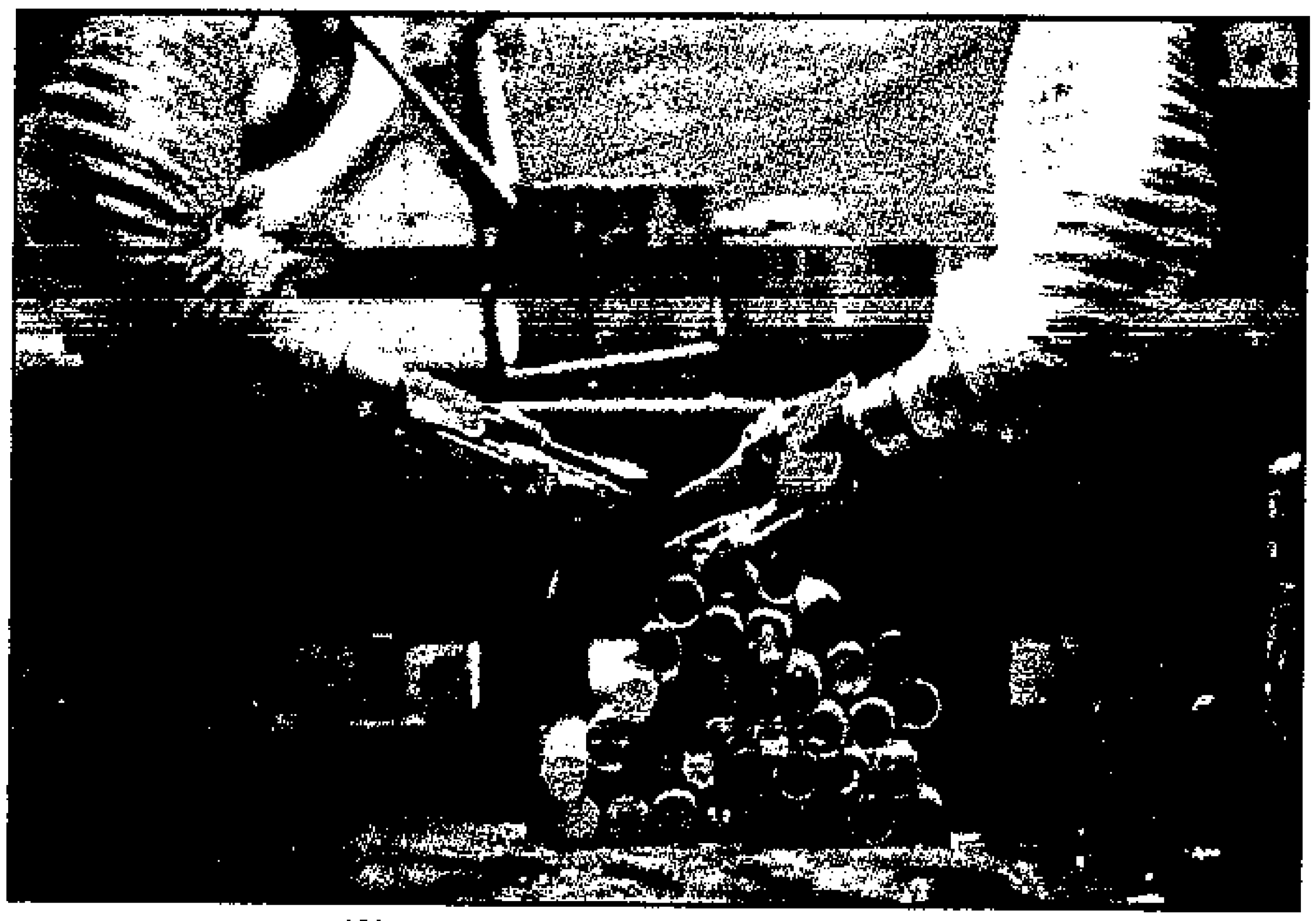
Secondly, the rate of consumption depends on whether the AEC decides to upgrade the Safari reactor, now running at 10 MW. At 20 MW, it could enable SA to capture around 10%-15% of the world market for molybdenum 99. On that basis, the stockpile would last for 10-15 years. This goal could soon be achieved. (Stumpf, for security reasons, declines to quantify the stockpile or say where it is located.)

The semi-commercial enrichment plant which employed a nozzle process to make low-enriched uranium for Koeberg was shut down on March 31.

The proliferation-sensitive equipment will be dismantled under close agency supervision. Indeed, the safeguards were formulated to set a new and higher standard for non-proliferation supervision.

This is further illustrated by the commitment that any components which could be used to make enriched uranium will be melted down with salvage of their metal content. Nonsensitive items such as cables will be decontaminated and reclaimed.

All this could take another four years. The sensitive components of the older, disused, nozzle-based pilot enrichment plant for producing nuclear fuel are also being melted down. SA's own Nuclear Licensing Authority is also supervising the dismantling to monitor the safety dimension.



The hot zone ... *robot at work*

However, SA has not relinquished its ambition to play a continued, if peaceful role in enrichment technology. The AEC is hard at work on an innovative laser-based enrichment process which could — even if only in the next century — be highly cost-effective internationally.

Early experiments, claims Stumpf, have put SA ahead of the field. But even the experiments are closely supervised by the agency.

Will the AEC continue to manufacture nuclear fuel elements for Koeberg now that these items can once again be sourced overseas? A working party, including Eskom, the Department of Mineral & Energy Affairs and the newly influential Minerals and Energy Policy Centre, is currently examining the economics of all stages of the process from newly mined uranium up to fabricated fuel elements.

One option might be to continue making fuel elements but from imported enriched uranium to conserve the local fuel element technology for the future. Another route could be to discontinue local fabrication and import fuel elements. In the post-sanctions environment, cost is paramount.

There is already a glut in the international market in natural and enriched uranium, though there are formidable political and technical obstacles to a further large inflow from ex-Soviet weapons-grade material. For now, we can only guess at the possible market impact.

What the Russians are selling is low-enriched uranium for power plant use, but no-one knows their cost levels. They appear to sell for what they can get.

There is also a domestic struggle in the US between the electric power companies, which would like to use Russian uranium, and US uranium miners. As things stand, the US has steep import duties on all grades of uranium, including enriched material.

Stumpf believes the overall surplus of enriched uranium will last beyond the year 2000 but the demand is highly price-sensitive. If the AEC can come to market ahead of the pack, it could add R250m a year to the value of SA's uranium exports and bring significant earnings from technology licence agreements.

The proliferation-sensitive nature of this process makes it more important than ever for the AEC to allow the agency maximum supervision.

What is clear, in this welter of technical issues, is that SA is now truly on the side of the angels on the non-proliferation issue. "I worked hard to get us there!" says Stumpf.

Because of the advanced technology needed to enrich uranium, it was to be expected that much of the know-how could be re-applied for peaceful purposes.

And so it is proving. The latest annual report tells of a range of valuable products and processes (in addition to the radio-isotopes) now being marketed by the AEC. These include a process to produce fluorinated hydrocarbons such as tetrafluoroenthylene, from which a valuable polymer (PTFE) is made.

Other possibilities include specialised plating, special alloys and components for air compressors, membranes for specialised filtration, instrumentation for froth flotation and finely engineered high-alloy components for a variety of uses, including satellite launching and advanced monitoring systems for incipient failure on vital machinery.

What does all this mean financially? The AEC's income statement for the year ended March 31 1994 discloses an increase in sales of products from almost R178m to R196m.

More important, the deficit (after financing costs) shrank from R106m to R54m. In the year under review, sales of nuclear fuel rose by 3,1% and those of non-nuclear fuel products and services rose by 18,8%. Gross operating expenses fell by 8,1% and the State allocation of funds for operating activities dropped by 13,3% to R311m.

This financial year, the AEC expects to improve its turnover from direct sales by 13% and reduce its dependence on the State by a further 20% in real terms compared with the previous year.

Evidently, the AEC is well on the way to a commercialised future. Could this eventually open the door to privatisation? This would clearly require government first to convert its debt into equity but it remains a fascinating long-term possibility. ■

ELECTRICITY PLANNING

Looking to the future

(55)(250) FM 26/5/95

Eskom still finds itself with surplus capacity through failing to forecast the economic downturn around the end of the Eighties. Some of the older stations are still mothballed and some are being decommissioned. Yet the time will come when new supplies of power will have to be procured. Eskom is looking towards the year 2000 with some imagination.

Eskom's 19 power plants have a nominal capacity of 37 840 MW — over half of the installed capacity in Africa. It supplies more than 95% of the electricity consumed in SA. In 1994, the demand for power increased by 3,9%, exceeding Eskom's forecast. The demand for power rose by 7% to peak at 25 000 MW as a result of the cold winter. It is expected to grow by more than 6 000 MW by 2000.

In July 1994, Eskom adopted an integrated electricity plan embracing an optimal combination of supply and demand options, taking into account the expected growth and Eskom's capacity. As part of the plan, Eskom is reviewing its capacity requirements. As the dedicated coal proved insufficient, coal will be railed to the new Majuba power plant in Natal, the first unit to be commercial in 1996, while the programmes for Majuba 4, 5 and 6 are being reviewed. Some older stations — Ingagane, Highveld and Taaibos — will be decommissioned.

An agreement has been reached for the setting up of a southern African power pool — open to all SADC countries plus Zaire. Negotiations among electric utilities to arrive at a draft agreement are almost complete, whereafter comments will be sought.

Agreement has been reached for the renewed supply of power from Cahora Bassa in 1997. Work is proceeding to rehabilitate the transmission line to SA, extensively sabotaged during the civil war in Mozambique.

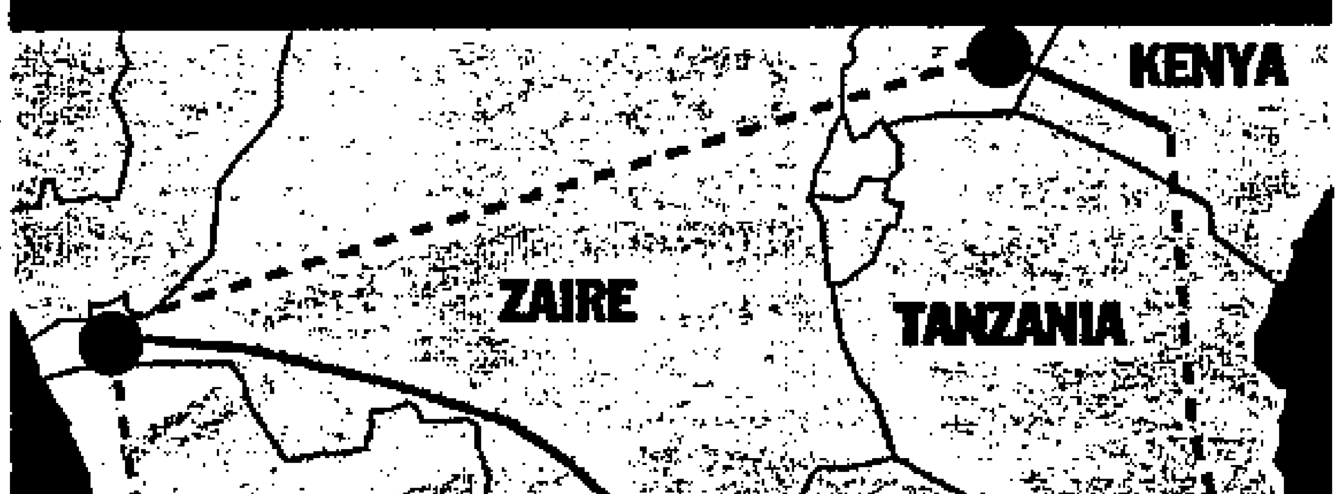
Eskom energy manager Brian Statham says natural gas, in the regional setting, has great potential if available for power generation. On the west coast, the Kudu field could probably sustain a base load plant of nearly 2 000 MW "if the economics are right." The Pande field in Mozambique could sustain a plant of about 1 000 MW.

Eskom, for practical reasons, will limit itself to about [illegible] imported power but the exact figure will depend on prices. But imports are not the only possibility for augmenting Eskom's capacity. Some independent power producers are expressing interest in becoming involved and there may be opportunities for them to supplement capacity, either supplying Eskom or in competition.

Eskom has in recent years concentrated on building generating units of about 600 MW, the so-called "six-packs." Technically, says Statham, Eskom could install and run 900 MW units and there are coal fields that could sustain units of that size. There would be benefits of scale.

However, there are also advantages of standardising on 600 MW units. Indeed, it might even be appropriate for reasons of flexibility to turn to smaller units. Eskom has taken no decisions, though all options are being investigated. We should remember that the stations still mothballed have units of around 200 MW. They will influence the flexibility for operations when they return to service.

HIGH VOLTAGE FRIENDSHIP



Most relevant, modern combined cycle generating units come in modules of about 200 MW-250 MW. These generating systems first use the burning fuel to drive a gas turbine and then to heat a conventional boiler in a two-stage process. The combined cycle achieves a thermal efficiency of around 45%-50%, compared with, say, 36% for conventional boilers. It is also considered to be cleaner environmentally.

Eskom is keeping the nuclear option open and has bought a number of suitable sites. The relative economics of nuclear power is improving. There have been advances in nuclear plant design with a move to smaller, low-maintenance, simpler systems. By the time Eskom needs to consider the nuclear option — some time in the next century — many of these innovations will probably be commercially proven.

Statham says there is considerable emotion around the nuclear safety issue. The greater the number of years that pass after Chernobyl, the more the potential impact of nuclear incidents will be understood.

Pumped storage schemes may become more important as they can serve a dual role of compensating for peak demands for power and transferring water across geographic divides.

Statham considers it important that all these options are kept open. SA is blessed with cheap coal but environmental constraints may prevent us from taking full advantage of our extensive reserves. The imposition of a global "carbon tax," for example (though unlikely), would have a major impact on the energy mix in SA.

Eskom is working on the assumption that economic growth will be somewhere between 3%-4% a year. Based on this, it will need to commission another power plant only around 2008. Lead time — now a remarkable 3-3,5 years in Europe — is one area where combined cycle scores heavily.

Though the plant is marginally more expensive, the shorter lead time cuts financing costs.

The structure of load growth will also influence Eskom's decision. If the load is going to peak more because domestic demand grows relative to other segments, the combined cycle and pumped storage options offer more flexibility as they have quicker start-up times than conventional coal-fired plants. But the need for peaking capacity will also depend on how soon we can link with neighbours to tap their hydro-electric capacity.

The next technical advance after the combined cycle would be the fluidised bed boiler, which has been brought to the stage of delivering around 200 MW in Germany.

Finally, there are marketplace options such as interruptible supply agreements with major users. These would allow Eskom to reduce its reserve margins and therefore its costs.

Evidently, the spirit of technical innovation and proactive management of the electricity market are alive and well and living at Megawatt Park.

Kudu gas could fuel Cape power station

55

CT(BR) 30/5/95

By Derek Tommey

Mining Editor

Within the next six or seven years the Western Cape is likely to become one of the country's major industrial growth areas, with South African and international firms flocking to the area to take advantage of its newest resource — gas powered electricity.

This is the outcome that is expected to flow from the development of a potentially major natural gas field, the Kudu field, situated 150km off the coast of Namibia by Shell Exploration and Production Namibia and Engen.

If everything goes according to the developers' expectations, they will start piping this gas to the Namibian coast and then to Saldanha Bay to fuel a new Eskom power station and possibly Iscor's new steel plant, just after the turn of the century.

A further pipeline may be laid to Cape Town to supply local industry.

But the Western Cape will not have to wait until the pipeline reaches Cape Town to benefit from natural gas. Ger Kegge, Shell Exploration and Production Namibia's managing director, says his calculations show that a gas-fired Eskom power station at Saldanha could produce electricity at a lower cost than Eskom would be able to supply to Cape Town in the future from its Highveld power stations.

Eskom does not fully agree with these figures, but has held preliminary discussions with Shell and Engen on the supply of gas to a future power station, he says.

Mike Deats, senior general manager of fuel and technical services at Eskom, says it is likely that Eskom may come to some kind of arrangement for the purchase of gas.

He says it makes sense to have additional generating capacity in the Western Cape as this will help improve the reliability of supply to the area.

Cape Town gets most of its power over long-distance transmission lines from the Eastern Transvaal and the balance from the Koeberg nuclear power station.

Kegge says Shell Exploration and Production Namibia is confident that the field contains a minimum of 3 trillion cubic feet of gas and may well hold much more. Drilling to determine the size of the field will begin soon.

An important requirement in the development of the field is large long-term commercial customers. Eskom and Iscor can meet this requirement.

Kegge says that in ballpark figures, it will probably cost about $1 billion to develop the field and pipe the gas to the Western Cape.

Top yield on sugar

CT(BR) 30/5/95

By John Spira

Gauteng Business Editor

Investors in the JSE-listed Sugar Stock SU01 will receive the maximum yield due on their 1995 Harvest Warrants.

In March last year Theta Securities, the Rosebank-based firm of financial securities specialists, designed and placed R42 million SU01 stock. Investors included Old Mutual, Fedsure, Metlife and African Life.

The stock was issued by the South African Sugar Association to fund 9 500 small sugar cane farmers from disadvantaged communities. The sugar industry, via the association, wished to limit the negative effect of continuing drought on production and loan default by small cane growers.

The returns on the stock at the date of issue were capped at about 16,88 percent and had a floor return of about 8,9 percent.

Returns were based on expectations of a basket of factors that affect the small cane growers' earnings. The return is determined by:

Mr Leon Kirkinis, managing director of Theta Securities

- The South African sugar crop;
- The world spot price of sugar on March 31;
- The closing rand/dollar exchange rate on March 31.

Although the sugar crop and the rand/dollar spot were marginally below base projections, the world spot price of sugar, which increased from $231 a ton at the date of issue to $324 a ton on March 31 1995, exceeded expectations. World consumption exceeded world production for the third consecutive year.

QUESTIONS

†Indicates translated version.

For written reply:

Dept of Water Affairs and Forestry: advisers/consultants

57. Sen E K MOORCROFT asked the Minister of Water Affairs and Forestry:

(1) Whether he has appointed any (a) advisers and/or (b) consultants to advise him or his Department; if so, (i) what (aa) is the name and (bb) are the qualifications of each such adviser and/or consultant, (ii) for what (aa) purpose and (bb) period was each appointed and (iii) what remuneration package and/or other fee is being paid in respect of each;

(2) whether any fringe benefits are payable to any such advisers and/or consultants; if so, what are the relevant details in each case;

(3) whether any advisers and/or consultants are advising or assisting him or his Department at no cost to the State; if so, (a) what (i) is the name and (ii) are the qualifications of each such adviser and/or consultant and (b) what function is each performing within his Department;

(4) whether any (a) organisations, (b) bodies and/or (c) persons are paying the costs of the advisers and/or consultants referred to in paragraph (3); if not, what is the position in this regard; if so, what are their names? S116E

The MINISTER OF WATER AFFAIRS AND FORESTRY:

(1) (a) Yes.

(b) Yes.

(i) (aa) (i) Mr L J Abrams.

(ii) Mr A H Heard.

(bb) (i) B.Sc Civil Engineer (Natal), M.Sc Civil Engineer (Wits), M SAICE. Pr Eng.

(ii) BA, BA Hons (First Class) in Politics (UCT).

(ii) (aa) To advise me on any matter in my capacity as Minister of Water Affairs and Forestry.

(bb) (i) 1 July 1994 to 30 June 1995.

(ii) 16 June 1994 to 30 June 1995.

(iii) (i) R288 000 pa inclusive of all normal employment benefits.

(ii) R230 400 pa inclusive of all normal employment benefits.

(2) No.

(3) Yes.

(a) (i) Mr D J Gevisser.

(ii) B.Sc Forestry (Stel), M. Forestry (New York State College of Forestry, Syracuse University, New York, USA).

(b) None.

(4) (a) No.

(b) No.

(c) No.

Mr Gevisser's services require no expenditure from the State as his advice is offered free of charge and his occasional personal visits to Cape Town, for instance, coincide with other commitments. Several experts in various fields have offered their services free of charge to me in the recent past as a contribution to the new Government and this public spirit and goodwill is being utilised in the interest of the State without committing the State or benefitting such individuals in any way.

Koeberg Power-station: people within 16 km radius/potassium iodate tablets

81. Sen J SELFE asked the Minister for Public Enterprises:

(55) Hansard 30/5/95

(1) with reference to her reply to Question No 10 in the National Assembly on 21 September 1994 (a) how many people are estimated to live or work within the 16 km radius of the Koeberg nuclear power-station and (b) (i) how many potassium iodate tablets are currently available for distribution in the event of an accident at the power-station, (ii) where are they stored and (iii) how will these tablets be distributed should the need arise;

(2) whether potassium iodate tablets have an indefinite shelf-life; if not, (a) what is the shelf-life of these tablets, (b) on what date was the current supply of tablets manufactured, (c) what arrangements exist for the (i) replenishment of these tablets on a regular basis and (ii) manufacture of additional tablets if required and (d) what is the estimated cost of maintaining a supply of these tablets?

S156E

The MINISTER FOR PUBLIC ENTERPRISES:

(1) (a) 75 000.

(b) (i) 1 540 000.

(ii) The Cape Metropolitan Council holds 90% of the stock, and the remainder is available for distribution to Koeberg personnel and Robben Island inhabitants.

(iii) Distribution to the public is effected by the Civil Protection and Health Services staff of the Cape Metropolitan Council. Issue is provided for at distribution points and mass care centres at a recommended dosage of two tablets per person per day.

(2) No.

(a) Three years.

(b) December 1994.

(c) (i) Replenishment is via procurement by Eskom to coincide with the expiry date of the previous stock.

(ii) Additional tablets may be obtained from known stockists or manufacturers in the United States of America or the United Kingdom.

(d) R200 000.

Agricultural marketing boards

94. Sen E K MOORCROFT asked the Minister of Agriculture: (3) Hansard 30/5/95

(1) (a) How many agricultural marketing boards were in existence (i) in 1990 and (ii) as at the latest specified date for which information is available, (b) what percentage of agricultural production fell under the marketing boards (i) in 1990 and (ii) as at the latest specified date for which information is available and (c) what were the current total assets of each specified board still in existence as at the latest specified date for which information is available;

(2) whether any of these boards (a) require compulsory membership by farmers falling under their control, (b) impose compulsory levies on farmers and (c) operate single channel marketing systems; if so, which boards in each case;

(3) whether any representations have been received for the disbandment of any of the existing boards; if so, (a) from whom and (b) what was the response in each case;

(4) whether any of these boards have introduced measures to deregulate themselves; if so, which boards?

S174E

The MINISTER OF AGRICULTURE:

(1) (a) (i) 21.

(ii) 15.

(b) (i) 1990 — 67,05%.

(ii) 1993 — 58,16%.

(c) The total assets of each specified board in existence as at the latest specified date are as follows:

Canning Fruit Board — R4,5 million.
Citrus Board — R18,2 million.
Cotton Board — R5,9 million.
Deciduous Fruit Board — R23,6 million.
Dried Fruit Board — R12,9 million.
Lucerne Seed Board — R3,9 million.

Maize Board — R14,2 million.
Meat Board — R160,7 million.
Milk Board — R1,1 million.
Mohair Board — R68,3 million.
Oilseeds Board — R15,9 million.
Sorghum Board — R0,185 million.
Tobacco Board — R3,6 million.
Wheat Board — R68,1 million.
Wool Board — R46,8 million.

NB: Assets include fixed assets (buildings), machinery and equipment, investments and current assets.

(2) (a) No.

(b) Yes—all existing control boards impose compulsory statutory levies.

(c) Yes—the following single channel marketing systems are operated:

— Single-channel fixed price schemes for winter cereals (wheat, barley and oats).

— Single-channel pool schemes.
Sunflower seed and Soya beans.
Leaf tobacco.
Deciduous fruit for export.
Citrus fruit for export.
Dried fruit.

(3) No.

(a) and (b) Fall away.

(4) Yes.

— The Citrus Board

The single-channel marketing arrangements for citrus fruit on the domestic market were abolished in favour of a free marketing system. The export of citrus fruit takes place according to a single-desk approach.

— The Cotton Board

Restrictive registration of cotton ginners was abolished.

— The Deciduous Fruit Board

The single-channel marketing arrangements for deciduous fruit on the domestic market were abolished.

— Lucerne Seed Board

The single-channel pool system was replaced by a surplus removal system.

— Maize Board

The single-channel fixed price marketing system was replaced with a new marketing system according to which maize will be freely traded in the domestic market without statutory price fixing.

— Meat Board

Restrictive registration of abattoir agents, butchers, general dealers, meat processors, hides and skin dealers as well as importers was abolished. The prohibition establishing controlled areas was repealed, making the freer movement of meat throughout the RSA possible. Control over meat products was scrapped.

— Mohair Board

The single-channel pool system was replaced with a surplus removal system.

— Oilseeds Board

The marketing of groundnuts no longer takes place through a single-channel pool system, but by way of a surplus removal system with voluntary pools.

— Sorghum Board

The floor price system has been replaced by a surplus removal system with voluntary pools.

— Wool Board

The single-channel pool scheme was abolished and replaced with a new scheme according to which wool is freely traded in the domestic market.

Convicted persons released before completion of sentences

99. Sen J SELFE asked the Minister of Correctional Services:

Whether any persons convicted of violent crimes and sentenced to more than six years in prison were released before the completion of their sentences in (a) 1993 and (b) 1994; if so, how many in each case?

S180E

Namibia gas find may give W Cape big boost

(55)

Business Staff

JOHANNESBURG. — Within the next six or seven years the Western Cape is likely to become one of the country's major industrial growth areas with South African and overseas firms flocking to the area to take advantage of its newest resource — cheap electricity.

This is the outcome that is expected to flow from the discovery of a major natural gas field, the Kudu field, about 150 km off the coast of Namibia by Shell Exploration Namibia and Engen.

ARGT 30/5/95

If everything goes according to the discovers' expectations, they will start piping gas to the Namibian coast then to Saldanha Bay to fuel a new Eskom power station and Iscor's new steel plant just after the turn of the century.

Subsequently, a further pipeline will be laid to Cape Town to supply local industry and possibly the household market as well. But the Western Cape will not have to wait until the pipeline reaches Cape Town to benefit from cheap gas. Shell Exploration Namibia MD Ger Kegge says his calculations show that a gas-fired Eskom power station at Saldanha could produce electric power at a lower cost than Eskom is able to supply to Cape Town from its Highveld stations.

He said Eskom did not fully agree with these figures. However, Eskom had held preliminary discussions with Shell and Engen on the supply of gas to a future power station.

Mike Deats, senior general manager, fuel and technical services at Eskom, said it was likely that Eskom could come to some arrangement for the purchase of gas from the Kudu field.

He said it made sense to have additional generating capacity in the Western Cape as this could help improve the reliability of supply to the area.

Cape Town gets most of its power over long-distance transmission lines from the Eastern Transvaal and the balance from the Koeberg nuclear station.

Killing for cigarette: Judgment postponed

The Argus Correspondent

JOHANNESBURG. — Judgment in the trial of two Krugersdorp youths accused of murdering and robbing a 38-year-old man after he had refused to give them a cigarette has been postponed in the Rand Supreme Court until June 12.

The accused are a 16-year-old youth and Frikkie Theron, 18.

They have both pleaded not guilty to murdering Sam Khoza, 38, and stealing his watch and shoes in September 1994.

Uniform tariffs for electricity nearer

Star 31/5/95

BY DEREK TOMMEY

The day when South Africans can expect to pay more uniform and in some areas much more reasonable electricity tariffs, is rapidly coming closer.

This was highlighted yesterday when Eskom, the country's giant producer, together with another 250 electricity authorities, applied to the National Electricity Regulator for licences to produce, transmit and sell electricity.

From today, all electricity generators, transmitters and distributors, in terms of the Electricity Amendment Act of 1994, have to obtain licences from the national regulator to operate.

This was an essential step in the necessary move to rationalise the electricity industry, said Dr Ian McRae, chairman of the National Electricity Regulator.

The recently-held Electricity Forum decided that it was essential that the industry should be rationalised to overcome the problem of supplying electric power to the black and rural areas, he said.

The licensing process will enable the National Electricity Regulator to identify clearly who might be the players in the future and to strive for a more effective and efficient industry and even, in the longer term, enable it to open the industry to more competition.

(65)

Dependence

"It would also enable it to focus on a more effective way of running the industry. And moving towards fuller rationalisation."

He said there were more than 3 000 tariffs in South Africa. The licensing system would enable These tariffs to be rationalised and for the country to move towards a national tariff.

However, a complicating factor was that local governments were heavily dependent on electricity for revenue and the restructuring of the industry would become a great threat to them.

It must also be borne in mind that the problem of local government financing would still have to be solved, said McRae.

POWER TALK *Andries Calitz, senior general manager of marketing at Eskom, seen submitting Eskom's application to the National Electricity Regulator for licences to generate, transmit and distribute electric power. With him from the left, are Ian McRae, chairman of the NER and Brian Statham, senior general manager, energy trading, at Eskom.*

PHOTO: JOHN WOODROOF

More uniform power rates on horizon

CT(BR) 31/5/95 (55)

By Derek Tommey

The day when South Africans can expect to pay more uniform and, in some areas, much more reasonable electricity tariffs is rapidly coming closer.

This was highlighted yesterday when Eskom, the country's giant electricity producer, together with another 250 electricity authorities, applied to the National Electricity Regulator for licences to produce, transmit and sell electricity.

From today, all electricity generators, transmitters and distributors, in terms of the Electricity Amendment Act of 1994, have to obtain licences from the national regulator to operate.

Efficiency

This is an essential step in the necessary move to rationalise the electricity industry, said Dr Ian McRae, chairman of the National Electricity Regulator.

The recently held Electricity Forum decided it was essential that the industry be rationalised to overcome the problem of supplying power to black and rural areas, he said.

The licensing process will enable the National Electricity Regulator to identify clearly who could be future players and to strive for a more effective and efficient industry and, in the longer term, enable it to open the industry to more competition.

He said there were more than 3 000 tariffs in South Africa. The licensing system would enable these tariffs to be rationalised and for the country to move towards a national tariff.

However, a complicating factor was that local governments were heavily dependent on electricity for revenue and the restructuring of the industry would become a great threat to them.

As the National Electricity Regulator focused on its ability to meet development goals, the problem of local government financing would also have to be solved, said Dr McRae.

ELECTRICITY (55)

On the grid

FM 2/6/95

Roshcon, the operating subsidiary of Eskom-controlled industrial group Rotek Industries, has been awarded a US$41m turnkey contract by Tanzania's electricity supplier, Tanesco. The contract is for the supply and installation of a 91 MW modular gas turbine power generating plant in Dar es Salaam.

The project is part of Tanesco's $650m electricity upgrading programme, financed by the World Bank. Included in the programme are plans to link the Tanzanian grid with Malawi, Uganda and Kenya, building a hydro-power station and developing the offshore Songo-Songo gas fields.

The Tanzanian contract follows last month's announcement of a R44m pilot contract to supply and install 41 000 prepaid electricity meters along with a supporting vending system, also in Dar es Salaam. Uganda might also be in the market for about 120 000 meters.

The meter contract involves the creation of 350 jobs, including 300 Tanzanians now being trained by Roshcon.

Roshcon deputy GM Pieter Oosthuizen says: "It took two-and-a-half years and half a million rands of intensive marketing in Africa. We now consider ourselves the contractor to beat in East Africa."

The gas turbine technology for the latest project was developed by the $2bn-a-year, Houston-based Stuart & Stevenson group. Roshcon's third joint venture partner is the $1,5bn-a-year, Toronto-based Stone & Webster engineering contractors which will handle the project engineering and design.

Oosthuizen says Roshcon is also involved in a R10m electrification project for Zambia's Zesco electricity supply company in Lusaka. "We hope this is the beginning of big things in Zambia. But, while the need is great, financing for further projects remains a problem there."

Based on its Tanzanian success, Roshcon is now also looking towards tendering for an identical gas generating contract in the Ivory Coast.

A new division, Roshcon International, has been formed to handle contracts outside SA. Turnover is expected to increase to R175m in 1995 from less than R10m five years ago, when Roshcon was established as part of Eskom's commercialisation programme.

Sister company Rotek Engineering is involved in a R27m hydro-power station upgrading project in the Congo, and Roshcon plans to tender for a $25m transmission line contract in Uganda. Another major tender (with an international group) is for a

$100m hydro-power station contract in Malawi, says Oosthuizen.

Roshcon parent Rotek Industries, which projects that last year's R500m turnover will jump to about R700m in 1995, will shortly initiate a share participation scheme for its employees. ■

SA to link up with partner on nuclear technology

PELINDABA. — South Africa's Atomic Energy Corporation is negotiating with a potential foreign partner on development of laser technology to produce industrial quantities of enriched uranium, the corporation's chief executive Waldo Stumpf said. 55

"It's being finalised now and hopefully in the next few weeks it will come to fruition. What we're doing with our partner is industrialising technology already developed," he said, declining to identify the foreign partner.

He added South Africa was the world leader in molecular laser isotope separation. ARG 3/6/95

Mr Stumpf said last August he hoped a Western nation would invest about R36 million over the next two to three years in a pilot plant to produce nuclear fuel for export. — Reuter.

Star 3/6/95 (55)

Atomic body spreads wings

SA's Atomic Energy Corporation is negotiating with a potential foreign partner on development of laser technology to produce enriched uranium, AEC chief Waldo Stumpf said in Pelindaba yesterday. "It's being finalised now and hopefully in the next few weeks it will come to fruition." — Sapa-Reuter.

Athlone power plant all fired up again

55

~~124~~

CT 7/6/95

MUNICIPAL REPORTER

ATHLONE power station is being fired up again after years of enforced inactivity.

City electrical engineer Mr Fred Berwyn-Taylor said Eskom had approached the city some years ago and said it had spare capacity in some of its more modern power stations.

Since it is better to run power station machinery continuously, rather than switching it on and off according to demand, Eskom offered to provide Cape Town with power at "a satisfactory price" in exchange for keeping Athlone power station idle.

Mr Berwyn-Taylor said this arrangement had made sense for both parties. Eskom supplied electricity to Cape Town at a price below that for which Cape Town would be able to generate it itself. This is because modern power stations upcountry are more efficient than old ones — Athlone power station was built in 1961.

Last winter, however, Eskom experienced a large load increase and nearly ran out of spare capacity. It informed Cape Town that it would phase out its favourable tariffs over a three-year period.

This means that Cape Town has to phase in Athlone power station again, which involves a gradual warm-up process. A couple of months ago, it started working again at one-third of its capacity.

Yesterday a ship was due to offload 12 000 tons of coal from Namibia in Table Bay harbour for the power station.

Mr Berwyn-Taylor said the council was aware of environmental sensitivity and steps were being taken to avoid being an irritant in the community.

"We will clean up the stack gases, even though they are already within the limits laid down," he said. "Steam does escape, but we are busy with devices to silence it."

(55) (2...)

ELECTRICITY

Power struggle

FM 9/6/95

A strong difference of opinion has arisen between the Association of Municipal Electricity Undertakings (AMEU) and Eskom over the basis of comparison for electricity distribution costs.

AMEU president Howard Whitehead contends that the present four-tier pricing structure imposes an additional cost burden on customers of local authority distributors when compared with the equivalent Eskom customers.

The present structure starts with the cost of generation and any levy that might be placed on generation. At the next tier the transmission costs are added to the costs.

At the Eskom distribution level all these costs plus the cost of Eskom's own distribution operations, as well as the cost of its electrification programme, are carried by Eskom customers. Among these customers is the typical local government distributor, which must add its own distribution and streetlighting costs and a contribution to other municipal services. The customer of a municipal distributor must therefore not only carry the financial burden of local government but a share of Eskom's own distribution and electrification costs.

The proportion of these categories of Eskom's costs borne by customers of local governments is considerable, remembering that Eskom's sales to local government amount to more than 40% of the total. This burden is carried even though many large municipal undertakings are connected directly to Eskom's transmission grid and so bypass its distribution network. Municipal undertakings in this category pay 30%-50% more for their supply than their Eskom counterparts.

A rationalisation of pricing structures should be the National Electricity Regulator's first priority, Whitehead argues. Brave words indeed, but Eskom redistributor sector consultant Ken Campbell portrays the situation differently.

Campbell says the NER has convened work groups comprising the AMEU, Eskom and other representatives specifically to address issues such as ringfencing. That is the determination of the boundaries between generation, transmission and distribution of electricity.

Eskom denies the claim by the AMEU that larger municipal undertakings pay 30%-50% more than their Eskom counterparts. The price differentials are in fact 19%-30%.

Eskom is also concerned that an impression is being created that changes to come may afford AMEU members considerable price relief. Some large municipal undertakings could, to the contrary, see large increases if true costs were reflected in Eskom's tariffs and not countered by national cross-subsidies within Eskom's tariffs.

Considering that the NER is now busy with the task of establishing the conditions on which electricity undertakings may be licensed in future, its chairman, Ian McRae, has refused — perhaps wisely — to comment on this controversy. ■

R30-m to get Athlone power going

(55)

Municipal Staff

THE Cape Town City Council is spending R30 million to recommission the Athlone power station in an effort to keep to a minimum electricity costs.

The power station was commissioned in 1961 but closed 10 years ago. It will take about three years to get it fully-operational.

Station manager Wouter Roggen said because the station was coal-powered, it meant that some ash would be released into the air and the station would also generate some noise in the daily process of warming the steam turbines before daylight.

"But we intend installing fabric filters on the boilers to limit ash emissions to 50 mg/cubic metre and council engineers are experimenting with sound attenuators, to limit sound levels."

ARG 9/6/95

The national ash emission standard was 400 mg a cubic metre.

Mr Roggen said the recommissioning of the station was in the early stages and much of the light fall-out monitored in the vicinity in recent months had turned out to be mostly wind-blown particles from other sources.

Eskom holds hopes for gas

Mungo Soggot

BD 15/6/95 (55)

ESKOM hopes a major gas consumer will be found so that demand from Namibia's Kudu gas fields will make construction of a Cape gas power station viable.

Energy management manager Brian Statham said the scheme did not appear to be as competitive as a coal-fired station, unless another major gas user was found, such as the proposed and controversial Iscor smelter at Saldanha Bay, which would then make the piping of the gas from Namibia feasible.

A gas-powered station — more environmentally friendly than a coal-fired one — was mooted as a key part of Eskom's capacity expansion which becomes essential when its current surplus runs out after 2000.

An Iscor spokesman said as the gas was not yet available, the steel giant had planned a conventional smelter, but said if the gas was available at a later stage it would consider using it.

A Cape gas-fired power station was seen as competitive as building anEastern Transvaal coal-fired station to supply the Cape with electricity.

Electrical: Power for the masses

CT(BR) 20/6/95 (55)

The electrical distribution equipment industry has the capacity and institutions to meet the needs of a mass electrification programme but needs to be restructured to provide competitively priced goods for local and export markets, Richard Goode of the Industrial Strategy Project has found.

But the electronics industry was in a bad way, it said. It was unable to provide affordable consumer goods to the millions who would come on stream as part of the 8 million new connections that Eskom planned for the next 20 years.

"Although the electrical distribution equipment industry, mainly through Eskom, has the generation and transmission infrastructure needed, it is constrained by the lack of investment, fragmentation of demand, lack of standards and economies of scale, high raw material costs and low skills levels among workers."

Goode recommended phased reduction in protective tariffs for the electrical equipment firms, particularly the highly protected distribution transformers, circuit breakers and insulated cable producers.

There was a need for a skills upgrade to improve productivity.

The electronics sector, on the other hand, was in a far worse position. It was uncompetitive and it relied on imports.

To survive, it would have to be integrated into international markets with a phased reduction of tariffs on equipment and components and greater access to foreign technology with South African companies entering into co-operative networks overseas.

Goode recommended the sector should concentrate on developing technologies that would enhance productivity in other sectors.

Some sub-sectors within the electronics sector would survive but others would fail, he said.

BD 22/6/95

Maree opens substation

55

Nicola Jenvey

EMPANGENI — SA's largest electrical substation, the R141m Athene power station built to service the Alusaf Hillside smelter, was officially opened by Eskom chairman John Maree yesterday.

The station's capacity was 2 000MW, 30% greater than its nearest competitor in SA. The Alusaf Hillside smelter would require 800MW at any given moment and the additional capacity would be used to feed smaller projects such as Richards Bay Minerals.

The Alusaf Bayside smelter would still require capacity from the Impala substation.

"Within three years SA will be the world's cheapest supplier of electricity and this (Richards Bay-Empangeni) region has the potential to attract large-scale international investments where the greatest cost component is electricity. This could be the Silicon Valley of the electricity world," Maree said.

Commenting on Eskom's rural electrification project, Maree said the region would benefit significantly from the fact that the backbone of an electrical supply system for the region had been installed because of Alusaf's needs.

It would be possible now to supply electricity to more homes in the region at a faster pace than previously, Maree said.

Cahora Bassa power back 'early in 1997'

ARG 22/6/95 (55)

Political Staff

ESKOM and Hidroelectrica de Cahora Bassa — the Mozambican company that owns and operates Cahora Bassa — have agreed to re-establish the power supply through the high-voltage DC system to South Africa as early as possible in 1997.

Replying to a question tabled in the national assembly, Mineral and Energy Affairs Minister Pik Botha said the Mozambican company had now placed the contract for the powerline reconstruction with an Italian consortium for completion within two years, by June 7 1997.

On completion early in 1997 of the high-voltage line now under construction from Cahora Bassa to Zimbabwe, that country would buy 500 megawatts (MW) from the Mozambican supplier.

Eskom had forfeited this power from its contractual entitlement in favour of Zesa, the Zimbabwean Eskom, until the end of 2003.

Mozambique had a maximum allocation of 200MW from the 2 000MW Cahora Bassa scheme.

Apart from using this power for its own customers, Mozambique was negotiating with Swaziland and Malawi for the sale of its excess power.

The transmission schemes from Cahora Bassa to Malawi and between Swaziland and Mozambique had been studied but still had to be built.

Eskom would provide financing to the tune of R130 million, of which two-thirds was guaranteed by the South African government, for the export of steel tower components to Mozambique for the reconstruction of the high-voltage DC lines.

The main contracts for reconstruction of the Cahora Bassa transmission scheme were now finally well underway and South Africa could expect the reinstatement of this important renewable and environmentally clean supply of energy in the first half of 1997.

ESKOM (55)

Cold comfort

FM 23/6/95

It's an ill wind that doesn't blow somebody good — and, as in the case of electricity giant Eskom, the chillier the winter the bigger the uptake in capacity.

Eskom CE Allen Morgan says the power utility is operating at about 20% above budget, which should see revenues for the year coming in at the R3,2bn level.

Given the increased growth rate, and increased demand on the system, Eskom is being prudent on managing capacity. "We have kept our margins in terms of available capacity as low as possible, and if we go into a cold winter we can expect a fairly substantial growth on our peak."

Morgan sees Eskom's peak line at about 25 300 MW in a mild winter. "If we have a very cold winter we can expect our peak to rise to about 26 000 MW."

The utility is now also working closely with the Department of Trade & Industry to launch an international initiative to attract investors. "We are looking at a broad range of industries, and again one must look at beneficiation. We do provide cheaper electricity and have various commodity-linked supply schemes available to foreign investors." Some interest has been shown in Eskom's foreign marketing initiatives "but we haven't got a firm paper on it yet."

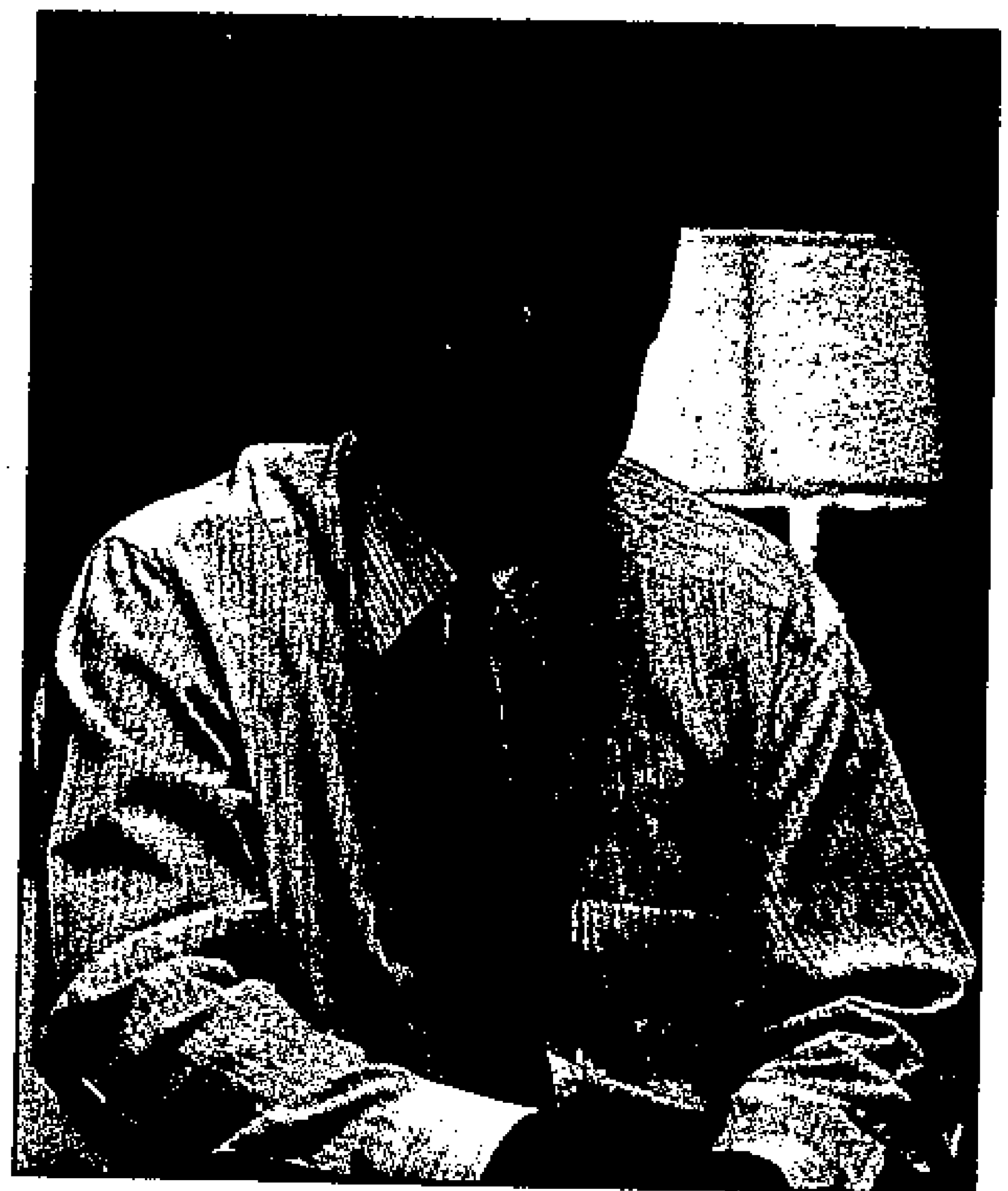
Morgan's message to the market is that the business is "pretty sound. We do have our problems, but we are on top of them."

On the question of mothballed power stations, Morgan says that next year will see the commissioning of the first machine at Majuba. "We will also start bringing back the Arnot station — we will bring back about four machines at Arnot next year."

But totally mothballed plant will only start coming back about 1997-1998.

On the issue of nonpayment for services, Morgan says arrears are still increasing. However, what is positive is that the trend on the provision is coming down. "Last year at this time we were providing for R25m on a monthly basis. This is now down to R15m a month in provisions for bad debt. I don't see a drastic improvement until after the November elections.

"But what we have succeeded in doing is stemming the tide and bringing the trend down. Masakhane has played a big role and, of course, cutting off poor payers is also a benefit to us at this stage."



Morgan . . . *stemming the tide of nonpayment*

Morgan admits that perhaps the cut-off policy should have been implemented earlier, but says the programme is certainly reaping benefits for Eskom.

"At one stage we were averaging 20 000 disconnections a month. But once they pay up we bring them back on line. If people want to come back on, we restructure the outstanding debt for them. We are reaching far better agreements now with civic associations — one of the main ones being the Soweto Civic Association. We have a good arrangement with them, we have good support from them. They are encouraging residents to pay for services."

He adds that all new connections — to date, about 800 000 — are now installed on the basis of prepayment systems.

The electrification programme is "going well" and "under the circumstances" Eskom has connected more than 100 000 houses so far this year. Though its target for the year lies at about 300 000 homes, there are some areas which are still violent and Morgan admits "we have not been able to keep progress as we wished it."

The utility still hopes to connect a further 50 000 homes to meet projections by mid-year. And it is still confident that, in the six months left, it will be able to manage its targets before year-end.

Referring to Eskom's affirmative action programme, Morgan says that a number of senior managers had taken early retirement — to date, about 50 — and they will be replaced by black managers.

"Our policy is to keep the skills in the organisation while we are progressing with affirmative action." ■

Koeberg generators pass 100 billion mark

CT 27/6/95

KOEBERG nuclear power station on Sunday night notched up 100 billion kilowatt hours of electricity generated since start-up in 1984. 55

The power generated was the equivalent of South Africa's total demand for 8,2 months, or demand in the western and southern Cape for 6,9 years, Koeberg said in a statement yesterday.

The operating time required to produce 100 billion kilowatt hours was 7,4 years for the station's Unit 1 and 6,8 years for its Unit 2. Koeberg's longest period of continuous generation was 357 days last year.

Since start-up the station had "consumed" 21 tons of uranium. — Sapa

Solar power for rural development

(55)

ARG 29/6/95

□ American team leads the way

Staff Reporter

PENINSULA Technikon students sat back while their lecturers got some tuition this week, courtesy of visiting American renewable energy specialists.

The professors and lecturers wielded solar panels and wind generators on the roof of the tecknikon's electrical engineering department, as instructors from the US-based organisation Renewable Energy for African Development (Refad) taught them the basics, just in case they had forgotten anything.

Theory was turned to practice as the learned crowd put a variety of clever, low technology instruments to work.

"Our aim is to educate those people who are responsible for training the people who will be doing the installations," said Refad instructor Jeff Ross.

"The goal of the exercise is rural development — with electricity, a family can read at night, watch television or listen to the radio, and all this contributes to education.

"At the same time, their lives are made more bearable and this technology is environmentally far more acceptable.

"We use solar power to heat or pump water, and wind turbines to generate electricity for a multitude of uses. The whole idea is not to compete with the grid of the public utility (Eskom), but to provide power where the grid doesn't reach.

"The power can be used for primary lighting, water and so on for schools, clinics and enhancing rural family life.

"The philosophy behind it is to enable people to generate an income either directly or indirectly from the use of this type of equipment.

"In this way, they can find ways of paying for the equipment. Refad also has as one of its aims the creation of a revolving credit system on which communities can buy the equipment.

"It is true that sometimes such equipment can be quite expensive involving a large initial capital outlay, and it would be wise to get people to use it in such a way that it can pay for itself."

Peninsula Technikon's Bennett Alexander, senior lecturer at the department of electrical engineering, said the local industry was very helpful in supplying hardware for the course.

"They were marvellous. We soon reached a point where we had to tell people we had enough equipment to work with.

"The fantastic thing about this kind of technology is that it is small and modular, while it can be installed and operated with the minimum technical knowledge."

The course, which started last week, will continue for four weeks.

SUN FUN: Setting up practice solar panels are Pious Changala of Malawi, Joseph Phuti of Botswana, Levy Nakatana of Namibia, Amos Mdebuka of the Eastern Cape and Jeff Ross of the US agency Refad. One of the ultimate goals of the exercise is to make this available to more rural communities in South Africa.

Picture: ROY WIGLEY The Argus.

(27/1)(123)(55)

A modest beginning

THE African Development Community electricity pool should "be in a position to make a modest beginning later this year", Minerals and Energy Affairs Minister Pik Botha said in Cape Town yesterday. The pool should save the region $600m a year in the short term, he said. 20/7/95

Pik: Extra energy on the cards

CT 7/7/95

ENERGY is a much-needed resource for rapid socio-economic development in the Southern African region, Mineral and Energy Affairs Minister Mr Pik Botha said yesterday.

He told a meeting of energy ministers of the Southern African Development Community in the city that two documents aimed at unleashing sufficient energy in Southern Africa could be approved during the meeting.

The first document, the Southern African Power Pool, would decrease the need for investing in expensive power stations while benefiting the region with about $600 million (about R2 160m) a year.

The meeting, attended by 10 SADC energy ministers and 40 senior government official, ends today.

See Page 19

Sapa, Staff Reporters

Power pool means energy for Africa

(55)

MXOLISI MGXASHE
Staff Reporter

ARG 8/7/95

FOR Southern African countries to achieve rapid economic and technical development they must beware of excessive bureaucracy and slow decision-making, says Minister of Mineral and Energy Affairs Pik Botha.

He was speaking at a five-day Southern African Development Community (SADC) conference on energy that ended in Cape Town yesterday.

Mr Botha said consultation and achieving consensus on government projects were extremely important, "but equally important is the making of good decisions in a reasonably short time" to ensure that governments were able to deliver the goods without wasting precious time.

The conference forms part of a number of efforts by Southern African governments to pool resources for more rapid and effective co-ordination.

Mr Botha also warned delegates not to use state mechanisms for what the private sector could do better, quicker and cheaper.

"I am not saying there is no role for governments in the energy sector, but the respective roles of the state and the private sector should be clearly defined and understood. The government should create the level playing field and the rules of the game and then step back to allow the private sector to get on with play."

Delegates approved two important documents — the Southern African Power Pool and the Protocol on Co-operation in Energy Development within SADC Countries.

Mr Botha said savings of R1,8 million a year in energy costs should be achieved with the launch of the power pool.

It would increase security of supply and reduce the need to invest in expensive power stations, he said.

"From a technical point of view, and providing we do not delay its implementation by wasting time on unimportant procedural details, the SADC power pool should be in a position to make a modest beginning later this year," Mr Botha said.

Mr Botha's spokesman Roland Darroll said savings would be made by ensuring better usage of capacity in the region, rather than have each country trying to be self-sufficient.

"Also, when there is a drought in the north and hydro-electricity plants are in difficulty, those countries will be able to draw power from coal-based power stations in the south," he said.

Quick thinking needed for economic growth, says Pik

Picture: LEON MÜLLER, Staff Photographer.

□ **PEOPLE'S ENERGY:** Khayelitsha resident Fikisa Plata demonstrates the electrification of her shack to delegates attending a Southern African Development Community (SADC) conference on energy held in Cape Town. Watching is Swazi energy minister Absalom Dlamini (spectacles) and Phambili Nombane's general manager Allain Roucole.

Foreign bids for Eskom power plants

55

ST(BT)9/7/95

By SVEN LUNSCHE

ESKOM is considering offers from European and US power utilities to buy two of its mothballed power stations.

Allen Morgan, Eskom's chief executive, said this week the companies were finalising proposals to buy Grootvlei, near the Vaal Dam, and Camden, near Ermelo, which could involve a partnership with Eskom or the establishment of an independent power producer.

"They are very keen to be involved in South Africa, but our overall approach towards the sale will be determined by the government's policy on the restructuring of state assets," Mr Morgan said.

He emphasised the foreign utilities would have to fit in with Eskom's planned pricing structure for electricity and its plans to bring back mothballed plants.

Eskom closed down some power stations in the late 1980s when electricity demand fell in line with the recession.

It is anticipated that power sources will be stretched to capacity in about three years when additional capacity will be required.

"I don't envisage that the foreign power utilities will come on to the Eskom grid before 1999," Mr Morgan says.

Another potential source for future energy is the proposed Southern African Development Community electricity power pool, he says.

At an SADC energy ministers' meeting this week the state electricity utilities were given the go-ahead to proceed with the rules for the 500 MW power pool.

The pool will act initially as a standby facility for SADC members faced with a sudden shortage of electricity, says Johan Basson, chief director of energy in the Department of Mineral and Energy Affairs.

"The power pool increases security of supply and allows a country to run its transmission system with less standby capacity," Mr Basson adds.

While South Africa has an annual capacity of more than 40 000 MW, the pool will initially prove significant to countries like Botswana, which has electricity capacity of less than 200MW.

Mr Basson expects significant savings to emerge from the system as it ensures better usage of capacity in the 11-nation SADC.

The pool will allow countries in the northern SADC region, which are dependent on hydro-electricity plants, to draw power from coal-based power stations in the south during droughts, and vice-versa.

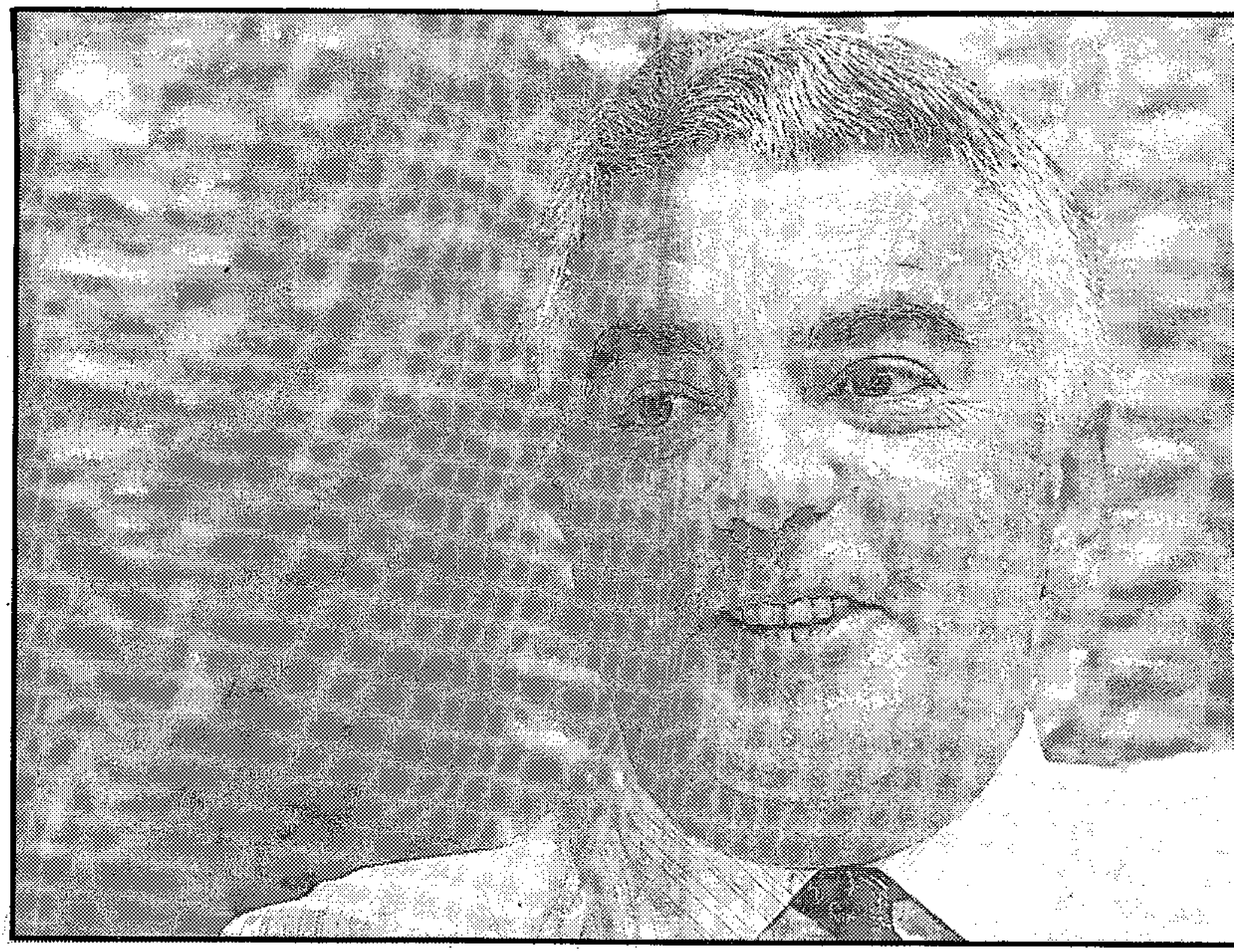
While Eskom will initially be the main supplier to the pool, Mr Morgan says that in about three years Eskom could be sourcing some of its electricity from the pool.

Addressing the SADC meeting, Minerals and Energy Affairs Minister Pik Botha said the pool should be launched this year and in the short term save about $600-million a year in energy costs.

"From a technical point of view, and providing we do not delay its implementation by wasting time on unimportant procedural details, the SADC power pool should be in a position to make a modest beginning later this year," Mr Botha commented.

The meeting was also expected to discuss a protocol which Mr Botha said would aim to integrate SADC energy activities, Reuters reports.

This would lead to a marginal loss of national sovereignty as control over energy would be transferred to a regional body.



POWER PLAYER ... Allen Morgan, Eskom's chief executive, who says US and European power utilitie

Foreign bids for Eskom power plants

55

ST(BT) 9/7/95

By SVEN LUNSCHE

ESKOM is considering offers from European and US power utilities to buy two of its mothballed power stations.

Allen Morgan, Eskom's chief executive, said this week the companies were finalising proposals to buy Grootvlei, near the Vaal Dam, and Camden, near Ermelo, which could involve a partnership with Eskom or the establishment of an independent power producer.

"They are very keen to be involved in South Africa, but our overall approach towards the sale will be determined by the government's policy on the restructuring of state assets," Mr Morgan said.

He emphasised the foreign utilities would have to fit in with Eskom's planned pricing structure for electricity and its plans to bring back mothballed plants.

Eskom closed down some power stations in the late 1980s when electricity demand fell in line with the recession.

It is anticipated that power sources will be stretched to capacity in about three years when additional capacity will be required.

"I don't envisage that the foreign power utilities will come on to the Eskom grid before 1999," Mr Morgan says.

Another potential source for future energy is the proposed Southern African Development Community electricity power pool, he says.

At an SADC energy ministers' meeting this week the state electricity utilities were given the go-ahead to proceed with the rules for the 500 MW power pool.

The pool will act initially as a standby facility for SADC members faced with a sudden shortage of electricity, says Johan Basson, chief director of energy in the Department of Mineral and Energy Affairs.

"The power pool increases security of supply and allows a country to run its transmission system with less standby capacity," Mr Basson adds.

While South Africa has an annual capacity of more than 40 000 MW, the pool will initially prove significant to countries like Botswana, which has electricity capacity of less than 200MW.

Mr Basson expects significant savings to emerge from the system as it ensures better usage of capacity in the 11-nation SADC.

The pool will allow countries in the northern SADC region, which are dependent on hydro-electricity plants, to draw power from coal-based power stations in the south during droughts, and vice-versa.

While Eskom will initially be the main supplier to the pool, Mr Morgan says that in about three years Eskom could be sourcing some of its electricity from the pool.

Addressing the SADC meeting, Minerals and Energy Affairs Minister Pik Botha said the pool should be launched this year and in the short term save about $600-million a year in energy costs.

"From a technical point of view, and providing we do not delay its implementation by wasting time on unimportant procedural details, the SADC power pool should be in a position to make a modest beginning later this year," Mr Botha commented.

The meeting was also expected to discuss a protocol which Mr Botha said would aim to integrate SADC energy activities, Reuters reports.

This would lead to a marginal loss of national sovereignty as control over energy would be transferred to a regional body.

POWER PLAYER ... Allen Morgan, Eskom's chief executive, who says US and European power utilities are to keen to invest

Report clears Umgeni and RMB

By JULIE WALKER

A REPORT on the borrowings of Umgeni Water and Rand Merchant Bank, its market-maker, has cleared both of malpractice.

The report was compiled by financial consultant Dave King at the request of capital market players and investors.

These parties were concerned about potential over-reaction against all market participants in respect of speculation that Umgeni had exposed consumers and taxpayers to excessive risk.

The report says Rand Merchant Bank was not responsible for market positions taken by Umgeni.

While Umgeni had taken unnecessary risk positions, these in all probably were as a direct result of uncertainty regarding proper accounting treatment of capital market transactions entered into for different economic reasons.

"While Umgeni did take certain positions at risk during the last few years the level of risk was not such that it could jeopardise Umgeni Water or its consumers.

"However, the level of disclosure was insufficient for independent analysts to gain insight on the risk position and performance," says Mr King.

Umgeni pre-funded at a level significantly beyond what any capital market player has done in South Africa.

The objective was to gain liquidity for the organisation during difficult times and not to take a view on interest rates.

External experts were employed by Umgeni to manage the risk arising from pre-funding, but Mr King says this would have been unnecessary had the position been properly hedged at initiation of the pre-funding.

Umgeni could repurchase its debt, but prevailing rates make the funding look good from both a rate and a liquidity perspective. Mr King says Umgeni should be comfortable with its position.

A copy of the report has been sent to the Minister of Finance and to the Minister of Forestry and Water Affairs, who has also authorised an investigation.

Electricity pool will save millions, says Pik

Cape Town – A southern African power pool should be launched this year, which in the short term could save $600-million a year in energy costs, says Minerals and Energy Affairs Minister Pik Botha.

Addressing a meeting of energy ministers of the Southern African Development Community (SADC) last week, Botha said the power pool would increase security of supply and reduce the need to invest in expensive power stations.

(55)

"From a technical point of view, and providing we do not delay its implementation by wasting time on unimportant procedural details, the SADC power pool should be in a position to make a modest beginning later this year," Botha said.

Star 10/7/95

Botha's spokesman, Roland Darroll, said savings would be made by ensuring better usage of capacity in the region, rather than having each country trying to be self-sufficient.

"Also, when there is a drought in the north and hydro-electricity plants are in difficulty, those countries will be able to draw power from coal-based power stations in the south," he said. "When there is water in the north, countries in the south can use hydro, which is cheaper." – Reuter.

Political agreement on regional power pool

(55) (2279)

Edward West

BD 17/7/95

CAPE TOWN — The political leg of the southern African electricity power pool agreement, the first physical regional co-operation by SA outside of the SA Customs Union, was expected to be signed by Southern African Development Community (SADC) heads of state at a meeting next month, Eskom CE Allen Morgan said yesterday.

The memorandum of understanding to co-ordinate power generation had already received general approval by SADC countries at a conference last week and the August agreement would be followed with an agreement between utilities.

Morgan said SA would continue exporting power to its neighbours in the short term, but electricity was expected to flow from Cahora Bassa in 1997, while from 1998 SA would be able to import hydro-electricity from Zambia, which could prove cheaper than building new power stations.

The agreement would also allow southern African countries dependent on hydro-power from the Zambezi and Congo rivers to tap power from each other during times of drought, or to tap into coal-fired power sources further south.

The agreement would enable the better usage of power surpluses between SADC countries and the establishment of joint ventures by pool members for the establishment of new power sources, he said.

In terms of the memorandum of understanding, SADC ministers and officials would be responsible for policy matters between governments and their power utilities, while utility CEs would act as the board of the power pool.

Conference told millions of homes have no power

(55) (123)

BD 20/7/95

Bonile Ngqiyaza

ABOUT 3,7-million rural and informal dwellings were without electricity at the end of last year, Eskom housing consultant Izak van Gass said yesterday.

He was speaking at the Household Energy for Developing Communities conference in Midrand organised by the Southern African Institute of Energy.

He said of about 4 700 clinics, 47% were without electricity during the period in question.

"An alarming 270 times more children" in SA had died from air pollution-related diseases than in Europe.

It was estimated air pollution on the highveld accounted for health costs of R1 055bn a year.

"The total health care costs and loss of productivity related to respiratory diseases have been estimated at R700m in 1994 alone," he said.

About 12-million South Africans were without access to clean drinking water, and less than 2,3% of the dwellings in rural settlements had piped water.

Van Gass said only 2,8% of the households in informal urban areas had piped water inside their homes.

The implementation of the much-needed water programme would bring about a shift in consumption patterns, he said.

Mineral and energy affairs development director Izak Kotze said a third of the population — 14-million — were living under the poverty line, estimated at R850 for a household of four.

In the drive to achieve equality, sustainability and the elimination of poverty, an integrated energy plan had been identified as the most appropriate way of supplying households with "an optimum least-cost mix".

Although the effective use and supply of appropriate forms of energy was "not a sufficient condition", it was still "a necessary condition for development and reducing poverty".

Kotze said SA levels of ambient air pollution, especially in Gauteng, were "several times higher than international standards in winter".

Planning for power

A plan for the projected demand for electricity until the year 2010 is in place at Eskom. The plan answers the following three questions for the period 1995 to 2010:

- What is the demand for electricity going to be in South Africa?
- How is Eskom going to influence that demand?
- How is Eskom going to meet that demand?

The forecast concluded that between 1994 and 2000 the maximum demand for electricity could be expected to increase by more that 6,000 Megawatts, which is the equivalent of two large power stations. This increase would consume an additional 20 Megatons of coal.

To influence the demand, Eskom is implementing Time-of-Use tariffs aimed at getting customers to shift portions of their load to non-peak periods.

It is also re-examining agreements where electricity was discounted in return for certain municipalities not running their own power stations. The aim is to encourage municipalities to operate their own power stations. Additional capacity which would be available is estimated at 330 Mw.

In addition, an Interruptible Load agreement between Eskom and a customer allows Eskom to interrupt power to a portion of the customer's plant for limited periods in return for compensation.

A Curtailable Load agreement is where the customer reduces electricity demand in response to a pricing signal from Eskom.

To date Eskom has entered into contracts for 1,400 Mw of Interruptible Load with Alusaf and the ferrochrome industry.

Eskom is also looking at co-generation, which refers to the generation of power by a customer using waste products of his production process. A capacity of 1 500 Mw is considered achievable.

To meet the increased demand for electricity four initiatives have been approved:

- Importing power from Cahorra Bassa in Mozambique, where Eskom plans to import 950 Mw from the winter of 1997.
- Importing power from the Kariba North power station in Zambia, where Eskom will import 500 Mw from January 1996, via the transmission system of the Zimbabwe Electrical Supply Authority.
- Returning Arnot power station to full production. Four of the six units at Arnot with a combined capacity of 1,295 Mw are currently in reserve storage. Two units will be returned to service in 1996, and the two remaining units as soon as possible thereafter.
- Constructing and operating the first three units at Majuba power station. The first unit is to be commissioned in 1996. The combined capacity of the three units will be 1 836 Mw.

year study of pollution in several rural and urban areas of the Transvaal and the Free State conducted by the CSIR.

The study found that between 45% and 48% of households with access to electricity still use coal and wood for cooking and space heating.

"It should be borne in mind that electrification will not eliminate the use of coal stoves and hence pollution," the report said.

"This is because domestic space heating using coal stoves is roughly five time more efficient than electrical heating."

"In the electrification process, the need for space heating is likely to be the most difficult and expensive issue to address.

"What is absolutely certain, however, is that any electrification programme which fails to address this need will also fail to achieve the health benefits that should accrue from the increased utilisation of electricity."

The study highlighted the urgent need for alternative energy sources with a lower associated

"In the interim, the safer and more effective use of current fuels and cleaner fuels should be promoted."

The main facts relating to household energy sources in South Africa can be summarised as follows:

- Coal accounts for approximately 80% of primary energy use. Of this coal, 54% is burnt by power plants to generate electricity from steam.
- About 2,5% of total coal consumption is for household use. More than 60% of the total population – about 24 million people in 3,7 million dwellings – use coal and often wood as well as a source of household energy.
- Studies indicate that children exposed to wood and coal smoke in poorly ventilated conditions have an increased chance of developing acute respiratory problems of between 100% to 400%.
- Levels of sulphur dioxide, carbon monoxide and smoke in homes using coal and wood as a primary energy source were found to be two to 10 times higher than standards laid down by the World Health Organisation.

- An investigation into the use of gas, such as methane from landfills.
- The development of clean coal technologies and natural gas for power plant application.
- Use of low-smoke coal, reconstituted from coal discards, which has been used overseas for several decades.
- Increased use of paraffin, which is cleaner than wood or coal.
- The provision of affordable and energy-efficient low-cost housing by optimising passive solar building design which requires no additional space heating.

"At the same time, however, education and awareness programmes are essential to spread awareness of the risks of wood and coal burning and teach people how they can use these fuels more safely and effectively," the study said.

"One simple, inexpensive method to reduce air pollution exposure and concomitant health risks is to ensure adequate ventilation.

"But urging people to implement it would require a concerted, well-planned and co-ordinated awareness campaign."

SUNSENSE

Enough energy is released in one second by the sun to supply the world's total energy needs for 2,000 years.

No quick fix ... air pollution from burning coal and wood is a health hazard, but electrification will not solve the problem, because 45% to 48% of people with access to electricity still use coal and wood for cooking and space heating because it is cheaper.

tions investors will find attractive.

"There was recognition within the Govern-

The Star SURVEY

ENERGY IN 2000

The era of cheap and convenient sources of energy is coming to an end. A transition to more expensive, but less polluting sources must now be managed. In this special survey, Science Writer **ANITA ALLEN** looks at South Africa's energy policies, production and consumption, and the road ahead.

Star 28/7/95 (55)

Running on Empty

COMING to terms with the challenge of ensuring an adequate, safe energy supply is of worldwide concern. Yet the debate over sustainable, non-polluting energy has hardly begun in South Africa. We have much more pressing problems, so it is said.

However, fossil fuels such as oil, natural gas and coal – the world's primary source of energy (88%) – are being depleted 100 000 times faster than they are being formed. South Africa's coal resources are expected to run out towards the middle of the next century.

World energy consumption is expected to increase by 50-60% by the year 2010, which means emissions of the main greenhouse gas, carbon dioxide, could double.

One view is that this level of energy consumption is sustainable and that climatic change is either not serious or is something to which humans can adapt.

Eskom's official stance on global warming is that the evidence in inconclusive. But, although scientists have not managed to definitely establish the link between CO_2 emissions and global climate change, with accumulating data it seems more and more likely.

Some studies put the global rise in temperature at .3 deg C every decade, which would have significant impact on natural and human systems.

Another view embraces sustainability and establishes appropriate incentives to trigger changes which are not only adaptive but anticipatory. But translating this into action is proving to be elusive, with most of world's biggest producers of CO_2 predicting they will fail to meet the first target of the Climate Change Convention, which is to stabilise emissions of CO_2 at 1990 levels by the year 2000.

The problem in South Africa and elsewhere is that the system which enables societies to produce energy does not lend itself readily to a flexible, quick response.

An intractable infrastructure with power plants having a 20- to 40-year lifetime, energy projects taking a dozen or more years from blueprint to operation, and entrenched public opinion of costs, need and environmental acceptability, all make for a system laden with inertia.

South Africa faces a future of possible exponential economic growth and industrialisation, in which the demand for energy will likewise peak. Although the country contributes about 1,35% to total world CO_2 emissions, this is disproportionately high when expressed in per capita terms and is surpassed only by China. We are also among the highest per capita energy users.

Our energy policy is currently dominated by the need to supply relief for the poor. To date, decision makers have interpreted the pressure as a mandate for escalating energy consumption. Coupled with population growth, this interpretation may well be unsustainable.

Globally, and locally, there is a growing call to take account of the increasing efficiency of solar and wind generation, to shift to natural gas as the least polluting of the fossil fuels and to look to bio-gas power generation, as well as – and perhaps most importantly – for South Africa to follow the trend around the world to open the energy industry to competition.

The choice facing South Africa is continued coal power generation, with its acid rain and air pollution, or to become an innovator.

Rapid technological advances in alternative energies is making them cost competitive. The southern tip of Africa has the highest potential for the use of solar energy, with wind energy an option at the coast.

> South Africans are among the highest per capita energy users

But at present Eskom looks at solar and wind energy as suitable only for rural areas beyond the transmission grid and for small unit application. It has no plans to generate energy from renewable sources for the power grid.

Once the projected growth of demand associated with the RDP has soaked up existing capacity from its coal fired generators, Eskom will be looking to hydro electricity from Cahorra Bassa in Mozambique, and Kariba.

Also, anyone talking on the subject predicts further nuclear generation on the coast to stabilise end-of-the-grid areas.

As a first step in the new era of energy generation in South Africa, regulations screening the power monopoly from competition should be ditched. The grid should be opened to all users.

In addition, subsidising the use of coal should be stopped. Instead taxes should be levied on the polluter-pays principle to reflect environmental and health costs.

Without these steps there will be no change in energy policy.

Eskom argues that low electricity costs to consumers will promote economic growth. But the relationship between energy costs and economic growth is complex.

A study of energy prices of large industrialised nations, produced under Helga Steeg, director of the International Energy Association, shows that between 1978 and 1990 Japan had the highest growth rate, even though its energy prices were the highest.

This and other studies indicate that energy efficiency, energy saving and innovation have important correlations with economic growth and competitiveness in countries which have the highest energy prices, such as Switzerland, Japan and Germany.

Extending electricity services must go hand in glove with measures to stabilise or curtail energy consumption.

But Eskom, and national policy, does little more than pay lip service to the ideas, and the debate on this has not begun in South Africa.

The potential for saving energy through efficient technologies is enormous – variously estimated at between 30% and 75%.

Savings range from better building design incorporating passive solar design, which obviates the need for air conditioning and heaters, to more energy efficient lighting devices and appliances and rebates to promote the buying and selling of efficient devices.

As a start all products using electricity should contain a declaration of their energy requirements, so that consumers can make informed choices on purchase.

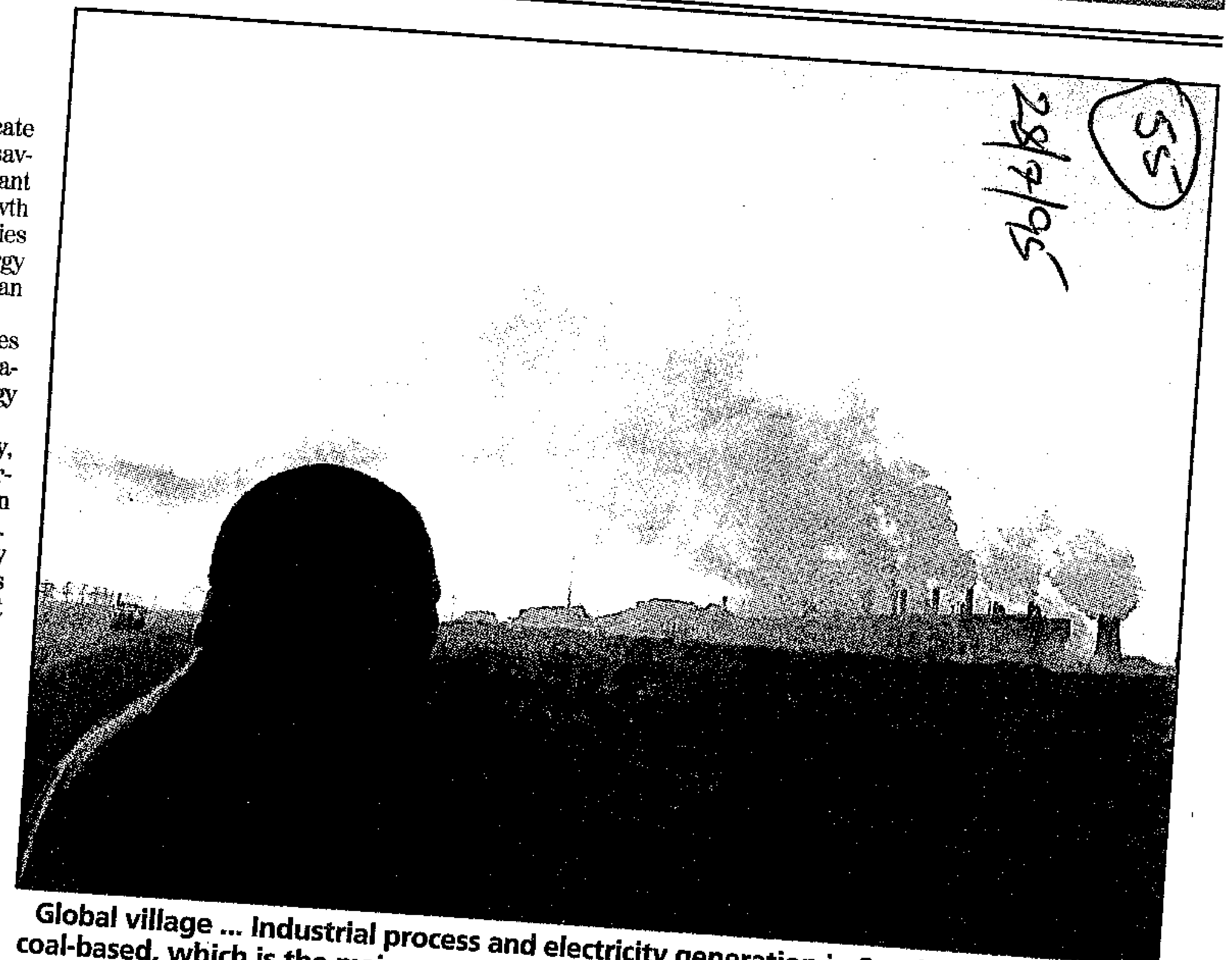
There is also huge potential energy savings in a mix of technologies that substitute for electricity, such as solar powered water heaters. Hot water geysers, for example, can account for 60% of a household electricity bill.

In Israel, which has less solar radiation than South Africa, solar heaters are mandatory for all new dwellings. Less than 1% of homes in South Africa have solar heaters.

Human beings need to reaffirm their role as stewards. Rather than thinking of energy as a commodity from planet Earth, we need to think of energy for planet Earth.

Our dependence on energy will persist, but it must do so in the context of ecological soundness.

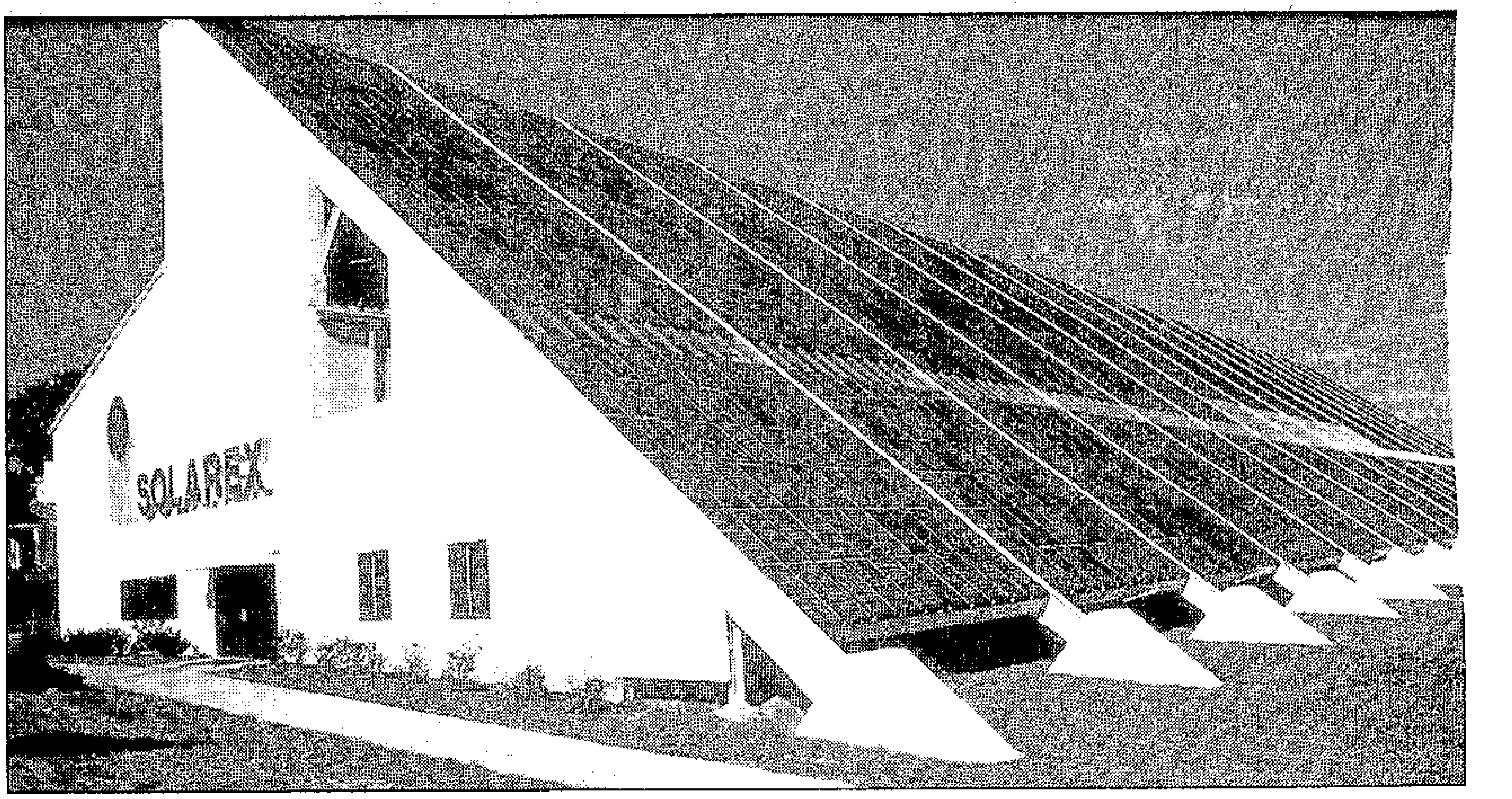
28/7/95 (55)



Global village ... Industrial process and electricity generation in South Africa is largely coal-based, which is the major source of greenhouse gas emissions and pollution. South Africa is therefore vulnerable if international protocols adopt limits on emissions.

Issue of heating is up in the air

Solar breeder ... a factory manufacturing solar photo-voltaic cells is powered by electricity generated by those same cells on its roof in Maryland, United States.



Highlight of living at the bottom of Africa

Star 28/7/95 (55)

Southern Africa has exceptional potential for the use of solar energy. On a world insolation map, this bottom tip of Africa is the largest single area in the highest category, with above 6,5 kilowatt hours per square metre a day. This adds up to just over half of the total world surface in the highest category.

"South Africa is a prime area for insolation," says Dr Isaac Kotze, director: Energy for Development at the Department of Mineral and Energy Affairs (DME).

"If there's any country that can cash in on solar's potential, it is South Africa, with wind as an option at the coast."

At the same time, he admits that there are no plans in place to promote, invest, research or implement large-scale solar energy plants for the generation of electricity.

The main thrust in energy policy at the moment in South Africa is to extend the electrical grid at an accelerated pace from the current 300 000 homes a year to 500 000 a year, says Kotze.

"The bottom line is that by 2012 to 2015 we hope to increase the number of people connected from the present 40% to 79% of the population. The problem is that in that time natural increase in the population will mean that the 20% left unconnected at that stage will be the same as the number unconnected today," says Kotze.

The electrical transmission grid is in place countrywide, but connections from this average at R45 000 a kilometre. In more remote rural areas of South Africa, which lie too far from the grid, it is more cost effective to use solar energy. This applies to about 20% of the population, he says.

> If there's any country that can cash in on solar's potential, it is South Africa

For this reason, solar is being promoted by government to play a complementary role to electrification under the Reconstruction and Development Programme.

An inhibiting factor in solar energy supply is the cost and the problem of recovering investments because of low usage. Installations require large amounts of funding upfront and at present South Africa does not have any organisations which will finance such ventures. There is also as yet no infrastructure in place to handle the process.

"If we want to make a dent we need a dedicated organisation to oversee process," says Kotze.

It has been decided that the Central Energy Fund will supply loan financing. It has several millions of rands available from overseas for solar energy housing supply.

The DME is focusing on two areas: lighting and communication. "That is where the power lies and the market is opening up."

Three solar energy programmes are being set up by the DME for areas falling outside Eskom's grid:

- Electrification of clinics, which is being handled by the Independent Development Trust (IDT). The target is 200 per annum, with an estimated 2 000 to 3 500 clinics in the country. The IDT is also involved in solar energy for water pumping.
- Electrification of schools through Eskom. This is a capital investment run through the RDP and co-ordinated by the Department of Education. With about 15 000 schools, the target is 1 000 this year, 2 000 in '96, 3 000 in '97 and so on. "There is no intention to recover capital costs," says Rodney Buttle, non-grid electricity manager at Eskom.
- Solar energy for housing, which depending on the funding, involves about 2,5 million homes over the next 20 to 30 years. This is being done on a cost recovery basis and entails private sector involvement.

"It costs about R3 000 a source point, which is financed over 30 years at a low interest rate and we charge R45 per connection with the rest of the financing in tariffs per unit," says Kotze. "It's paid off over a long time."

The demand for solar energy is there, funding for big projects via the RDP office is becoming available, but the obstacle is the lack of structures to bring suppliers and markets together.

It's a complex process where the area that needs solar energy has to be identified, then the concept has to be explained to communities. Thereafter, they have to identify their specific needs, all of which already needs funding.

As far as schools projects are concerned, Eskom has set up a unit to liaise with communities.

The DME is holding a workshop next month with solar energy suppliers in an effort to co-ordinate activities and set up the infrastructure for the delivery process.

Current state of solar energy

(55) Star 28/7/95

Solar energy is being used only on a relatively small scale in South Africa in two main applications: photovoltaic (PV) and hot water systems.

These two fields are virtually separated at the manufacturing level, but at the installation and customer service level they are combined.

Solar energy for water pumping is a third application which has potential and is increasingly being used, especially in rural areas.

The main advantage of PV is its modularity. The modules or panels can be combined to produce any amount of power, from a few watts to many thousands of kilowatts. A small installation can be expanded as power requirements grow and it can supplement wind, diesel and grid power. This modularity offers power when you need it, with very little construction or lead time.

PVs can go almost anywhere, without needing the major investment of electrical infrastructure. This power when and where you need it makes PV the ideal choice in many off-grid applications.

The benefits of PV systems are that they are:

- Pollution free.
- Quiet.
- Fuel free
- Low maintenance and running costs, with batteries lasting about three to 10 years.
- With no moving parts, PV modules are very reliable. The electronics are less reliable, but this depends on what you choose. Solar modules are usually guaranteed for 10 years, but their life is indefinite.
- They do not need trained personnel to operate. Systems management, such as changing batteries, is substantially less complicated and less expensive than maintaining and refuelling conventional diesel or gas generators.

The drawback of PV electricity generation is that it is expensive when compared to grid electricity.

One module, a battery and one electrical point will cost about R2 500 to R3 000.

However, PV costs compare well with electricity via a generator. Because it is maintenance free, fuel free and easy to use, it slashes operating costs compared to diesel or gas generators.

In the past, farms have been typical users of generators. More often than not this is an inefficient use of the machine, because it is too lightly loaded and therefore doesn't last as long. Usually the machine runs virtually the whole day drawing perhaps 10% of its capacity, which is not fuel efficient.

The newest advance in solar module technology consists of a stainless steel frame, double glass and the silicon wafer manufactured in a hi-tech and complex process. The silicon acts as a conductor to collect energy from the sun and generates the current stored in the batteries. Typically, each module generates about 50w of electricity.

All modules are still manufactured overseas, with one or two companies doing assembling here. Major suppliers include ASE Americas, Siemens and BP Solar Systems, which has recently teamed up with Willard Batteries.

For a typical farmhouse one would need about 16 to 30 modules. This will provide lights, TV, video, Hi-fi, sewing machines, appliances, smaller microwave ovens, and low energy-user fridges and freezers.

Solar electricity is not used for hot water heating, stoves or any space heating, airconditioners or heaters.

Kettles, too, are a surprisingly high energy user, so PV systems can take only limited use of a kettle and the same goes for a swimming pool filter.

Domestic household use of solar energy is still very small scale. The main problem is that there is no mechanism or incentives from Building Societies to go solar, and credit terms for solar installations are unusual.

"The problem with solar is that if one converts totally to solar in a city home, it never pays for itself. You never get your money back at current electricity costs. The cost of the system is just too high," was how one supplier summed it up.

Spinoffs as high-powered US mission heads for SA

ARG 17/8/95

(123) (55)

CLIVE SAWYER
Political Correspondent

UNITED States Energy Secretary Hazel O'Leary arrives in South Africa on Saturday with some high-powered investors, bold plans to boost electrification — and more than 2 000kg of books for the children of Guguletu.

Mrs O'Leary will be accompanied by several US government officials and 20 representatives of energy firms.

The collection of maths and science text books, some of which will be handed out in townships other than Guguletu, was organised by aides who visited South Africa on reconnaissance for the visit.

In a briefing by satellite yesterday, Mrs O'Leary outlined the main goal of her trip — to help realise the RDP goal of the electrification of 2,5 million households by 2 000.

She repeated her statement earlier this week that diplomatic tension between the US and South Africa about the storage of Iranian oil at Saldanha would not have a negative affect her visit.

Hazel O'Leary

It was normal for countries and companies to disagree on some issues, she said.

"We will forge ahead on the things about which we agree."

Immediate benefits of her visit will include:

- Two hundred South Africans will be selected to go to the United States for training in energy business practice, the start of a programme of university and technical college training in this field;
- Inter-government agreements on the supply of information on energy supply and demand; and
- Opening a solar energy panel factory which will create jobs and demonstrate the use of alternative energy sources.

Mrs O'Leary said interest from potential business investors was so high that people had had to be turned away.

Mrs O'Leary's visit will be on the eve of the first meeting of the South Africa-US bilateral commission agreed to last October.

The commission is to build economic ties in the fields of energy, human resources, health and science and technology.

South African ambassador to Washington Franklin Sonn was enthusiastic about the visit.

It would keep South Africa on the front burner for potential investment, he said.

US and SA set to sign deals on energy supplies

ARG 21/8/95 (55)

THE United States and South Africa will sign co-operation agreements about energy supplies on Friday, it was announced today.

Speaking to the Press in Cape Town after meeting Mineral and Energy Affairs Minister Pik Botha, United States Energy Secretary Hazel O'Leary said the agreements would include both governments, certain non-governmental organisations and the business sector.

South Africa and the US had a long history of science and technology co-operation, and had mutual goals for necessary economic development in South Africa.

A large delegation from the US public and private sectors, looking for investment opportunities in South Africa, are with her.

Ms O'Leary said the visit was especially important for South Africa's economy and social upliftment.

Today's meeting was expected to set the tone for the US delegation's collaboration with its South African hosts during its week-long visit.

Ms O'Leary will also meet members of parliament's energy committees today.

Ms O'Leary opened a renewable energy research project yesterday which stems from co-operation between energy research and training facilities in the United States and South Africa. — Sapa.

NMENT

)MICS

Big changes mooted for energy policy

(55) ET (PTR) 21/8/95

BY BRUCE CAMERON

POLITICAL EDITOR

The first draft of a document setting out a comprehensive new mineral policy for South Africa should be ready by the end of the month, said Marcel Golding, the chairman of the parliamentary energy and minerals committee.

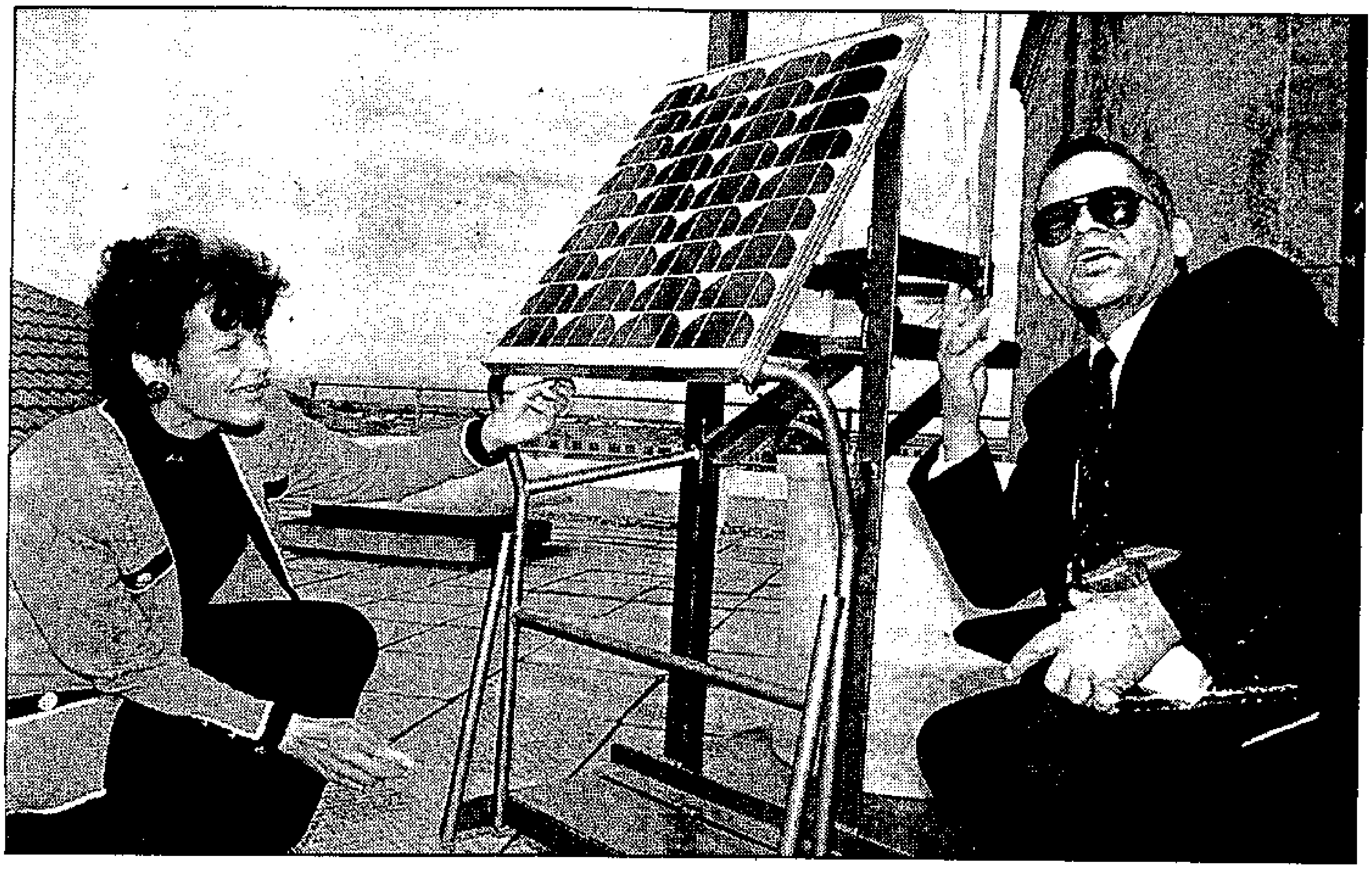
Golding, whose committee is driving the reform process, would like to see legislation being started towards the end of next year.

In an interview with Business Report, Golding said fundamental changes could be expected in the draft document, transforming the industry and improving the stake of deprived communities.

The process should benefit the mining industry and the country as a whole.

A working group representing the committee, the mineral and energy affairs department, the Chamber of Mines; organised labour and the Minerals and Energy Policy Centre, has produced a "chopping block" document. It is based on last year's ANC draft discussion document on minerals and energy and the department of mineral and energy affairs' draft principles, as well as other submissions.

The latest document will form the basis for public comment and further consultation, culminating in the publishing of government policy green and white papers towards the middle of next year.



SUNNY STRENGTH: US Energy Secretary Ms Hazel O'Leary and Peninsula Technikon rector Mr Brian Figaji with a solar-powered pump on the roof of the engineering building. *PICTURE: ALAN TAYLOR*

America aids SA technology

CT 21/8/95

STAFF REPORTER

(423) (55)

SUSTAINABLE appropriate technology was needed in South Africa to bring electricity to remote areas, United States Energy Secretary Ms Hazel O'Leary said at the Peninsula Technikon yesterday.

She is leading a trade delegation of more than 70 people from the Clinton administration.

Former US ambassador to Lesotho Mr Leonard Spearman said 35 Peninsula Technikon students had already been trained in alternative technology by US industries.

Ms O'Leary said her delegation wanted to ensure that the investment SA needed came to the country "to the benefit of both our nations".

US warns SA over energy regulations

(55) ~~(123)~~

By Bruce Cameron

Political Editor

CT(BR) 22/8/96

United States secretary of energy Hazel O'Leary has told the parliamentary energy committee that if it wants South Africa to develop efficient energy supplies the government should have "a light hand with regulation".

In a meeting with the energy committee, chaired by ANC MP Marcel Golding, senior energy company executives accompanying O'Leary warned that over regulation would lead to investors becoming wary of coming into the country.

In a joint meeting between the American delegation and the parliamentary committee, O'Leary said the United States had learned the consequences of over regulation in energy supply.

What rules there were had to be simple and easy to understand.

Potential investors expressed willingness to get involved in South Africa, but expressed concerns about the lack of a government track-record and the stability of South Africa.

55

Solar panels will light 10 000 homes in Alex

US Secretary of Energy Hazel O'Leary yesterday opened a factory which will produce solar panels to provide electric power to Alexandra township.

The panels will be assembled by a black-owned business, Suncorp Manufacturing, supported by the US Department of Energy, AEG and the black investment company Renaissance.

US official Robert Annan said the facility, when fully operational, would produce enough panels to bring electric lighting to about 10 000 homes.

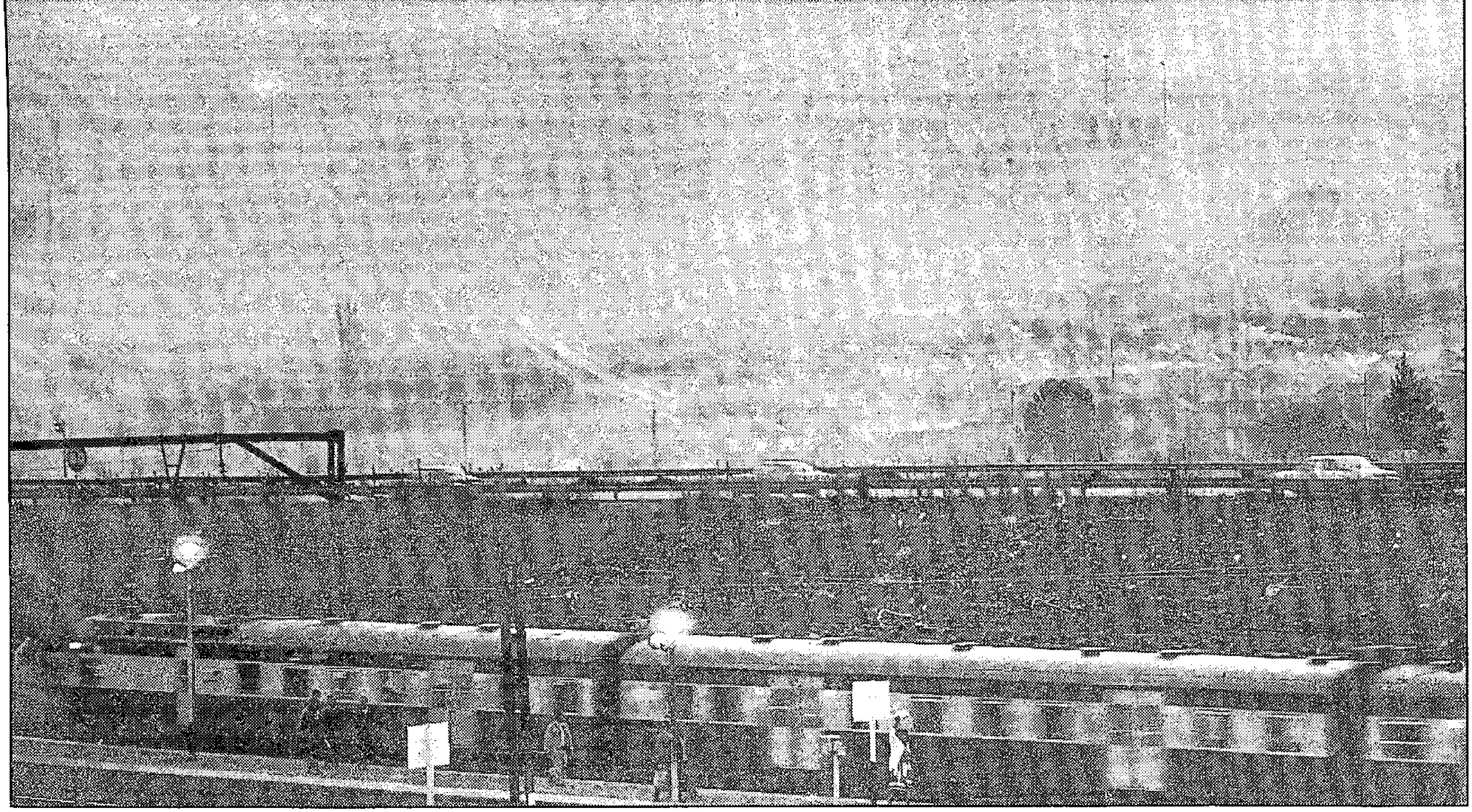
Yesterday O'Leary, who is on a nine-day visit to South Africa, also donated books and computers to Ipolokeng Primary School in Diepkloof, Soweto.

She is leading a delegation, here at the invitation of President Mandela, of about 100 US businessmen.

"We are all striving for the same goal and that is a rise in economic levels. Through the joint venture 250 jobs have been created for South Africans and 35 jobs have been created in the US," O'Leary said.

The Ipolokeng school, which has no electricity, was supplied with solar energy panels donated by Suncorp, a newly established joint venture between US company Spire and South African businessmen. — Staff Reporter, Reuter.

Star 23/8/95



◀ Electrification will not end pollution . . . 50% of households having access to electricity still use coal and wood for cooking and to heat their homes.

Study finds electrification alone does not solve problem

Solar solution to Gauteng pollution

Star 23/8/95 (55)

BY ANITA ALLEN
SCIENCE WRITER

A comprehensive CSIR study has shown that electrification on its own does not offer a solution to air pollution in Gauteng.

Now solar energy has been proposed.

The three-year CSIR study found that about 24-million South Africans are exposed to hazardous levels of air pollution as a result of burning coal and wood as household energy sources. But, 45% to 48% of all households with access to electricity still use coal and wood for cooking and to heat homes.

One way of addressing the space heating problem, lies in passive solar design (PSD), says Dieter Holm, head of the Department of Architecture at the University of Pretoria in the latest issue of The African Sun, the journal of the Solar Energy Society of SA.

This little explored component of current housing schemes refers to building with nature to achieve comfortable indoor conditions by using the sun for day lighting and winter space heating, or the cool breeze for summer cooling. Energy flows naturally while buildings react passively needing a minimum of artificial energy.

Holm argues that PSD is the only way of procuring cost-effective and sustainable housing. It is also the cheapest use of solar energy because it requires no extra features that a normal decent dwelling would not have. But it demands care on the part of planners, architects and decision makers.

Of all generic housing forms, the detached house is thermally most inefficient because all six enveloping surfaces are exposed to the outside, with no mutual protection from other houses. The smaller the free standing house, the greater its surface-to-volume ratio and the greater its heating/cooling energy demand. It is also the most expensive model with respect to the provision of services such as water, electricity, telephone, road, storm water, sewer, waste removal, public transport, security and health services.

A new housing model must be holistic, says Holm, aiming at integration, synergy and symbiosis of functions. It must aim to integrate living, leisure and work while obviating the need for commuting. It must not support the exclusive use of the unsustainable and socially disruptive detached house.

Other models, like terrace housing, courtyard housing and cluster housing, in addition to mixed land use will have to be considered. New urban settlements will strive to be in harmony with nature, not against it. Holm believes that this means the right to solar access will be protected, because it has survival value and that urban design should facilitate energy effective architecture design generally and PSD in particular.

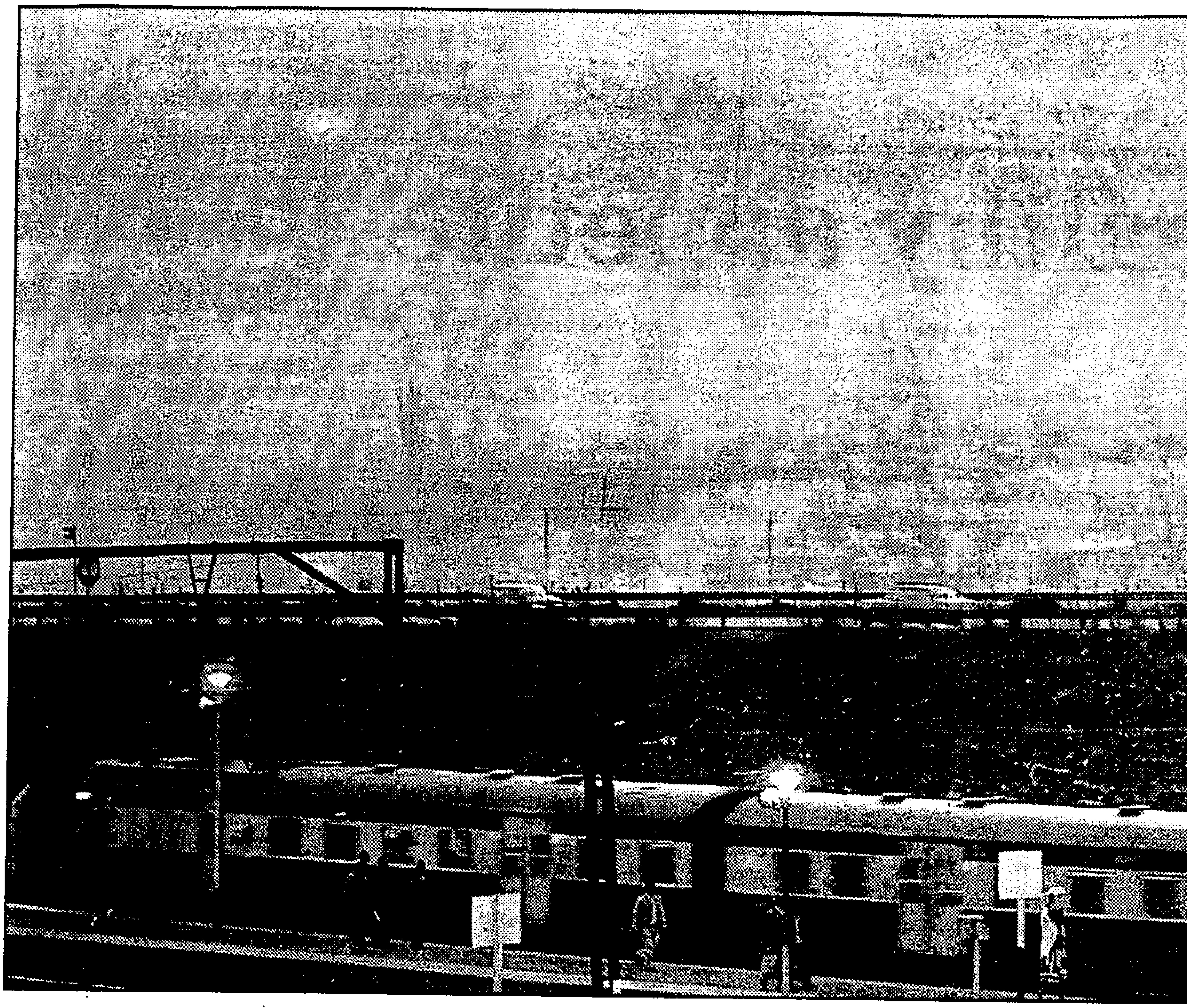
Using PSD in 727 000 informal houses will save 6 400 ha of woodlands annually and reduce the emission of greenhouse gases by 4-million tons a year, Holm says. Savings for the end user with its application in only 50% of all formal housing will save R660-million a year, health cost savings will amount to R550-million. In addition, there are energy conservation advantages and job opportunities.

With all these advantages, Holm notes that a recent study showed that more than 72% of builders stated that thermal design is not a consideration. Users do not demand it and there is a general lack of awareness with developers and decision-makers.

In South Africa, the health impact and the number of deaths alone suffice to introduce thermal building regulations, says Holm.

"In view of the large-scale housing programme where very important decisions with long-term implications are being taken, it is important to ensure ecologically sustainable development. This requires that we seize this unique opportunity of doing things right the first time," he concludes.

Design guidelines on PSD are being prepared by the Department of Mineral and Energy Affairs. A brochure covering basic information for developers, users, decision makers and planners is available.



Study finds electrification alone does not solve problem

55 23/8/95

Solar solution to Gau

BY ANITA ALLEN
SCIENCE WRITER

A comprehensive CSIR study has shown that electrification on its own does not offer a solution to air pollution in Gauteng.

Now solar energy has been proposed.

The three-year CSIR study found that about 24-million South Africans are exposed to hazardous levels of air pollution as a result of burning coal and wood as household energy sources. But, 45% to 48% of all households with access to electricity still use coal and wood for cooking and to heat homes.

One way of addressing the space heating problem, lies in passive solar design (PSD), says Dieter Holm, head of the Department of Architecture at the University of Pretoria in the latest issue of The African Sun, the journal of the Solar Energy Society of SA.

This little explored component of current housing schemes refers to building with nature to achieve comfortable indoor conditions by using the sun for day lighting and winter space heating, or the cool breeze for summer cooling. Energy flows naturally while buildings react passively needing a minimum of artificial energy.

Holm argues that PSD is the only way of procuring cost-effective and sustainable housing. It is also the cheapest use of solar energy because it requires no extra features that a normal decent dwelling would not have. But it demands care on the part of planners, architects and decision makers.

Of all generic housing forms, the detached house is thermally most inefficient because all six enveloping surfaces are exposed to the outside, with no mutual protection from other houses. The smaller the free standing house, the greater its surface-to-volume ratio and the greater its heating/cooling energy demand. It is also the most expensive model with respect to the provision of services such as water, electricity, telephone, road, storm water, sewer, waste removal, public transport, security and health services.

A new housing model must be holistic, says Holn tegration, synergy of functions. It mu grate living, leisi while obviating the muting. It must n exclusive use of able and socially tached house.

Other models, housing, courtyar cluster housing, mi d land use w co... ered. New ments will strive t ny with nature, Holm believes th the right to solar protected, because al value and that should facilitate er architecture desi and PSD in particu

◀ **Electrification will not end pollution . . . 50% of households having access to electricity still use coal and wood for cooking and to heat their homes.**

e does not solve problem

ion to Gauteng pollution

Star 23/8/95 (55)

no extra features that a normal decent dwelling would not have. But it demands care on the part of planners, architects and decision makers.

Of all generic housing forms, the detached house is thermally most inefficient because all six enveloping surfaces are exposed to the outside, with no mutual protection from other houses. The smaller the free standing house, the greater its surface-to-volume ratio and the greater its heating/cooling energy demand. It is also the most expensive model with respect to the provision of services such as water, electricity, telephone, road, storm water, sewer, waste removal, public transport, security and health services.

A new housing model must be holistic, says Holm, aiming at integration, synergy and symbiosis of functions. It must aim to integrate living, leisure and work while obviating the need for commuting. It must not support the exclusive use of the unsustainable and socially disruptive detached house.

Other models, like terrace housing, courtyard housing and cluster housing, in addition to mixed land use will have to be considered. New urban settlements will strive to be in harmony with nature, not against it. Holm believes that this means the right to solar access will be protected, because it has survival value and that urban design should facilitate energy effective architecture design generally and PSD in particular.

Using PSD in 727 000 informal houses will save 6 400 ha of woodlands annually and reduce the emission of greenhouse gases by 4-million tons a year, Holm says. Savings for the end user with its application in only 50% of all formal housing will save R660-million a year, health cost savings will amount to R550-million. In addition, there are energy conservation advantages and job opportunities.

With all these advantages, Holm notes that a recent study showed that more than 72% of builders stated that thermal design is not a consideration. Users do not demand it and there is a general lack of awareness with developers and decision-makers.

In South Africa, the health impact and the number of deaths alone suffice to introduce thermal building regulations, says Holm.

"In view of the large-scale housing programme where very important decisions with long-term implications are being taken, it is important to ensure ecologically sustainable development. This requires that we seize this unique opportunity of doing things right the first time," he concludes.

Design guidelines on PSD are being prepared by the Department of Mineral and Energy Affairs. A brochure covering basic information for developers, users, decision makers and planners is available.

Electricity distribution 'needs major overhaul'

(66) ARG 24/8/95

JOHANNESBURG. — It would not be responsible to issue distribution licences to municipalities currently selling electricity, the National Electricity Regulatory Board (NER) says.

NER chairman Ian McRae told a press conference in Sandton that many of the 398 distributors which had applied for licences were not economically viable.

Many would also not be able to provide services in municipal areas which had been enlarged in the new local government system. They would fail to meet the government's targets for electrifying the country as quickly as possible.

Dr McRae said the system for distributing electricity needed a major overhaul.

The NER had opted for a "holding position", which meant that the temporary licences of distributors would be extended for nine months.

In this period an NER committee would produce proposals on a new distribution structure and how to deal with the impact of this rationalisation on the finances of local government, Dr McRae said.

Many local governments were dependent on income from electricity sales and were using this money to subsidise other municipal services such as water and sewerage.

Dr McRae said ways had to be found to remove the role of trading in electricity from local government financing.

A national electricity tariff structure and common service standards would also have to be devised. More than 2 000 different tariffs were being applied by the 398 distributors.

"Rationalisation would optimise the use of resources and would lead to an improved service to customers at better prices," Dr McRae said.

Extending electricity to the more than 60 percent of the population still without it would also be accelerated.

Dr McRae said the NER was satisfied with the present system for generating and transmitting electricity.

Licences would be issued before September 1 to 13 institutions currently generating electricity: nine local governments, three private companies and Eskom, which supplied the bulk of electricity.

Eskom would also be licensed to transmit electricity.

Among the local councils to receive generation licences were Johannesburg, Pretoria, Bloemfontein, Port Elizabeth, Cape Town and Kroonstad.

The NER was set up last year to regulate the electricity supply industry.

All generators, transmitters and distributors of electricity were deemed to have temporary licences with effect from March 1 this year for six months. — Sapa.

Power pool in pipeline

(65)

Sowetan 24/8/95

By Bhekie Matsebula

A SOUTHERN African power pool is to be established soon so that those countries with surplus power supply can transfer such supplies to those regional countries in need.

This was revealed by the technical and administration expert on energy in the Southern African Development Community, Dr Antonio Pinto, during a Press briefing on energy at the World Trade Centre, Kempton Park.

"What the power pool will see that power utilities are working together to bridge common objectives which will increase reliability and efficiency of production of the energy systems of each member state, " Pinto said.

Pinto said it was important that member states support the establishment of the power pool.

"What the power pool will do is that it will transfer power surplus in those countries with power surplus to those countries which have a short power supply," Pinto explained.

He said it was important for member states to ensure that communities, such as those in the rural areas, were supplied with electricity at the lowest cost possible.

He added that the private sector has been marked as a pivotal sector which should be involved in the energy sector.

The socio-economic and political changes that took place in the region recently had enable the energy sector to review its policy and strategic document which would allow the sector to account for and try to face the challenges imposed in the community-building programme in the SADC region.

● *Sowetan* will tomorrow publish a special focus on SADC with its history and the main issues that confront next week's heads of state summit, the first in South Africa.

Solar factory sees light of day

CT(BR)25/8/95 (SS)

By Patrick Wadula

Special Writer

Increased co-operation between South Africa and the United States in the field of electricity and alternative power saw the first black-owned solar power equipment factory, Suncorp, being established in Wynberg this week.

It was initially capitalised at R8,3 million by the American energy department with Spire, a Massachusetts-based company, and Renaissance Investments, a South African black-empowerment and investment company.

Other partners include AEG, which provided technical and managerial support, the University of Port Elizabeth, which assisted with staff training, Vulindlela Bulatsela, and Mandela Dlamini and Associates.

Alan Norman, the acting managing director of Suncorp, said the plant would initially provide 30 jobs, rising to almost 100 in the first year of operation.

The solar energy panels have been installed at Ipolokeng Primary School in Diepkloof, Soweto, and at a community washing centre in Alexandra.

The panels would also be sold to rural communities and farms which were without power grids.

'RDP presents opportunities'

By Thabo Leshilo

Staff Writer

CT(BR)25/8/95

The Reconstruction and Development Programme could only be implemented along strict business lines in a climate of real economic growth, said Eric Stillerman, the director of International Campus.

In turn, the RDP presents a window of opportunity for business in terms of growth and expansion.

These are among the themes of the RDP Business Development Programme to be run by International Campus in Johannesburg from August 30 to September 1. Stillerman said real spending was increasing in a range of viable market segments which were not presently served.

"Entry into these markets requires that business aligns its vision and strategies with the realities of the RDP," he said.

The focus of the government should be on effective delivery to the poorest segments of the country, which do not have access to the private sector.

Participants in the programme would include the representatives of central and provincial governments, parastatals, companies and trade unions.

Further details on the programme should be directed to Stillerman on (011) 728-4747.

25 000th client switched on

(55)(~~123~~)

THE Phambili Nombane project which aims to electrify 40 000 homes in Khayelitsha by the end of 1996, yesterday celebrated switching on its 25 000th customer.

The project, a joint venture between Eskom, Electricite de France and East Midlands Electricity in the UK, started in May last year.

Khayelitsha's mayor Mr Vuyani Ngcuka said the community was greatly appreciative. — Staff Reporter

CT 25/8/95

ENSURING HIGHER RETURNS . . . Yamaichi's Yuji Nomoto Picture: JULANI VAN DER WESTHUIZEN

Eskom to tap R750m from samurai bonds

By MARCIA KLEIN

ESKOM is expected to raise up to R750-million on the Japanese bond market in October. The utility said it was considering tapping the market for samurai bonds, without giving an indication of how much it hoped to raise. (250)

However, sources said they expected the electricity utility to raise up to R750-million. (66)

This is the second time South Africa has had access to Japanese capital. In May the government launched a R1,3-billion five-year samurai bond.

Japanese finance houses Yamaichi and Nomura and Johannesburg stockbroker Frankel, Pollak, Vinderine, are joint leaders in raising the funds.

Yuji Nomoto, deputy managing director of Yamaichi International, Europe, who visited South Africa this week, said bonds of this nature ensured a much higher rate of return for Japanese investors who usually earned rates of below 1%.

Japanese investors were also looking outside Japan for higher returns.

Mr Nomoto said Yamaichi's strategy had been to focus on three countries it identified as being the most important emerging markets: Poland, Turkey, and South Africa.

Some Japanese companies had started operations in South Africa. "Now it is our turn to bring Japanese money into this country."

Frankels and Yamaichi are also investigating an asset swap and an SA fund to be marketed to the Japanese retail sector.

ST (BP) 27/8/95

SADC agrees to create power-pool

CT(BR) 28/8/95

(55)

FROM REUTER

Ministers of the Southern African Development Community (SADC) meeting in Johannesburg agreed to the creation of a common energy power-pool, but referred most other issues before them for further discussion, the group's executive secretary, Kaire Mbuende, said at the weekend.

Mbuende said the accord on sharing energy would include Zaire, which is not a member of the 11-state group.

Mbuende said the ministers urged technical experts to expedite drafting of a strategy to deal with repeated drought in the region.

The SADC faced a cereal shortfall of about 34 percent of its needs this year and had appealed for food aid worth $270 million — more than half of which had already been committed, he said.

Mbuende said proposals for a trade protocol had been referred for further discussion as had those for free movement of people within the SADC. "It is important that you control movement through provisions of free movement rather than through prohibition.

"It is a better control when you have terms under which people can move from one country to another. Absence of such provisions causes the problem of what is referred to as illegal migrancy," he said.

Electricity union rejects inefficiency claim

Mungo Soggot 55

THE Association of Municipal Electricity Undertakings (AMEU) has defended local authority electricity suppliers from allegations that they are predominantly inefficient.

It has also criticised implied comparisons between local authority electricity suppliers and Eskom.

The AMEU was responding to last week's announcement by the National Electricity Regulator that the electricity supply industry had to be rationalised to put an end to widespread inefficiencies that were threatening the RDP electrification programme and pushing up prices.

The alleged state of the industry had led the regulator to decide not to grant any distribution licenses next month, as had been the plan when the regulator was set up six months ago. Instead it would work with government on rationalisation.

AMEU president Howard Whitehead said: "The problem in the electricity supply industry is more of a financial nature than physical inefficiency. Complex cross subsidies cloud the facts." BD 29/8/95

The regulator's proposed rationalisation would probably see an expansion of Eskom's role.

Whitehead said local authorities on average paid 20% more for electricity than Eskom distributors. Despite this, local authority distributors were able to provide reliable electricity at competitive prices.

"Comparisons seem to have been drawn with Eskom. If that is the case, is an organisation like Eskom that uses municipal payments to fund electrification, spends millions on marketing a product for which it has a monopoly, that incurs losses of R40m a month through ineffective cash collection and that has built a generation capacity far in excess of SA's needs, efficient?"

ARG 30/8/95 (55)

SADC accord 'means saving of R2-bn a year'

CLIVE SAWYER, Political Correspondent

THE power pool agreement signed this week by Southern African Development Community countries will mean a saving of more than R2 billion a year, says Minister of Mineral and Energy Affairs Pik Botha.

Speaking yesterday at a Press briefing on a discussion document about future energy policy, he said South Africa was committed to providing the cheapest energy to all its people.

The goal of 2,5 million domestic electricity connections by the turn of the century remained attainable.

● Copies of the discussion document are available from the Department of Mineral and Energy Affairs, Private Bag X59, Pretoria 0001.

'Mothballing of Koeberg' an energy option

ARGT 30/8/95

(55)

Political Correspondent

MOTHBALLING Koeberg nuclear power station pending the outcome of an independent probe into its environmental and economic advantages is among options proposed in a "discussion document" on energy policy.

The document said Eskom acknowledged that generating costs at Koeberg were higher than those at comparable coal-fired power stations "in the Transvaal".

However, Koeberg had not been operating under optimum conditions.

Eskom said that replacing the lost generating capacity, if Koeberg was closed, would be higher than its present operating costs.

These claims had not been independently investigated, the document said.

Eskom had not released to the public technical details of its plans for decommissioning the station or disposing of radioactive waste.

There was general acceptance that full public disclosure and involvement were necessary for a feasible political and economic solution to the waste disposal problem.

Among other options in the discussion document are:

- Allowing Eskom alone to decide whether Koeberg should continue.
- A public inquiry into the economic and environmental desirability of the station.
- Mothballing Koeberg pending the outcome of a probe into its advantages over other ways of providing electricity.
- Obliging Eskom to publish full details of its plans for decommissioning and waste disposal, and to hold public workshops in the Vaalputs/Springbok and Cape Town regions.
- An independent investigation into the effect of radioactive emissions on the environment, the health and safety of workers and communities surrounding Koeberg.

The document said this last option could generate people's confidence in the government and Eskom, or public resistance with calls for the closure of Koeberg.

Govt rethink on Koeberg

(55)

BARRY STREEK
POLITICAL STAFF

CT 30/8/95

THE future of the Koeberg nuclear power station could become the subject of a public inquiry.

This is one option presented by the Department of Mineral and Energy Affairs, in a policy discussion document, tabled in Parliament yesterday.

The department criticised Eskom for not disclosing the cost of running the Koeberg plant, or the costs of decommissioning it.

According to the document, Eskom has acknowledged costs comparable coal-fired stations, but pointed out the station had not operated optimally due to contractual obligations to the Atomic Energy Corporation and national grid.

"Moreover, Eskom maintains that the cost of replacing lost generating capacity and of closure, would be higher than present operating costs ... Neither of these claims have been independently investigated," the document reads.

The department said there were various options: Permit Eskom to decide alone whether Koeberg should continue; establish a public inquiry into the economic and environmental desirability of continued operation; halt operations subject to the outcome of an independent investigation and oblige Eskom to publish full details of decommissioning and high-level waste disposal, and to organise and finance a series of public workshops at which these plans can be discussed and criticised.

Eskom defends Koeberg's cost

(55)

STAFF REPORTER

CT 31/8/95

KOEBERG nuclear power station supplied only 10% of South Africa's energy, but it would cost billions of rands to replace, Eskom's energy spokesman Mr Brian Statham said yesterday.

"If Koeberg were closed we would have to replace it," he said.

"The cost of a new power station would be far greater than the current costs of Koeberg," Mr Statham said.

He was commenting on the Department of Mineral and Energy Affairs' policy discussion document tabled in Parliament on Tuesday in which the future of Koeberg was raised.

Zinc strikers face final interdict bid

Deborah Fine

BD 31/8/95

STRIKING workers at the Zinc Corporation's East Rand operation have been ordered to show cause in the Rand Supreme Court next month why the company should not be granted a final order interdicting them from stopping temporary workers from entering the plant during the strike.

In an affidavit, Zincor senior personnel officer Martin Hurworth said strikers had also stoned vehicles trying to enter.

An interim interdict was granted on Tuesday prohibiting strikers from coming within 100m of the plant and obstructing access to the plant.

Eskom conduit for US institute

Theo Rawana

BD 31/8/95

ESKOM and the US-based Electric Power Research Institute had agreed to form an African centre for essential community services — a technology transfer mechanism for moving institute technology through Eskom to sub-Saharan Africa, they said yesterday.

Institute customer systems group vice-president Clark Gellings and Eskom research manager Steve Lennon said the centre would probably use a major SA university as its host site.

The California-based institute, with 700 utility members, was founded in 1972 for the US electric industry to improve power production, delivery and use.

The centre would function as a satellite of the institute's customer systems group community environment centre in St Louis, Missouri, and would become part of the institute's centre and office network.

"The process of site selection (in SA) is already under way, with the opening scheduled for March-April 1996. Selection criteria include technical capabilities, community presence, ties to key SA industries and resource contributions," the organisations said in a joint statement.

Initially the centre would be supported by Eskom and the institute, with extra funding from SA's government, water utilities and health care industry. It was to be self-supporting and function as a nonprofit corporation.

ESKOM FINANCE (260) (55) FM 1/9/95

High-voltage accounts

Eskom is still reducing its gearing and the real price of electricity, while vigorously participating in domestic electrification (see *Business*). According to Electricity Council chairman John Maree, Eskom is increasingly financing its net capital expenditure from its own cash flows.

The 1985 debt:equity ratio of 3:1 had been reduced to 1,7:1 by December 31 1994 (date of the latest accounts). Eskom's intention is to reach debt:equity parity within the next four years. At the end of 1994, Eskom had total assets of R47,4bn. Revenue for the financial year was R15,4bn and net income R2,3bn.

Eskom undertook to reduce the real price of electricity by 20% between 1992 and 1996 and the current year's figure makes this goal realistic. The price increase for electricity in 1994, at 7%, continues to reflect a significant decline in real terms — 73% of its level 10 years ago.

CE Allen Morgan reports revenue for the year increased by 11,8% to R15,417bn as a result of the net tariff increase of 7,6% last year and a 3,9% increase in sales volume.

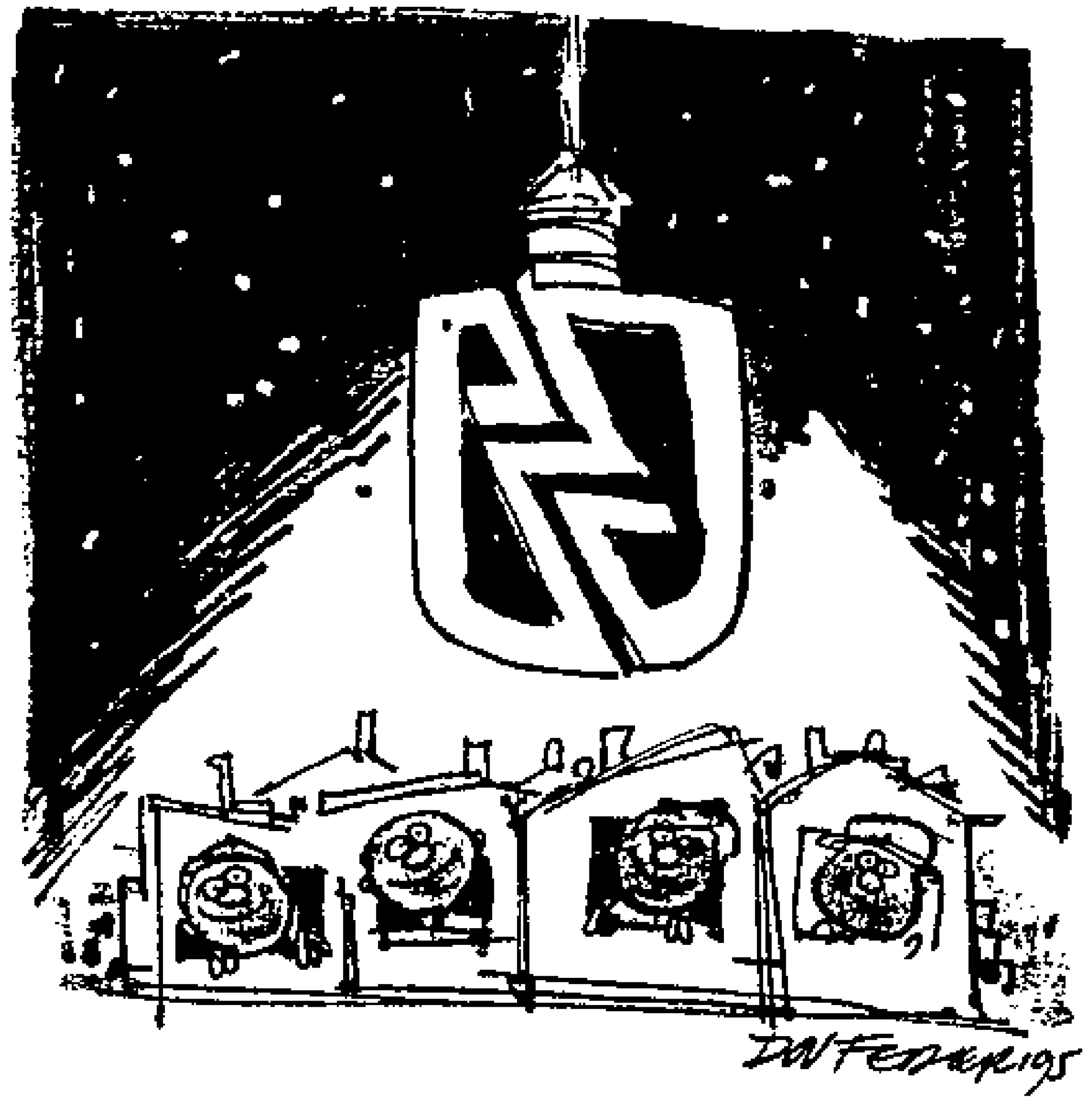
Operating expenditure increased by 10,7%, to R9,97bn. Net interest and finance charges increased by only 1,2% to R3,186bn — covered 1,7 times by net operating income.

Net income was R2,3bn, a 37,8% increase over 1993. On a current value basis, it was R407m, up from R14m in 1993.

The real return on assets was 4,3% (4,1% for 1993), which is considered satisfactory. Provisions include R201m for arrear debt

(against R167m) and R192m for decommissioning obsolete coal-fired capacity.

The notes to the cash flow statement show that Eskom repaid more than R1bn debt to local capital and money markets last year, while net interest-bearing debt dropped from R28bn to R27,8bn. Eskom has already completed its local refinancing programme for this year. Much of the finance for 1995 was achieved in 1994, through the issue of Electrification Participation Note 2 (EN2), which raised R1,2bn and replaced EN1, issued in 1993.



The effects of the severe local bear market in bonds was substantially offset by shrewd hedging strategies adopted in late 1993. Eskom expects to abstain from the local capital market during the remainder of this year, having raised significant amounts abroad, notably a loan from the Bank of Taiwan, a Japanese Exim (export-import) loan to finance capital goods and a syndicated loan issue completed in May. The utility announced recently it "is contemplating tapping the Japanese Samurai bond market for the first time in October" — prefunding for 1996.

In the local money market, the expected effect of local operations will be net borrowings of a modest R300m for the remainder of 1995.

To help it with overseas borrowing, Eskom has obtained credit ratings from Moody's Investors' Services (Baa3) and from Standard & Poors Rating Group (BB) — the same as SA's.

In the league table of world electricity prices, SA has achieved an average price of UK2,5p/kWh. Translated according to the ruling exchange rates of December 31 1993, this compares with more than 8p in Japan, 7p in Germany, 5p in the UK and 4p in the US and France.

Eskom's industrial customers pay 38% less than their North American and 50% less than their European counterparts. Eskom's long-developed skills in burning low-grade coal to generate power gives SA a major comparative advantage in electricity-intensive industries, notably the conversion of base metal ores to products such as aluminium and stainless steel.

The major financial blot on this remarkable record is continuing nonpayment by customers "in certain areas" — presumably black urban areas. However, Maree says cutting off power to individual nonpaying customers is starting to have the desired effect. But the pattern of nonpayment still needs to be addressed by all parties if RDP objectives are to be achieved. ■

ESKOM (65) FM 1/9/95

Watt a performer

Eskom sales reached another peak last year, rising 3,9% to 149 443 gigawatt hours (a gigawatt is 1 000 megawatts). Peak demand grew by 7% to 24 798 MW, due partly to an exceptionally cold winter.

CE Allen Morgan expects peak demand to rise by more than 6 000 MW between now and the year 2000 (see *Economy*).

To partly meet that demand, a multiparty agreement will restore the war-ruined direct current high-voltage transmission line to SA from the hydroelectric plant on the Cahora Bassa dam in central Mozambique.

Contracts will include equipment to convert direct current into alternating current to feed Eskom's grid. The total value of contracts will be about R300m, with Eskom financing the export of steel towers worth R130m. The utility expects to have 950 MW available by the winter of 1997.

Eskom is also negotiating an agreement to import 500 MW of peak power from Zimbabwe's Kariba hydroelectric station by January 1996.

Three coal-fired units at Majuba (each 360 MW) will be commissioned sequentially in 1996, 1997 and 1998. Coal will be supplied and railed to Majuba by end-1996 due to serious mining problems at the local dedicated mine. Eskom also intends to return Arnot's mothballed units to service, from 1996.

It will review the status of three yet-to-be commissioned units at Majuba and some mothballed stations. Ingagane and Taaibos will be decommissioned soon; Wilge and Salt River closed last year.

The creation of the Southern Africa Power Pool (agreed to in principle by electrical utilities) and other energy-sharing arrangements under negotiation should enable obsolete capacity to be replaced by cheaper hydro peaking power. But a medium-term warning is the indication that Eskom will review sales programmes to take account of its diminishing surplus capacity — suggesting there will be no major price incentives for future bulk consumers. ■

Electricity industry to change soon

FROM SAPA (280) (55) CT(BR) 5/9/95

John Maree, the chairman of Eskom's electricity council, said yesterday that the South African electricity distribution industry would undergo significant changes in the short to medium term.

Speaking at the biennial convention of the Association of Municipal Electrical Undertakings held in Kempton Park, Maree said the South African electricity customer base was undergoing rapid growth and transformation through electrification programmes.

"Changes in trading relationships, technologies and market structures will undoubtedly lead to changes in the character of the South African electricity distribution industry, but the political process involving local, regional and provincial government is likely to have a the most dominant impact on the industry's structure in the near term.

"We will see trends to concentration as well as to fragmentation and specialisation. These will not necessarily be mutually exclusive changes," Maree said.

Maree said the industry was currently dominated mainly by Eskom, a few metropolitan organisations and a growing number of interim structures.

Over time, Eskom and the metropolitan bodies would lose many of their customers and interim structures would disappear entirely.

They would be replaced largely by a number of statutory corporations established specifically for the purpose of managing and operating the distribution of electricity in South Africa.

Maree appealed to delegates not to fight rationalisation.

SA electricity remains the cheapest

BD 6/9/95 (55)

Mungo Soggot

SA's electricity remained the cheapest in the latest survey of 16 countries by the National Utility Services (NUS).

SA held on to pole position despite having the largest price increases of countries measured during the April 1994-April 1995 survey.

NUS SA national sales manager Rob Mackenzie said yesterday that of the major local authority electricity distributors, only Johannesburg had hiked prices above the inflation rate while Eskom had kept its increase to just under 4%.

An Eskom spokesman said the national power supplier was well on track to meet its price compact to cut prices 20% in real terms between 1992 and the end of next year.

It was also on the way to meeting its pledge to cut prices 15% between 1995 and 1999.

The average increase during the period was 7,27%. The country with the lowest was Australia with a 4,32% reduction. The survey showed that Spain, Holland, France, Britain and Australia had cut their prices, while Belgium and Norway had hiked prices above the rate of inflation.

Mackenzie said the creation of the National Electricity Regulator this year should keep a lid on SA price increases as suppliers would now be more accountable. Municipal operators would now have to justify hikes.

Commenting on the regulator's recent announcement that it had been unable to grant licenses in six months due to the disorganised state of the supply industry, he said the time frame had been optimistic.

He welcomed the regulator's intention to rationalise the industry, which would probably see small local authority operators stop supplying electricity. Eskom would probably take over some of these. He expressed concern that the regulator had mooted the possibility of imposing a tax on electricity to compensate those local authorities who would be losing a major source of income.

'Costly' to close Koeberg

☐ Several billion rand to mothball, says Eskom

ARG 6/9/95 (55)

POSER: Closing Koeberg nuclear power station would cost billions of rands, says Eskom's energy management chief Brian Statham.

BACKGROUND TO THE NEWS

JOHN YELD, Environment Reporter

IT would cost South Africa "several billion rands" to mothball Koeberg nuclear power station, and between 3 000 and 4 000 people in the Western Cape could lose their jobs.

That's the assessment of Eskom in response to a policy discussion document tabled in parliament by the Department of Mineral and Energy Affairs.

The document criticises Eskom for not making public the technical details of its plan for decommissioning Koeberg at the end of its 40-year productive life, or for disposing of its nuclear waste.

Among the options which the document suggests is mothballing the nuclear power station, pending the outcome of an independent assessment of its environmental and economic implications.

Asked to comment, Eskom's energy management manager Brian Statham said the proposal was "not really an option".

"Koeberg, like any other major project, is costed on a life-cycle basis.

"In other words, there's an initial outlay to establish the facility, then a period of income as the facility produces, and finally an outlay again to close the facility."

Koeberg was designed to be productive for 40 years and its economics were based on that period.

"So if Koeberg were to be closed prematurely, the economic balance would be negatively impacted — that is, the outlay for establishing and then dis-establishing the facility would still be incurred, but the income would be curtailed.

"This would make the economics of mothballing or closing Koeberg very expensive."

Also, Eskom would have to find another source for the power produced by Koeberg — about eight percent of the national total, Mr Statham said.

"This would take some time. Probably we would re-commission one of the coal-fired power stations that are mothballed.

"This would take about three years and would cost in the order of half a billion rands.

"Such a power source would be remote from the Cape and there would be operational costs involved in getting the power to the Cape."

There were only two practical options, Mr Statham suggested: Allowing Eskom to continue operating Koeberg until the end of its planned economic life (about 2024), or until the government had formulated a policy around nuclear power generation.

"We have estimated that if Koeberg were to close now, the cost would be several billion rands," said Mr Statham.

"This would include the premature closure costs, substitute power, resultant operational difficulties, and so on."

Also, some three to four thousand people directly and indirectly dependent on Koeberg for their livelihoods would probably lose their jobs.

"There are a number of clerks, maintenance people, fitters and turners and so on who could be placed elswehere in Eskom, but there is also a substantial number of people with nuclear experience who are not so easily redeployed."

Storing the nuclear fuel for any period of "mothballing" would not be a problem.

"All the fuel burnt in Koeberg up until now is stored on-site in the fuel pool.

"So the fuel rods could be stored there indefinitely, as long as they kept the water purification systems operating."

Golding combines youth and experience

CT(BR) 7/9/95 (65)(216)

By Bruce Cameron
Political Editor

Pik Botha, the minister of mineral and energy affairs, thought when he swapped portfolios on entering the government of national unity that he would have a relaxing time.

Nothing happened in those portfolios — he thought.

The trouble was he judged the position from the years when his party was in power — when the energy industry basically operated in secret and mining was left to the mining industry.

But during those years, members of the ANC who are now influential in the government, were in the industries watching and learning, seeing what was wrong and what needed to be put right.

One of these people was Marcel Golding, now chairman of the parliamentary mineral and energy affairs committee.

In the days when ministers of mineral and energy affairs were having an easy time, he was serving an apprenticeship as the assistant general secretary of the National Union of Mineworkers, then headed by Cyril Ramaphosa, now the ANC general secretary.

Golding, who at 35 is comparatively young and full of the energy of youth, is, with his committee, driving a process of reform that reaches across both energy and mining.

He has a grasp of his subject that few before him could claim.

Although committed to a new social order, he is not tied in any ideological straitjacket as he searches for creative solutions.

He said there were major problems in both areas of the portfolio but he believed there were constructive solutions — "we must just think creatively".

The policy of the department of mineral and energy affairs in the past was governed by a dictum which said: "If you do not know where you are going, any road will do".

"We have tried to change that. We have a view. We want to have dialogue with different parties about the merits of this view.

"We need a vision of transformation that provides the incentives, the reciprocity, the economic empowerment, a change in ownership patterns, modernisation, greater social partnership and greater social justice."

One of the major problems that affected not only the mining industry but all industry, was that apartheid had limited entrepreneurial spirit among blacks with restrictions placed on their ability to become businessmen.

"Industry has been built on cheap disenfranchised labour with no investment in human capital. Now people complain about productivity levels.

"You cannot get profit without investing and one of the key areas of investment is human resources. Many countries, without our natural resources, prosper because they invested substantially in their people," said Golding.

A multi-pronged approach was required to resolve productivity. This included improved training and education together with the establishment of trust in the workplace and a rethink of compensation packages.

Golding said the new Labour Relations Act would allow the committee to make the changes possible and would entail "gain-sharing negotiating" and change of ownership patterns so that workers identified with their companies.

One way to achieve this would be to have three sources of income — a basic wage rate; clearly defined and honoured profit-sharing incentives; and the introduction of significant employee share option schemes.

A major part of the reform in both components of the mineral and energy affairs portfolio revolved around the preparation of two white papers, which should be ready by the end of the year.

The reform was overdue, particularly in the mining industry.

"It has taken many people a long time to realise that problems do exist. The same officials I used to negotiate with four or five years ago on the need to reform health and safety in the industry rejected it.

"After the Leon Commission report and the Vaal Reefs disaster there was a deathbed conversion."

But reform had to be fundamental, said Golding.

"When health and safety legislation comes before parliament next year it will have a dramatic impact. It will separate the conflicting areas of exploration and development of the minerals from the enforcement of health and safety."

Golding said legislation alone would not stop accidents. What was important was to ensure the law was effectively implemented with an enhanced safety inspectorate.

He was insistent that reform had to come from within the industry itself, particularly in relation to employment practices.

The entire mining industry, and particularly gold mining, faced challenges which would result in further job losses.

All resource based industries like gold mines, eventually had to close down. "It is not like a coke factory where you mix syrup and water and turn out coke on the other side".

"The question is when it is closed down what options are available to those left behind. We have got to make sure that when we build a mine we are able to ensure that we can fund some of the problems that come from the closure of the mines."

The country had to move down the path of industrialisation and beneficiation to create more value and jobs.

Initially with beneficiation few new jobs would be created, but as downstream industries came on line the number of jobs created would rise rapidly.

The process was, however, difficult with a number of problems, including investment and competition with the countries which were beneficiating minerals from South Africa.

But Golding said tax incentives should be given to industry to invest and foreign beneficiators should be encouraged to open plants in South Africa.

Mining should be opened up not only for foreign competitors but also to give blacks a stake in the industry. One way would be to open an investment register of all mineral-right holdings, their owners and values.

Golding said many major mining companies did not even know what mining rights they held or even if they were part of a core business. In many cases the areas were considered too small to exploit.

If a register was created this could be followed by a market on which mining rights could be traded, he said.

The demand for fundamental reform was equally great in the energy, and particularly the liquid fuel, sector, he said.

Energy policy had to be shifted from what was called energy security. All investment had been driven by security needs resulting in the creation of uneconomic projects like Mossgas.

Golding said the energy reform programme was based on three principles. These were:

- The need for social equity to overcome the huge disparity of an over-abundance of electricity while people in the townships lived in darkness;
- The efficient utilisation of energy including conservation with appropriate energy mixes; and
- Environmental sustainability, including issues such as pollution.

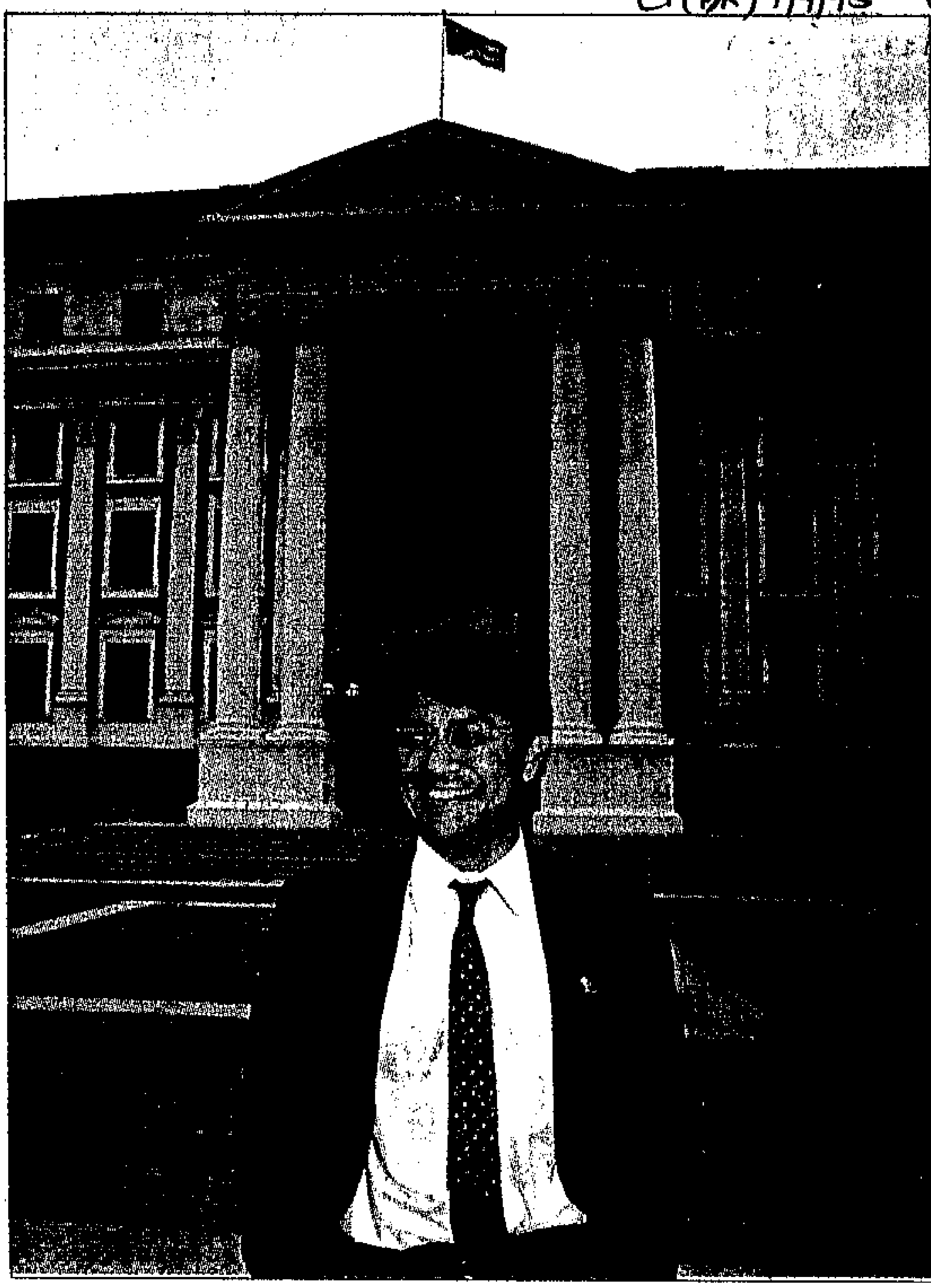
Golding said in the energy sector there was also a need for creative thinking. Eskom was an internationally respected producer of cheap electricity but the question remained as to whether or not there should be increased competition.

He said Eskom should remain a state asset to assist in meeting social goals of government but "this does not mean we should exclude the private sector from coming in".

There were a whole range of opportunities that would open up for both foreign and local investors as demand outstripped supply over the next three to four years.

For example the private sector, in conjunction with a black empowerment programme, could be used to recommission mothballed power stations or to complete power stations on which construction had been interrupted.

This would help achieve other targets such as social goals and the transfer of technology from abroad.



CREATIVE APPROACH *Marcel Golding, chairman of the mineral and energy affairs committee and former National Union of Mineworkers general secretary, does not take a strict ideological stance* PHOTO: ANDREW BROWN

AEC deficit surges on atomic plant write-off

(55) CT (PR) 8/9/95

By Roy Cokayne
PRETORIA BUSINESS EDITOR

The Atomic Energy Corporation's (AEC) net deficit rose more than 100 percent to R111,185 million for this financial year compared to a net deficit of R54,461 million in the previous year.

This was primarily due to the R125,117 million extraordinary write-off on its uranium enrichment plant at Pelindaba near Pretoria, according to the AEC's latest annual report tabled in parliament yesterday.

The plant, called the Z-plant, was closed at the end of March this year, heralding the end of an era in which South Africa was self supportive in the nuclear energy fuel needs of its Koeberg nuclear power station.

According to the report, operating expenses continued to be managed down successfully with the aim of reducing state dependence.

Reduction

It said state dependence on operating expenses was reduced from R310,896 million to R308,275 million, representing a reduction of 9 percent in real terms.

However, it said the government grant of R308,275 million for operational activities was supplemented by R20 million due to costs incurred by the closure of the Z-plant, apart from R201,45 million to service state guaranteed loans by way of interest and redemption.

The report said corporate sales increased marginally by 10,6 percent, which was mainly due to the closure of non-profitable businesses and product lines.

Increase

In spite of the small increase in sales, the AEC said if extraordinary items were excluded, it was still able to increase the net surplus after financing costs by R51,758 million compared to the previous year.

The AEC said the removal of trade boundaries, following the political transformation process in South Africa, had enabled the organisation to enter and compete on world markets.

A portfolio of more than 200 products, processes and services, derived from the AEC's technological core competencies, were successfully introduced into profitable niche markets, it said.

The report said non-nuclear fuel businesses were characterised by a modest 7,5 percent increase in sales compared to the previous year.

This was due to a deliberate rationalisation of unprofitable product lines to establish a sound basis for the future, it said.

However, the report said export sales of non-nuclear fuel products totalled R7,633 million, representing an increase of 80 percent.

Public to shape energy policy

ARG 9/9/95

SUBMISSIONS have been invited on a new national energy policy which will ensure that all South Africans have equitable access to basic and reasonably priced energy services.

The Department of Mineral and Energy Affairs said the new policy should promote energy use that protected the environment while also ensuring commerce and industry had adequate energy supplies to achieve economic growth.

(55)

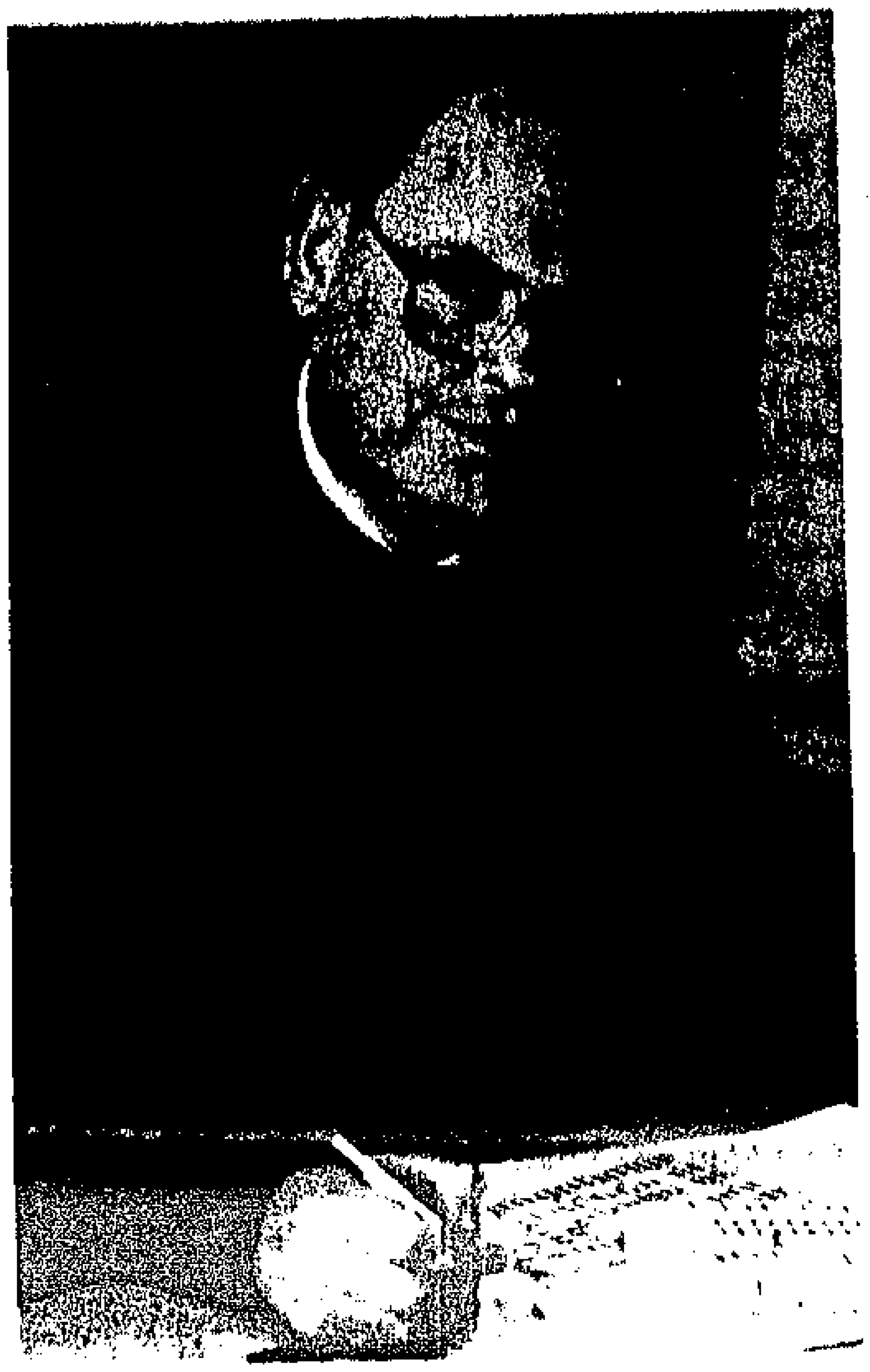
"We will only be able to balance these priorities if we embark on an open and participative process."

The parliamentary committee on mineral and energy affairs would assist in this process.

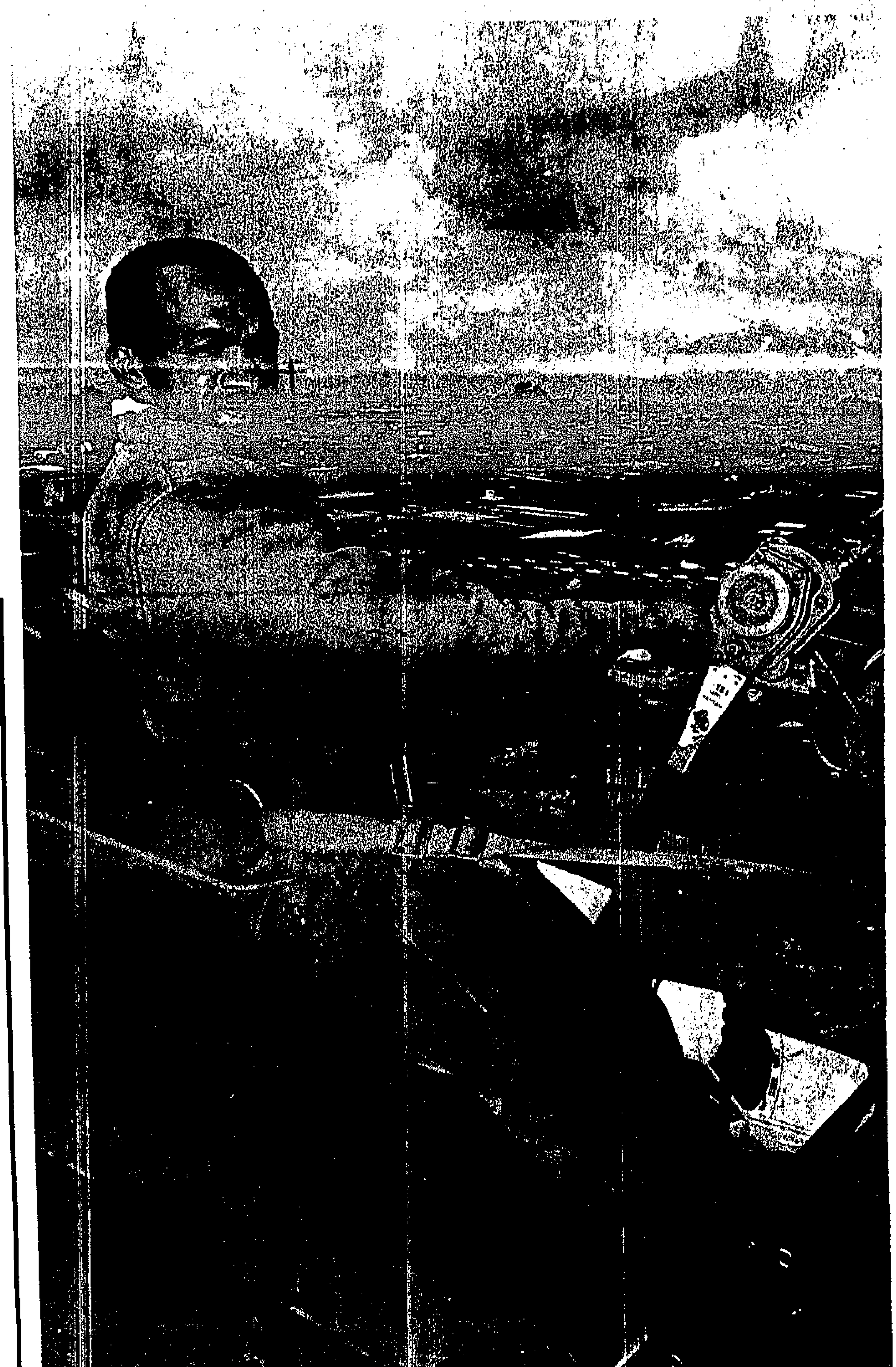
Interested parties have until October 31 to make their submissions.

And now let

□ *New company lifts gloom by bringi*



PROJECTS MANAGER: Ian Barge says sustainable employment has been created and hundreds of families have benefited from income generated through the project.



POWER SOURCE: Alfred Bondt connects an electric cable to one of the poles that will f electricity to the hundreds of shacks in the area. Pictures: ROY WIGLEY, The A

let there be light

by bringing electricity to shacks of Khayelitsha

ARG 12/9/95 (55)

JOSEPH ARANES
Municipal Staff

LIGHT is finally illuminating some of apartheid's darkest creations as the government's reconstruction and development programme delivers power to the people.

During the past year, more than 25 000 houses in Cape Town's biggest township, Khayelitsha, have had electricity supplies switched on and work is under way to connect another 25 000 residences to the grid.

For years the township was trapped in darkness because the local authority did not have the capacity and, it seems, the inclination to provide the service to the more than 500 000 Khayelitsha residents.

But that all changed when the Electricity Supply Commission (Eskom) took over the supply rights to the area, and set up a joint venture with Electricité de France and the English company East Midlands.

A commercial company Phambili Nombane (Forward with Electricity) was formed and undertook to spend R60-80 million on the massive task of bring electricity to the area.

Operations manager Ian Barge said that after the new company was formed, they set about speaking to all the community role-players to find out their needs.

"Some people were against the idea of providing electricity to shacks but the overwhelming view was that it would drastically improve the quality of life of the people, and would fit nicely into the RDP plans.

"When we moved into the area we soon discovered that the existing grid was never designed to provide enough power to the whole area. About 10 000 formal houses, the schools and the creches had electricity, but very little energy was left for the informal houses."

This problem was soon rectified and once local residents were employed to work alongside some Eskom staff, poles and cables quickly became a feature of the area.

Mr Barge said labour-intensive methods were used. Local workers were trained for the project and had the opportunity to continue applying their skills in similar projects.

"In this way sustainable employment has been created and hundreds of families have benefited from income generated through the project."

Khayelitsha community spokesman Dickson Kulani said the project not only concentrated on short-term employment but also tackled the grassroots issues of skills transfer and capacity-building in the community.

"The labour-intensive electrification method replaces machines with people wherever possible, allowing a large portion of the labour costs to be reinvested in the community.

"And the network being installed in Khayelitsha meets world standards for electrification and residents can look forward to a highly reliable system and high levels of customer service from Phambili Nombane," Mr Kulani said.

Site C resident James Mninzi, who is patiently waiting for his shack to be connected to the grid, said the introduction of electricity would improve the quality of his life.

"My family is very excited and is looking forward to the day when we too will have electricity.

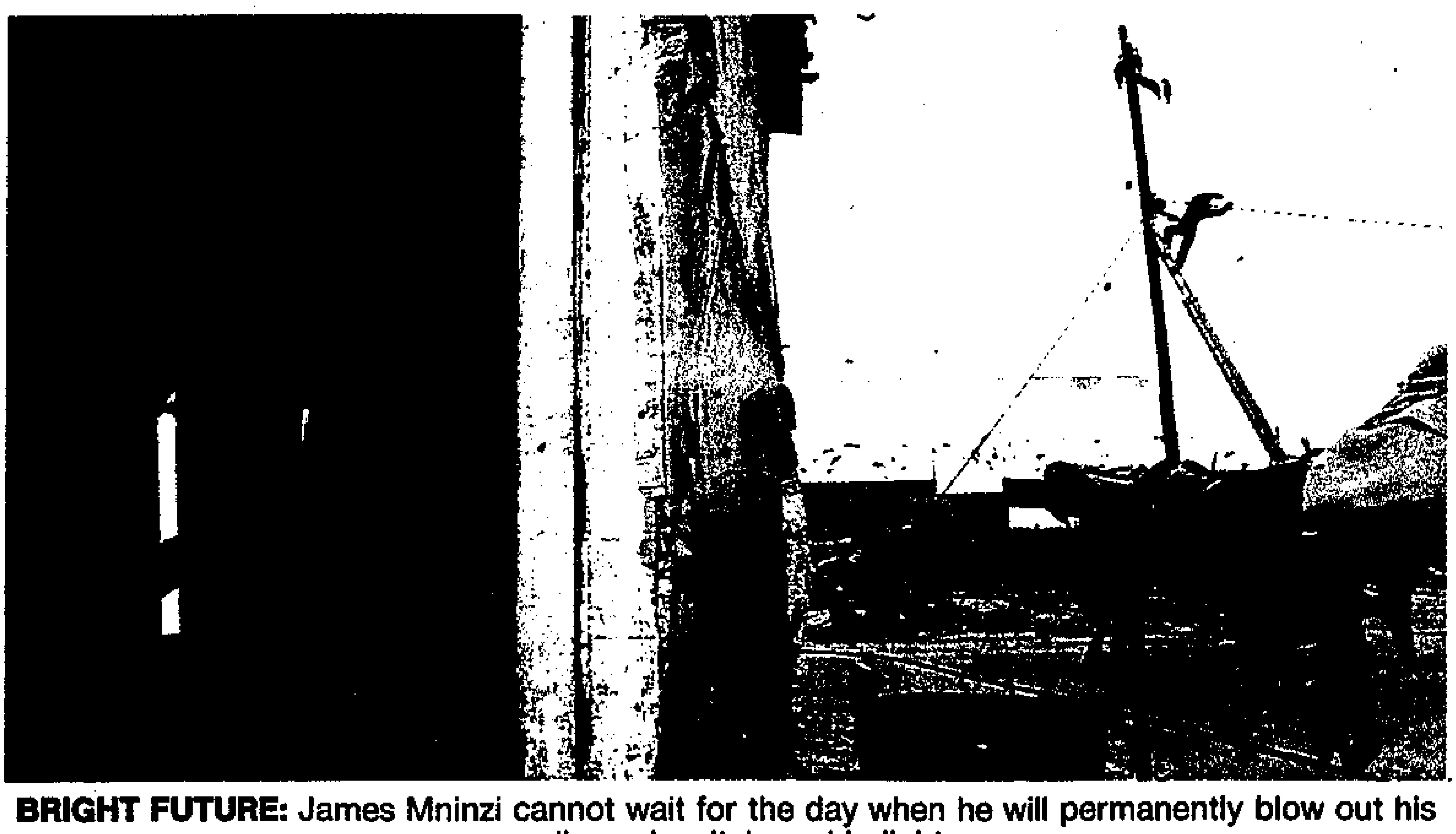
"For years we have been using candles to provide light and this is very dangerous. On numerous occasions shacks were destroyed and lives lost because of candle-related accidents. Soon this will be a thing of the past."

Victoria Thuli, who is also waiting to be connected, said she was sure her family could only benefit from getting electricity.

"My children will be able to study and do their school work at night without having to strain their eyes to read their work, and this will help them improve at school."

Mr Barge said pre-paid meters were being installed in all the dwellings enabling people to use as much electricity as they could afford.

he poles that will feed
ures: ROY WIGLEY, The Argus



BRIGHT FUTURE: James Mninzi cannot wait for the day when he will permanently blow out his candle and switch on his lights

BD 13/9/95

Labour is given full representation

(55)

Renee Grawitzky

CAPE TOWN — The Parliamentary Committee on Public Enterprises yesterday approved amendments to the Eskom Act to provide for the restructuring of the Eskom Electricity Council to ensure representation of all stakeholders.

Public Enterprises Minister Stella Sigcau said although the current constitution of the electricity council did not provide for representation by trade unions, it permitted representation by specified organisations. These included the Afrikaanse Handelsinstituut, the SA Chamber of Business and the Steel and Engineering Industries Federation of SA (Seifsa).

The amendments would provide for three representatives from Eskom's management board, three trade union representatives, a Chamber of Mines representative, a Seifsa representative, three representatives from organised business as well as representation from the agricultural and investment sectors. The council would also include representation from the broader community within SA, as well as those who have special knowledge with regard to electricity supply and distribution.

Eskom to hike tariffs

(55) ARG 23/9/95

JOHANNESBURG. — Electricity tariffs would be raised by four percent next year, Eskom said here.

It said the rise, the same as the last annual increase, was necessary to offset normal operating costs. "The increase has been approved by the Electricity Council," said John Maree, chairman. — Sapa.

Business, economists welcome Eskom's price hike

By Charlotte Mathews
Investment Editor

Businessmen and economists welcomed Eskom's announcement on Friday of a 4 percent hike in the average price of electricity from January 1 next year, but said it was in line with expectations and would not cause them to revise inflation forecasts downwards.

Jacob de Villiers, the executive director of the Afrikaanse Handelsinstituut, said this meant a fall in electricity tariffs in real terms, which would contribute to economic growth and improve the quality of life for a large part of the population.

Sacob said that Eskom's tariff policies in recent years had shown "a responsible and determined approach towards the objective of containing inflation".

However, business still had to establish whether the average price meant there would be sharply differentiated rates for different categories of users.

Business was also concerned about the electricity on-sale policies of local authorities, which appeared to use the electricity tariff as a revenue-generating mechanism.

This concern was echoed by Econometrix senior economist Michiel Bester, who said the moderate increase would not affect predictions of inflation because it was a very small component and could be added to by local municipalities.

Some of the major municipalities generate a portion of their electricity needs and buy the remainder from Eskom, and are believed to make a profit on electricity to subsidise other expenditure.

That could become even more popular since the looming local government elections could see greater pressure on local government finances.

CJ (BR) 25/9/95 (55)

Terence Möll, the senior economist for Old Mutual, said the main reason Eskom was able to increase its rates below inflation — and had committed itself to doing so for at least the next four years — was that they had surplus capacity, so they could increase output in the economic upturn without an increase in costs. It was also the best managed parastatal, he said.

Bester said Eskom was benefiting from recent investments in projects such as Columbus and Alusaf, which were heavy users of electricity and were helping to offset lower demand from the gold mines. The volume growth from industrial users compensates for the low price increases.

Business, economists welcome Eskom's price hike

(55) ~~(…)~~ Star (BR) 25/9/95

By Charlotte Mathews
Investment Editor

Businessmen and economists welcomed Eskom's announcement on Friday of a 4 percent hike in the average price of electricity from January 1 next year, but said it was in line with expectations and would not cause them to revise inflation forecasts downwards.

Jacob de Villiers, the executive director of the Afrikaanse Handelsinstituut, said this meant a fall in electricity tariffs in real terms, which would contribute to economic growth and improve the quality of life for a large part of the population.

Sacob said that Eskom's tariff policies in recent years had shown "a responsible and determined approach towards the objective of containing inflation".

However, business still had to establish whether the average price meant there would be sharply differentiated rates for different categories of users.

Business was also concerned about the electricity on-sale policies of local authorities, which appeared to use the electricity tariff as a revenue-generating mechanism.

This concern was echoed by Econometrix senior economist Michiel Bester, who said the moderate increase would not affect predictions of inflation because it was a very small component and could be added to by local municipalities.

Some of the major municipalities generate a portion of their electricity needs and buy the remainder from Eskom, and are believed to make a profit on electricity to subsidise other expenditure.

That could become even more popular since the looming local government elections could see greater pressure on local government finances.

Terence Möll, the senior economist for Old Mutual, said the main reason Eskom was able to increase its rates below inflation — and had committed itself to doing so for at least the next four years — was that they had surplus capacity, so they could increase output in the economic upturn without an increase in costs. It was also the best managed parastatal, he said.

Bester said Eskom was benefiting from recent investments in projects such as Columbus and Alusaf, which were heavy users of electricity and were helping to offset lower demand from the gold mines. The volume growth from industrial users compensates for the low price increases.

Atomic organisation in export drive

Business Day Reporter

THE Atomic Energy Corporation is poised to export to Australia hydrogen fluoride, which used to be part of its uranium enrichment process.

It said the hydrogen fluoride would be bought by oil refineries and stainless steel refineries.

The corporation's uranium enrichment plant at Pelindaba was shut down on April 1 — a move which Minerals and Energy Affairs Minister Pik Botha said would save the corporation up to R210m. Now that the US ban on uranium exports to SA was over, Eskom would be able to import enriched uranium more cheaply for its Koeberg power station. Pelindaba's closure resulted in the loss of 500 jobs.

The corporation said hydrogen fluoride could be used in surface finishing of stainless steel, in petrol refining and detergent production and for production of inorganic fluoride salts used in the steel and aluminium industries.

It had also exported inorganic salt to an aluminium producer in Britain, and was preparing its products for export to Norway, the US and Brazil.

It said the first exports to Australia would reach clients in November. The product would be distributed by Australian company Incitec.

BD 2/10/95

December deadline for electricity shake-up plans

BD 4/10/95 (55)

Mungo Soggot

GOVERNMENT wanted to see final plans for the rationalisation of the electricity supply industry by December 15, the national electricity regulator said yesterday.

Regulator consultant Kevin Morgan said a team including the regulator, local government representatives, Eskom and members of government departments — including mineral and energy affairs, public enterprises and finance — was working flat out to meet theDecember deadline.

The supply industry includes Eskom and local authorities.

The regulator recently said a fundamental rationalisation of the inefficient industry was needed to prevent prices from climbing and to make mass electrification work.

Most of the problems lay with local authorities which were not coping.

It said in many instances they were suffering from the legacy of inefficient apartheid town planning which duplicated many operations.

The regulator has proposed rationalising the electricity industry into a national body which could be linked to Eskom; or into a few regional bodies linked to Eskom; or into a few regional electricity distributors linking Eskom and local authority distribution operations.

Industry sources said relations between local authorities and Eskom had been tense during the early days of plotting the industry's future. There had also been allegations that Eskom was hogging the process, and trying to take on too much.

A strong source of tension lay in the continued and widespread misconception that electricity supply was still the cash cow of local authorities' shaky finances.

Another source expressed concern that because the working group team met only once a week it would tackle only short-term issues.

"They are just looking at local government finances and electrification," the source said.

It was the ideal opportunity to make longer-term decisions about the industry's future such as the involvement of foreign utilities, many of which had expressed a keen interest to set up in SA, he said.

Eskom back in world capital markets with Samurai bond

CT (BR) 17/10/95 (55)

By Neil Behrmann

London Correspondent

London — Eskom will be issuing a ¥20 billion (R727 million) five-year Samurai bond today.

Nomura Securities and Yamaichi Securities will be the joint lead managers, according to officials at Nomura.

A roadshow, attended by a group of Eskom officials and headed by the executive director, Willem Kok, was held at a Tokyo hotel yesterday, according to the bond newsletter IFR.

This is Eskom's first return to the international capital market since 1992 when the utility issued a five-year DM300 million issue (R770 million at the present exchange rate).

Nomura and Daiwa control a third of the international yen bond-issuing market and two thirds of the Samurai market, according to IFR.

This is the second Samurai issue following the ¥50 billion (R1,8 billion) Republic of South Africa five-year bond that proved popular with Japanese investors in April.

Samurai issues are yen-denominated bonds that are raised in the Japanese markets and are mainly sold to Japanese institutions and wealthy private investors.

South African borrowers are now accepted in that market, so they can tap into the huge stock of Japanese savings.

On the international capital markets, known as the Euromarkets, large numbers of Euroyen issues were floated in the past few years as investors have favoured the strong currency.

The RSA Samurai issue was well timed for the borrower, since the yen has depreciated 20 percent against the dollar and about 18 percent against the rand.

But at present exchange levels of ¥100 to $1, the risks to borrowers have increased — and will further increase if the rand weakens once again.

In the past decade, the yen has appreciated more than 200 percent against the rand.

Assuming the equivalent of R1 billion had been borrowed in Japanese yen 10 years ago, the government would be repaying about R2,7 billion today.

Moreover, interest payments would have increased annually. The loan burden on South Africa's Deutschmark and Swiss franc borrowings have also raised the country's foreign exposure and offset repayments in the past few years.

Several Asian nations that have borrowed in yen have been hurt by the unexpected size of the currency's appreciation. So much so that a study by Merrill Lynch said that large yen liabilities could curb growth of the nations.

Five-year yen bond yields, however, are only about 3 percent. Although there will be a premium, interest charges will be much lower than dollar and Deutschmark rates. Eskom is rated Ba3 by Moody's.

Gas unlikely to replace coal as prime power source

CT(BR) 17/10/95 (EB) (55)

FROM REUTER

The use of gas for power generation in South Africa was made unattractive by the vast reserves of cheap coal in South Africa, an Eskom official said.

But, in the longer term, there could be a place for gas power generation, Eskom senior general manager Mike Deats told the Africa Oil '95 conference last week.

"The price of coal makes it difficult to get excited about other forms of power generation," he said, but added that "as time goes on the potential for gas-fired power becomes more and more attractive to us".

Deats said it cost Eskom between R1,50 and R2,50 a gigajoule to run its numerous coal-fired stations on indigenous coal.

This compared with an estimated cost of R8 and R12 a gigajoule of energy from gas-fired stations.

Eskom's coal-fired power stations are supported by coal reserves amounting to some eight billion mineable tons.

Each station can look to a coal supply life in excess of 40 years and in some cases up to 50 or 60 years, he said.

These reserves support Eskom's sent-out capacity of some 35 000 megawatts.

The relatively low reserves of gas, the fact that most of it would be imported to South Africa from Mozambique and Namibia and its poor potential for job creation meant Eskom was unlikely to use it for electricity generation while coal reserves were still available, he said.

Gas reserves at the state-owned Mossgas could potentially support a 350 megawatt power station, Mozambique's Pande fields could support a power station with capacity of more than 800 megawatt and the Kudu fields in Namibia could produce a further 2 000 megawatt station, he said.

Deats said he had held discussions with Enron, the producer and marketer of the Pande field, and Shell, which has a controlling share of the Kudu field.

He said existing coal-fired station capacity would meet new demand, assuming growth in demand of between 3 percent and 3,6 percent a year until 2000.

If natural gas is available, markets will develop

(55) BD 18/10/95

PHILIP LLOYD

SIMON Barber asks (Business Day, October 3) if Pande gas is an economic lifeline or a potential fiasco. He claims that the World Bank enthusiasm for the wealth it could create for Mozambique is misplaced. Is there a market for the gas in SA, he inquires.

The history of natural gas markets strongly suggests that there is a demand here. Everywhere in the world, when natural gas has become available, markets for it have developed rapidly.

It is a very clean fuel and delivers energy in a concentrated form. In the US there is a 300 000km network of lines, and this grid is being expanded by 5 000km a year.

Natural gas makes up 30% of the total energy consumed in the US and its share of the total fuel market has grown markedly in recent years. There are similar trends in Europe and the Far East.

Are we likely to repeat this experience? It seems probable. Sasol recently built a gas line from Secunda to Middelburg to supply Columbus Steel. Once news of its existence spread, everyone who was near the line and could make use of the gas fought to get some.

Bakeries, brickworks, even the Witbank municipality needed it. The original line had to be expanded and spurs with their own metering stations had to be built.

The new line from Secunda into KwaZulu-Natal is experiencing similar demand. There is a market.

Why, then, is Barber so leery of the prospects here for gas? He seems to assume that there is only one potential outlet, namely a possible project near Palaborwa to turn magnetite ore into iron carbide for steel manufacture.

Palaborwa lies due west of Pande, and if there was a chance of a significant project there, it would make sense to bring the gas past the town on its route into the rest of SA.

But this is not to say that the project would be big enough to take all Pande's output. Production of gas from Pande and of iron carbide at Palaborwa are not "mutually dependent", as Barber claims.

What else might the gas be used for? Certainly there is great interest in its potential for power generation. Our daily cycle of power demand is showing greater peak demand, thanks to growing domestic consumption. The massive coal-fired stations make cheap power for base load, but are expensive when used for peak power.

Natural gas burned in gas turbines, with the turbine exhaust going to secondary boilers, is becoming the most popular method of providing cheap peak power elsewhere in the world. Other possible major uses include fuelling motor vehicles, particularly taxis; and conversion into syngas to run the Sasol plants.

This may seem curious, but one of the technical successes of Mossgas was to show how cheap the combination of methane reformers and Sasol's latest synthol technologies would be.

Do we have to rely on Mozambique? Was the experience of the Cahora Bassa power line not enough for us? A possible scenario is for Pande gas to start the market rolling and then for us to tap our vast resources of methane, trapped in coal beds, and so become less dependent on foreign supply.

At a recent international symposium in Johannesburg, it was pointed out that coal-bed methane now makes up a quarter of the US natural gas supply. Zimbabwe is starting several production programmes with the aim of electricity production. One estimate of our production potential puts the coal-bed methane resource at about 10 times that of Pande.

If Barber is suspicious of natural gas, he really pooh-poohs coal-bed methane. He seems to think it "reaches the wellhead with nasty chemicals in it". He is wrong. Its most noxious component is a bit of carbon dioxide.

Why is he being so alarmist? At his Washington base he can relax, warmed by natural gas, eat bread baked by natural gas and bathe his fevered brow in water heated by the stuff. Has he become one with the North, telling the South to do as he thinks, not as he does?

□ **Lloyd teaches chemical engineering at Wits University.**

LETTERS

PANDE GAS (55) FM 20/10/95

Great expectations?

A significant natural gas deposit was discovered in north-central Mozambique in 1961. But efforts to exploit it have proved elusive. The most recent failure, over price, was a proposed deal with Sasol to absorb the gas into its expanding industrial gas pipeline.

Now the Industrial Development Corp is negotiating to bring the gas to Palabora to convert waste magnetite owned by Palamin (more than 200 Mt) into iron carbide or iron. One technical problem would be the high titanium content of the magnetite. It would also be capital-intensive — a cost of around R1,5bn has been suggested.

US oil and gas company Enron has been vigorously promoting the development of the Pande deposit. It has signed a "memorandum of understanding" with the Mozambican government. And the World Bank is keeping a close eye on prospects.

Enron claims there is enough gas to operate the magnetite process for 30 years at a rate of 50m gigajoules a year. The idea is beautiful but transport costs pose problems. The shortest route would be 500 km but Mozambique might prefer to route the pipeline through Maputo to give access to potential domestic consumers. Then the line would be more than 850 km.

Proven reserves at Pande stand at 1,7 trillion cubic feet of gas — enough to run a 600 MW generator for 25 years. Mozambique's national hydrocarbon company, Empresa Nacional de Hidrocarbonetos (ENH), claimed recently that total reserves could reach some 8 trillion cubic feet, though this seems to be optimistic.

Price is still the main issue. A press report claims Sasol was willing to pay R12/gigajoule — not enough for ENH.

All of Pande's gas would be of only marginal importance to SA — where coal reserves dwarf other fossil fuel resources — but could be of great value to poverty-stricken Mozambique. ■

Eskom launches master artisan programme

Theo Rawana

A MASTER artisan school, designed to provide SA artisans with extended training based on the principles of the German Master Artisan Programme, was launched at Eskom's Training Centre at the weekend.

The school, the first of its kind in Africa, would provide a qualification which was internationally recognised, enabling holders to work as master artisans, managers and trainers.

SA programme co-ordinator Danie van Wyk said the newly opened school, run by master artisans employed by Eskom and trained in Nuremberg, was open to all South Africans.

A pilot programme with 20 students would start on October 30, and the first group of trainees would include people from several organisations in the public and private sectors.

Instruction would be given at Eskom's training college in Midrand, the Unisa School of Business Leadership, technical institutions and various industrial sites.

Master artisan Sean Cook said Eskom had provided funds for the programme, but the European Union had been approached to fund black candidates with no income. The course would consist of seven to nine months' full-time training, followed by two to five years' part-time training.

BD 23/10/95 (55)

20-year rural power plan

(56) ~~(133)~~ Star 26/10/95

A project to electrify 2,5-million rural homes by 2015 has been announced by Mineral and Energy Affairs Minister Pik Botha in Pretoria.

Refsa, a wholly owned subsidiary of the Central Energy Fund, would co-ordinate and finance the provision of solar energy to rural communities.

"The financing will be sourced from the department, the reconstruction and development programme and outside sources through the RDP office," Botha said. "The solar units will be sold to the communities and paid for on terms still to be decided on."

Provincial and local government, the private sector and non-government bodies would be involved in the project.

Botha said the programme was essential to reduce dependence on traditional biomass fuels.

"The ... consequences of 12-million tons of trees disappearing in smoke every year are formidable. More than 13-million South Africans ... depend on firewood, dung and crop waste for energy."

The project was announced at a national energy seminar attended by about 90 energy sector representatives. – Sapa.

Govt plans to supply solar energy to 2,5m rural homes

CT 27/10/95 (55)

BARRY STREEK

THE government has launched a new initiative to electrify 2,5 million rural homes by 2015 by using solar energy.

The programme was opened by Mineral and Energy Affairs Minister Mr Pik Botha when he addressed a national energy workshop in Pretoria.

Refsa, a wholly owned subsidiary of the Central Energy Fund, the state-owned energy holding company, would co-ordinate and finance the provision of electricity-generating photovoltaic cells — solar energy — to rural communities, his ministry said.

It would be financed by his department, the RDP and outside sources through the RDP office.

The solar units would be sold to the communities concerned and paid for on terms still to be decided.

"The purchase price gradually met by the purchasers will then be applied again to finance other purchasers via a revolving credit fund. Overheads will be minimised."

Trained

Provincial and local government as well as the private sector and NGOs would be involved.

Consumers of solar energy would be trained in using the electricity provided and in carrying out simple maintenance tasks, and local entrepreneurs would be trained to perform more complex maintenance and repairs.

"The United States is showing great interest in assisting us with this programme.

"The Refsa initiative dovetails well into Eskom's off-grid rural school electrification programme and the Independent Development Trust's project for rural clinics," says the department's statement.

The programme was also necessary to reduce rural dependence on traditional biomass fuels.

"The financial and ecological consequences of 12 million tons of trees disappearing in smoke every year are formidable.

"More than 13 million South Africans — about one third of our citizens — depend on firewood, dung and crop waste, for energy," the statement noted.

Pollution suddenly gets worse - two big generation plants shut immediately

They all say 'Eskom, you're a star'

(55) Star 2/11/95

■ BY ANITA ALLEN
SCIENCE WRITER

Bouquets are being handed out to Eskom for its decision to close two of its six 600-Megawatt units at Duvha Power Station near Witbank, where emissions suddenly rose to 10 times registered levels.

Duvha, which is Eskom's powerhorse and supplies the cheapest electricity on the grid, was retro-fitted with bag filters on three of its units in 1992 at a cost of R96-million. At the time it was a world first with the biggest bag filters yet installed anywhere. The promise was that the bag filters would operate at 99,9% efficiency, reducing emissions far below existing pollution regulations.

Unfortunately, earlier this year it was noticed that the fabric of the filters, which operate as giant vacuum cleaners, was beginning to perish. At first it was thought that this was normal wear and tear, but in the past few weeks the rate of failure accelerated and Eskom realised it had a major problem.

Complaints from the public followed as white clouds of "smoke" billowed from the stacks, and there was a warning from the office of the Chief Air Pollution Control Officer that something had to be done.

At Friday's executive committee meeting of Eskom's generation division, a unanimous decision was taken to close the two units.

"There was a dramatic rate of change and we were pumping out toothpaste. So we decided we had to close down the units," Brian Statham, Eskom's executive director: generation, said.

The exercise in self-regulation has been praised by Martin Lloyd, Chief Air Pollution Control Officer of the Department of Environmental Affairs and Tourism (DEA&T) as an example to industries countrywide.

Lloyd said the Air Pollution Act allowed his office to close polluters operating in excess of their registered, allowable emissions. However, the act stated that a reasonable period had to be allowed for abnormal problems to be corrected.

"The fact that Eskom has voluntarily closed down its units is excellent, and shows how seriously it considers air pollution," Martin said. "It's a breakthrough in self-regulation and responsible care, and Eskom should be congratulated."

Lloyd's division was transferred from the Department of Health to the DEA & T in April, and has only six officers to monitor air pollution countrywide, whereas a work study has shown at least 32 officers are required.

Warning

Pieter Odendaal, deputy-director air pollution control, who is responsible for power stations, said the division operated by crisis management. He wrote to Eskom two weeks ago warning that immediate steps had to be taken to rectify the situation at Duvha.

A bouquet for Eskom was also handed out by Rodney Meyer, chairman of the Air Pollution Liaison Committee (Apolcom) of Mpumalanga.

"Eskom must be commended for their prompt action. It is definitely an example to all other industries," Meyer said.

Apolcom consists of more than 30 representatives of industries, including Eskom, and the town councils of Witbank and Middelburg. It meets bi-monthly to respond to complaints, shares experiences and discuss problems of mutual interest. It also runs an air quality monitoring station funded by the DEA & T.

Eskom has monitored air quality in the region since the early 1980s to determine the impact of its power stations and other sources.

In the 12 months from July 1994 to July 1995, concentrations of SO2 (sulphur dioxide), NOx (nitrogen oxides), O3 (ozone) and Fine Particulate Matter (FPM) have generally fallen well below the DEA & T guidelines. Occasional high hourly concentrations of SO2 have been recorded throughout the year, primarily from Duvha, but have not exceeded the guideline.

In the 12-month period there has been a significant reduction in both SO2 and FPM, due mainly to improved emission control strategies, including fitting of bag filters.

"The failure of the fabric means that Eskom will have to re-examine its policy of fitting with bag filters," Statham said.

Fabric filter economics are centred on bag replacement costs.

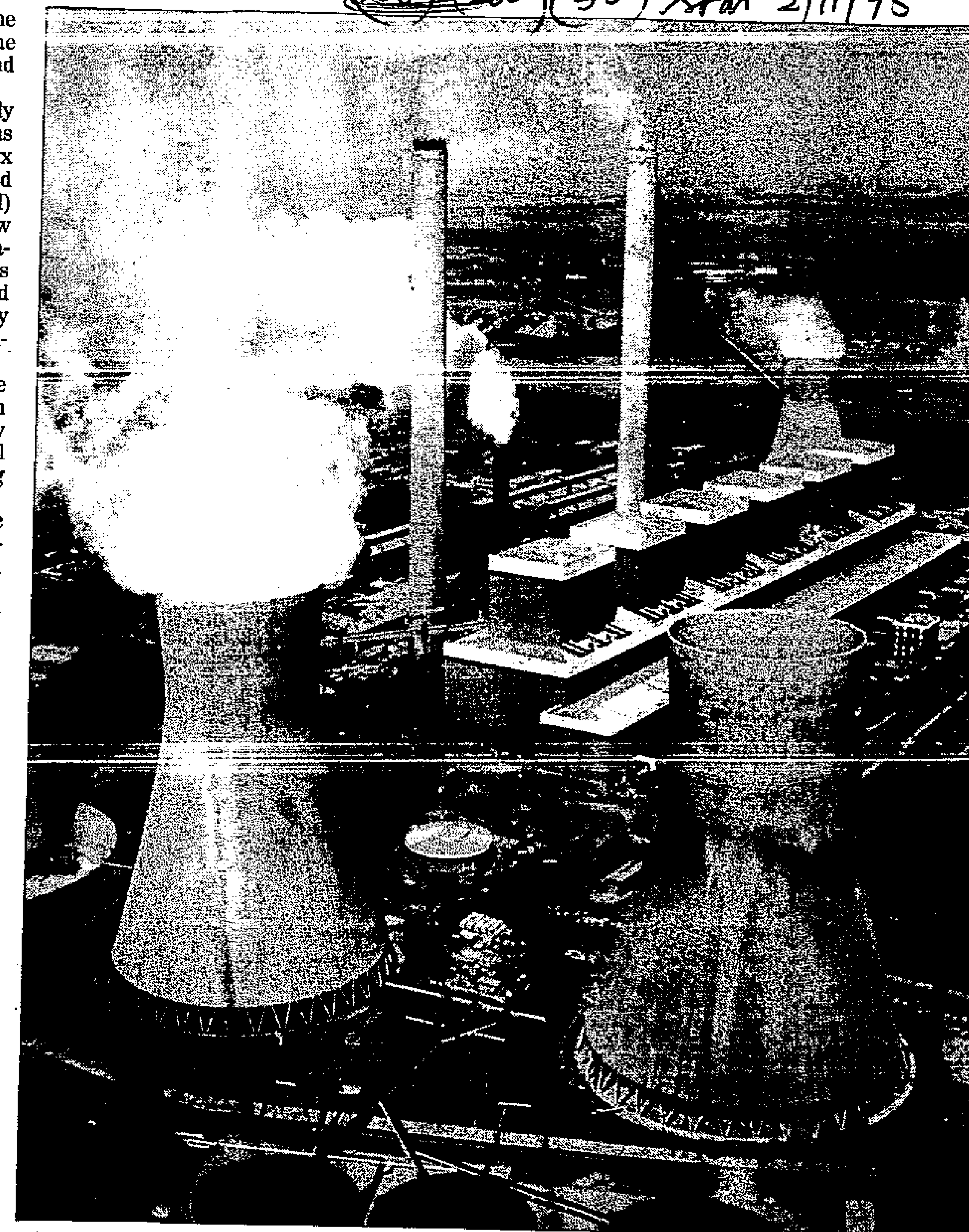
At a cost of R12-million for one set of bags a unit, the premature failure of the fabric could mean a return to less efficient and "dirtier" technologies.

This would mean that downward trends in air pollution over the Witbank/Middelburg region, which is on premier tourism routes, may not be maintained.

Closing the two Duvha units will cost Eskom about R8-million to R10- million and it also means that for the time being the giant utility will have to switch to more expensive electricity sources from other power stations.

Eskom, in conjunction with the bag filter supplier, is investigating solutions. This includes the possibility of fitting more expensive bag filters; these can only be supplied by March.

If a solution to the problem is not found, the costs could be passed on to consumers, according to Statham.



Power failure ... two 600Mw units at Eskom's Duvha power station have been closed down following the failure of bag filters and resulting excess emissions.

Arrears push Eskom's RDP programme into the dark

ST(BT) 5/11/95 (55)

By THABO KOBOKOANE

ESKOM has warned that arrears of R230-million are threatening to slow its township electrification programme.

Peter Adams, media relations officer at Eskom, says that by end September Eskom had switched on 203 000 homes and is on target to electrify 300 000 homes this year.

This will bring the number of township and rural homes linked to the grid to 835 000 since the drive began in 1990.

A further 300 000 homes a year will be electrified until the end of the decade under Eskom's commitment to the reconstruction and development programme.

"It would be tragic, though, if Eskom's RDP successes were cut short by continued non-payment," Mr Adams says. Attempts to secure payments or cut off non-payers are being hampered by harassment and kidnappings, he says.

Since the mid-1980s Eskom has lost over R1-billion in non-payment of electricity accounts in the townships.

Mr Adams says the arrears are split evenly between individual consumers, serviced directly by Eskom and township transitional councils.

Eskom is also incurring losseson prepaid meters, mainly through illegal tampering and technical faults.

Mr Adams says that even those individuals who are paying do not necessarily do so in full. "In Soweto, for example, the 70% of customers who regularly meet their bills pay between 30% and 100% of the total account."

He says that 19 transitional councils, many of them on the East Rand, have incurred the most debt and remain "problem areas". This is in spite of an agreement reached between provincial governments and Eskom in August to roll over R1-billion in debts incurred before February 28 into a suspense account. The agreement was intended to ensure that the new local authorities would not have to service debt accumulated by previous "unrepresentative councils".

Debts accumulated after February will have to be settled by December with interest.

"Eskom is engaged in an ongoing programme of negotiation and inducement so that councils pay at least their current accounts, with payment of interest to be tackled afterwards.

"At a certain point Eskom will be compelled to take legal action.

"With regard to arrears for individual households, we will have no alternative but to use our credit-control measures and cut off electricity supply.

"Only if negotiations fail to bring the desired result will we be forced to switch off electricity, both to local government and individuals," he warns.

Eskom's mounting arrears mirror a recent trend in the townships of a renewed drop in municipal service payments.

After some early successes the government's Masakhane campaign reported recently that service payments had fallen significantly between June and August this year.

In Soweto 30% of residents paid for their services in June. Two months later it had dropped to 24%. The respective figures for East Rand townships are worse, having plunged from 68% to 16% in the case of Katlehong.

(55) BD 10/11/95

Mungo Soggot

ESKOM has grossly overestimated figures for rural electricity usage, which means it will take far longer to recoup its R1bn-a-year slice of the reconstruction and development programme's mass electrification drive.

The parastatal said yesterday electricity usage in many rural areas was a seventh of the figure it had estimated for the 20-year break-even business plan set up when it started the electrification drive four years ago.

The group had still to estimate likely losses from the shortfall, which in some cases was less than 20% of what it needed to break even.

Industry commentators said the underrecovery could slow the electrification programme, which was already affected by widespread non-payment.

However, Eskom insisted the roll-out would not be jeopardised by the paltry demand for electricity. It would still make 300 000 new connections a year to the national electricity grid for the rest of the decade. Its drive, which makes up the bulk of the RDP office's programme, costs about R1bn a year.

"The poverty in rural areas is much worse than we thought and people use much less electricity," an Eskom spokesman said.

Many rural customers who had just been connected were using as little as 45 kilowatt hours a month, while the average was 83kwh.

When Eskom launched the programme in 1991 it was banking on average usage in newly electrified areas reaching 370 kwh a month by year seven, which would allow it to break even in 20 years. This meant that in areas where electricity use was the most paltry Eskom was underrecovering about

Continued on Page 2

Eskom

(55) BD 10/11/95

Continued from Page 1

R50 a month per connection — netting R7 instead of the R62 it would get from a customer who used 370kwh.

Eskom was selling "starter electricity kits" — including a kettle, an iron and a hot plate — at cost price in many areas in a bid to stimulate demand.

Eskom had never expected profit from the electrification drive, but it had also not expected such a loss.

Eskom had made more than 235 000 new connections to the national grid by the end of October and was on track for 300 000 this year.

It cost between R4 500 and R6 000 to make a connection in rural areas.

Local authorities have their own electrification programmes, which are supposed to bring the annual total to 500 000 connections.

The cash flow crunch from meagre demand comes on top of Eskom's struggle against non-payment, which has left it with arrears of about R230m.

Eskom has already admitted that non-payment could force it to slow down its electrification push.

Gauteng, Bavaria sign co-operation agreement

Stephané Bothma (55) BD 10/11/95

PRETORIA — The establishment of solar energy production facilities was a field for future co-operation between Gauteng and the German province of Bavaria, Bavarian prime minister Edmund Stoiber said yesterday.

Signing a co-operation agreement with Gauteng premier Tokyo Sexwale, Stoiber said that the province could not produce enough electric energy and therefore a great market for solar energy existed in the region.

The agreement, signed at Sexwale's Pretoria office, provided for a joint task team to implement trade, industry, tourism, science, investment and policing exchanges.

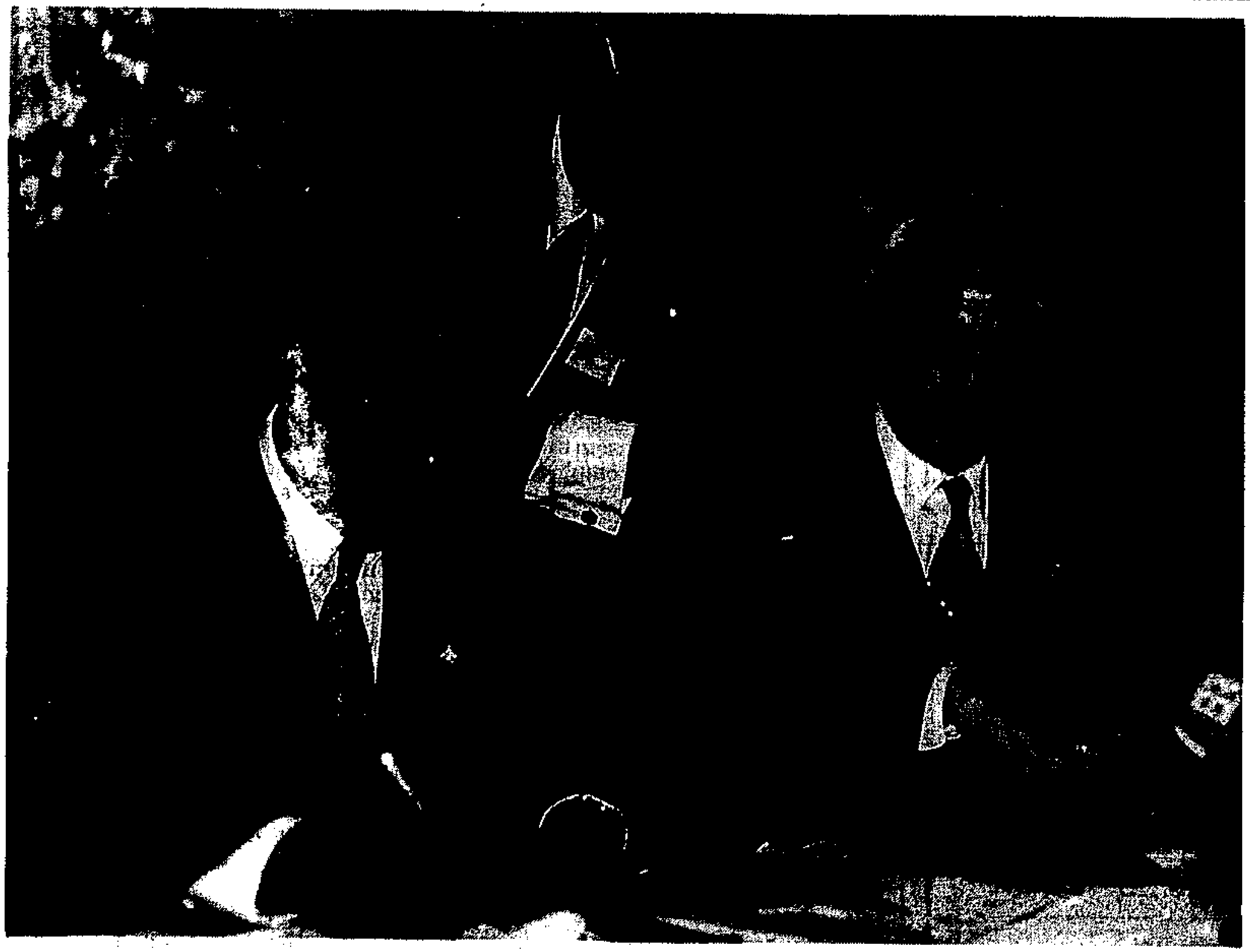
Sexwale said SA was keen to create an economy based on small and medium enterprises, as was the case in Bavaria. Gauteng was the economic "dynamo" of SA and therefore the Bavarian contribution would benefit the country as a whole.

Sapa reports Stoiber said he had never been asked so extensively about the German federal system as during his talks with SA leaders.

He said President Nelson Mandela and Deputy Presidents F W de Klerk and Thabo Mbeki had shown a lot of interest in German assistance with SA's constitutional structure.

"We are offering to share our experience. The future lies with federalism."

He said if the German federal system was compared with certain central government structures such as that of France, one could see that federalism benefited all regions. "We have no underdeveloped regions," he said.



Gauteng premier Tokyo Sexwale signs a joint protocol agreement with Bavarian Prime Minister Edmund Stoiber at Sexwale's Pretoria offices yesterday. The pact provides for a joint task team to implement trade, industry, tourism, science, investment and policing exchanges. Picture: NICKY DE BLOIS

Fission for answers? (55) FM 10/11/95

Following the publication of a Green Paper on all aspects of energy policy, the Mineral & Energy Affairs Department has released a report on urgent issues in the nuclear fuel cycle industry.

This is the product of a working group in which not only Eskom and the Atomic Energy Corp but also the ANC-associated Minerals and Energy Policy Centre, as well as the department, were represented.

The document evaluates the whole front end of the fuel cycle, starting with conversion — at present, like the remainder of the cycle, performed by the corporation.

It looks at uranium enrichment, in view of an earlier corporation decision to close its uneconomic semi-commercial enrichment plant — the so-called Z-plant.

It also examines whether the corporation should continue to produce nuclear fuel assemblies for Eskom at Beva and what strategy should be pursued for storage of spent nuclear fuel from Koeberg.

Stumpff

Over the years of isolation, the corporation built up a nuclear industry comprising a linked series of activities:

❑ Conversion of uranium oxide supplied by the mines to uranium hexafluoride, the starting point for enrichment processes;

❑ Enrichment of the hexafluoride to the extent necessary for different purposes. For nuclear fuel to be used at Koeberg, the content of the fissionable isotope, U235, 0,7% in nature, had to be stepped up to more than 3%; and

❑ Fabrication of the complex nuclear fuel assemblies used at Koeberg.

These activities flowed, one way or another, from our political isolation during the apartheid years.

When we rejoined the world last year, not only had the nuclear weapons programme — which required uranium enriched to around 90% U235 — already been renounced but it was again possible to enter world markets as a potential buyer of each stage of the "front end" of the nuclear fuel cycle.

The "back end" involves the disposal of spent fuel elements and nuclear waste. This remains a sensitive issue even in the changed political circumstances.

The first recommendation in the Green Paper is the continued operation of the uranium oxide conversion plant at Pelindaba, provided that operating losses, attributable to the uneconomical, small scale of the plant, are reduced to a specified extent (R5m) within, say, two years and Eskom continues to honour its contract to buy uranium hexafluoride from the corporation.

The second proposal is that enrichment services should be bought internationally — that is, if and when the corporation's ambitious and potentially most cost-effective laser-based enrichment process is brought to fruition, with luck by 2005.

But success is not yet certain, says Minerals & Energy Policy Centre director Rod Crompton. This is the "molecular laser isotope separation."

The third suggestion is that the Beva nuclear fuel fabrication plant should be closed after completing the reload of fuel assemblies for Eskom now under way.

All these recommendations must be read in the context of a world awash with enriched uranium and where other forms of peaceful nuclear technology such as fuel assemblies are freely obtainable on a commercial basis.

The Green Paper also recommends urgently establishing a national policy for radioactive waste management. The corporation, it says, should verify the suitability of the Vaalputs storage site for spent nuclear fuel — after initial storage for about five years at Koeberg. And it must be determined who will pay for this.

Corporation CE Waldo Stumpff says Vaalputs is licensed only for disposal of low- and intermediate-level nuclear waste, though the procedure to obtain a licence for temporary (40 years') storage of spent fuel from Koeberg has been started.

Crompton says neither Vaalputs nor Koeberg are licensed for high-level nuclear waste produced by Koeberg's reactors. Though Vaalputs could prove suitable for final disposal of spent fuel in a deep underground facility, the investigation, which could take years, must still be carried out.

The latest annual report of the corporation says independent opinions have indicated Vaalputs is one of the safest disposal sites of its type in the world.

It is also necessary to update the Nuclear Energy Act of 1993, to make better provision for the peaceful uses of nuclear energy (with particular attention to safety in the nuclear industry) and nonproliferation of nuclear weapons.

SA has, as earlier reported, placed its entire stockpile of weapons-grade uranium under exceptional safeguards closely and continuously inspected by the International Atomic Energy Agency.

The corporation has been instructed by government to act as its agent for imports of enriched uranium. Because it is not clear how the corporation should exercise this responsibility, it has not yet committed itself to any transactions. The working group had serious reservations about the present basis but considered the matter too complicated to make a resolution based on the facts that were known.

The group, therefore, recommended the establishment of a task force to investigate the status of the corporation in this context and produce recommendations.

The corporation has, meanwhile, pushed on with its programme to become a profitable supplier of peaceful nuclear and other technology. This includes:

❑ Continued production of radioactive isotopes for medical use (a rational method of consuming the stockpile of weapons-grade uranium held under safeguards;)

❑ Fluorine availability (from conversion) has enabled production of a valuable range of fluorine-based products with superior qualities, notably plastic containers resistant to petroleum-based liquids; and

❑ A novel plasma-based process for beneficiating zirconium oxides (from beach sand).

In the long term, success with the molecular laser isotope isolation process (potentially most cost-effective), in conjunction with the local availability of uranium, would enable SA to become a major international competitor offering enriched uranium for nuclear power.

For now, the corporation's progress towards profitability was interrupted by high closure costs for the Z-plant — about R125m. Nevertheless, since the inception of the 2000 Plus Plan in 1990-1991, annual net funding from the State for operations has been cut by 73% in real terms.

In the 1994-1995 financial year, the corporation received about R309m for operational expenses, R20m to help with closing the Z-plant and about R201m to service State-guaranteed loans in the form of interest and redemptions — almost entirely a reduction in foreign loans from about R53m to R37m.

The technical recommendations in the report of the working group appear to be a reasonable compromise between cost-saving and preservation of a core technical capability for the 21st Century. Stumpff warns, though, that the decision to shut down the nuclear fuel capability is likely to be irreversible.

ROAD FREIGHT

Balancing act

FM 10/11/95

The Road Freight Association is to press for the standardisation of axle weights in sub-Saharan Africa.

Association chairman Garth Bolton says if cross-border freight operators all accepted the "Mitchell Plan" it will simplify law enforcement and see the introduction of the same maximum weight limit per axle for trucks.

Mitchell . . . *calls for increase in maximum load*

The plan, proposed by deputy-DG of the Transport Department, Malcolm Mitchell, calls for an increase in the maximum load of a dual-wheeled single back axle from the current 8,2 t to 9 t, of dual-wheeled twin axles from 16,4 t to 18 t, and of a triple-axle tridem from 21 t to 24 t.

Bolton feels this may lead to law enforcement agencies treating all carriers the same, and "may end the practice of police turning a blind eye towards cross-border operators using our roads, as far as axle loads and truck combinations are concerned."

The proposed heavier axle loads would improve truckers' revenues which, says Bolton, have not kept pace with inflation. Margins are between 5% and 15%.

Cross-border truckers have other significant advantages over their SA competitors — notably cheaper diesel fuel and lower wages. It is also believed that they use that cost advantage to undercut local transporters to get internal loads, from one point of SA to another (cabotage). But that's difficult to prove, says Bolton.

On the question of whether left-hand-drive trucks should be allowed to use SA roads, Bolton admits that they are more dangerous "but we cannot ask for them to be banned."

The argument is that the driver of the truck, which is about 2 m wide, has to move his truck 2 m into the lane of oncoming traffic before he can see whether it's safe to overtake, which poses a hazard.

Bolton agrees but says: "It's a smokescreen being used to reject them.

"They are easily procurable in countries to the north, where there is no limitation on importing used vehicles from the Americas and Europe, where left-hand-drive vehicles are the norm.

"Operators in countries to the north can buy good second-hand trucks for R100 000, while we have to pay more than double for similar equipment."

But Neville Roome of Freightliner, the Mercedes-Benz division that will sell the imported US trucks in February, says allowing the use of left-hand-drive vehicles in SA is dangerous. The Freightliners sold here will be right-hand-drive vehicles. ■

BRIGHT SPARK

Murray & Roberts-owned Trichamp Components has been taken over by US-based Cooper Automotive in a US$10m deal.

Trichamp — licensee for Champion spark plugs and Trico wiper blades — aims to grow the 7% export segment of its $20m/year local operation by focusing on markets in Africa, says MD Chris Goodwin. The SA business will be run by Cooper Automotive's UK-based Champion Europe division.

Champion Europe MD John Sharpley says exports of locally made wiper "linkages" to US and even European car makers could also lead to expanding business, especially as the takeover provides the opportunity for injecting new technologies.

Trichamp sells 85% of the wiper blades and half of the spark plugs in SA.

Cooper sees growth with new car manufacturers like Hyundai and Volvo moving in. Goodwin adds: "We make up 25%-30% of local automotive lighting sales."

TRADE

Spare the rod

FM 10/11/95

Government appears to have brushed aside the so-called "social clause" issue in its bid to conclude bilateral and multilateral trade deals with selected countries.

Despite the fact that its stance could bring it into direct conflict with trade unions on highly charged, emotive issues such as child and prison labour, the Department of Trade & Industry says it will be guided by the World Trade Organisation.

And while Nedlac is still debating labour's request that a human rights type proviso be included in trade agreements — business and government agree that this could harm trade relations at an early stage of reintegration into the world economy.

Brought into the limelight by a proposed R1bn countertrade arms deal with the Philippines, the issue has placed Cosatu in a spot. The labour movement will have to quickly rethink its insistence on the imposition of special labour and social conditions on trade and co-operation agreements. That is, if it doesn't want to be accused of harming economic growth and job-creating export prospects.

Filipino ambassador to SA Leonides Caday says he wants to push through the R1bn countertrade deal as soon as possible. Proposals drawn up by Armscor and Denel "are already on the table in the Philippines." The country has problems monitoring its 320 km exclusive fishing zone and is looking for patrol boats, helicopters and radar systems from SA.

"We are also in the process of negotiating a special trade deal with Trade & Industry but the major outstanding issue is the social clause, which is not acceptable to us. Our major imports from SA are steel products, though we might also consider switching some of our coal imports from Australia to SA. We would like to increase trade between our two countries," says Caday.

In 1994, SA exported goods to the value of R166m to the Philippines, whose imports from SA totalled R85m.

Tshediso Matona, deputy director of multilateral trade relations at Trade & Industry, says both the International Labour Organisation and the World Trade Organisation are looking into ways of halting unacceptable global social practices such as the use of child and prison labour.

"SA cannot unilaterally impose such social conditions on its trading partners as we have to be part of the international consensus on both labour and trade issues."

Matona says the best way to overcome differences over social and labour practices followed by SA's trading partners is through patient negotiation and by setting a good example, rather than by imposing conditions seen as interference in another country's domestic, political and social policies.

Other countries which may be affected by possible social clauses imposed on special trade deals (still to be negotiated) include Malaysia and Thailand. Bilateral trade with Malaysia almost tripled — to R1,1bn — over the last three years (SA's 1994 exports totalled R343m, with imports at R748m), while trade with Thailand doubled to R1,7bn over the same period. Rash, prescriptive conditions imposed on burgeoning trade relations could therefore be a costly mistake.

But, says Matona, the "sensitive issue" of a social clause only affects trade agreement between the two countries — normal trade is proceeding apace. And, he adds, while the social clause issue is still being debated at Nedlac, government feels that its unilateral imposition on trade agreements is unacceptable. ■

Durban's power cuts cost R65m

BD 13/11/95 (55)

Nicola Jenvey

DURBAN — Three of Durban's biggest industrial operations have jointly lost up to R65m in the past year to disrupted power supplies.

Engen, Mondi Paper and Safref said at the weekend that a combination of human error, poor weather and cane fires kept interrupting power supplies, despite regular pleas to Eskom and Durban Corporation over the quality of service.

Sapref said that talks to bring a "quality of supply" agreement into customers' contracts had still to bear fruit.

Engen, which last month unveiled a R300m fall in attributable earnings to R116m for the year to August, said the 17 power cuts it had suffered during the period had cost it up to R3,5m each. Major dips cost it more than R5m.

Engen CEO Rob Angel said a cut of just a tenth of a second was sufficient to trigger a plant shutdown. The disruptions lifted wear and tear costs, cut yields of top-grade products as batches were downgraded and hit crude oil throughput.

According to Engen, 10 of its power-supply interruptions were due to Durban Corporation, and the others were blamed on Eskom.

Sapref ~~MD~~ ~~Peter Fransen~~ said it had suffered six major interruptions in the year up to July, "conservatively estimated" at R5m.

Each disturbance cost the oil refinery between R250 000 and R2m and delayed production by about 24 hours.

Mondi Papers senior electrical engineer Colin van Vuuren said it had lost 20 production hours to 11 dips this year, costing around R1m, excluding any effect on quality and engineering consequences.

"(This year) has been more favourable (but) … no voltage dip can be tolerated as we experience productivity problems," he said.

Disturbances affected up to nine production units at one time.

Durban Corporation said that 22 disruption cases had been reported in the year, up to March.

Transmission director Tony Dold said "millions of rands" were being spent by both the Corporation and Eskom to find solutions.

Eskom said last week that supply blips cost it the equivalent of 4% of total annual sales. It is planning to import US technology in a bid to shield its major industrial clients from the voltage dips.

Dold said that companies should also isolate the more vulnerable sections of their operations, to minimise the damage.

Eskom plan to limit supply disruptions

(55)

BD 16/11/95

Nicola Jenvey

DURBAN — Eskom is to spend R50m securing isolated channels through sugar cane fields in a bid to limit power disruptions caused by cane-burning.

Eskom lands and rights director Ernest Grunewald said yesterday that the utility planned to "buy" 23,5m-wide tracts of land through cane fields which would remain cane-free.

Although the land would remain the farmer's property, Eskom's permission would be needed before sugar crops could be planted beneath the lines.

Out of the 15 power lines in KwaZulu-Natal of 275kV and greater, nine were under negotiation with cane growers and the remainder were scheduled for discussion in due course.

Eskom transmission maintenance manager Pat Naidoo said the current Operation Firebreak, in which farmers warned Eskom in advance when cane was being burnt, was "working very well".

"Servitudes are under consideration, depending on the outcome of talks with the industry," he said.

Grunewald said Mpumalanga sugar cane farmers had suggested harvesting cane without burning. This would be reviewed later should Eskom find servitudes would also be needed in that region.

Another proposal on the agenda of the quality of supply forum — which includes representatives from business, Eskom and Durban Electricity — was the establishment of a quality of supply laboratory at the University of Natal, Durban.

University electrical engineering lecturer Greg Diana estimated establishing the research centre would cost R4m, of which government had guaranteed 50% provided industry put forward the rest.

Diana said about R2bn was lost to SA industry annually through power cuts and dips. Research into improved quality could save 20%-25% of these losses.

POLITICS

55 (58) (123)

Eskom workers get houses

Sowetan 21/11/95

By Abdul Milazi
Labour Reporter

BLACK workers at Eskom, who have for years been confined to overcrowded hostels, will for the first time be allowed to occupy family houses previously reserved for whites only.

This follows Eskom's decision last week to change its housing policy after three years of persuasion and negotiation by trade unions.

According to an Eskom spokesman, the new policy included upgrading the hostels into single quarters and increasing the housing loan from R13 000 to R22 000.

Currently hostels, including those on the mines, house between 12 and 16 workers per room.

National Union of Mineworkers (NUM) spokesperson Ms Sue Moorhead said "We have made significant gains for our members with the new Eskom Accommodation Policy. We now have to make sure that the policy works and that we get involved in local and regional housing structures to push for results."

Workers who wish to buy Eskom houses will receive a 20 percent taxable discount based on the market value of the house while those who are renting privately will receive a rental subsidy.

Moorhead said the new policy means that family houses will now be open to all workers regardless of job grade and the only criteria would be the number of years of service and number of dependents.

She said Eskom's decision took the unions by surprise because the issue had been negotiated for three years without an agreement being reached.

"Now the mines have to follow Eskom's cue. Black people are still bundled into one room while their white colleagues enjoy the luxury of family houses," she said.

Energy policy debated

Mungo Soggot (55) BD 21/11/95

CALLS for the state to loosen its grip on the energy sector had dominated many responses to the Green Paper on energy policy, Minerals and Energy Affairs Minister Pik Botha said.

"Many of those who commented on the Green Paper put government keep out notices on their energy fences," he said. Many had detected in the paper a tendency towards state control.

Botha was opening the national energy two-day policy summit in Pretoria, attended by about 400 delegates, which will revolve around discussion groups on energy policy.

The proceedings yesterday were marred by a walkout by NUM delegates, who complained they were not able to voice their case in a workshop dominated by business.

The minerals and energy affairs department would publish feedback from the summit, which would help mould the draft white paper, due next year.

Response to the Green Paper had been "overwhelming" — 50 submissions from top players such as Eskom, the SA Petroleum Industry Association, Sasol and the Chamber of Mines.

Botha said that "in broad terms" he agreed with those who had lashed out at state control of the sector.

"The free market system is a flawed system, but it has fewer flaws than any other system we have tried," he said. New small businesses would have to be protected from the "effective but often chill winds of competition".

Botha said many responses had hit out at levies on energy. Another thread was the perception government was opposed to nuclear power. In the long term, nuclear power would be one of SA's main energy sources.

Special benefits for whites to go — Eskom

(55)

Renee Grawitzky

BD 21/11/95

THE all-white Mineworkers Union is to hold a strike ballot over Eskom's new housing policy, which includes the removal of "special benefits" for its white employees.

White workers at Eskom's power stations have been entitled to preferential benefits, including low rentals and subsidies on water and electricity. In terms of the new policy, these are to be phased out over seven years.

Eskom sources said the main aim of the policy was to upgrade hostels and ensure that all employees had equal access to housing benefits, including rental and housing subsidies.

Eskom would work jointly with the unions to agree on how the hostels should be upgraded.

National Union of Mineworkers housing unit co-ordinator Sue Moorhead said over 7 000 workers lived in Eskom hostels. The company had agreed to upgrade hostels to allow for one person a room.

Moorhead said the mining houses now had to follow in Eskom's footsteps. This could include the conversion of hostels into family units.

Theo Rawana reports that National Hostel Residents' Association chairman Zakhele Mlambo said at a conference in Durban at the weekend that the administration of SA's 500 hostels, which housed 1,5-million people, was in a chaotic state.

Mlambo called on government to finance the training of personnel to help in the running of hostels. He said upgrading in private sector hostels was not taking place.

Hostel leadership was hamstrung by the fact that in most areas — especially Gauteng — they had no channels to lobby government, he said.

Green Paper on energy criticised over state control

(55) CT 21/11/95

PRETORIA: The government's Green Paper on energy has received "substantial" criticism regarding the proposed control the government should have over energy matters, Mineral and Energy Affairs Minister Mr Pik Botha said.

Speaking at the opening yesterday of the national energy policy summit here, Mr Botha agreed with critics that "only the forces of competition can achieve maximum efficiency and economic growth", but said the free market system held dangers for smaller consumers.

To achieve balance, smaller energy consumers should be partially protected from the "chill winds of competition", he said.

Other critics objected to the strong antipathy towards nuclear energy evident in the Green Paper, Mr Botha said.

Nuclear energy was one of the cleanest energy sources, but nuclear waste was problematic, he said.

South Africans should become used to the idea that the nuclear and renewable energy industries would be the country's major energy sources in the future.

"Experts tell me these two (sources) will become less expensive thanks to technology, whereas others will become more expensive despite technology."

International researchers were trying to find safer ways of disposing of nuclear waste.

Mr Botha said once the new energy policy was promulgated, it should not become "frozen law", but should move with the changes in society and the energy situation. The policy should allow for ongoing review.

He called the great divide between rich and poor suffered by many countries a "cruel reality" and said it had to change. At a time when developed countries could start affording clean energy, developing countries had to think of economic success. Costs would force poorer countries to use fuel with high carbon dioxide emissions. — Sapa

New housing deal on cards at Eskom

(56) (360) (1237)

Eskom's black workers will for the first time be allowed to occupy family houses previously reserved for whites only, after being confined in the past to overcrowded hostels. Eskom decided last week to change its housing policy after three years of negotiations with trade unions.

An Eskom spokesman said the new policy included upgrading hostels into single quarters and increasing housing loans from R13 000 to R22 000. Hostels presently house between 6 and 12 workers per room.

National Union of Mineworkers spokesman Sue Moorhead said: "We have made significant gains for our members with the new Eskom accommodation policy. We now have to make sure that the policy works and that we get involved in local and regional housing structures to push for results."

Workers who wish to buy Eskom houses will receive a 20% taxable discount based on the market value of the house, while those who rent privately will receive a rental subsidy.

Star 21/11/95

Moorhead said the new policy meant that family houses would now be open to all workers and the only criteria would be number of years of service and number of dependants. She said Eskom's decision took the unions by surprise because the issue had been negotiated for three years without an agreement. "Now the mines have to follow Eskom's cue. Black people are still bundled into one room while their colleagues enjoy the luxury of family houses." – Own Correspondent.

PANDE GAS (55) (183) (218)

Paying the piper

FM 24/11/95

The Industrial Development Corp and US energy giant Enron are locked in negotiations which could see gas from Mozambique's Pande gas fields used for major industrial development at Phalaborwa in the Northern Province.

Enron, which recently signed an agreement with Empresa Nacional de Hidrocarbonetos de Mozambique, has been given six months by the Mozambican government to find an SA customer for its proposed US$700m gas field development.

The target now is Palabora Mining's 200 Mt stockpile of discarded magnetite (iron oxide) tailings. The aim is to reduce and beneficiate the magnetite to iron carbide for use in steel-making.

Houston-based Enron spokesman Carol Hensley says the $13bn corporation will be able to deliver gas to SA by 1998 after a customer approves the completion of a 900 km pipeline from Pande. "But," she adds, "we are not totally dependent on the iron carbide plant and are also talking to other prospective SA customers."

Though Iscor is also interested in the development, it is looking at other processes such as coal-fuelled iron reduction. Magnetite contains about 60%-70% iron and carbide 85%-95%.

Palabora Mining MD Frank Fenwick says indications are that Pande gas could be too expensive as a reduction fuel. "We are keeping our options open and talking to others apart from the IDC."

An Industrial Development Corp spokesman says it will be decided next week whether the corporation will co-fund a proposed R15m feasibility study, which should indicate by April whether the carbide plant could become an economically acceptable and technologically proven option.

The spokesman says the corporation has had initial discussions with Palabora Mining, Anglo American, Gencor, Sasol and Iscor to find joint venture partners for the development of the stockpile.

He says coal-based technologies exist for the reduction of magnetite to iron units and that these are also being looked at. He adds that Foskor's phosphate rock plant at Phalaborwa has a magnetite stockpile of about 35 Mt, which could be beneficiated.

"The total stockpile could allow a 30-year life for the proposed 4 Mt/year carbide plant," he says.

Iscor mining consulting services GM Ernst Venter confirms Iscor's interest in the proposed beneficiation of Palabora's magnetite stockpile but says the gas-fuelled reduction process is one of several options being considered by Iscor.

"A steel-making plant is also an option — once a decision is taken to develop the stockpile — but costly pelletisation would be required," says Venter.

Adds Venter: "One should remember that priority would be accorded to adding value to the magnetite — to the benefit of the owners, co-developers and SA's economy — not to developing the Pande gas field. But, if Pande gas could eventually become the fuel source, the two projects would fit together." ■

Bridge over troubled water?

(55) FM 24/11/95

A plan for a R500m pipeline linking the Mossel Bay gas fields with the proposed R6,8bn Saldanha Steel plant could help to secure the future of both.

Not only would the steel plant save 35% on capital costs for its iron-making but the life of Mossel Bay could be extended by up to 10 years.

Integral to this strategy is the four-and-a-half-year upgrade and conversion of the 25 000 BPD Mossgas condensate refinery to an 80 000 BPD conventional liquid refinery, says Hugh Brown, a Johannesburg-based capital projects evaluator, strategist and co-author of a study on the development and future usage of gas resources on the subcontinent.

"To sensibly and economically phase the weaning of the refinery off gas and on to liquids, detailed and sophisticated planning is required. And, to attract private-sector involvement in the refinery, a beneficial set of tariff and tax regimes would be needed, for about 10 years."

Brown says other preconditions would be to cut operating costs at Mossgas (and possibly the flow rate through the refinery) by "at least 20%, to self-fund offshore interim developments. These include the installation of variable compression and drilling three additional wells, at a cost of R300m, to get you to 2001."

Based on current Bredasdorp mining lease area gas reserves and an analysis of future demand for gas in the Western Cape — including Saldanha Steel — the required flow rate could then be sustained for eight to 10 years after switching.

Brown says the strategy, which would take five years to implement, involves:

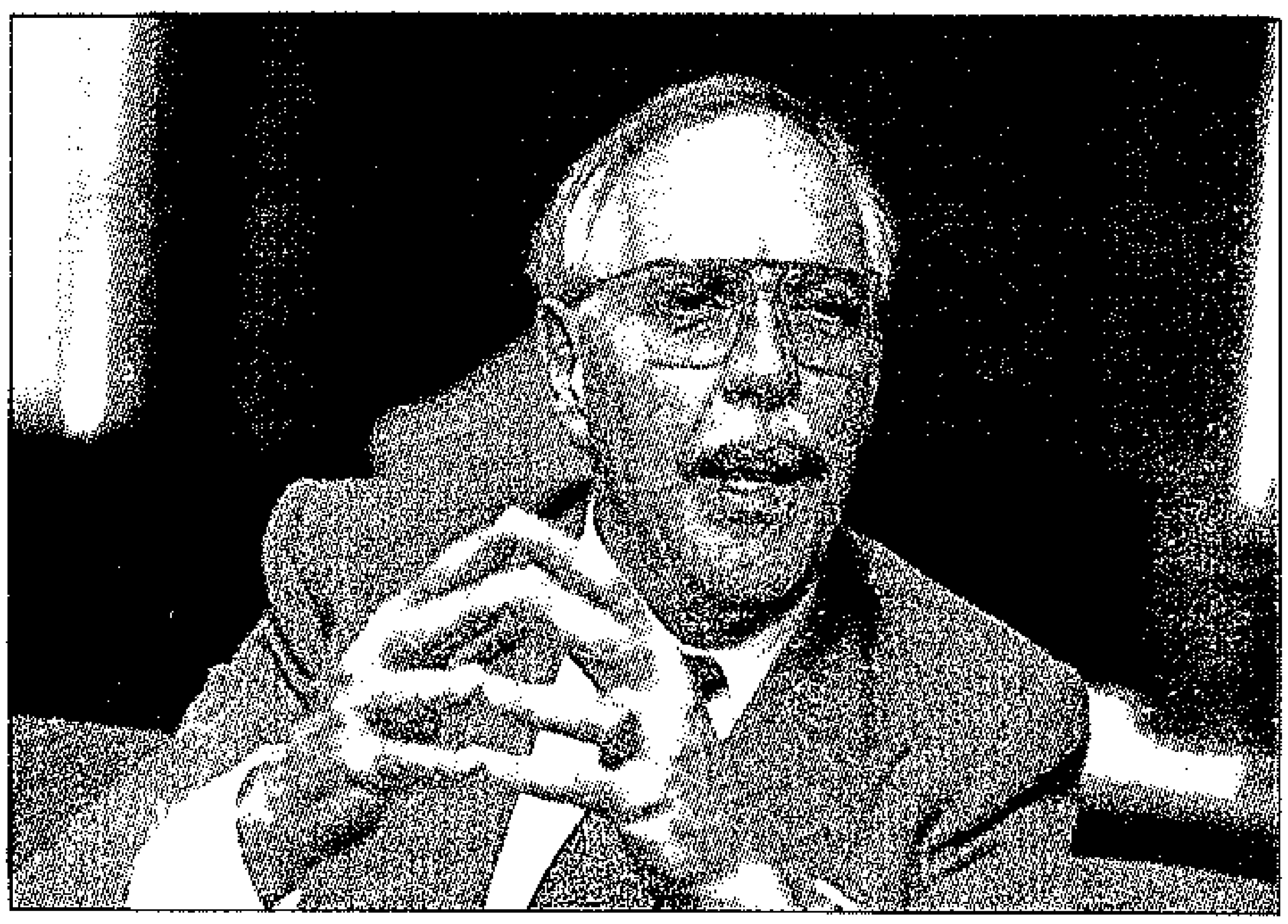
- Starting the five-year conversion of the Mossgas refinery in 1996, perhaps with private-sector involvement;
- Waiting for two years, then starting the pipeline from Mossel Bay to Saldanha and the gas iron reduction plant (which will take three years to build) so that all three projects can be completed at the same time.

Government would recover some of its lost billions by extending the use of Mossgas and the liquid refinery would become a far more valuable asset. Also, Iscor would save on capex by substituting its coal-based Corex iron-making plant with a far cheaper gas reduction plant.

Iscor MD Hans Smith says his group would consider the gas option, provided the Mossel Bay, Kudu or even the Pande gas fields can make gas available at competitive tariffs within a short time frame. But, he adds, this would not seem an option within the next five years — even though it has been proven that gas-powered iron plants can effectively do the job.

Brown says that, with a large number of global steel mills moving towards completion, the thin strip steel market is heading for maximum capacity, which will bring prices down.

"The solution for Saldanha Steel would be to build the gas iron reduction plant first, to supply the growing global demand for iron set off by the proliferation of new, scrap-based, steel minimills. The demand for iron should remain buoyant, even during the downturn. The steel portion of the mill can be planned for later, when the global market goes into its next upward cycle."



Smith . . . *Mossgas lifeline for Saldanha Steel?*

This strategy includes increasing the capacity of the iron plant to 2 Mt/year (from a proposed 1,45 Mt/year).

"The best option for Iscor would be to close the book on thin strip steel at Saldanha until the timing is right, to wait for gas (which should become available, after final Mossgas refinery conversion, by about 2001) and to go the iron route first. And a gas-fired iron plant will be far less polluting than coal-based technologies," he adds.

Another benefit is that this strategy would avoid the risk associated with bringing Corex on line in a tight time window when the nature of the technology applied on such scale is not well understood.

Gas-fired operating costs would be about 15% higher than Corex. But, with the substantial savings on capex (using gas), based on a constant dollar analysis, including finance charges, the result would still be that thin strip steel produced from the minimill would be 10% cheaper than a similar product flowing from the Corex process.

"When the Mossel Bay gas can no longer sustain the flow rate required by the Western Cape market — in about 10 years — Kudu gas could start. That would presuppose that the owners of the Kudu field, off the Namibian coast, would start developing this within the next few years."

Another option for using the gas from the huge Kudu field would be smaller, coastal, gas-fired power stations. "This would be far cheaper than building another nuclear power station. And, with growing global demand for pollution controls and scrubbing of noxious gases from Eskom's coal-fired Mpumalanga power stations, such additional environmental controls would also effectively make new coal stations, with transmission to the Cape, more expensive than gas-powered stations in the Cape."

Brown says Britain and the US already operate gas-driven power stations.

An Eskom spokesman says that though the utility looked at the gas option, it decided that the short-term solution for the growing power needs of the Western Cape would be to increase — even double — the capacity on existing transmission lines from the coal stations in Mpumalanga.

"Our study over the past 18 months looked at usage of Kudu gas. We also considered Pande and the possibility of exploiting the methane gas reserves of the Waterberg coal fields. But, with coal far cheaper than gas as a power source, it seems unlikely that Eskom would now choose the environmentally cleaner gas route."

But he says gas would become an option if demand for power surged in the area following a steel-based industrial lift-off. Or gas could be used as a direct, domestic and industrial energy source.

But this leaves Mineral & Energy Affairs Minister Pik Botha pondering what to do with the R12n Mossgas synfuel fiasco. Options, though tenuous now, could include converting the refinery to handle liquid fuel.

However remote it may seem, the synfuel white elephant could be privatised, in a partial sell-off to Far Eastern equity partners who have shown an interest, or sold off as a going concern to local or overseas investors, allowing government to recoup a meagre portion of its lost billions. But talk is cheap and despite an extensive US$100 000 feasibility study conducted for the Taiwanese, the possibility of a sell-off remains just that — a possibility.

Electricity industry in for a shock if recommendations are accepted

Cape Town – A government working group has proposed a radical shake-up of South Africa's electricity industry and the introduction of a national levy to help fund electrification, deputy constitutional development director-general Andrew Boraine said yesterday.

The recommendations would be formally presented to the Cabinet for approval in February, Boraine told a parliamentary public hearing on proposed new local government legislation.

The recommendations are contained in the interim report of an electricity working group representing all major players in the industry. The group operates under the auspices of Minmec, the intergovernmental forum comprising several local government MECs.

Boraine said the report made "radical recommendations" and urged all interest groups to respond before February to the issues raised in the document.

The report calls for the separation of responsibilities for the distribution, generation and transmission of electricity and the rationalisation of the industry into a single national distribution company in order to achieve savings and help meet electrification targets.

"These are fairly major changes. I think it is very important for all stakeholders to become deeply involved in the debate," Boraine said. – Sapa

(55) (123) Star 25/11/95

Electricity tariff restructure on cards

55

RECOMMENDATIONS on the restructuring of the electricity industry would be presented to local governments next week, a senior government official said.

ARG 25/11/95

"Between now and February we will discuss the proposals with all the major stakeholders to discuss the pros and cons," deputy director-general of provincial affairs and constitutional development Andrew Boraine told a parliamentary committee.

He said the recommendations were contained in a report just finalised by an electricity working group reporting to the inter-governmental forum of national and provincial ministers, Minmec.

The recommendations included the separation of the distribution of electricity from generation and transmission and the rationalisation of the electricity supply industry into a single national distribution company.

It also recommended a single national tariff system, "not a single national tariff, but a single national tariff system," Mr Boraine said.

The committee also wanted to see the introduction of "cost reflective tariffs to level the playing area between the Eskom-supplied areas and the local authority-supplied areas, a national electrification levy to fund electrification as well as the right of the local authorities to tax electricity in their area to raise revenue for development projects.

"These are fairly major changes ... and it would be important for all the local authorities to get involved in the debate because we have to finalise the report for Cabinet by February next year."

Mr Boraine said that unless the electricity distribution system was rationalised, it would not be able to meet the targets set down for the electrification of homes.

Many local authorities were not financially viable and the more poor consumers were connected to the electricity grid, the more subsidies would be needed. — Reuter.

Municipalities would get stake in new body

Eskom may hive off power provision role

(55)

BD 27/11/95

Tim Cohen

CAPE TOWN — Proposals to break up Eskom by separating its electricity generation and sales functions, and for the introduction of a standard national electricity tariff system, are to be made this week.

The major overhaul of SA's electricity operations is to be put forward by the Electricity Forum, a body consisting of parties interested in the supply and consumption of electricity.

The proposals would create a huge new electricity provider by merging Eskom's electricity provision with that of municipalities, who would be compensated by the right to a portion of the income generated by electricity tariffs.

Electricity Forum co-chairman Andrew Boraine emphasised at the weekend that the plans were not final.

Splitting off Eskom's electricity provision function would allow the parastatal to concentrate on the generation and supply of bulk electricity.

He said the new electricity provider would be responsible for supplying electricity to homes and businesses, new installations and for the collection of tariffs.

In the process, municipalities would lose their rights to provide electricity, a major blow to some councils which derive a large proportion of their income from electricity tariffs.

The forum would suggest that the provision of electricity be taxable, and that this income should accrue directly to the municipalities.

Boraine said major issues had still to be negotiated with the many role-players involved.

The plans were an attempt to solve a range of problems in the provision of electricity in SA, including Eskom's intervention as an electricity provider where municipal government had collapsed or where residents had called on it to do so, and the systems put in place by former homelands.

A confused system of electricity provision had developed, with a huge number of electricity rates applying in different parts of SA.

Some municipalities had to provide electricity without being sufficiently compensated because of payment boycotts, while for others electricity was a major income generator.

Boraine said the proposals would be presented to organised local government on Thursday. They would then be discussed in a wide range of forums, including provincial governments and labour and business organisations.

Many of these organisations are represented on the forum, which Boraine co-chairs with National Electricity Regulator chairman Ian McCrae. The forum aims to produce a final report by February.

THE SPIRA INTERVIEW

Eskom director Vusi Ngubeni has his eye on the top job

(55) CT(BR) 27/11/95

Vusi Ngubeni, 41, has one overriding ambition — to become chief executive of Eskom.

He believes that by the age of 50 he will be in line for the position — one of South Africa's leading corporate jobs.

Now Eskom's executive director (services), he handles the group's non-core activities. He is responsible for a budget of R900 million and controls assets valued at R1,5 billion, so he is certainly no stranger to responsibility.

In the next few years he intends to learn a lot more about Eskom's core electricity generation and distribution business.

Ngubeni's portfolio encompasses Eskom's properties, its information technology activities, its commercial resource management (tendering and purchasing), and its business services (conference facilities, landscaping and horticulture, air and land transportation, industrial catering, protective services and visual media services).

This places him in a seat growing hotter by the day as the debate over the restructuring of state assets focuses increasingly on the parastatals' non-core businesses.

Does he relish the notion of Eskom being privatised?

"It's a dilemma fraught with conflict. Eskom's customers want cheap electricity, which means we have to operate as cost-effectively as we can. Privatising our non-core activities is perhaps one of the ways of reducing costs and increasing productivity.

"On the other hand, we face concern from unions, because privatising means government losing control and cost containment implies a reduction in the number of employees."

"We've been accused of adding to the unemployment situation. I suppose we have, but at the same time, because we've upgraded our people, those who use our product have received cheap electricity cost effectively.

"This is the key. If the price is too high the customer will find alternative forms of energy.

Eskom, Ngubeni points out, is already commercialised. In the process, it has striven for more revenue and better productivity.

It continues to do so by asking whether it should, for example, be in industrial catering. If there are specialists able to provide the service more cheaply and more efficiently, then Eskom should buy in that activity.

"In so doing, you have to be able to demonstrate to the formerly disenfranchised that they receive a resultant benefit. The whole idea must be to get small business involved.

Ngubeni believes this type of approach ties in with the RDP, because to him the RDP means economic empowerment and better and appropriate skills.

"If labour owned some or part of the state's assets, they could then employ more members. They could employ whomever they wish.

Yet the unions have turned their backs on share ownership. Why?

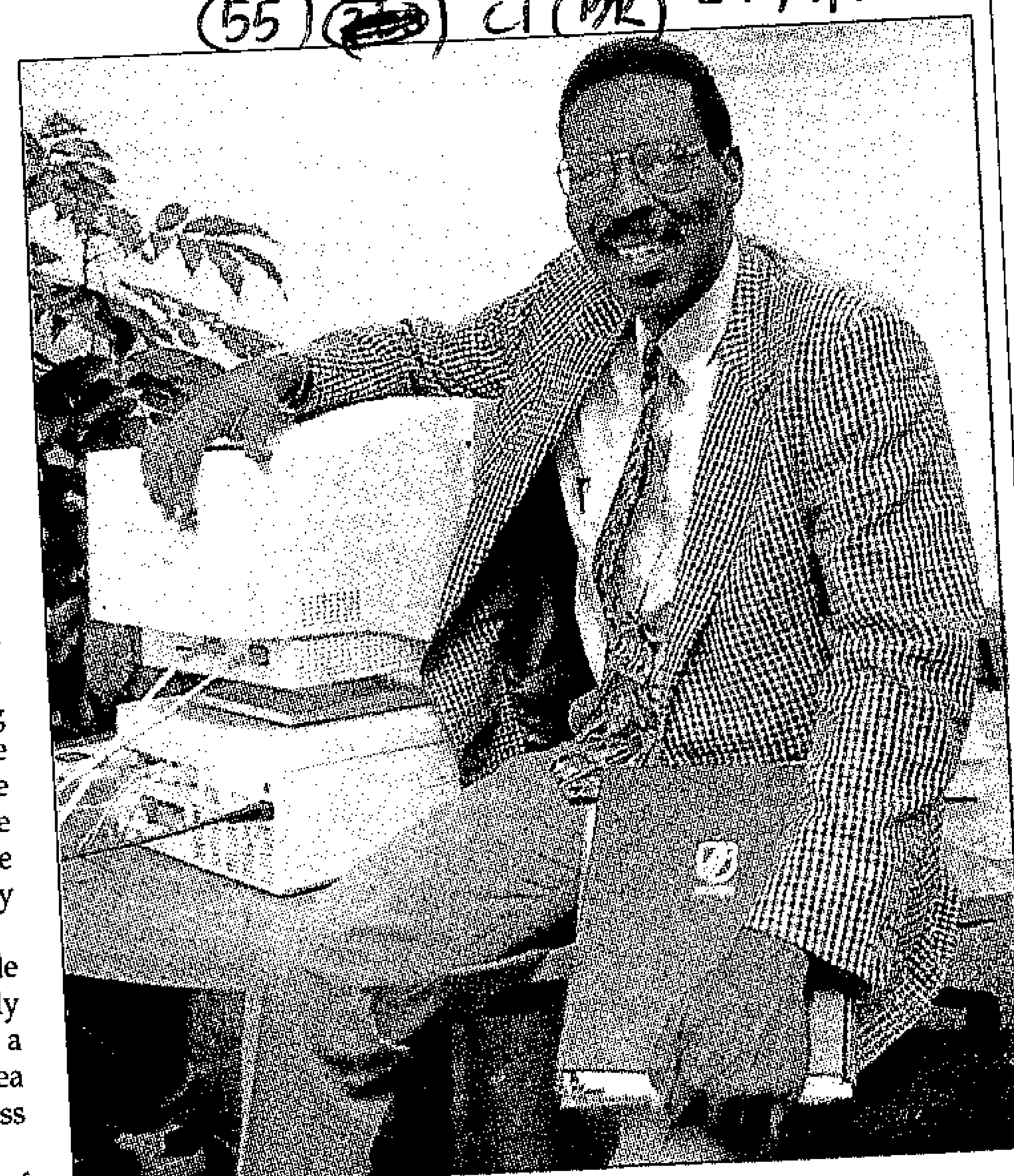
"They've never trusted capitalism. South Africa's evolution has been characterised by a divided society; a situation where one segment of the population owned and the other didn't. Those who didn't own did not (and could not) appreciate the beauty of owning and creating wealth.

"Many countries (particularly in Africa) have relied on foreign aid, only to end up with nothing.

"We need to create wealth and sustain the economy from within, so that reliance on outside assistance is minimal, or reduced to technical know-how.

"In this way wealth creation stays here and generates a spiralling job-creation process."

Ngubeni was born in Ermelo. He has been with Eskom for three years. Before that he spent six years with Bristol Myers Squibb as director of human resources. He was educated in Swaziland, Botswana and Kenya.



BIG PICTURE *Vusi Ngubeni, Eskom's executive director of services*
PHOTO: JOHN WOODROOF

Eskom will complete Majuba power plant

(55) (38)

ESKOM had announced plans to complete the R9,5bn Majuba power station in KwaZulu-Natal, Engineering News has reported in its latest issue.

Sapa reports the article said Eskom completed construction of the three initial units of the 4 149MW power station in 1993.

The decision to build the three remaining units formed part of a broader Eskom programme to boost energy capacity as demand increased.

Other parts of the strategy included de-mothballing Arnott power station, importing hydro-generated power, rehabilitating the Cahora Bassa line and the eventual de-mothballing of Camden, Grootvlei and Komati power stations.

The first unit of Majuba would be commissioned in April next year, with a further unit commissioned each year until 2001. BD 28/11/95

□ **Mungo Soggot** reports national electricity regulator Ian McRae said yesterday that revamping the fragmented electricity distribution industry into a single, national distributor and the creation of a national tariff system was the most viable cure for the industry's widespread inefficiency.

McRae said the proposal, one of several options the electricity working group was considering and which it would discuss with Eskom, local authorities and other stakeholders in the next few months, was at this stage the most "financially viable".

The working group included central and local government officials and the regulator.

In October, other regulator officials mooted the idea of a national supplier which would control all the distribution operations currently run by Eskom and local authorities. The regulator had found the industry to be so dishevelled that it had held back on granting distribution licenses pending a full scale revamp.

The regulator had discovered that in many instances distributors were unable to meet electrification targets, were charging excessive rates and that industry competence varied widely.

The advantage of a single distributor was that it would help rationalise the 2 000 different tariff rates across SA, officials said.

McRae said some local authorities could resist the move which would deprive them of their electricity supply operations — what they believed was a great money earner. "The perception is there that it's a money earner, but its not. In fact, in most cases they lose money."

Industry commentators said it was likely Eskom would steer any national distributor.

Eskom CE Allen Morgan said yesterday it would prefer to comment today after he had heard a presentation from the working group on its proposals.

Eskom lukewarm over distributor plan

BD 29/11/95

Mungo Soggot (55)

ESKOM refused yesterday to give its full blessing to the proposed creation of a national electricity distributor, saying that there were other ways in which the problems of the distribution industry could be tackled.

Reacting for the first time to the proposal that all Eskom's and local authorities' distribution operations be merged into a national distributor, Eskom CE Allen Morgan said that, for example, there could be several regional distributors which combined existing operations, but which remained sensitive to regional pressures.

"Eskom knows that something has to be done," Morgan said.

However, he said the national electricity supplier would want to see the full effect of the current proposal on its transmission and revenue.

The proposal has been mooted by the electricity working group, which consists of the National Electricity Regulator and officials from the provincial governments and central government.

"Let's model it and then take a look," Morgan said.

Morgan said the "nationalisation" of the industry was fraught with problems, particularly as it would keep out competitive forces.

At the moment it was not clear whether the proposed national distributor would be owned by the state, or by a combination of Eskom and the municipalities.

He dismissed the idea that Eskom would dominate any national distributor, saying that in many instances municipalities which ran effective distribution operations had at least as much expertise as Eskom.

Regulator chairman Ian McRae said on Monday that at the moment a national distributor seemed to be the most viable financial cure for the problems besetting the industry.

He said the industry was riddled with inefficiency and a huge range of tariffs.

Eskom will not seek large amounts from domestic capital market

BD 5/12/95

Greta Steyn

ESKOM would have no need to raise substantial amounts on the domestic capital market next year to meet its capital expenditure budget of about R5bn, market sources said yesterday.

The electricity utility last week gave a presentation to capital market players, aimed at giving them an idea of its financing plans for the next financial year.

It was unable to release details yesterday, saying the figures would be finalised this week and would probably be released next week.

Analysts who attended the presentation said Eskom had told them plans were still on track for the corporation to reduce its borrowing requirements to zero by the turn of the century.

Next year it would probably be able to meet its financing needs without much recourse to the domestic capital market.

It would use a mix of offshore finance already raised, money market instruments and internal cash generated. About R1,1bn in foreign loans had been raised for next year — about R720m in a Samurai bond and about R380m in concessionary finance provided by the Japanese Export-Import bank. The latter was part of the Japanese aid package for SA, carried an interest rate of 3,5% and was project-linked.

A spokesman said it did not seem as if more foreign borrowing would be undertaken next year, but circumstances could change.

Sources said Eskom would need to tap the money market for a substantial amount of funding, depending on the extent to which internal cash generated could be used to meet financing needs. A figure of R1bn had been mentioned, but sources said this might change.

A capital market analyst said Eskom's meagre borrowing requirements would not put pressure on the market. Government's huge appetite for loans was 'dominating the market for new loans, with parastatals playing a much smaller role than in previous years.

'55)

About a year ago Eskom said it would raise R2,4bn on the money market, R960m on foreign capital markets and R690m in bonds on the domestic capital market.

However, difficulties in foreign markets after the Mexican financial crisis forced it to borrow more on the local market.

A source said about R2bn of its annual capex budget went towards the electrification programme, while the rest went on general distribution and transmission.

US looks set to bully SA into buying costly Pande gas

SIMON BARBER in Washington (55)

BD 6/12/95

WITH the help of muscle from the White House, Houston-based energy giant Enron Corp has just signed a deal with Mozambique to develop the Pande gas field. Now it expects Vice-President Al Gore, in SA today and tomorrow for the second meeting of the US-SA binational commission, to persuade SA to buy the bulk of Pande's output.

The Clinton administration went to considerable lengths to see that Maputo gave the Pande project to Enron, rather than an SA-led consortium, but Enron still needs to find major consumers in SA to make the venture viable. Unless SA customers are ready to buy large, steady quantities of the gas, Enron and Pande could be in trouble.

That would not be pleasing to Gore, Energy Secretary Hazel O'Leary or Commerce Secretary Ron Brown, all of whom have travelled to SA for the circus. If the administration's handling of Mozambique is anything to go by, they will not be brushed off lightly.

In a letter to President Joaquim Chissano last October, White House national security adviser Anthony Lake threatened that US aid to Mozambique could be terminated because of machinations by Energy Minister John Kachamila to bounce Enron in favour of a group including Sasol and Asea Brown Boveri.

Sasol had been in on the project until last year, when it fell out with Mozambique's energy parastatal, Empresa Nacional do Hidrocarbonetos (ENH), mainly over the price Sasol was prepared to pay for the gas. Enron then signed a memorandum of understanding with ENH giving it exclusive rights, effective until April next year, to develop a plan for the extraction, transmission and marketing of gas.

Then relations between Enron and Kachamila soured, to the point, sources say, where Enron's Maputo representative accused the minister of corruption.

In July, Mpumalanga premier Mathews Phosa, who is taking a keen interest in the Pande project because of the development opportunities it may offer his own province, disclosed he had been told on the highest authority that Enron was out and Sasol back in.

Meanwhile, US Energy Secretary Hazel O'Leary, who had expected to attend a signing of a formal agreement between Enron and Mozambique at the end of her SA visit in August, came home disappointed. Congressional Republicans were already flaying her for her propensity to travel with large retinues without producing much return on the taxpayer's investment.

Moreover, she had been accused on the floor of the House of Representatives of actually helping kill another Enron deal, a $2,8bn power plant project at Dabhoi in India's Maharashtra state. Although that project is now back on track, it left the rails earlier this year after elections in which Hindu nationalists took over the state government.

The new government moved to scrap the deal, which would have represented the largest US investment yet in India, saying it was too sweet to Enron. Congressman Martin Hoke charged that O'Leary had only made things worse with a public warning to New Delhi that "the failure to honour agreements between project partners and the various Indian governments will jeopardise not only the Dabhoi project, but also other private power projects that are being proposed for international financing".

Hoke said: "This blatant intimidation tactic inflamed nationalist sentiments (in Maharashtra) during what was already a very, very tough and sensitive process in terms of trying to save this deal." O'Leary could ill afford another fiasco involving politically influential Enron, but that was precisely what seemed to be brewing.

On October 12, according to The Oil Daily, a respected US trade journal, Kachamila officially notified Enron he was tearing up the memorandum of understanding — despite Chissano having just assured the White House that the deal was on. Lake responded by suspending $13,5m Mozambique was still due as part of its aid allotment.

Lake also wrote to Chissano. His tone brought to mind the Godfather. "There is at the moment a debate of unprecedented intensity in Washington with regard to my government's overall budget and, particularly, funding for foreign assistance. Mr President, we hope for a minimal effect on Africa from this debate. However, it will become increasingly difficult to defend such programmes if some are able to argue that promising countries like Mozambique are not moving ahead rapidly to ensure economic growth through resource development."

In other words: stop messing around, or you will wake up with the head of your favourite race horse next to you in bed. Enron was quickly back in the picture.

An agreement was signed in Maputo on November 13.

Since Pande was discovered by a Gulf/Amoco consortium in 1961, the chief obstacle to its development has always been the lack of regional demand for gas to make its exploitation worthwhile. Enron, and the World Bank, which is supporting the venture, think they have found the answer in plans the Industrial Development Corporation is co-ordinating to build a massive plant at Phalaborwa to convert magnetite-rich copper mine tailings into iron carbide for steel-making.

However, backers of the Phalaborwa megaproject — which remains at the pre-feasibility study stage — have made clear that the price at which Pande gas can be delivered remains a critical factor in their choice of technology for the conversion process. There is a coal-based alternative.

And while the chemistry of the gas approach is simple enough — mix iron oxide and methane under the right conditions and you get iron carbide — the implementation is tricky and untested on the scale envisaged at Phalaborwa.

Moreover, even if the gas-based process is selected, there are other sources that would not require the construction of a 900km pipeline around the Kruger park: Sasol's Secunda plant, for example, and coal bed methane from the Waterberg, whose potential is being explored by some of the same companies that have been approached about participating in Phalaborwa.

The problem for Enron boils down to this: SA, with its abundant reserves of coal, is not a gasified country, which makes it a buyers' market for gas.

Its existing needs can be met by Sasol, which also has plenty of potential excess capacity should it decide to scale back liquid fuel production as subsidies and protection levels for synfuels decline.

Moreover, raising SA demand for gas, attractive as that might be in environmental terms, will require considerable investment in infrastructure and conversion.

The key issue, then, is price. Sasol was let go from the Pande project last year because it was not prepared to pay what Mozambique wanted. Enron is understood to be asking close to R12 a gigajoule, double the cost of bulk gas in the US. This has satisfied Maputo, but has yet to generate firm buyers in SA. One has to wonder how shifting to an energy source and feedstock that is relatively costly in international terms is going to improve the overall competitiveness of the SA economy.

The scene is set for an interesting tussle. Will the Clinton administration try the same tactics on SA that it used on Mozambique? Probably. But don't get bent out of shape. Beneath the rhetoric Gore will no doubt be spouting for public consumption. SA is just another place where US companies would like to make money. Helping them make money is the foundation of US policy. Why else do you think there's a binational commission?

Bank says reform essential

(55) BD 5/12/95

Beatrix Payne

SUB-SAHARAN African electricity utilities would have to go through radical reform and restructuring to attract private sector funding, World Bank industry and energy department director Richard Stern said yesterday.

At a briefing before the start of the Bank's symposium on power sector reform, he said sub-Saharan utilities, excluding SA, would have to invest $14bn to $17bn, but state spending priorities meant they would have to tap private sector resources.

Reform implied improving performance as operating efficiencies were low and losses were high. A first step could involve encouraging private sector competition, unbundling or separating various functions into independent companies.

CURRENT AFFAIRS *Rwana Mwzana, of Zambian electricity company ZESCO, addresses delegates at the World Bank's symposium on the African power sector* PHOTO: JOHN WOODROOF

Bank urges power sector reform

(55) CT (BR) 6/12/95

By Fiona Leney

Johannesburg — The power sector in Africa should be seeking private investment and extensive reform if it is to match economic growth targets over the next decade, World Bank experts said yesterday.

They were speaking at a symposium organised by the bank to examine options for improving the sector's performance on the continent.

Richard Stern, the director of the World Bank's industry and energy department, said that the $10 billion shortfall estimated in the sector's investment needs over that period could only be raised on the capital markets, but that the disappointing performance of the power industry would have to be improved if investors were to be tempted.

"The options for reform are many. Privatisation is not the only one," Stern said. "African countries should learn from other countries' experience, but they need to tailor that to their own needs."

Stern stressed that the World Bank was not advocating the rigid and wholesale application of full privatisation. Contrary to the traditional view of the World Bank, he and his colleagues were advocating reforms "embedded in an African context", he said.

While larger systems would benefit from complete unbundling and the introduction of full competition, smaller systems should be looking at the privatisation of management areas.

A recurring theme of the conference was that macro-economic reforms would have to go hand in hand with power provision reforms, in order to draw foreign investors.

Peter Cordukes of the World Bank's industry and energy department sounded an optimistic note, saying there had already been huge foreign interest in entering the power distribution sector in countries such as Britain and Australia, where privatisation programmes were far advanced. "This is one of the most profitable areas if run efficiently," he told delegates.

Electricity trade an option for sub-Saharan countries

(55)

Paul Vecchiatto

BD 6/12/95

THERE was a growing realisation that electricity trade between sub-Saharan countries was now a practical proposition for some countries to earn much-needed income, World Bank energy department director Richard Stern said yesterday.

Speaking at the World Bank symposium on reform in the power sector in sub-Saharan Africa, he said that if the Cahora Bassa project came on line in 1997 it would earn Mozambique revenue at a price acceptable to it and client countries.

But little investment could be expected to come from governmental sources which were already strained, he said. "Some of the more radical reforms will include charging tariffs that will cover the cost of power generation and there is also a general consensus on privatisation of state-run utilities."

Tore Hervei, CE of Southern African Development through Electricity, a non-governmental consultancy, said there were a number of problems related to privatisation. These included limited access to electricity and the weak performance of the majority of the utilities in the region.

Peter Cordukes, analyst with the World Bank's Industry and Energy department said few of the region's utilities were likely to move to a position where they would be able to sell off a majority of their equity until well into the next century.

Eskom chairman John Maree said Eskom supported the development of an inter-connected electricity grid joining all countries of southern Africa. "There is a regional surplus of 9 000 MW of electricity generating power, mostly in SA.

Holiday delays energy decisions

CT (BR) 7/12/95 (55)

By Derek Tommey

Johannesburg — The start of the Christmas holidays had made it difficult for any government department to make a top-level decision for at least the next six weeks, Marcel Golding, the chairman of the government's mineral and energy affairs committee, was told yesterday.

At a meeting in Pretoria he appealed to people interested in formulating a new minerals and energy policy to submit their views in not more than 1 200 words by January 15.

But representatives of many government departments said this would be impossible as everybody of importance would be on holiday and unavailable.

Reluctantly, Golding extended the deadline for written submissions to January 30

After some discussion the meeting decided to hold two two-day workshops early next year.

Golding told the meeting that the energy committee rather than the minerals and energy committee would deal with matters relating to the ownership of gas deposits.

Councils to keep surpluses

MUNICIPALITIES countrywide need not worry any more about losing the R1,7-billion annual income they get from surplusses on their electricity undertakings.

In what amounts to a local tax on electricity, most municipalities have traditionally set their tariffs at slightly higher than they need to cover electricity costs. The surplusses are then paid into the rates account to ease the burden on ratepayers. 55

For the past 18 months, local government groups have been worried that the surplusses will be taken from them.

But at the Cape Metropolitan Council meeting yesterday, councillor Mr Frank Van der Velde said a working group set up by the ministries of energy affairs, constitutional affairs and public enterprises had recommended that local government should get its R1,7bn a year from electricity. CT 7/12/95

Municipal Reporter

EWS

Provincial energy agreement signed

(55)(~~123~~)

Bloemfontein – An energy supply co-operation agreement was signed by the premiers of the Free State, Northern Cape and Eastern Cape in Bloemfontein yesterday, and witnessed by US Energy Secretary Hazel O'Leary.

The agreement earmarks rural areas for regional co-operation in energy development.

The US-South Africa Binational Commission Sustainable Energy Committee prioritises provincial development.

Riemvasmaak, where people recently returned to ancestral land, was already using solar energy at its clinic. – Sapa.

Star 7/12/95

Power play in the parastatals

MtG 8-14/12/95 (55)

The power sector has come under the spotlight lately and is an issue of major concern for sub-Saharan countries, reports Meshack Mabogoane

ATTEMPTS to restructure parastatals in the sub-continent have been the focus of fundamental discussions recently. Two conferences, addressing this issue and setting scenarios for market-related developments and economic changes, have been held in South Africa.

Two weeks ago a *bosberaad*, headed by Minister of Public Enterprises Stella Sicgau, was held in Warmbaths to review deliberations and efforts to restructure the whole gamut of parastatals in South Africa.

This week an international *indaba*, also opened by Sicgau, was held at the Eskom Conference Centre in Midrand on "power sector reform and efficiency improvement in sub-Saharan Africa."

The conference was largely a sequel to the bank's Roundtable Conference held in 1993, stirred by concern about the sector's poor performance in the Third World. Work began in 1988 when the bank initiated a review of policies and programmes related to this sector.

The main themes and spirit of the bank's studies and recommendations, as well as developments already under way in Africa and other developing countries to effect sector reforms, set the agenda for the Midrand conference.

The power sector in the Third World is, according to the World Bank, quite dismal

As the major provider of funds and facilitator of development in the Third World, the bank's position on this issue is crucial. It is part of its overall economic structural adjustment programme to redirect and prime the economies of the developing countries.

The power sector in the Third World is, according to the bank, quite dismal. Between 1979 to 1988 it has been adversely marked by:

- a decline in average real power tariffs;
- a deterioration of the quality of service;
- poor maintenance of plants;
- inadequate metering, billing and collection;
- poor management;
- and government interference in daily affairs.

Financial statistics have been as depressing. On average, rates of return have fallen from nine percent before the mid-1970's to five percent in 1991; self-financing ratios were 12 percent in 1991 against required targets of 20 to 60 percent.

"The deteriorating macro-economic situation and the debt overhang of the 1980's exacerbated these financial problems and worsened debt service coverage" in developing countries, according to the bank.

This militates against developing countries footing the maintenance and development bills. So to bail them out, other methods are needed.

Robinson Mwanza, chief executive officer of the "commercialised" Zambian Electricity Supply Company (Zesco), told the Midrand conference that "Zambia had to reform as a matter of survival. There was no alternative to reform since the infrastructure had collapsed."

Case studies in Africa and elsewhere were cited, indicating the changes that have been wrought to counter the downward slide. These ranged from outright selling off of state assets to hiving off non-core activities to the private sector. Or letting Independent Power Producers (IPPs) come on the scene.

The bank estimates that US$100-billion is required yearly to meet "modest rates of growth" of the power sector in developing countries. The bank and other official lenders — multilateral banks, bilateral donors and export credit agencies— "cannot realistically provide more than 10 percent" of this amount. Only US$1,7-billion is available for sub-Saharan Africa.

It is against this background that the bank recommends that the private sector should step in. But there should be the necessary domestic commitment (to democratisation) and a good measure of flexibility and pragmatism on the part of outside partners — perhaps to take cognisance of the very imperfect economic and political conditions.

While the bank warns against imposing general measures and makes a point of treating each national economy distinctly, its guidelines include:

- The need for governments to rethink their roles in power supplies. Policy making, regulatory and ownership functions should be considered separately "provided their links are clarified." Public ownership of utilities is not, however, ruled out as "public or private ownership alone is an insufficient basis for predicting the success or failure of power sector reforms."
- Commercialisation, viewed as a "series of measures that lead a State-owned enterprise to conform to corporate standards of management and operations, including efficiency in pricing", is a goal for sector reforms.

Other economic indicators — like inflation — should be considered as "tariff reform and inflation are of special concern in devising realistic procedures and schedules" in restructuring. General affordability, including subsidies, are crucial policy considerations.

- Introducing competition in the sector is a more complex phenomenon. "It could range from bidding for ancillary to core services". However, "any efficiency gains from introducing competitive supply will have to be measured against new transaction costs, more complex regulation and possible inefficiency in investment."

US$100-billion is required yearly to meet 'modest rates of growth' of the power sector

The bank recommends that where feasible there should be encouragement of bidding for "financing and construction of additional capacity" (IPPs).

Stella Sicgau: Reviewing the whole gamut of parastatals in South Africa

The bank is hopeful that there is greater "co-operation among public, private and international participants in power sector development than is often expected."

Policies should be based on general understanding and consent; efforts should be made to open the policy-making process and to the understanding of the public; and for the parties involved to tailor reforms while being sensitive to an understanding of local economic and political conditions.

Deliberations on power sector reforms seem to have eschewed the wholesale market approach that marked much of the thinking on restructuring the economies of the Third World. Certainly the realities of the power sector and distinct national economies have been as much of a concern.

Left with a legacy of lethal waste

(55) Star 9/12/95

The recent demolition of the rocket test facility at Rooi Els concluded SA's brief membership of the nuclear club – with the exception of Koeberg, writes **NICO ZAVERDINOS**

The Department of Mineral and Energy Affairs (DMEA) admits that there is no clarity on how nuclear policy was previously made, but some assume it was decided at some level of Cabinet by *ad hoc* committees. They are now attempting to redress the situation through the green paper by inviting public proposals.

"We hope to have a National Energy Policy Summit, which will finalise our proposals," said DMEA spokesman Roland Darrel. But at the moment, Government policy is far from clear on the issue of nuclear energy.

A nuclear power station like Koeberg has a life of about 40 years before the construction itself is regarded as contaminated.

When it is decommissioned, probably around 2020, it must be treated as waste for up to 200 years.

Eskom have created a special fund for the eventual cost of decommissioning.

"We have provided for the 'green field' option," said Bill Woodcock, Nuclear Fuels Manager of Eskom. "In this process we remove the entire station and re-plough the land. However, it is more likely that we will remove the spent nuclear fuel and encase the rest of the plant in concrete until the radiation has decayed."

According to Mike Kantey of the now defunct Koeberg Alert, there are three types of waste produced by Koeberg.

"Low level waste includes gloves and clothing which might have been contaminated, while medium level waste might include equipment and contaminated water. They are stored in stainless steel drums and concrete blocks respectively above ground at Vaalputs in Namaqualand.

"High level waste, like the core of the reactor, is obviously the most dangerous and is stored on site at Koeberg. Some of this waste, like plutonium 239, has a half-life of up to 24 000 years," he said.

"In 50 years of nuclear energy nobody has ever come up with a viable solution for dealing with high level waste.

"We have built up ten years of spent fuel, plus the two cores in the reactors, which adds up to about 500 tons of spent fuel," said Woodcock.

"So far we have collected R390-million for dealing with this, R150-million of which will go to decommissioning the station."

Since the demise of the Cold War, nuclear energy has been losing its glitter internationally. The disaster at Chernobyl brought the horror of a nuclear accident from the realm of fiction into the world of fact and one physicist claimed in 1982 that a worst-case scenario at Koeberg could kill 350 000 people.

Aside from the usual rumours, there have been no reports of serious incidents at Koeberg. However, last year an internal Eskom report criticised maintenance staff for lack of attention to detail in their work. The staff said they felt that they were under too much production pressure.

There have also been reports that, despite strict checks on permanent staff, casual and contract workers were not subjected to the same control.

In the United States there is only one nuclear power station still being built, said to be opening this year. Construction on Watts Bar One began 23 years ago and cost almost $7 billion more than its planned allotment.

The Tennessee Valley Authority (TVA), which built Watts Bar One, planned to construct 17 reactors in the 1960s. It cancelled eight of them in the 1980s because of the cost factor and today only three are up and running. The TVA has managed to run up a $26 billion overdraft.

The accumulated costs of nuclear energy have been cited as too high to be profitable.

According to Dr Thomas Auf der Heyde of the Science Advisory Unit at the University of Cape Town, the cost per kilowatt hour of nuclear energy compared to that of coal was reported to be three times higher.

This does not include the cost of security, waste disposal and decommissioning. "In 1986 a comparative analysis of Koeberg and a coal-fired plant in the Eastern Transvaal showed it was simply not cost-efficient," Auf der Heyde said.

"A full economic account of Koeberg has never been publicly issued, so we can only conclude that it is not economically viable," said Dr David Fig, director of the Group for Environmental Monitoring.

"We believe that it was created politically to enable the Nationalist Government to acquire the nuclear materials needed to further their nuclear weapons programme."

The historical relationship between nuclear energy and nuclear weapons in South Africa has also come under examination in the green paper.

When the Government finally drafts legislation on nuclear energy, it will no doubt take both the cost-efficiency of Koeberg, as well as its call for declaring Africa a nuclear weapon-free continent, into account.

The idea is that it can then sell enriched uranium on the international market.

"Impossible," said one scientist at Koeberg who declined to be named.

"The AEC is a white elephant, a millstone round the neck of Koeberg. It consumed R460-million last year, 70% of the DMEA budget, and produces fuel that is outdated.

"They have just spent a small fortune on upgrading their technology to produce fuel that will be ten years out of date when it comes on line.

Fig agreed. "South Africa doesn't need an organisation like the AEC today," he said.

"They're not doing anything we can't get elsewhere cheaper. They should pull out of Koeberg's fuel cycle completely."

But Dr Karel Fouche, executive general manager of technological development at AEC, maintains that his organisation has a healthy future in South Africa.

"We have had a strategy for the last five years to become a commercially viable enterprise. By the year 2000 we anticipate that most of our income will come from non-nuclear products, but we still see a strong future in uranium production.

"If the AEC continues producing fuel for Koeberg, the station will never operate at its full potential," the scientist said.

"They are using their influence in Government to force us to buy their fuel.

"We can get better fuel on the international market that will provide almost twice as many kilowatt days, and be a third cheaper than the AEC product."

"The likelihood of them commercialising their nuclear technology is incredibly small," said Auf der Heyde.

"One of the reasons the AEC was set up was to provide fuel for the Nationalist government's nuclear weapons programme.

"In this respect they were very successful, but as a commercial enterprise they were a complete failure."

Fouche insists that their budget allocation must be seen in context to their work.

"This financial year we have a budget allocation from the DMEA of R273-million. We also needed over R20-million for the decommissioning of our enrichment plant.

"We will be paying R60-million in interest on loans and R117-million on loan redemptions too.

"There is provision in the budget for our non-commercial operations and this is done in the national interest. We see it as funding for our RDP work.

"The rest of the world will buy the outdated fuel that the AEC produces," the scientist said. "Unless South Africa builds another three reactors, the AEC's nuclear enterprise won't be profitable."

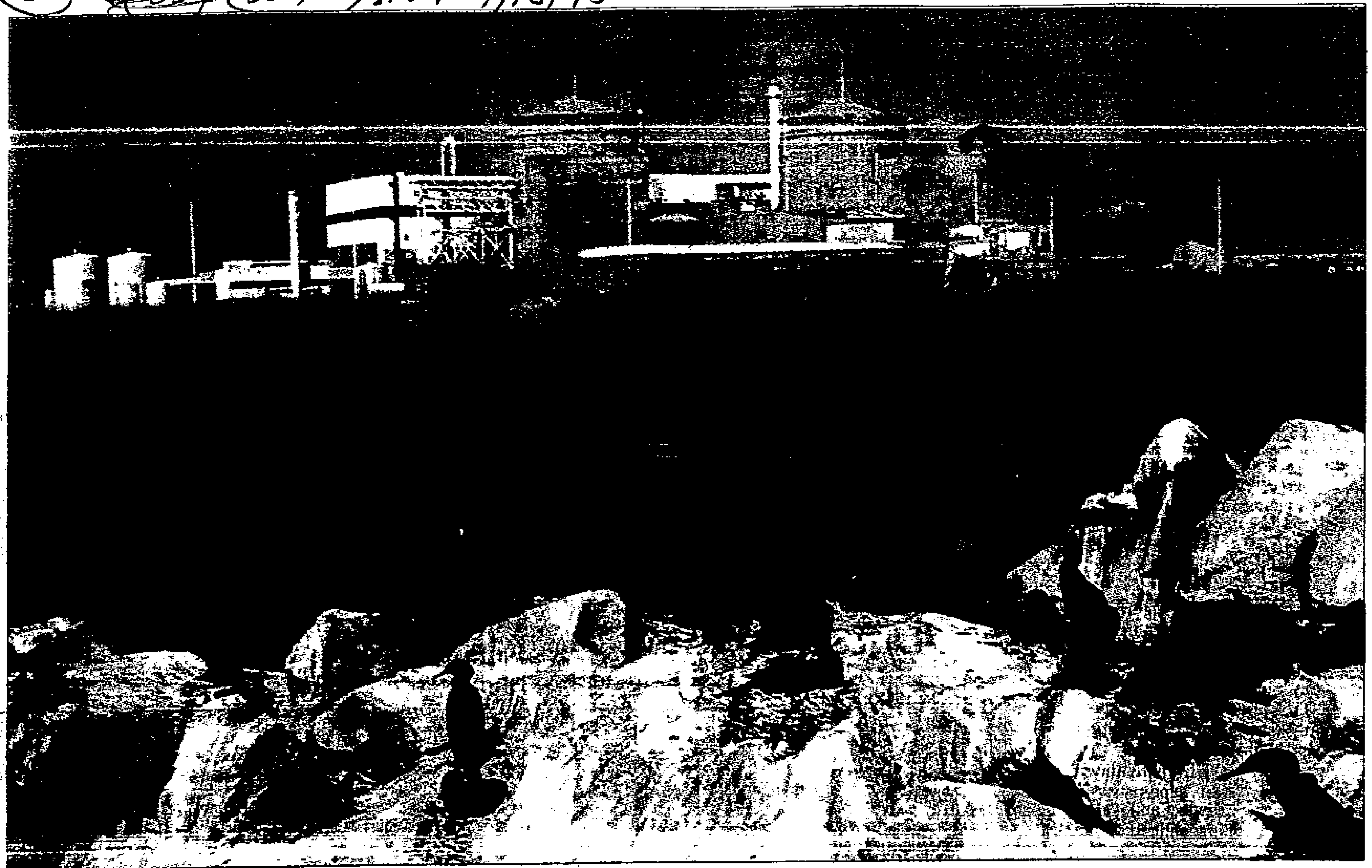
Fouche says that a number of countries have already expressed interest in AEC-produced nuclear fuel.

"But it is now up to the Government to determine to what extent we will be involved in the production of fuel for Koeberg."

"The Government will now have to decide on whether it is willing to subsidise the AEC to possess on indigenous nuclear fuel production facility, or whether it will opt for a more cost-effective approach and import the fuel necessary to run Koeberg," said Auf der Heyde.

Eskom, which operates Koeberg, is remaining open on the issue of nuclear energy. "We believe that we must have a skill and ability in all electricity generation," said Eskom spokesman Peter Adams.

"One day when our coal resources become scarce, then we will have the ability to examine viable alternatives."



DANGER LEVELS: High level waste such as the core of the reactor, is the most dangerous stored on site at Koeberg (above). Some of this waste, like plutonium 239, has a half-life of up to 24 000 years but as yet, there is no viable solution for dealing with high level waste

14|12|95

THURSDAY
DECEMBER 14, 1995 ★

Khayelitsha lights up for Christmas

(55) (Cap)

ANEEZ SALIE

CT 14/12/95

THIS is going to be a particularly jolly festive season in 31 338 Khayelitsha homes because their occupants will be able to string fairy lights on their Christmas trees for the first time — they now have electricity.

And the party started yesterday — to celebrate the completion of the first phase of the RDP project to electrify all of Khayelitsha by Phambili Nombane (forward with electricity), a joint international venture between Eskom, Electricité de France and East Midlands Electricity.

At a cost of R75 million all the homes and businesses that could be electrified have been, only unserviced dwellings or those where formal houses are not planned having been left out.

Yesterday's celebration was held at one of the scheme's successful spin-offs, the Roxy Cinema, brought to life by owner Mr Nelson Godongwana.

Many small businesses had been made possible, said Khayelitsha mayor Mr Vuyani Ngcuka.

(55)

Township celebrates switch-on

ST(M) 17/12/95

THE first phase of Khayelitsha's electrification, involving the installation of the network, was celebrated at the township his week.

Phambili Nombane, a joint venture between Eskom, Electricite de France and Britain's East Midlands Electricity, started work on the first contract in February last year and have so far connected 31 338 homes.

The project, which follows guidelines laid down by the reconstruction and development programme, has resulted in numerous job opportunities for residents.

It has also given many residents the opportunity to develop small businesses. — Sapa

Electricity supply revamp welcomed

BD 18/12/95 (55)

Mungo Soggot

THE proposed shake-up of the electricity supply industry had been welcomed by most interest groups and final proposals should be presented to government in February, national electricity regulator spokesman Johan du Plessis said at the weekend.

Du Plessis said the proposals, which involve transforming the fragmented electricity distribution industry into a single decentralised distributor, had been discussed with Eskom, local authorities and most interest groups — including trade unions, the Chamber of Mines, the SA Agricultural Union, civic associations and some major companies.

All interest groups had agreed the current set up had to go. Some, however, had expressed caution about the proposed changes' effect on tariffs, and the openings it made for privatisation.

But the proposed shake-up, details of which first emerged last month, faced no major opposition.

Book warns against privatisation of electricity

(55) ([redacted]) BD 19/12/95

CAPE TOWN — As government finalises plans to revamp the electricity supply industry, two Cape Town researchers have warned against any attempts to privatise the sector.

In the new book Poverty and Power, published by UCT Press, Anton Eberhard and Clive van Horen say that, as in eastern Europe, the movement to democracy has led to pressures to open the economy and promote wider participation.

This has led to "thoughtless prescriptions for wholesale privatisation of state functions and corporations, often with disastrous consequences for social and economic equity", the book says.

"But there is now a growing understanding that the market has not met, and will not meet, all development challenges and, in particular, will not fully provide for the basic needs of the poor."

"A lean and efficient state is envisaged which appreciates where markets best function but which intervenes strategically, selectively and, if necessary, deeply in those areas where markets fail."

The authors support the idea of the industry being guided by an independent electricity regulator, who has already been appointed. — Reuter.

Power pool could lower regional costs

BD 19/12/95 (55)

Michael Hartnack

HARARE — Regional power prices were expected to become more competitive and "least cost" generation projects would be adopted following the formation of a 10 nation "southern African power pool", the Zimbabwe Electricity Supply Authority (Zesa) said yesterday.

Zesa predicted large-scale hydroelectric schemes, such as that at the Zambezi River's Batoka Gorge, 60km below Victoria Falls, "would become viable under the power pool arrangement".

Zesa welcomed Friday's signing of a memorandum of understanding linking SA, Angola, Botswana, Namibia, Malawi, Mozambique, Swaziland, Tanzania, Zaire and Zimbabwe.

The Lesotho Electricity Corporation and the Zambia Electricity Supply Corporation were expected to sign once their governments had signed the memorandum.

Zesa, Eskom, the Botswana Power Corporation, EDM of Mozambique and Snel of Zaire had already signed an operating agreement regulating day to day pooling of electrical power.

Ostrich speculators to be eased into scheme

Louise Cook

BD 19/12/95

A NEW scheme in the former Transvaal ostrich industry to boost leather and meat exports would allow speculators in without needing farms or infrastructure.

Transvaal Ostrich Producers' Organisation chairman Johan Wingerd said at the weekend that 40 ostrich farmers had set up a co-operative to take over the running of the Ostriches Galore abattoir and feed lot at Tarlton in the Magaliesburg.

Instead of young birds being raised by farmers on farms, the co-operative would take in thousands of 6-month-old birds at 55kg into its feed lot from speculators or part-time farmers.

At least 8 000 birds were likely to be delivered to the feed lot next year, he said.

"This way, anyone can buy a young ostrich, have it delivered straight to the feedlot to raise it and deliver it to the abattoir after five months at 85kg. The buyer does not need a farm, labour or any farming skills."

Wingerd said the scheme could offer returns on investment of 23% a year.

The Transvaal Agricultural Union, backing the move, said the co-operative would also export quality ostrich leather and meat products in "meaningful quantities and on a consistent basis."

"The move is aimed at providing a co-operative feed lot system that delivers slaughter birds in economic quantities to abattoirs," the union said.

Wingerd was optimistic about the future of the industry in the former Transvaal.

It was 10% the size of the Karoo industry at Oudtshoorn, but had potential to overtake the farming and export operations run by the Klein Karoo Co-operative, he said.

"Gauteng entrepreneurs have money to invest in the industry. We are hoping to set up further feed lots and abattoirs in Gauteng, Northern Province and Free State over the next few years," he said.

Mediation body starts to take shape

BD 19/12/95

Renee Grawitzky

THE Commission for Conciliation, Mediation and Arbitration's interim board meets this week to discuss the appointment of an independent chairman and a director, as well as the way forward for the commission.

The interim board comprises three representatives each from business, labour and government, but will be officially appointed by Labour Minister Tito Mboweni only once Nafcoc has finalised its representative on the board.

Labour's representatives are Ebrahim Patel (Cosatu), Manene Samela (Nactu) and Ben van der Walt (Fedsal) while business representation included Bokkie Botha and Rudolph Gouws. However, no final appointment has been received from Nafcoc after their original representative resigned from the organisation. Government representatives are the labour department's director-general Sipho Pityana and deputy director-general Les Kettledas, as well as public service and administration department director-general Paseka Ncholo.

At the heart of the new Labour Relations Act is the establishment of the commission, designed to provide a quick, efficient and cheap means of resolving disputes.

The commission has to be up and running by the time the new Act comes into effect on May 1.

The International Labour Organisation (ILO) has been providing financial and human resource assistance in the establishment of the commission. Former Independent Mediation Services of SA head Charles Nupen is the ILO's technical adviser.

Pityana said last week the department had requested R100m be set aside in its 1996/7 budget for the operation of the commission. Mediation and Conciliation Centre director Mahmood Fedal said yesterday that because the commission would be funded with taxpayers' money, it was crucial that it succeeded. Its success depended on the support provided by private dispute resolution agencies such as the centre.

Fedal said the users of the dispute resolution mechanism — business and labour — should also be consulted on the formation of the commission. Excluding these parties could result in them going to other private agencies and not utilising the structures established by government.

Book warns against privatisation of electricity

BD 19/12/95 (55)

CAPE TOWN — As government finalises plans to revamp the electricity supply industry, two Cape Town researchers have warned against any attempts to privatise the sector.

In the new book Poverty and Power, published by UCT Press, Anton Eberhard and Clive van Horen say that, as in eastern Europe, the movement to democracy has led to pressures to open the economy and promote wider participation.

This has led to "thoughtless prescriptions for wholesale privatisation of state functions and corporations, often with disastrous consequences for social and economic equity", the book says.

"But there is now a growing understanding that the market has not met, and will not meet, all development challenges and, in particular, will not fully provide for the basic needs of the poor."

"A lean and efficient state is envisaged which appreciates where markets best function but which intervenes strategically, selectively and, if necessary, deeply in those areas where markets fail."

The authors support the idea of the industry being guided by an independent electricity regulator, who has already been appointed. — Reuter.

Power pool could lower regional costs

BD 19/12/95 (55)

Michael Hartnack

HARARE — Regional power prices were expected to become more competitive and "least cost" generation projects would be adopted following the formation of a 10 nation "southern African power pool", the Zimbabwe Electricity Supply Authority (Zesa) said yesterday.

Zesa predicted large-scale hydroelectric schemes, such as that at the Zambezi River's Batoka Gorge, 60km below Victoria Falls, "would become viable under the power pool arrangement".

Zesa welcomed Friday's signing of a memorandum of understanding linking SA, Angola, Botswana, Namibia, Malawi, Mozambique, Swaziland, Tanzania, Zaire and Zimbabwe.

The Lesotho Electricity Corporation and the Zambia Electricity Supply Corporation were expected to sign once their governments had signed the memorandum.

Zesa, Eskom, the Botswana Power Corporation, EDM of Mozambique and Snel of Zaire had already signed an operating agreement regulating day to day pooling of electrical power.

Maepa returns to bring light to his countrymen

(55) Star 20/12/95

A black-owned group is manufacturing solar energy equipment to be used for the rapid electrification of rural areas, reports Priscilla Singh

Nape Maepa recalls with fondness a house of darkness and a village with no electricity in Dilokong, south of Pietersburg, in what is now Northern Province. But he is bitter that almost 30 years later not much has changed and most rural areas in this country are still without electricity.

Maepa left South Africa in 1966 due to political turmoil and settled in the US where he qualified with an engineering degree.

"But I'm back home," he says, "to give something back to my people and my country."

Maepa is the chairman of the Suncorp Group, a black-owned company responsible for the manufacture of photovoltaic modules of solar energy panels which will be used for rapid electrification of rural areas.

The solar panels, which will convert sunlight into electricity, are well suited to providing electrification to rural homes, schools and clinics as well as telecommunication services.

Maepa's organisation has already made a big impression in Soweto at a school which had wires installed since 1982 but no electrical connection.

Electricity from solar energy is very economical

"We stepped in and completed the process and now the school is faring much better with electricity. We also donated computers and outdoor lighting for security purposes," he said

"The story of Suncorp began late last year with discussions among leaders in the United States and South Africa on how to tackle the huge need for electricity among the majority of our population.

"In South Africa where the sun shines on an average of 300 days a year, solar energy was an obvious choice and in addition solar energy does not pollute the atmosphere."

Two leading edge laboratories in the United States, the National Renewable Energy Lab (NREL) in Golden, Colorado and the Sandia National Lab in Albuquerque, New Mexico, were asked to assist.

The semi-automated module production line arrived in customs in August this year and within days the University of Port Elizabeth, Spire Corporation in Massachussetts US, AEG South Africa and the Suncorp staff were installing the line at the same time as the Suncorp building in Kew, next to Alexandra, was being wired.

Maepa says he literally took eight people off the streets to work in the manufacturing department of Suncorp and a German energy specialist came to South Africa especially to give them intensive training.

"When the US Secretary for Energy Hazel O' Leary arrived at our plant near Alexandra she was deeply moved by the progress we've made," he says.

"The biggest advantage of using solar energy panels for electrification is that the system is very economical.

"For Eskom to construct high voltage power lines, especially over a long distance, to communities which only require a small electrical load is very expensive."

But what about periods when the weather is overcast for a few days?

"The modules we have designed will have the capacity to store the solar energy for a few days and if the weather is cloudy and overcast a household will still have electricity," Maepa says.

He is "very bullish" on both the future of the company and the future of electrification in South Africa.

"To achieve this bright future, our company's plan calls for us to move now into the 'balance of systems' where, upon the achievement of our project plan, the rural clinic superintendent flips the switch to turn the vaccine refrigerator on, or the rural school principal makes her first telephone call."

It is Maepa's fervent hope to provide electricity to as many as 10 000 homes in rural areas and in cities by March next year and light up the lives of all South Africans through solar energy electrification.

Electrification connections fall short of national target

Mungo Soggot (55) (BBB)

BD 21/12/95

SA's mass electrification programme is set to make about 420 000 connections to the national grid this year — 30 000 short of target.

Eskom said yesterday it was poised to attain its 300 000 share of the 450 000 target after a record 47 000 connections last month.

But the national electricity regulator said that while some local authorities' electrification projects had progressed well, widespread turmoil at local government level and uncertainty about the future of the electricity supply industry had hit many programmes. It appeared 120 000 new connections would be made, instead of the 150 000 targeted.

A regulator spokesman said some local authorities appeared to be holding back until clarity emerged on the shake-up in the industry, which was likely to result in a single, decentralised national distributor. Their electrification push had also been slowed by the lack of housing delivery.

Eskom electrification planning manager Diana Theron said although Eskom was committed to making 300 000 connections a year until 1999, its annual capital outlay on electrification would be cut 10% in real terms until then.

It would therefore grow more difficult for it to meet its reconstruction and development programme commitment, particularly since the electrification programme was increasingly focusing on rural areas which were much more expensive to electrify.

Eskom hoped to chisel the cost of a connection from R3 372 to R2 421 in real terms by 1999.

Electrification projects manager Phumlani Moholi said whereas most of the connections this year had been made in the second half after the infrastructure had been erected, Eskom hoped to have wrapped up half of next year's target by June.

Electrification connections fall short of national target

BD 21/12/95 (55)

Mungo Soggot

SA's mass electrification programme is set to make about 420 000 connections to the national grid this year — 30 000 short of target.

Eskom said yesterday it was poised to attain its 300 000 share of the 450 000 target after a record 47 000 connections last month.

But the national electricity regulator said that while some local authorities' electrification projects had progressed well, widespread turmoil at local government level and uncertainty about the future of the electricity supply industry had hit many programmes. It appeared 120 000 new connections would be made, instead of the 150 000 targeted.

A regulator spokesman said some local authorities appeared to be holding back until clarity emerged on the shake-up in the industry, which was likely to result in a single, decentralised national distributor. Their electrification push had also been slowed by the lack of housing delivery.

Eskom electrification planning manager Diana Theron said although Eskom was committed to making 300 000 connections a year until 1999, its annual capital outlay on electrification would be cut 10% in real terms until then.

It would therefore grow more difficult for it to meet its reconstruction and development programme commitment, particularly since the electrification programme was increasingly focusing on rural areas which were much more expensive to electrify.

Eskom hoped to chisel the cost of a connection from R3 372 to R2 421 in real terms by 1999.

Electrification projects manager Phumlani Moholi said whereas most of the connections this year had been made in the second half after the infrastructure had been erected, Eskom hoped to have wrapped up half of next year's target by June.

Electricity for 300 000 homes in '96

Sowetan

(55)

21/12/95

By Joshua Raboroko

ESKOM is to spend R1 billion to electrify more than 300 000 homes and to create jobs in urban and rural areas in the new year.

Eskom electricity projects manager Mr Phumlani Moholi told a media conference in Johannesburg yesterday that 150 000 other electrification projects would be undertaken by local authorities nationally.

Most of the homes to be electrified would be in rural areas in the nine provinces, particularly in KwaZulu-Natal, Northern Province, the Eastern Cape and North West.

"The company is committed to electrifying 300 000 houses every year depending on community needs. The challenge is greater in the rural areas," he said.

The company would sub-contract small businesses and local communities in the delivery of most projects to create jobs for thousands of unemployed people.

Moholi said it was hoped that 50 percent of the work would be completed by June and 80 percent in September, provided there were no disruptions such as theft of property, robbery and violence in the areas.

He said the setback to many projects had been criminal elements who had caused delays to projects. With its high level of violence, KwaZulu was one of the areas hardest hit.

For the projects to succeed, residents would be expected to pay for the services to avoid cut-offs, Moholi said.

He disclosed that Eskom had lost about R200 million as a result of non-payment of tariffs by residents between 1991 and 1995. However, the level of payments had increased in most areas.

About 5 000 households are having their electricity supply cut off every month and the penalty for reconnection ranges from R50 to R750.

Eskom's national planning manager Mrs Diana Theron said the company was planning to undertake more projects a soon as new housing developments took place.

Reforms on line for electricity distribution

ST(BT) 24/12/95 (55)

By MARCIA KLEIN

ELECTRICITY distribution, currently undertaken by Eskom and more than 350 local government bodies, is unsustainable in its present form and could be rationalised under a single distributor by as early as mid-1996.

A draft report by the Electricity Working Group, which will be presented to the government after feedback, says rationalisation has to take place to meet the RDP electrification target.

Eskom, which generates 96% of the country's electricity, distributes to about 40% of consumers by number or 60% by sales volume. The balance is distributed by local government bodies.

The working group, which includes government and local government organisations, Eskom and the National Electricity Regulator, had to recommend a distribution structure and look at the effect of rationalisation on the funding of local governments.

The draft says the generation and transmission sectors are operating efficiently. But distribution "is unable to meet the objectives of the industry".

In the proposed dispensation, electricity would be supplied by a single distributor owned either by the state or by Eskom and local governments jointly. "Whether it is a parastatal or a private company, it should remain in the public sector," says Ian McRae, co-chairman of the working group.

The group's aim is to establish an industry financially independent of the government. It must also meet the objectives of the RDP and restructure without increasing electricity prices or collapsing local governments which collectively earned a surplus of R1,7-billion in 1994 from sales of electricity and used this to fund other services.

As alternative sources of revenue do not seem to be available, the electricity supply industry would have to foot the bill for these services.

The draft says the electrification programme is not economically feasible and has to be subsidised. It costs R2 500 to bring electricity to the average small house.

The draft says the industry has to bring electricity to 60% of the population who do not have it and continue to supply lowest cost electricity to industrial, commercial and agricultural consumers.

Power surge from Eskom

By THABO KOBOKOANE

MORE than 297 000 houses have been electrified this year and Eskom is on track to exceed its target of 300 000, according to Phumlani Moholi, the utility's electrification projects manager.

This means that more than 904 000 houses in urban and rural areas have been connected to the national grid since the drive to electrify 300 000 houses a year began in 1991.

At least 300 000 houses will be electrified every year until the end of the decade in terms of Eskom's commitment to the reconstruction and development programme. Eskom is set to achieve this target, despite theft of electricity, meter tampering and non-payment of accounts, which has cost it more than R1-billion since the mid-1980s.

Mr Moholi says a further 150 000 electrification projects will be undertaken next year by local authorities.

Diana Theron, electrification planning manager at Eskom, says 90% of the utility's projects will be undertaken in rural areas, where there is a backlog, and because of the slow start in the government's housing programme.

Only 10% of the 300 000 houses earmarked for next year will be electrified in urban areas.

The rural areas represent a challenge for Eskom, says Mrs Theron, because they are expensive to electrify and "we only have a budget of R1-billion annually, which continues to decline in real terms annually.

"It is getting tighter every year . . . and there is a lot of pressure to improve our planning in order to meet our targets," she says.

ENERGY — 1996

JANUARY — JULY

Brightly lit future for Tembisa

R80-m plan to end blackouts and bring electricity to homes that have never had it

(55) Star 17/1/96

By Hopewell Radebe
City Reporter

Frequent electricity blackouts and potentially fatal wires hanging loose in Tembisa should soon be a thing of the past with the area having been earmarked for a massive electrification overhaul.

The Kempton Park/Tembisa Metropolitan Substructure is scheduled to announce an R80-million plan for the overhaul next week, which will include electrification of households which have never had electricity.

At present, hundreds of homes are connected illegally and dangerously with electric wires all over the place, hanging loose from poles and across streets, creating a life-threatening hazard.

Kempton Park electricity director Jan Malan said the electrified portion of the township was heavily overloaded.

This was especially true during peak winter periods which had led to frequent and lengthy blackouts in the past.

He said a multi-phase plan to renovate and electrify the township has been designed.

The first phase – to be started in May this year – would deal with the installation of a R35-million prepaid metering system for every household.

Phase 2, also with a face value of R35-million, would be aimed at homes which had never had electricity.

This phase would focus on new suburbs such as Phomolong.

The remaining R10-million had been budgeted for administration and a marketing campaign for the scheme.

Part of the massive overhaul involves the installation of a central computer centre, enabling the authorities to manage and control the use of electricity.

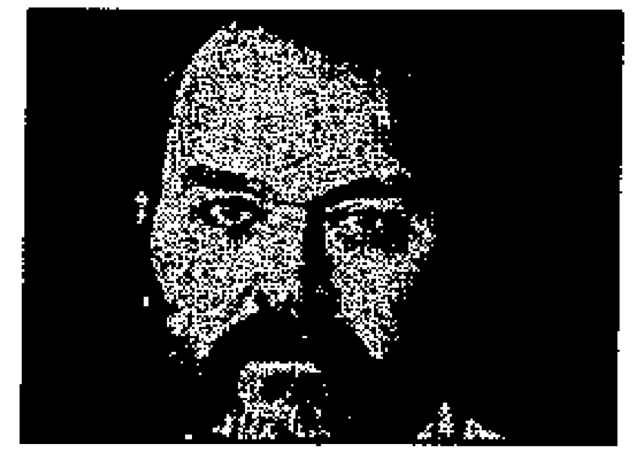
The system will also detect anyone tampering with the electricity supply.

Residents will no longer need to fear general cuts in electricity because of non-payment of electric bills, as the individual metering and computer systems will allow for individuals to be disconnected should they fail to pay.

Energy plans link South Africa and Algeria

CT (BR) 18/1/96 (55)

DIPLOMATIC VIEW



BY JEAN-JACQUES CORNISH

Since elections, the improved political situation in Algeria has drawn foreign interest

Pik Botha, the previous foreign minister, has stolen a march on his successor Alfred Nzo by becoming the first member of the new cabinet to visit Algeria, in his capacity as mineral and energy affairs minister.

The Algerians are delighted that South Africa has at last begun to show an active interest in their country, which has a proud record of support for the anti-apartheid struggle and was one of the first countries to open an embassy in the democratic South Africa.

Several high-ranking Algerian delegations have visited here in the past 20 months. Until Botha headed north to see the giant of the Maghreb for himself, Algerians were growing concerned about the lack of reciprocity.

The signs are this is about to change.

Algeria's ambassador to South Africa, Said Kitouni, says the improved political situation in his country, following successful presidential elections in November, has brought a flood of new international interest.

British Petroleum signed a $3,5 billion prospecting agreement with oil, gas and mineral-rich Algeria a fortnight ago. A $1,5 billion prospecting and refining agreement with the American corporation, Arco, is near completion.

Sasol, Anglo American and Gencor of South Africa have all started exploratory talks with the Algerian authorities.

Botha's visit was for only 36 hours during which he was confined to the security cocoon accorded all visitors to that country, where more than 30 000 people have died in political and religious violence over the past four years.

He met the Algerian energy and mines minister and Opec chairman, Ammar Makhloufi.

Botha also saw the head of government, Ahmed Ouyihia, and senior officials at the department of foreign affairs. He also visited the Algerian Mining and Geology Research Institute and the Institute of Petroleum.

After the visit he said Algeria and South Africa could gain from working together, particularly in the fields of mining, minerals and energy. This would naturally expand into other areas of trade and co-operation.

"Algeria has the petroleum resources and expertise to provide crude oil as well as gas and oil technology to South Africa.

"South Africa has the mineral resources and expertise to provide minerals-exploitation technology to Algeria," he said.

"Trade could expand by South Africa exporting its coal to fire Algeria's nascent steel industry, as well as chrome, manganese and vanadium to make alloys for Algeria to use in manufacturing stainless and specialised steels from its substantial iron ore deposits."

Algeria's national oil and gas company, Sonatrach, is the fourth largest marketer of gas in the world. Under-sea pipelines take Algerian gas directly into Spain, Portugal and Italy.

In 1994 more oil and gas was discovered in Algeria than in any other country. Reserves, not fully explored, are already ranked 11th largest in the world.

"South Africa is on the verge of developing its gas policy and and expanding its gas use," Botha said. "Potential sources are the Kudu fields in Namibia, the Pande fields in Mozambique and the Waterberg coal-bed methane deposits in the Northern Province.

"South Africa does not want to repeat the mistakes of Mossgas. We can do well to learn from the Algerian experience gained in developing their gas fields."

South Africa and Algeria faced similar problems in supplying electricity to remote areas, Botha said.

He noted that countries bordering the Mediterranean were developing the Mediterranean basin loop to share electricity on an integrated system along the northern and southern shores.

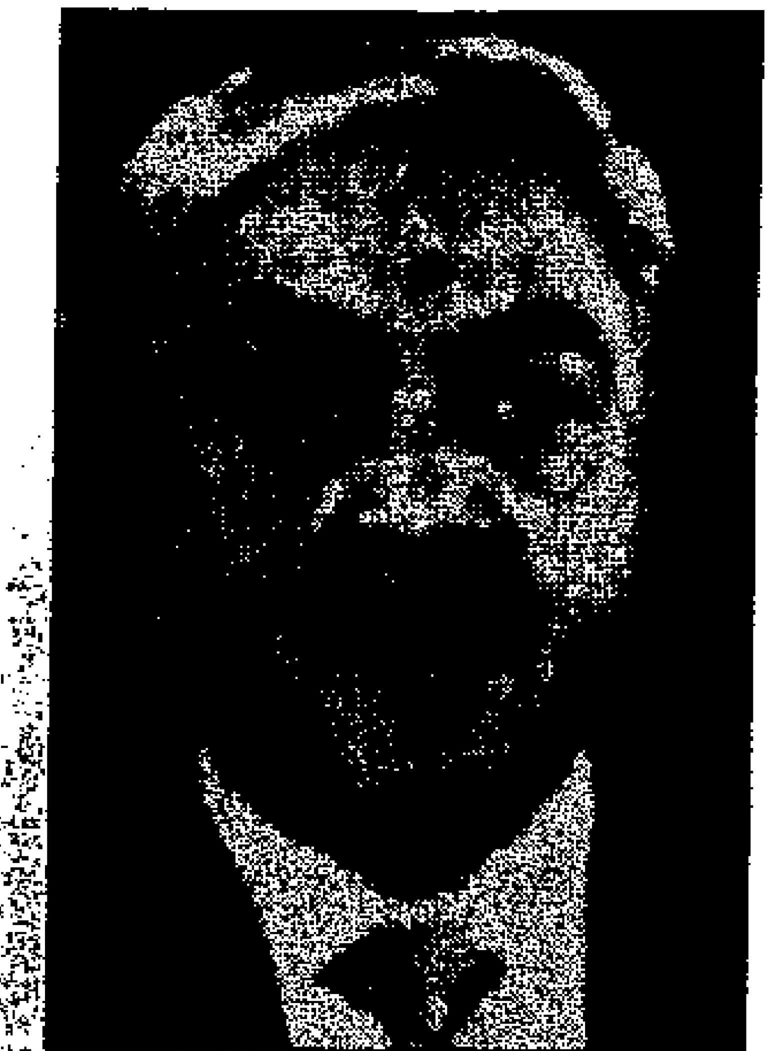
"A matter of concern to me is that the Inga project on the Zaire River is also brought into the grid," he said.

"It will be recalled that in August last year the Southern African Development Community countries entered into a memorandum of understanding on the southern Africa power pool.

"The community would certainly like to consider the role which the Inga project could play in the future of the South Africa integrated grid. It is important that the countries of southern Africa be brought into the process of developing the Inga hydro-electric source."

Key to Botha's visit and the new interest in Algeria is the political improvement in that country. Nzo would have wanted to be the first South African minister there following the presidential elections, but could not fit this into his schedule as quickly as Botha.

BRIEF TOUR *Mineral and Energy Minister Pik Botha*



ACID TEST *Algerian president Lamine Zeroual*

Establishing a South African embassy in Algiers has apparently become a matter of priority. Algeria is seen to be healing itself after the 71 percent turnout for the the poll which returned President Lamine Zeroual to power.

Reports from the four South African officials who monitored the November poll were very positive and the most encouraging development since then is a government undertaking to move the country towards a general election in the last quarter of this year.

This will be the acid test for the government that cancelled the 1992 elections midway, when it appeared the Muslim fundamentalists were going to win.

New voter awareness and a desire to end the violence that followed the cancelled poll is understood to have dramatically changed the political situation for the better.

Foreign utilities keen to buy Eskom stations

(55) (250)

Mungo Soggot

BD 23/1/96

ÉLECTRICITÉ de France (EDF) as well as Germany's Rheinische-Westfälische Elektrizitätswerke (RWE) were among the foreign utilities keen to buy three power stations Eskom had earmarked for possible sale, industry sources said yesterday.

The entry of foreign players would signal a major step towards private sector involvment in the generation sector. It would also coincide with the looming shake-up of the electricity distribution sector, they said.

Eskom energy management manager Brian Statham would not disclose the identity of possible buyers, but said the parastatal had set a February 16 deadline for proposals on buying the power stations. Eskom expected the proposals to set out what potential buyers planned to do with the Ingagane, Hiveld and Taaibos power stations.

Eskom decided in 1994 to investigate selling the stations as they were "no longer economical to keep in storage".

Statham said any move would have to fit with the overhaul of the electricity supply industry and any other government restructuring plans.

EDF would not comment and RWE could not be reached for comment. Sources said British utility Midland Electricity was also expected to make a bid.

National electricity regulator spokesman Johan du Plessis said foreign buyers' options would be to either sell the electricity to Eskom, supply to specific large customers, export it to a neighbouring country, or export the whole power station.

Like all other power station operators, they would have to apply to the regulator for a licence under the new legislation governing the industry. The new rules would now expose Eskom's power generation operations to regulation.

Du Plessis said that the structure of SA's Eskom-dominated power generation sector could be revamped, following the shake-up of the distribution industry.

French eye Eskom's power

(55) CT(BR) 26/1/96

STAFF WRITER

Johannesburg — Electricite de France (EdF), the state-owned French electricity utility and Europe's biggest supplier of nuclear power, said yesterday it might bid on "one or more power stations" likely to be sold by Eskom.

The statement comes hard on the heels of an announcement by Danone, one of France's largest foods groups, that it is negotiating to buy a significant stake in Clover Holdings, the South African dairy group.

Reports this week said a number of power stations in the Sasolburg and Newcastle areas that had been mothballed several years ago had been earmarked for possible sale.

Alain Saniez, the head of EdF operations South Africa, said yesterday that feasibility studies were under way and no decision had been reached whether to put in a bid. The new regulatory framework concerning independent power production, which must still be finalised, could also influence EdF's decision.

Eskom has said in the past that foreign power generators might be better placed to operate mothballed plants and sell their power through the Eskom distribution network.

"A positive sign is that all players in the industry have been asked to provide input into the proposed new regulatory framework," said Saniez. "We are active participants in the discussions about the future format of both the power generation and distribution industries."

He believed the present economic upswing, along with the long-term requirements of the reconstruction and development programme, would create a sustained demand for electricity.

According to Saniez, though there was surplus generating capacity, electricity was reaching less than half the population.

"This country's projected long-term economic growth will eventually outstrip its current power-supply capacity," he said.

Saniez said South Africa's leading role in southern Africa and the part it was likely to play in economic development throughout the region, would increasingly boost the need for electricity.

Electricity was a major engine driving development, which in turn increased the demand for power.

EdF is the industrial jewel in the crown of the French state. As a monopoly supplier of power to France, it runs a huge nuclear programme and achieves cost efficiencies that directly threaten potential competitors among its European neighbours.

More than 70 percent of France's electricity is nuclear generated.

The group is also fiercely expansionist. It has entered power generation markets in Asia and Australia and supplies about 6 percent of the power in Britain.

It is equally protective of its domestic market. The failure of the European Union to negotiate a free, cross-border market for the transmission of electricity is frequently laid at EdF's door.

Its interest in finding a foothold in southern Africa also ties in neatly with French ambitions outside its traditional zones of influence on the continent.

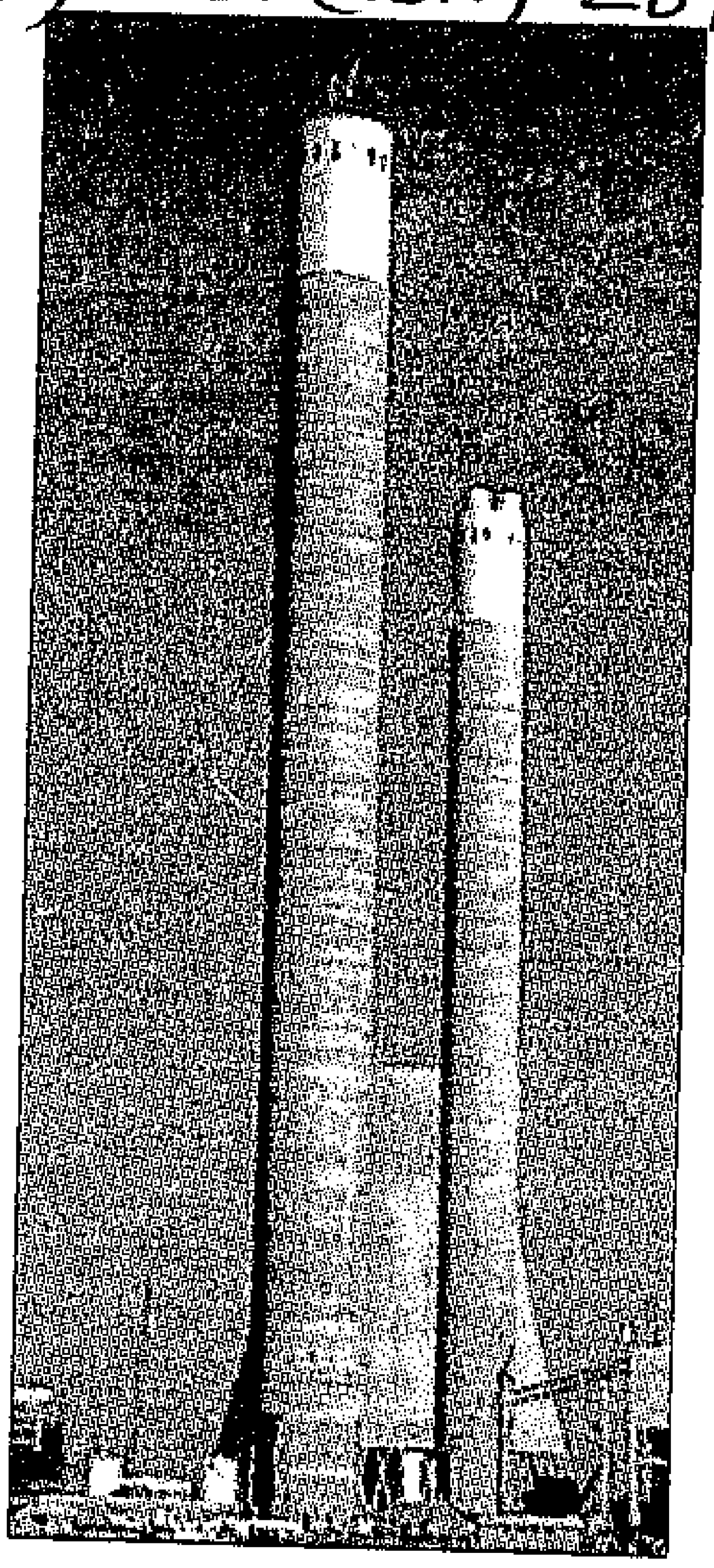
A number of French companies have transferred their African operations centres from Francophone Africa to South Africa, which they see as a more useful springboard.

Crisis meeting called:
Britain has intervened to speed up stalled trade talks between South Africa and the Brussels-based European Union.

It has called a crisis meeting on Monday for EU ambassadors to discuss French objections of an early offer to South Africa.

This follows a French demand that South Africa not be offered a free trade area until a full report has been drawn up on the consequences of an accord for EU countries and Europe's other trading partners.

Malcolm Rifkind, the British foreign secretary, has written to his EU counterparts urging them to make a speedy offer to South Africa. He says the study must not drag on so long that it delays the negotiations. — John Fraser



MOTHBALLED *Idle power stations have been earmarked for sale*

Eskom shrugs off leaked proposal on tax

(55)

BD 9/2/96

Mungo Soggot

ESKOM and government yesterday shrugged off a leaked report which proposed taxing the parastatal, imposing a levy on electricity sales and setting up a national electrification fund.

Reuter reported the draft white paper on electrification policy also proposed ditching government's pledge to make 2,5-million new connections to the national grid by 1999. It suggested only making cost effective connections.

The mineral and energy affairs department said the report was a discussion document written by the Energy for Development Research Centre of the University of Cape Town — an organisation appointed to explore energy policyby the department. Eskom CE Allen Morgan said the issues raised in the paper had to be seen within the context of the wide-ranging shake-up of the industry currently under way.

The electricity working group, which includes the recently formed National Electricity Regulator, has proposed setting up a single decentralised distributor with regional operating arms. The new company would house all SA's electricity distribution assets, most of which belong to Eskom and the rest to about 400 local authorities — developments which, Morgan said, would obviously affect the policies outlined in the draft white paper.

The working group's proposal has been touted as the only solution to inefficiency in the fragmented sector.

Reuter said the report proposed that a national electrification fund be set up by August and be funded by a levy on bulk electricity sales, donor grants, government grants and loans. The fund would steer electrification planning and seek "to arrest the unchecked, often inappropriate and inequitable subsidisation presently occurring, primarily by Eskom". Eskom currently meets the bulk of government's annual electrification target at a cost of about R1bn.

The report's proposed levy would be shared between domestic and other clients, should provide a third of the annual investment in electrification programmes but would have a negligible effect on industrial and commercial consumers.

A clause on restructuring electrification has as a target injecting more flexibility into the commitment to provide 450 000 new connections in each of the first five years of the current dispensation.

Electricity hike may follow 'White Paper'

CT 9/2/96 (55)

DOMESTIC electricity consumers face a double blow later this year if a secret draft White Paper on energy circulating at Parliament is adopted by the government.

The draft proposes a strategy to achieve social equity, efficiency and competitiveness of electricity supply in a market economy, but allows for state intervention "where market failures prevail".

The draft White Paper calls for a levy on electricity bills to fund a National Electrification Fund to manage the electrification of areas neglected under apartheid.

Domestic consumers will pay half the levy, with commercial users adding the rest to take the total levy up to one-third of the cost of electrification projects.

"The levy, together with the termination of internal cross-subsidies, will have a negligible effect on industrial and commercial consumers," the draft says.

It also proposes that Eskom should lose its tax-exempt status, which would add to the electricity bills of existing consumers.

An Eskom official said: "Eskom pays no conventional company tax because we are a non-profit organisation. Obviously, if we are to pay tax, the cost of electrification would have to be offset against it."

The draft says Eskom should not have to supply electricity on uneconomical terms, but should develop alternative energy sources.

It also proposes a R4 000 ceiling on the unit cost of rural connections, which would rule out new connections to farms or remote communities.

The draft is likely to be sent to the parliamentary portfolio committee on mineral and energy affairs for scrutiny and public comment. — Reuter

● See Page 20

Proposed electrification policy suggests sales levy

CT (BR) 9/2/96 (55)

By Brendan Boyle and John Spira

Cape Town — A draft paper on electrification policy has been slammed by Eskom.

The paper, ostensibly emanating from a group of academics, proposes the establishment of a national electrification fund, a development levy on electricity sales and full tax liability for the state-owned utility Eskom.

It proposes a strategy to achieve social equity, efficiency and competitiveness of electricity supply with state intervention "where market failures prevail".

It also proposes a step back from the government's pledge to provide 2,5 million new domestic connections by 1999 by applying a cost-effectiveness test.

The draft, prepared by the department of mineral and energy affairs, proposes that a national electrification fund be established by August, funded from a levy on bulk electricity sales, donor grants, government grants and loans.

The fund would be the primary electrification planning agency with the objective "to arrest the unchecked, often inappropriate and inequitable subsidisation presently occurring, primarily by Eskom".

The draft proposed the development levy, to be shared equally between domestic and other clients, which should provide a third of the annual investment in electrification programmes.

"Combined with national domestic tariff rationalisation, (the levy) would have the effect of raising average domestic tariffs to the average level presently maintained by Eskom for its newly electrified consumers."

Allen Morgan, Eskom's managing director, said the paper had "no status whatsoever".

The first Eskom had heard of it was at midday yesterday. Eskom had not been consulted.

"The proposals contained in the document are presented totally out of context," said Morgan.

"The state is already looking at the tax status of the parastals and a working group has been established to determine broad policy. The issue cannot be viewed in isolation, as this document does."

Morgan said it was unrealistic to talk of a national electrification fund at this stage.

The minister of finance was examining the financial structure of the country's parastatals and until finality had been reached, any funding proposals were nothing other than pure speculation.

Electricity tax this year?

ARG 10/2/96 (55)

DOMESTIC consumers face a double blow this year if a secret draft white paper on energy circulating at parliament is adopted by the government.

The confidential draft, of which Reuters has a copy, proposes a strategy to achieve social equity, efficiency and economic competitiveness of electricity supply in a market economy, but allows for state intervention "where market failures prevail".

University of Cape Town researcher Grove Steyn, who wrote the draft, said it was "an early rough draft of the electricity section of the proposed energy policy paper".

"As such, this document has no status," said Steyn, who is a member of a team mandated to draft an energy white paper for the Department of Mineral and Energy Affairs.

Two aspects of the proposal would hit established domestic consumers and rural communities waiting to be switched on could find themselves further back in the queue.

The draft white paper calls for a levy on electricity bills to fund a National Electrification Fund (NEF) that will manage the electrification of areas neglected under apartheid.

Domestic consumers will pay half the levy, with commercial users adding the rest to take the total levy up to one third of the cost of electrification projects.

"The levy, together with the termination of internal cross-subsidies, will have a negligible effect on industrial and commercial consumers," the document says.

"Combined with national domestic tariff rationalisation, it would have the effect of raising average domestic tariffs to the average level presently maintained by Eskom for its newly electrified consumers," it adds.

The draft also proposes that Eskom should lose its tax-exempt status, a move that would add to the electricity bills of existing consumers.

An Eskom official said the utility "pays no conventional companies tax because we are a non-profit organisation. Obviously, if we are to pay tax, the cost of electrification would have to be offset against it."

■ A draft white paper calls for a levy on electricity bills to fund a National Electrification Fund (NEF) that will manage the electrification of areas neglected under apartheid.

Proposals that could affect disadvantaged cummunities waiting to be switched on include one to step back from the ANC's pre-election promise to electrify 2,5 million homes in the first five years of democracy.

The white paper suggests that Eskom should not be obliged to provide electricity on uneconomical terms, but should be encouraged to develop alternative energy sources.

"Eskom will be able to lower its target if it does not have access to appropriate areas to electrify," the document proposes.

The document also proposes a R4 000 ceiling on the unit cost of rural connections, which would rule out new electricity supplies to farms or remote communities.

The proposed NEF would be the primary electrification planning agency with the objective "to arrest the unchecked, often inappropriate and inequitable subsidisation presently occurring, primarily by Eskom".

The department proposes that all available subsidy funds should be channelled through the NEF, which will allocate them in a transparent and equitable manner to promote RDP objectives.

Steyn said his draft would be reworked, probably extensively, after comments from other energy experts and would then be sent to the parliamentary portfolio committee on mineral and energy affairs for scrutiny and public comment.

Parliament is expected to receive a final Energy Bill in August, for passage during the current legislative year. — Reuter.

Finalising electricity tariff a 'massive job'

BD 12/2/96 (55)

Mungo Soggot

THE electricity industry faced a gargantuan task in creating a uniform national tariff without depriving local authorities of the R1,7bn surplus they enjoyed from electricity sales, Eskom CE Allen Morgan said last week.

Morgan said the administration of subsidies to local authorities which stood to lose out from the changes to the industry — those which derive sizable income from electricity sales — was a crucial issue being explored as players finalised the shake up of SA's electricity distribution sector.

The electricity working group, which includes the National Electricity Regulator, has proposed setting up a single decentralised distributor with regional operating arms.

The new company would house all SA's electricity distribution assets, most of which belong to Eskom, and the rest to about 400 local authorities.

The proposal has been touted as the only solution to inefficiency in the fragmented sector. The creation of a single tariff structure — instead of the 2 000 existing ones — is one of the regulator's key goals.

Morgan said it would be ideal to simply create regional distribution companies, but the industry was too immature to be run without central control. However, the regional divisions of the proposed new set up would have a high degree of autonomy.

Morgan said the cost of subsidising local authorities could not be pinned down more accurately until Eskom and other industry players had worked out the details of the new set up. "To balance them all it will cost between R1bn and R2bn a year."

The money would be spent on local authority distributors currently selling electricity at more expensive rates than others as well as those with large electrification commitments.

He hoped for clarity on the details of the new set up by mid-year.

About half of Eskom's 40 000 employees would work in the proposed new distribution company. The industry had undertaken not to force any retrenchments during the restructuring. He agreed with the regulator's proposal to not grant foreign companies distribution licenses for a few years until the local industry was sorted out. But this did not rule out joint ventures with foreigners during that period.

He said the industry would be exposed to foreign competition in generation within the next 10 years, during which time the regulator was likely to award foreign companies generation licenses.

When SA needed new generation capacity — which would be in about 2003 if the current 5% electricity growth rate continued — Eskom would probably have to compete with foreign companies to build the new power stations.

Scheme to provide solar electricity

Star 13/2/96

(55)

The Department of Mineral and Energy Affairs has, in conjunction with the US Energy Secretariat, devised a project through which 20 000 schools, 2 000 clinics and more than 2,5 million rural families could be provided with solar electricity. Mineral and Energy Affairs Minister Pik Botha said that if the project, still to be tabled before the Cabinet, was approved, each rural household would have enough power for basic household use. "We're talking of four bulbs, six hours of power per night, power for a sewing machine, fridge and TV at the cost of R3 000 to install," he said. – Political Reporter.

Solar power market growing

Mungo Soggot 55 BD 14/2/96

SA's solar power manufacturers are confident the local market will grow substantially in the next few years, predicting a tenfold increase to R180m a year as Eskom's solar energy initiative picks up.

However, there was some doubt about Minerals and Energy Affairs Minister Pik Botha's "overenthusiastic" claims on Monday that a R3bn-R5bn solar power scheme was being mooted. Botha said solar power was the ideal way to bring power to the 30% of the country not viable for connection to the national grid.

They said solar power was surprisingly rare in SA and until recently had been avoided by Eskom.

Franklin Energy Products and Siemens expected the market to grow tenfold to R180m as Eskom started to award more contracts for the supply of solar systems to schools.

The state-funded installation of solar systems in rural schools is run by Eskom, and the Independent Development Trust (IDT) focuses on clinics. Both get the money from the minerals and energy affairs department via the RDP office, which last year set up a company called Renewable Energy for SA. The IDT and Eskom then put individual projects up for tender.

Renewable Energy, which is housed in the Central Energy Fund, aims to make 2,5-million solar home connections by 2015.

The main solar players in SA — including Siemens, Franklin Energy Products, BP, AEG, Helios and Solarex — have formed the SA Solar Module Suppliers' Association, which seeks to set technical and ethical standards for the industry.

Eskom started awarding solar supply tenders in 1995 after being appointed by government to steer the schools programme.

Siemens solar manager John Adams said it had secured a R1,55m contract to supply 45 schools in Eastern Cape. Franklin Energy Products MD Robin Gunther his firm had bagged a R1,7m Eskom tender to take solar power to 44 schools in Northern Cape and another R2,5m tender to electrify 75 schools in Eastern Cape.

Energy fund 'should be wound down'

[redacted] 55 BD 19/2/96

Mungo Soggot

THE International Energy Agency has recommended government scrap most of the functions of the Central Energy Fund (CEF), which the agency considers wasteful and obsolete.

The agency is part of the Organisation for Economic Corporation and Development.

The proposal is in the draft of a wide-ranging report on SA's energy affairs. The minerals and energy department will refer to the report when drawing up the energy policy White Paper.

However, Mineral and Energy Affairs Minister Pik Botha is also referring to the work of government-appointed consultants.

In a report released yesterday the consultants came to different conclusions about the future of the CEF.

The international agency report finds that most of the activities of the fund, which houses all the state's sanctions-busting oil operations, should be wound down. It focuses on its oil trading arm, the Strategic Fuel Fund (SFF), which runs the massive strategic storage tanks.

"The need for the state to own or conduct most of the activities of the CEF is questionable."

During the oil boycott, all SA refineries bought crude oil from the SFF which successfully bought oil despite the maze of sanctions. Since then most have sourced their own crude. The SFF, however, still trades oil. The profits go to the CEF and ultimately to government, as do losses.

Continued on Page 2

Energy fund

55 [redacted]

Continued from Page 1

BD 19/2/96

The agency says country-to-country oil deals are of little practical value to refiners as refiners need particular types of crude for their refining needs.

It also rejects the idea that government deals get cheaper crude.

"Given the current world oil market and taking into account limited government resources, there is no case for government to be involved in state-to-state oil-buying arrangements."

It says any government subsidy for SFF should be confined to maintaining an adequate strategic stockpile, which other observers have pointed out is not as vital for SA because of Sasol.

The draft report's findings are at loggerheads with a management audit of SFF.

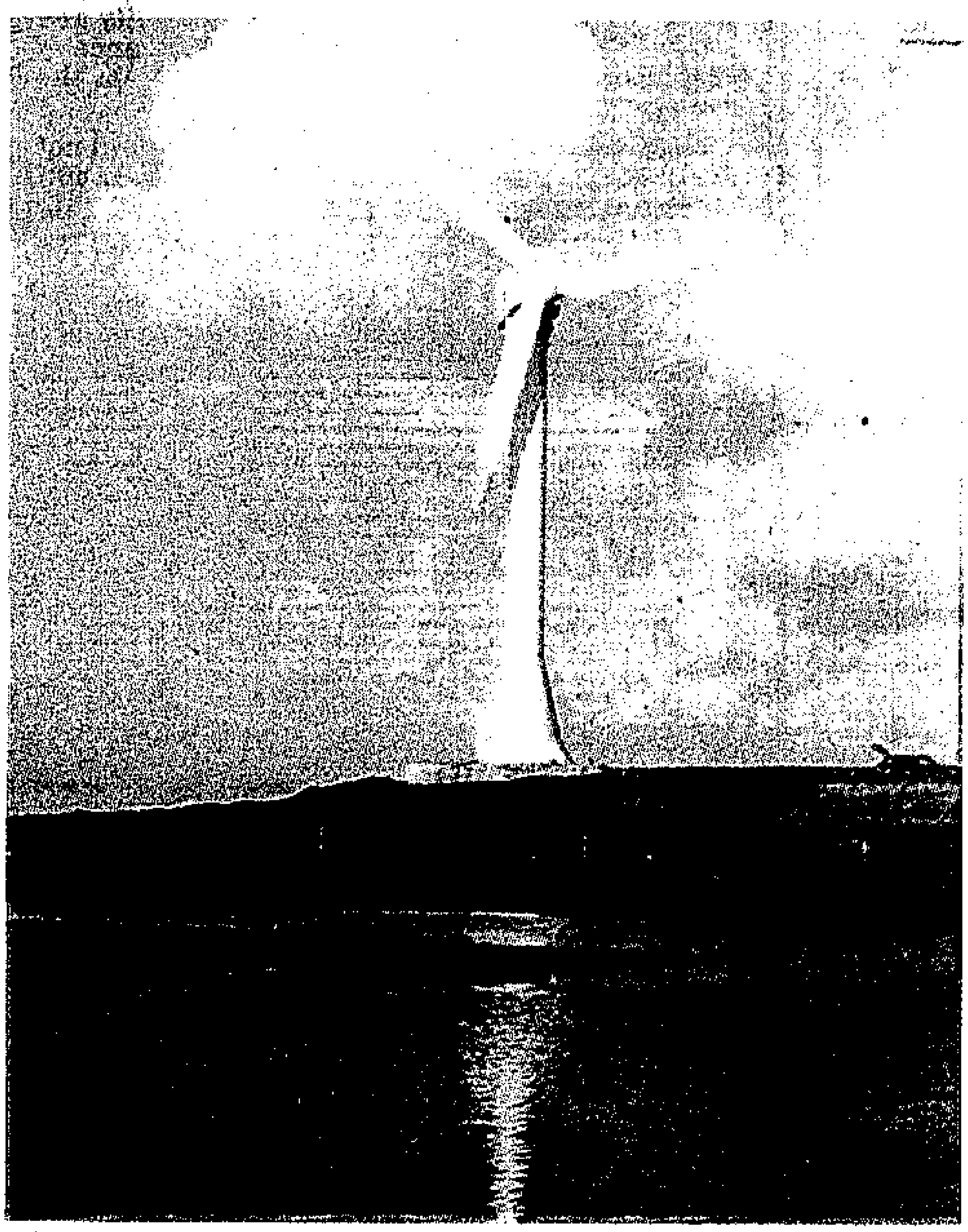
The audit report recommends government enforce mandatory purchases by SA oil refiners from the SFF. At present the percentage of oil bought from SFF stands at an unenforced 20%. It said the slice should go up to 40%, adding that "government must continue to be able to enforce mandatory purchases of SFF's crude imports, to ensure SFF's survival and viability".

Botha appointed the audit after allegations that the SFF had sold a lot of the oil it claimed to have at Saldanha and Ogies. The report, by London-based consultants Inspectorate, gives the SFF a clean bill of health.

It says the CEF should be restructured away from its sanctions-busting past to become an agency which helps bring energy to rural communities.

Wind power could light up Cape Flats homes

(55) ST(m) 18/2/96



TURBO CHARGED ... Giant wind-driven turbines like this one in Scotland could soon turn the W Cape's south-easter into electrical power for Cape Flats homes

By CHARL DE VILLIERS

SCIENTISTS plan to tap into the energy potential of Cape Town's blustery climate in an experiment involving two wind-driven turbines linked to the national electricity grid.

The five-year project will be run under the auspices of the Council for Scientific and Industrial Research and entails testing two Scottish turbines which can respectively generate 750kW and 300kW of pollution-free electricity.

The CSIR has commissioned an environmental study by the University of Cape Town which will canvass public views on the project to be run with the city's electricity department and the Department of Mineral and Energy Affairs.

According to UCT's Energy for Development Research Centre, an average house on the Cape Flats draws between 2kW and 3kW of power.

Based on this figure, the 750kW wind turbine would provide power for about 300 houses. The smaller turbine could supply 100 to 150 houses.

The CSIR has identified four possible test sites.

These are near Strandfontein beach, the Athlone power station, and either the coast or high ground at Koeberg.

The 750kW wind-turbine is 35m tall and each of its three rotor blades is 22,5m long. The 300kW turbine has 11m rotor blades and is 22m high.

UCT's Environmental Evaluation Unit says wind power is used to generate electricity in the United Kingdom, several mainland European countries, Brazil, India and the United States.

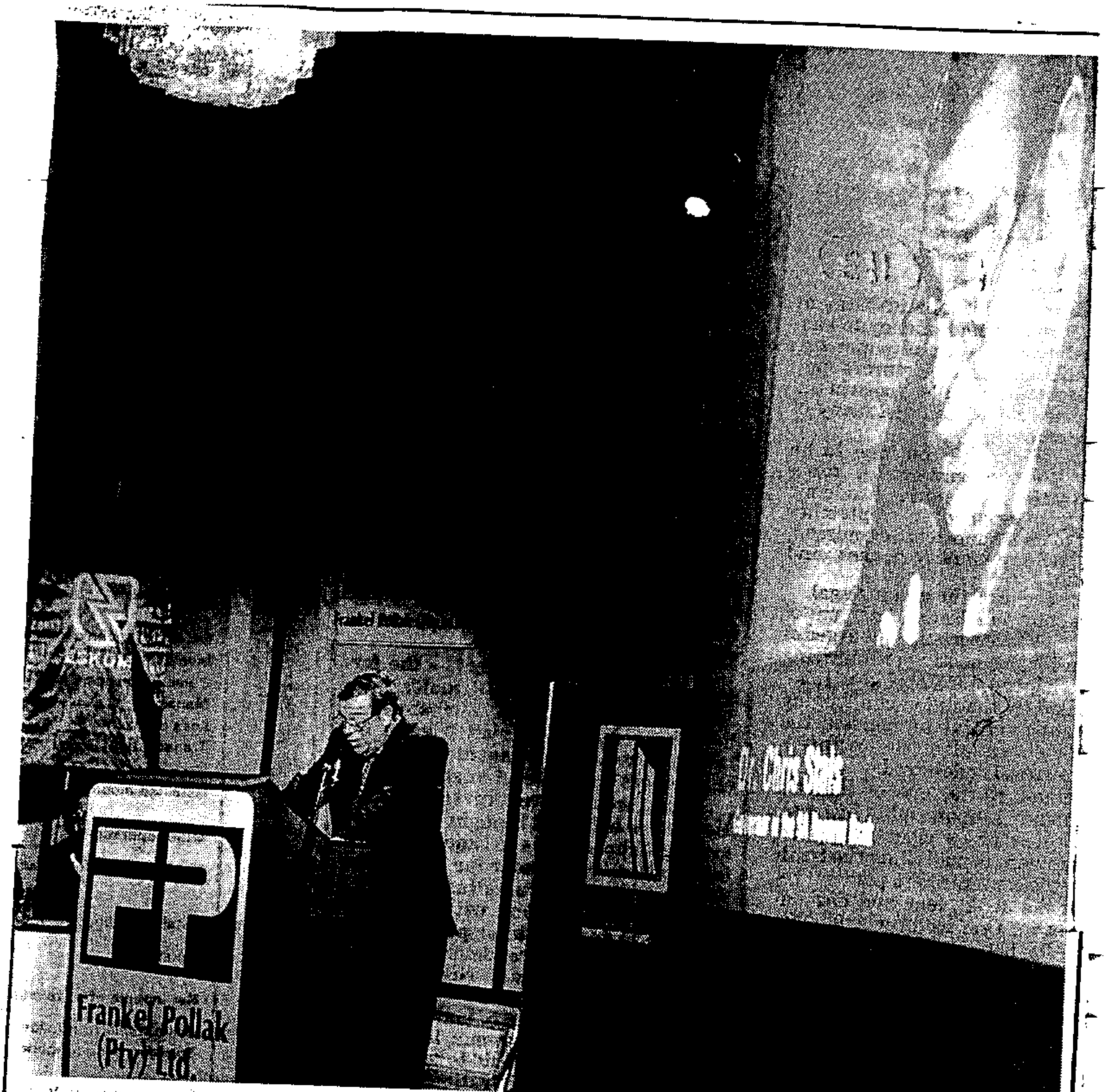
"The predominant use of fossil fuels and nuclear power to generate electricity is having a significant negative effect on our environment," the unit says.

"Environmental disasters such as ... oil spills on the Cape coast and nuclear disasters such as Chernobyl in the USSR, and the widespread destruction of crops and forests by acid rain, emphasise the need for a shift towards renewable energy sources.

"Unlike nuclear and fossil fuels, wind power requires no transportation of fuel and produces no radioactive waste," the unit says.

As a signatory to the international Framework Convention of Climate Change, the South African government was committed to reducing the total output of carbon dioxide.

Energy production in South Africa was responsible for about 75 percent of the country's total carbon dioxide emissions and it was essential that energy policies were formulated in the spirit of the framework convention.



Reserve Bank governor Chris Stals addresses the Frankel Pollak Annual Investment Conference at the Carlton Hotel in Johannesburg yesterday. Picture: GARTH LUMLEY

SA 'could make itself the electricity valley of the world'

(35) BD 21/2/96

Adrienne Giliomee

ESKOM had stuctured a creative deal by linking the price of electricity to the price of aluminium on the London Metal Exchange, CE Allen Morgan said yesterday.

He told the Frankel Pollak investment conference SA could become the electricity valley of the world if it entered into innovative pricing deals such as linking the price of electricity to industries with price-sensitive commodities.

One of the many areas where SA had a competitive advantage was reliable and internationally competitive electricity.

But low-cost electricity was not enough to attract foreign investors. Other direct and indirect investment opportunities, including portfolio investments such as Eskom bonds, were required.

Foreign involvement could be in the form of capital projects or operation and maintenance contracts. A possible opportunity also existed for a joint venture between Eskom and a foreign utility to electrify a residential area.

Fifty-six percent of SA households were without electricity, but Eskom planned to reduce this to 35% by 1999. This would involve electrifying about 2,5-million houses at a cost of R12bn.

Eskom intended to extend the electricity grid into Africa. "The long-term vision is to have an interconnected electricity grid from the Cape to Cairo," Morgan said.

'Attention needed on nuclear spill'

The Argus Correspondent

JOHANNESBURG. — A nuclear spill exposed in Sunday Weekend Argus should not be cause for alarm although the problem required "urgent attention", Minister of Energy and Mineral Affairs Pik Botha has said.

His comments spring from confidential reports by the Council for Nuclear Safety (CNS) leaked to Sunday Weekend Argus which showed that a nuclear storage site — located within the tight security perimeter of the Atomic Energy Corporation's (AEC) Pelindaba complex — was illegally excavated last year and contaminated material, including uranium 235 and carbon 14, was released into the environment.

Mr Botha said in a statement yesterday that the situation in itself was not serious, but events of this nature should not occur. "Although the danger is not significant, there are inadequacies and shortcomings which require urgent and earnest attention."

The excavation in May constituted a violation of AEC's licence and resulted in the CNS officially terminating the disposal activities in any old or new trenches at the site known as Radiation Hill.

A CNS report stated it was "always concerned ... with the possible contamination of the human food chain" but said radioactive contamination in the issue at hand was localised to a few trenches, which were in a fenced-off area in the middle of the Pelindaba site.

As far as the CNS was concerned "these occurrences are indicative of a degradation of safety culture at the AEC".

The AEC has strongly denied there is a poor safety culture in the organisation, saying its safety statistics are "comfortably below" the national average for the chemical industry. But it said top management was "also concerned about the incident and had already launched an in-depth investigation some weeks ago into the general management of all its facilities that operate under a CNS license".

The AEC went on to say there was no danger of contaminating the rivers and dams in the area as reported in Sunday Weekend Argus.

Mr Botha said the cabinet had appointed new boards of both the CNS and the AEC at its meeting last week. Talks would be held soon to discuss preventing a recurrence of the incident.

ARGT 26/2/96 (55)

Eskom seeks support for multi-tiered supply plan

(55) BD 29/2/96

CAPE TOWN — State electricity utility Eskom yesterday outlined a multilevel supply strategy designed to contain the unit capital cost of rural electricity connections and limit the subsidisation of new customers by bigger clients.

Hendrik Barnard, Eskom's electricity pricing manager, told the Senate committee on mineral and energy affairs that without intervention, 10% of non-residential consumers' bills would go to sponsor small users within five years. Eskom sought government and public support for a tiered supply strategy for rural areas, starting with a free 2,5-amp connection capable of running lights, radio and television at a flat rate of R15.

The main supply level would be a 20-amp connection costing R50, rising to R300 by 2000, and capable of running common appliances as well as a stove and geyser separately at 27c a kilowatt-hour unit. The top residential system would be a 60-amp connection at R300, rising to R1 000 by 2000, capable of running appliances, stove and geyser simultaneously at 37c a unit, he said.

"Government support for this philosophy ... is critical," he said.

The capital cost for a connection in rural areas was at present far in excess of the target ceiling of R2 500 — sometimes as high as R20 000. — Reuter.

A multicoloured mural painted on the M1 near Parktown, Johannesburg is a gigantic tribute to the rainbow people of SA sponsored by British Airways. Picture: GARTH LUMLEY

Eskom faces funding shake-up as govt revamps its parastatal policy

55 BD 29/2/96

Mungo Soggot

ESKOM's funding needs — a key capital market factor — face a major shake-up amid imminent changes to the electricity supply industry and a revamp of government parastatal policy which could include taxing Eskom for the first time.

Finance director Willem Kok said on Tuesday that Eskom was gearing up to give more money to government, which was seeking to tax and reap dividends from parastatals in its drive to improve the way it used available cash in the state sector.

But the effect could be offset by the looming changes to the industry, which should see Eskom transferring its distribution operations and concentrating on generation and transmission.

The restructuring would cut its funding burden, with elements such as its distribution wing — which handles the R1bn-a-year mass electrification programme — being transferred to a new body.

The electricity working group, which includes the national electricity regulator, has proposed shifting Eskom and local authority distribution assets into a decentralised national distributor.

Kok said that Eskom's capital market funding plans for the current year remained in line with market expectations.

He said it would not be raising much money on the local market for its R5bn capital expenditure programme.

It would focus instead on the international markets.

It had already wrapped up its funding for this year, but the outlook next year was less clear.

Kok said the exact makeup of the new industry structure had still be to debated.

It was also difficult to calculate the impact of government's parastatal plans because the scale of tax write offs and dividend payouts had not been set.

One option mooted by a finance department team was for Eskom to pay one-third of its income as an annual dividend to government. Eskom's net income was R2,2bn in 1994. Kok said Eskom's funding programme was not under pressure from the plans — it was heavily underborrowed in the local money and capital markets.

He said its current funding plan indicated an annual borrowing requirement of R2bn a year for the next three years.

"Tax and dividend payments are not expected to increase this materially and the total new requirement will definitely not be more than 1994's borrowings of R4,7bn."

Finance Minister Chris Liebenberg has already spelt out plans to change the way government manages cash in the state sector.

Liebenberg was expected to announce exactly how much this would mean to central government in the Budget.

These changes to cash management would also affect Telkom — which has paid government a higher than expected dividend of R525m in the latest financial year — Transnet and the Central Energy Fund.

See Page 5

A multicoloured mural painted on the M1 near Parktown, Johannesburg is a gigantic tribute to the rainbow people of SA sponsored by British Airways. Picture: GARTH LUMLEY

Eskom faces funding shake-up as govt revamps its parastatal policy

(55) BD 29/2/96

Mungo Soggot

ESKOM's funding needs — a key capital market factor — face a major shake-up amid imminent changes to the electricity supply industry and a revamp of government parastatal policy which could include taxing Eskom for the first time.

Finance director Willem Kok said on Tuesday that Eskom was gearing up to give more money to government, which was seeking to tax and reap dividends from parastatals in its drive to improve the way it used available cash in the state sector.

But the effect could be offset by the looming changes to the industry, which should see Eskom transferring its distribution operations and concentrating on generation and transmission.

The restructuring would cut its funding burden, with elements such as its distribution wing — which handles the R1bn-a-year mass electrification programme — being transferred to a new body.

The electricity working group, which includes the national electricity regulator, has proposed shifting Eskom and local authority distribution assets into a decentralised national distributor.

Kok said that Eskom's capital market funding plans for the current year remained in line with market expectations.

He said it would not be raising much money on the local market for its R5bn capital expenditure programme.

It would focus instead on the international markets.

It had already wrapped up its funding for this year, but the outlook next year was less clear.

Kok said the exact makeup of the new industry structure had still be to debated.

It was also difficult to calculate the impact of government's parastatal plans because the scale of tax write offs and dividend payouts had not been set.

One option mooted by a finance department team was for Eskom to pay one-third of its income as an annual dividend to government. Eskom's net income was R2,2bn in 1994. Kok said Eskom's funding programme was not under pressure from the plans — it was heavily underborrowed in the local money and capital markets.

He said its current funding plan indicated an annual borrowing requirement of R2bn a year for the next three years.

"Tax and dividend payments are not expected to increase this materially and the total new requirement will definitely not be more than 1994's borrowings of R4,7bn."

Finance Minister Chris Liebenberg has already spelt out plans to change the way government manages cash in the state sector.

Liebenberg was expected to announce exactly how much this would mean to central government in the Budget.

These changes to cash management would also affect Telkom — which has paid government a higher than expected dividend of R525m in the latest financial year — Transnet and the Central Energy Fund.

See Page 5

ATOMIC ENERGY CORP

55

GONE FISSION

FM 23/2/96

The Atomic Energy Corp is poised to strike a deal with France's Cogema in an effort to breach the highly competitive R15bn/year nuclear fuel market.

Though he would not confirm a reported joint investment of R150m and the identity of the partner, corporation CE Waldo Stumpf says the agreement should be signed by month-end. He says it's an equal partnership, with foreign help needed to industrialise and eventually market SA nuclear technology.

Cogema public relations director Veronique La France also would not comment but industry pundits say the deal will see SA uranium and enrichment technology marketed globally by the French nuclear giant.

The agreement is expected to net the Atomic Energy Corp significant forex earnings in the next three years of the industrialisation phase. Foreign earnings are expected to reach R1bn/year.

Current uranium spot prices are around US$30/kg. The nuclear fuel cycle, entailing four stages, adds value at each step. Conversion of the solid "yellow cake," a crude form of mined uranium, into uranium-hexafluoride adds about $6/kg and the enrichment process will typically push the price to $66/kg.

In the past three years, SA exported about 1 700 t/year of uranium ore concentrate, earning about R200m/year. The corporation is building a Molecular Laser Isotope Separation demonstration module under safeguard by the International Atomic Energy Agency. Stumpf says the process has the potential to be cheaper and better than other processes used elsewhere in the world.

If the enrichment process proves profitable, uranium exports could be boosted by at least R350m/year, says Stumpf.

The demonstration module can be converted into a medium production plant should the joint industrialisation programme succeed. The project is intended to fill the gap when Russian and US uranium stockpiles and excess nuclear weapons material are absorbed after the year 2000. This is when the overseas partner will be of strategic importance in enabling SA to gain a foothold in the "price sensitive market," says Stumpf.

The London-based Uranium Institute says the US has the most enriched uranium — a relic of the Cold War. Next is the Commonwealth of Independent States. Their stockpiles should be released by the end of the century.

Commercial applications for the Atomic Energy Corp's new technology include: smaller, simpler, cancer treating irradiation devices for secondary urban centres; the sterilisation of processed food and the fluorination of plastics. US space agency Nasa has already taken samples of sterilised food for testing.

Since 1990, the corporation has reduced its reliance on government funding by more than 75% and this trend will build until self-reliance is attained after 2000, Stumpf says. ■

Pik's public probe of contamination scare concludes there was no danger

Star 2/3/96

Pelindaba – Mineral and Energy Affairs Minister Pik Botha yesterday grilled executives of the country's nuclear agency over a radioactive contamination scare but concluded that no one was in danger.

55

Botha invited reporters to the session at the headquarters of the Atomic Energy Corporation (AEC) at Pelindaba to investigate an incident at the plant in March last year which nuclear regulators described as "a serious degradation of safety culture".

In the incident, revealed by *The Sunday Independent* last weekend, AEC workers using a mechanical excavator tried to unearth a condenser believed to contain up to 2 tons of depleted uranium.

The excavator did not find the condenser, buried in 1990 in a waste dump dubbed "Radiation Hill", but unearthed other radioactive waste, leading to fears that the surrounding area was at risk of contamination.

Botha grew frustrated yesterday during technical presentations by AEC chief executive Waldo Stumpf and senior manager Brian Hambleton-Jones on groundwater migration and other factors they said had a bearing on contamination risk.

"If you show that to the public they'll be frightened," Botha said.

"Am I right in saying there is no harm to human beings or animals as a result of the excavation; as far as the future is concerned, nobody in this whole area needs to fear anything?" Botha asked.

"Correct," replied Hambleton-Jones, who added he had been approached by worried representatives of neighbouring municipalities reporting that millions of rands in potential investment in the area had been placed in danger by the scare.

Jeff Leaver, head of the independent Council for Nuclear Safety, said the AEC's safety consciousness could be jeopardised by reduced state funding and the poor image it had developed in the years when it was involved in making nuclear weapons.

Pelindaba is the site of a research nuclear reactor and was the place where South Africa designed and built six nuclear warheads, all of which have been dismantled under international supervision. – Reuters

'Leaking radiation' reports denied

ARG 4/3/96 (55)

The Argus Correspondent

PRETORIA:— The Atomic Energy Corporation (AEC) has reacted to "incorrect" allegations made by Sunday newspaper reports of leaking radiation from a dumpsite at the Pelindaba nuclear power station.

In a statement the AEC denied that a nuclear waste dump 20km outside Pretoria posed any threat to the nearby Pelindaba population or to workers at the dump, called Radiation Hill.

It said a nuclear occurrence in April last year involved "only low-level waste and the effect of the spillage was confined to only a few metres around the lip of the trench".

But Sunday newspaper reports said radiation levels at the dump were 100 times higher than the legal limit. The AEC said in reaction it "strongly deplored the sensationalism".

"The misrepresentation of the facts and selective use of only some one-sided data without placing the occurrence in its proper context borders on irresponsible journalism," the statement said.

The reports said recent excavations at Radiation Hill found damaged nuclear waste containers and that the workers who discovered them wore protective clothing. It quoted an AEC spokesman as saying the company "screwed up, made several mistakes and infringed many of our license conditions".

The waste was buried more than two years ago. The residential area of Flora Park is two kilometres away and the densely-populated township of Atteridgeville 10km distant.

The AEC statement said four contract workers, and not eleven as reported, were involved at trench seven where the spillage occurred.

"The radiation doses at the trench were shown to be no threat to the workers, and yet the report makes unequivocal, incorrect statements that they were exposed, based on hearsay, and that cancer could develop in spite of the fact that no contamination has taken place and this has been proven.

"It must be clearly emphasised that Radiation Hill is an essential facility for the disposal of medical and industrial radioactive wastes from outside the AEC.

"Radioactive waste disposed of in the trenches at Radiation Hill is low-level.".

SA's cheat-beating technology finds a new niche market in wildest Africa

(55) CT (BR) 4/3/96

By James Lamont

Johannesburg — Isando-based Energy Measurements has won a R2 million contract to supply electricity meters to Rwanda, one of the most unruly countries in Africa. Electrogaz, the Rwandan national electricity utility, awarded the aid contract.

The meters will be put to commercial and domestic use in Kigali, Rwanda's capital. In spite of crippling poverty in that country, Electrogaz is optimistic that the level of theft will be lower than that experienced in South Africa.

The tender for the meters was issued on behalf of the German government's aid arm, GTZ. The German government has guaranteed the payment of the contract.

Serious pilfering in the local market encouraged Energy Measurements, a joint venture between Siemens and Spescom, to introduce new products to combat by-passing of electricity meters in South African townships.

The South African-designed meter, launched in 1990, was the world's first keypad-based prepayment electricity meter. It uses an algorithm and data encryption techniques to transfer credit.

Energy Measurements had to develop a more expensive split meter in August last year to overcome the devious efforts of local township technicians. As many as 60 percent of the meters were subverted. The new meters were installed in Durban and Acacia, areas badly affected by pilfering.

Carl Mostert, the managing director of Energy Measurements, said the South African market, to which Energy Measurements has supplied 1,2 million units, has thrown up problems unseen on the rest of the continent.

Mostert said the selling point was the meter's keypad-based metering system. The consumer receives a set of co-ordinates from a vending point which are then typed into the meter at home.

Mostert said homegrown pilfering ingenuity would not find favour in Rwanda, in spite of crippling poverty there. "In the rest of Africa people don't pay because they are either too slack or because no one collects."

Payment for electricity to outdated and under-funded public utilities in Africa was traditionally about as rare as its supply, said Mostert. In Nigeria, electricity bills are paid a year after their issue. In South Africa, Eskom still thinks twice before cutting off non-payers.

MADE IN SA *Energy Measurements' managing director Carl Mostert with the South African-developed meter*

PHOTO: JOHN WOODROOF

Government, in an attempt to pro-

ment was optimistic about the outcome of negotiations.

AEC denies radiation danger

BD 4/3/96 (55)

Ingrid Salgado

ATOMIC Energy Corporation (AEC) CE Waldo Stumpf yesterday dismissed as "sensationalist" weekend reports that the corporation's nuclear waste disposal site Radiation Hill was emitting dangerously high radiation levels.

Radiation emission from "a few spots as big as a saucer" had been identified. However, this could be cleaned up in half an hour, as soon as the corporation got the green light from the Council for Nuclear Safety, he said. "It is not emitting dangerously high radiation. It's a storage place with levels you would find at any uranium mine in SA." There was no danger to residents, workers or the environment.

The Sunday Independent reported yesterday that radioactivity levels at the site were 100 times higher than the safety limit, and said nuclear council officials were shocked at contamination levels.

The council's project manager in charge of licensing the AEC, Schalk de Waal, confirmed radiation levels were higher than maximum safety levels. However, this did not mean the area was dangerous. All work around the affected area had been stopped, and no workers were allowed at the site.

The contamination happened last year when the AEC dug up a container which contained uranium waste levels higher than originally thought, in so doing contravening its licence conditions. Spillage occurred in the process. The corporation has admitted wrongdoing in failing to obtain the council's approval for the excavation.

De Waal said the AEC would not be penalised for contravening its licence. However, the council expected the corporation to clean up the spillage. It was awaiting a report on safety precautions the corporation would take during the clean-up operation. The council rejected an AEC safety report last November and told the corporation to suggest additional precautions. The area could have been cleaned up had the AEC resubmitted the report, De Waal said.

Stumpf, however, said the go-ahead was in the council's hands.

'Too much secrecy' over Radiation Hill

(55) Star 5/3/96

Cape Town – The National Assembly's Mineral and Energy Affairs Committee is hoping to hear evidence from the Atomic Energy Corporation and Council for Nuclear Safety on the AEC's waste disposal site at Pelindaba near Pretoria.

Committee chairman Marcel Golding said he would be writing to the AEC and CNS to ask them to testify before the committee as soon as possible.

A report said that geiger counter tests by nuclear safety officials at Radiation Hill were 100 times greater than the safety limit.

The site is about 2km from the nearest residential area, and it was not known where some of the casual staff, who had helped dig up nuclear waste, were.

Golding said there had been far too much secrecy over this matter, and it was quite clear from information available to him that the AEC had violated its own licence conditions and not complied with set safety standards.

One of the questions was whether the casual workers had been traced and tested for contamination.

"The committee will certainly consider calling the AEC as well as the CNS before it seeks to provide an adequate explanation about what took place, to air the facts publicly and to reassure South Africans, and indeed the communities around the area, that there are no problems."

CNS had been charged with ensuring that safety and environmental standards were maintained and had brought the breach of licence conditions to the fore.

The committee, he said, would also like to determine what steps had been taken by the AEC to control the situation and find out who was responsible for excavations at Radiation Hill.

Golding said prevention of similar future incidents would require:

- A review of legislation that regulates the industry.
- Strengthening the powers of the Council for Nuclear Safety.
- Ensuring that a waste disposal and management policy, with respect to nuclear materials, is worked out.
- Properly identifying nuclear waste dump sites.

"This particular incident demonstrates the urgency of trying to come to a solution," he said, referring to the urgency for an inquiry and new policy.

Golding was also attempting to get the matter debated in Parliament. – Sapa.

Eskom surges to a record

ARG 6/3/96 (56) (360)

Political Correspondent

ESKOM has exceeded its targets for new household electricity connections in the past two years and plans another 300 000 this year.

This was disclosed by the Minister of Public Enterprises, Stella Sigcau, in reply to Senator Abraham Balie (NP).

In 1994 the supplier set a target of 250 000 new connections, and carried out 254 383. Last year, it installed 313 179 new connections, compared to its targeted number of 300 000.

Meanwhile Radio KFM increased its listenership by almost 100 000 between 1994 and last year, according to Pallo Jordan, Minister of Posts, Telecommunications and Broadcasting, while its advertising revenue soared from R6 million to almost R12 million.

SAfm listenership plunged from 414 000 to 250 000, and ad revenue fell from R14 million to R10 million.

Good Hope FM listenership rose from 490 000 to 627 000 but ad revenue fell from R28 million to R26 million.

Radio Xhosa listenership fell from 2 403 000 in 1994 to 2 329 000 last year. but advertising revenue rose from R16 million to R19 million.

- Relocation costs 2 649 000,00
- Development (grants and services) 8 750 000,00
- Administrative expenditures 240 096,00

Schmidtsdrift is a Presidential Lead Project and these funds were allocated from the Reconstruction and Development Programme and will be spread in accordance with a planned implementation period, over three financial years.

(ii) Funds for the relocation of the *SAN Community* (the !XU and KWE groups), currently living at Schmidtsdrift, have been earmarked from the Departmental budget as follows:

- Planning of a newly identified area (place) 300 000,00
- Development (Grants and Services) 6 500 000,00

To date no allocation of funds has been done in regard to relocation and administrative expenditure, as these amounts can only be determined when certainty on the place to which the San will go, has been obtained.

The planning funds (R300 000,00) were allocated from the Land Reform Pilot Programme for the Northern Cape Province and form part of a global allocation for this purpose from the RDP. The allocation for Development (R6,5m) is a provisional allocation from departmental funds, which can only be determined finally once the necessary identification of land and the land valuations have been completed.

(b) In both projects concerned (the Tswana and the SAN), the allocated amounts are transferred by means of transfer payments to the Northern Cape Provincial Administration, who will, with the aid of the Land Reform Steering Committee and the Land Reform Pilot District Administration (which has been created for this purpose), do the administration. These mechanisms have been created to appoint, in collaboration with the communities concerned, consultants who will appropriate the allocated funds, in accordance with approved business plans.

(2) The communities concerned have a responsibility to properly justify expenses concerned (as in any other similar situation). The consultants who are contracted by these communities with the assistance of the Provincial Authority, will assist them in this connection. Full accountability for all expenses must be made and in the process due cognisance of the prescribed Tender Board Prescriptions must be strictly adhered to. The normal settlement of expenditure procedures will be followed, namely expenses are paid after the work has been satisfactorily finalised and approved by the afore-mentioned Steering Committee.

(3) A statement on this matter is not envisaged, as the above-mentioned answers are standard in regard to all cases within the Land Reform Pilot Districts.

Development Facilitation Act: application

*12. Sen A E VAN NIEKERK asked the Minister of Land Affairs:

Whether the Development Facilitation Act, 1995 (Act No 67 of 1995), is currently being applied in all the provinces; if not, (a) in which provinces is it not being applied and (b) why not in each case?

S77E

The MINISTER OF LAND AFFAIRS:

No, (a) chapter 1 of the Development Facilitation Act, 1995 (Act No 67 of 1995), in which the general principles for land development and conflict resolution are being addressed, is applicable in all provinces.

All the provinces also indicated that they wish to nominate representatives to the Development and Planning Commission. Invitations to nominate representatives were sent to the various provinces. The final date for nominations is 8 March 1995.

The other chapters in the Act will be implemented once the regulations have been published. Preparations for implementation are in progress in all provinces with the exception of the Western Cape Province which has indicated that it will not be implementing the Act.

(b) According to the representatives of the Western Cape Province on the Forum for Effective Planning and Development, the province is preparing provincial legislation to direct land development.

*13. Sen Dr G W KOORNHOF—Safety and Security. [Question standing over.]

Hansard 65

Sources of energy for rural poor

*14. Sen S M RASMENI asked the Minister of Mineral and Energy Affairs:

Whether his Department has taken or intends taking any steps towards improving sources of energy for the rural poor; if not, why not; if so, what steps?

S97E

The MINISTER OF EDUCATION *(for the Minister of Mineral and Energy Affairs)*:

(Reply laid upon the Table with leave of House):

The Department of Mineral and Energy Affairs has a special Directorate dedicated to Energy for Development. The responsibilities of the Directorate are directly related to the energy needs of the urban and rural poor with the objective of alleviating the energy lack suffered by the poor.

My Department and I recognise the importance of appropriate, available and affordable energy as a necessary element in attaining a reasonable quality of life as well as for socio-economic development to be effected. We are therefore committed to the Reconstruction and Development Programme of the Government of National Unity, and accept the RDP's imperative to change structures and adjust priorities in order to achieve its objectives with attendant benefits for all the people of South Africa.

The following programmes give a brief indication of how the Department is atempting to come to grips in a realistic and practical way with the need to improve sources of energy for the rural poor:

(a) The Biomass Initiative/Plant for Life: Approximately one third of South Africa's people depends on traditional fuels—wood, dung and crop waste—as primary energy sources. They live in the rural areas where poverty is pervasive and population densities often high. The central role fuelwood plays, its increasing scarcity which places a burden mainly on rural women in terms of time spent and distances walked in its collection, as well as the environmental damage as a result of deforestation due to over-exploitation (settlement and agricultural needs, grazing requirements, building materials, etc. make it imperative for us to address the fuelwood crisis as a matter of urgency.

The planning phase of the Biomass Initiative Programme, called Plant for Life, was launched in 1992 under the guidance of an Interdepartmental Steering Committee coordinated by the Department of Mineral and Energy Affairs, as approved by Cabinet on 1 April 1992.

This planning phase, conducted in three main programmes, namely:

* a national assessment;

* a biomass production and demonstration element; and

* an information dissemination element;

has been completed.

A two-day symposium was held in September 1994 to publicise the major findings.

The Independent Development Trust (IDT) agreed to take over the community nurseries and demonstration sites established in the course of the programme, as part of its extended rural development programme. This sound foundation was laid by the Department of Mineral and Energy Affairs.

Although the Biomass Initiative has an energy focus as major element, its main driving force is rural development. It requires appropriate extension services and funding aimed at the empowerment of rural communities and households towards self-sustenance. It is therefore central to the objectives of the RDP.

The Initiative represents a multi-dimensional and multi-disciplinary intervention in rural society. It requires input from a number of Government Departments, amongst others, Mineral and Energy Affairs, Water Affairs and Forestry, Agriculture, Health, Welfare and Population Development and Land Affairs, in addition to Provincial and Local Governments and the RDP Office.

The Biomass Initiative requires grant funding from Government as well as from local and foreign grant funding sources. Elements of the Biomass Initiative could be funded through a national Public Works Programme, eg:

* the establishment of community woodlots;
* donga and eroded land reclamation projects in highly affected rural areas;
* the establishment of community recreation sites in densely populated rural areas;
* the distribution and marketing of fuelwood from industrial forestry wastes and projects aimed at the control of invader bush in selected commercial farming areas.

These possibilities are now actively being pursued.

120 rural wood and tree-planting related projects have been initiated. The Department collaborates with the Department of Agriculture in the latter's small-scale farming initiatives. These initiatives include tree-planting by small farmers. Since the question of tree-planting is central to the programme, the Department of Forestry is also a major player in this area.

A Cabinet Memorandum on the Social Forestry Programme Initiative, of the Biomass Initiative is being prepared. It focuses on fuelwood supply, to be managed by the Department of Water Affairs and Forestry and overseen by a Steering Committee of the Department of Agriculture, the Department of Mineral and Energy Affairs and other relevant role players and chaired by the Department of Water Affairs and Forestry.

Once Cabinet has considered the various issues currently outstanding, these decisions can be implemented.

(b) The provision of energy to rural communities is central to the Energy Policy Process at present taking place. Energy for the rural poor must be an integrated part of the total energy picture. The objective is to provide energy for all. Whether this is on-grid or off-grid electricity, solar heating, photo-voltaics, solar-power, illuminating paraffin, gas or other energy forms, will depend on local conditions. All these issues will be clarified in the Energy Policy Process which is intended to culminate in a new Energy Act next year. That Act will inevitably contain far-reaching provisions facilitating and encouraging energy provision to the rural poor, amongst others.

(c) Although mainly aimed at urban communities, the Low-Smoke Coal Programme is but one component of an integrated household energy programme applicable also to rural areas. The application of all energy-related factors is required to reduce air pollution to acceptable levels. At the same time the affordability of energy in poor sectors of the community should be ensured by means of appropriate energy provision.

The pivotal sector of the Low-Smoke Coal Programme is a macro-scale demonstration project scheduled for the winter of 1997. This project will entail field tests of the low-smoke coal in a large community and will determine its effectiveness, acceptability and applicability in ameliorating air pollution which is also found in rural villages. Thereafter a policy will be developed in order to encourage the introduction of the low-smoke fuel into the community.

(d) Electrification: Presently about 40% of South African dwellings, mainly in the medium and higher income groups are electrified and most of these are in urban areas. This limits the use of modern technologies such as electric lighting, appliances and TV to a part of the population. This was extensively addressed by the National Electrification Forum. Eskom is currently electrifying about 300 000 dwellings per annum and a number of local authorities another 100 000. Many of these homes will be in the rural areas provided their proximity to the national grid makes it economically feasible. This electrification service is to be complemented by the application of the renewable energy sources of the country to reach more rural people within the available means at our disposal.

(e) Pricing and accessibility of Illuminating Paraffin (IP): The price of IP has recently been subject to high price rises due to the increase in the demand for the fuel in some European countries during their particularly severe winter. By agreement with the Minister of Finance, I have been able to bring into effect the temporary suspension of Equalisation Fund payments by paraffin users. This has enabled the price rises to be contained, to the benefit of the rural poor who use this energy source extensively. The matter will be reviewed at the end of March 1996 when it is expected that the international market price of IP will have returned to more acceptable levels.

Other measures to reduce the price of IP for the benefit of rural poor energy users are being actively considered.

I have also asked the Liquid Fuels Industry Task Force to urgently look at the liquid fuels price mechanism as applied to IP.

(f) Remote Area Power Supply (RAPS) Systems in rural schools, clinics and community centres, as well as for essential electricity based domestic services (for lighting, electronic media access, food preservation, etc.): Certain important energy services require electricity, such as lighting, media access (TV, radio) and partly food preservation (refrigeration). For remote schools and clinics (about five kilometres or more from the grid), photovoltaics (PV) offer the facility of immediate access to sufficient and cost-effective electricity for essential needs.

Experience worldwide indicates that for the successful implementation of RAPS systems the task should be allocated to a dedicated and independent institution rather than to a conventional electricity utility whose business is electrification through grid extension. Mobilising the local private sector would contribute to the efficiency of the endeavour, but institutionalised planning and financial backing, especially in the early stages, is of paramount importance to ensure success.

My Department has been the prime mover in the formation of an independent company with the CEF group to coordinate all viable renewable energy programmes. The main objectives of REFSA (Renewable Energy for South Africa) which is increasingly giving concrete expression to RAPS, are to:

* Act as Government's implementation agency in the provision of renewable energy (mainly solar) for communities (almost entirely rural);
* Plan and undertake the implementation of renewable energy projects within the context of Integrated Energy Planning in collaboration with the private sector, appropriate NGOs and development institutions and Local Authorities and electricity distributors, and the relevant policy-makers;
* Mobilise Grant and Loan Funding for projects both locally and abroad, working closely with the RDP office;
* Contract appropriate existing private sector institutions and NGOs in the execution of its task;
* Set the necessary standards and system specifications;
* Inform consumers in the use of electricity and the basic maintenance of photovoltaic systems to ensure effective use;
* Train and assist local entrepreneurs to take on the long-term maintenance of systems to ensure long-term sustainability;
* Set the levels of subsidies/grant funding when and if necessary (i.e. the minimum level of service to be provided) in consultation with the grant funder and the relevant policy-makers;
* Manage a sustainable Revolving Credit Fund to support its operations;
* Publicise the characteristics and uses of renewable energy, including information on contractors, systems, typical costs, case study results and advice to would-be users.

REFSA is a small, but dynamic and versatile body resigned to minimise overhead costs and maximise efficiency of delivery as well as the effective harnessing of available skills and resources of the country. A pilot project on Solar Home Systems is being launched in conjunction with interested partners from abroad.

Within the policy framework of the Department, the Independent Development Trust has already electrified over 100 rural clinics using RAPS while Eskom is implementing an extensive rural school electrification programme. It is estimated that the backlog of about 2 000 rural clinics and 15 000 rural schools will be electrified through RAPS over the next decade. The objective of REFSA itself is to electrify 2,5 million rural households by 2015. This will be done by using photo-voltaic cells.

REFSA will raise finance in order to provide revolving credit to rural communities. Purchases of photo-voltaic cells will be financed from this pool and repayment will be returned to the pool which will then be used to finance other communities. Provincial and local governments as well as the private sector and NGOs will be involved.

(g) Other energy sources: The use of wind power and other energy sources is always under active consideration. Gas is a further alternative provided the rural communities concerned can be reached economically. Rural programmes in other countries, India for example, are studied and will be applied wherever practicable.

Conclusion:
The Department and I are painfully aware of the energy needs of the rural poor. Steps are being taken ot obtain the necessary manpower and finance to set up Regional Energy Offices alongside the already established Mining and Minerals Regional Offices of the Department. Once this has been achieved, other possibilities of working together with provincial governments and rural communities in order to enhance their energy sources can be explored and brought into being. Needless to say, support from the Senate for our various programmes will be greatly appreciated. I wish to thank the hon senator for raising this important matter by way of his question affording me the opportunity to deal with the dimensions of the challenge facing us.

*15. Sen H J P LEBONA—Foreign Affairs.
[Question standing over.]

*16. Sen H J P LEBONA—Foreign Affairs.
[Question standing over.]

*17. Sen T G G MASHAMBA—Education.
[Question standing over.]

Export of indigenous plants from SA: control

*2. Sen E K MOORCROFT asked the Minister of Environmental Affairs and Tourism:

(1) Whether his Department exercises any control over the export of indigenous plants from the Republic; if not, why not; if so, what is the nature of such control;

(2) whether any contraventions of such control measures took place during the latest specified period of 12 months for which information is available; if so, what are the relevant details;

(3) whether any steps have been taken against parties contravening these control measures; if not, why not; if so, what steps?

S66E

The DEPUTY MINISTER OF HOME AFFAIRS (for the Minister of Environmental Affairs and Tourism):

(1) No, the Department of Environmental Affairs and Tourism does not exercise any control over the export of indigenous plants from the Republic. In terms of Schedule 6 of the Interim Constitution, nature conservation is a provincial competency and the control of the import and export of indigenous fauna and flora is an integral part of that function. Legislation and manpower to effect the implementation of that function have therefore been established in the provincial nature conservation institutions.

(2) In view of the above, the Department keeps no record of contraventions of the measures controlling the export of indigenous plants. However, in terms of the certain obligations imposed on South Africa by the Convention on International Trade in Endangered Species (CITES), the Department is provided on an annual basis with information on the export of certain indigenous plant species. Such information only reflects the number of permits issued and the number of specimens exported and does not give any details on contraventions. Furthermore, the information now available only covers the 1994 calendar year.

(3) Falls away.

Abuse of State pensions

*5. Sen W F MNISI asked the Minister for Welfare and Population Development:

(1) Whether his Department has compiled any estimates of the number of people who are currently receiving State pensions while not being entitled to such pensions; if so, (a) what is the relevant figure and (b) what percentage of the total number of people receiving pensions does this figure constitute;

(2) whether he or his Department has taken or intends taking any steps to reduce or eliminate such abuse; if not, why not; if so, what steps?

S69E

The MINISTER FOR WELFARE AND POPULATION DEVELOPMENT:

(1) Yes, figures available to the Department are based on estimates resulting from sporadic investigations conducted in some of the provinces. It is estimated that the extent of abuse ranges between (a) 28 000 and 280 000 beneficiaries and (b) 1% and 10% as a percentage of the total number of beneficiaries;

(2) yes, steps to reduce and eradicate abuse of the system include the implementation of the uniform Act on Social Assistance (Act 59 of 1992) for grants as from 1 March 1996, with the use of uniform criteria, standardised letters and forms.

Steps that are being taken to reduce fraud even further include the amalgamation of 14 computer systems into a single transverse system and the implementation of a national Social Grants Register on 1 May 1996, with real-time communication to the Population Register which is administrated by the Department of Home Affairs.

For written reply:

Strike craft of SA Navy: state of repair

1. Sen M G E WILEY asked the Minister of Defence:

(1) How many vessels of the strike craft flotilla of the South African Navy are currently operational;

(2) whether the Navy has any other deep-sea patrol craft; if not, what is the position in this regard; if so, what are the relevant details;

(3) whether he will furnish particulars on the service record of the strike craft for the latest specified four years for which information is available in respect of (a) the number of vessels which were (i) decommissioned and (ii) under repair and (b) in each case, the (i) cost of repairs, (ii) reasons for repair, (iii) cost of upgrading and (iv) projected lifespan after upgrading;

(4) whether he will make a statement on the matter?

S12E

The MINISTER OF DEFENCE:

(1) Five of the nine Strike Craft are currently operational. A sixth is undergoing sea trials testing upgraded equipment.

(2) No. The SA Navy does not have any other deep-sea patrol craft. The Strike Craft and Mine Counter-Measures Vessels are regularly used on maritime patrols to a distance of approximately 50 nautical miles from the coast, but seldomly used beyond this distance.

The two Combat Support Ships are not suited for patrol duty and are too expensive to operate in this mode.

The SA Navy is therefore not in a position to patrol and protect South Africa's Exclusive Economical Zone effectively.

(3) (a) (i) and (ii) Between 1992-1995 the Navy maintained an average of six of the nine Strike Craft operational with the other three being in a state of decommission due to upgrading, refitting or in preservation.

(b) (i) and (ii) During the same period, 1992-1995, various Strike Craft were "under repair" 17 times. For the purpose of this reply, "repair" is defined as scheduled maintenance, repairs to defects and/or refits in accordance with the laid down "Upkeep plan". The costing of repairs is based on the planned hours per repair period as determined by the Naval Dockyard Simon's Town.

The following abbreviations are used in the table below:

DED—Docking and Essential Defects

EDED—Extended Docking and Essential Defects

R—Refit

Electricity suppliers opt for regional distributors

BD 11/3/96 (56)

Mungo Soggot

PLANS for the shake-up of the electricity supply industry were shifting away from centralised control and towards carving it up into regional distributors, industry spokesmen said at the weekend.

The Electricity Working Group, which is steering the revamp, said it would present its plans to government by next month. The group would propose either forming one national decentralised electricity distributor or carving up the current set-up into several regional distributors.

Other industry sources said whereas the group had initially favoured having a decentralised national distributor, it had been confronted with evidence suggesting that regional distributors were also viable.

Eskom itself favoured having as much decentralisation as possible in a range of regional distributors and others in the group were coming around to their point of view, one said.

Whichever way the working group goes, all Eskom's and local authorities' distribution assets will be put under one umbrella organisation. Although there is friction in the industry over how much centralised control to exercise over the new body, there is agreement that the current set-up has to go.

The status quo is seen as being riddled with inefficiency and lacking transparency.

One source said the proposal to government would recommend having as many regional distributors as was financially viable. He said it appeared the regional approach would give the best results, enabling more efficient electrification drives and more transparent pricing and cross subsidisation.

Business lobbies for lower rises in power

Nicola Jenvey (55)

BD 12/3/96

DURBAN — Organised business has put pressure on Eskom and Durban Electricity for lower-than-average electricity tariff rises, a move that could set a precedent for future price hikes.

Eskom key customer relations manager Hugh McGibbon said yesterday Durban Electricity had negotiated a 2% tariff increase from Eskom effective from March 1 against the 3,5% national average.

This saving meant Durban Electricity, which received its supply from Eskom, would raise its tariffs to business by only 4,8% instead of the previously expected 6,6%.

McGibbon said tariff structures were open to negotiation with major customers and Durban Electricity would be willing to renegotiate in future years.

The higher tariff increases to business relative to residential provided the city council with an additional R80m for township electrification, but business could not afford to pay for both Durban Electricity's project and Eskom's Electricity For All campaign, chamber president Robin Boustred said.

A premium for these projects had been included in the tariffs.

Dean said the differential put Durban at a disadvantage in terms of attracting foreign investment, as vast fluctuations in rates did not create an environment of certainty and continuity.

Durban Electricity technical services director Roy Wienand said the current 19% differential between the rate Eskom supplies to municipalities and industrial clients had developed over time, and an attempt was being made to bring the tariffs into line.

Dean said the reduced tariff had begun redressing the differentials, but business would have preferred a more beneficial tariff considering Durban Electricity had experienced only a 2% increase.

Nuclear emergency test

(55) ARG/3/3/96

Staff Reporter

A NUCLEAR emergency exercise being held today was due to affect thousands of people living within a 20 km radius of the Koeberg nuclear power station.

Koeberg officials warned that the siren and public address systems installed in Duynefontein, Melkbosstrand, Atlantis and adjacent farming areas may be used.

Koeberg staff have to show the Council for Nuclear Safety (CNS) that they could contain any nuclear disaster at the plant effectively.

The exercise forms part of the CNS's annual licensing of the plant.

The exercise is also being monitored by observers from Hong Kong and Slovenia.

Phil Metcalf, a senior manager at CNS, said that while Koeberg took emergency precautions, these could not always be guaranteed.

He said the objective of the execise was to evaluate the plant's major disaster management programme.

The aim of such a programme was to prevent acute health effects and to limit long-term effects of a nuclear disaster.

Every disaster management programme has on-site and off-site facilities.

The Cape Metropolitan Council (CMC) is responsible for the off-site emergency plan covering the area within a radius of about 16 km around the plant.

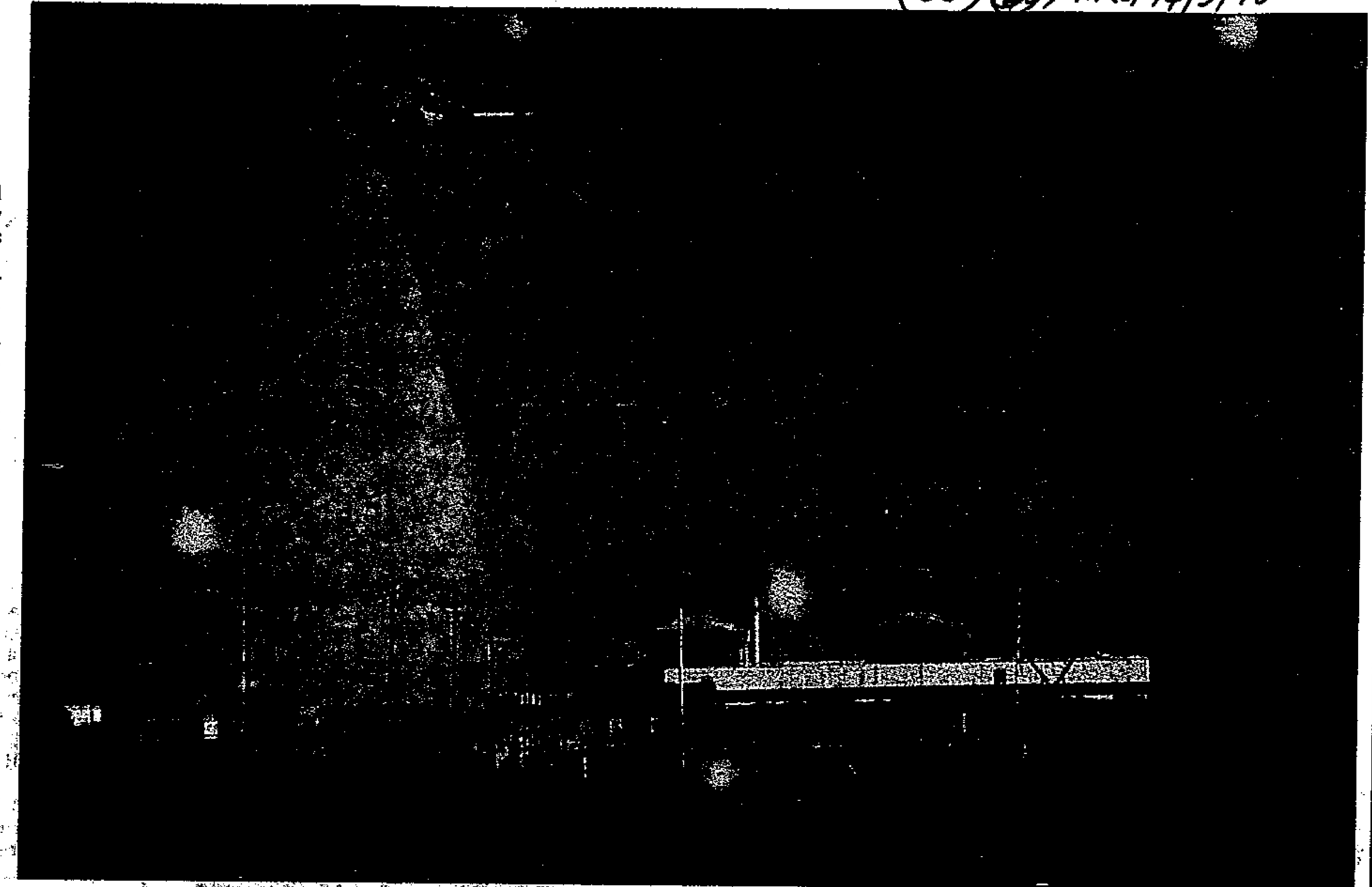
The exercise involves the CNS simulating a nuclear disaster to activate the emergency centre at Koeberg.

The plant does not know what time the simulated disaster will occure or what form it will take.

Koeberg alert put to test

(55) (55) ARG 14/3/96

Emergency services go through paces



RED ALERT: A helicopter circles over Koeberg Nuclear Power Station before landing during an exercise to fine tune reactions by emergency operations personnel. Pictures: ROY WIGLEY, The Argus.

LINDSAY BARNES, Staff Reporter

WHILE life in most parts of the Western Cape continued normally, a major exercise at Koeberg, simulating emergency reaction to a disaster, had at least 200 highly-skilled people in its grip.

The exercise was carried out yesterday by Koeberg nuclear power station in co-operation with all emergency personnel within a wide radius of the site of a potential nuclear disaster.

About every 12 to 16 months this exercise is repeated, and minor exercises are carried out four to six times a year, said emergency controller Geoff Laskey.

The operation was controlled from Cape Town where an emergency control centre in a building in Wale Street was manned by 20 people looking calm but alert, and ready for action.

On the board in front of them was a large map indicating the affected site around Koeberg, showing wind direction and the nine zones containing 1 600 people that needed to be evacuated.

Clearly marked were the immediate danger zones within a 10 km radius of the nuclear plant and from which residents would have to be evacuated.

Within the 10 to 16 km radius were standby or "shelter" areas such as Atlantis where residents would be warned to stay indoors and to shut all windows, but ultimately, would also have to be evacuated.

"The danger zone is the 16 km radius and to a much lesser degree outside of that," said Steve van Rensburg, head of emergency planning, training and marketing for the Cape Metropolitan Council Civil Protection.

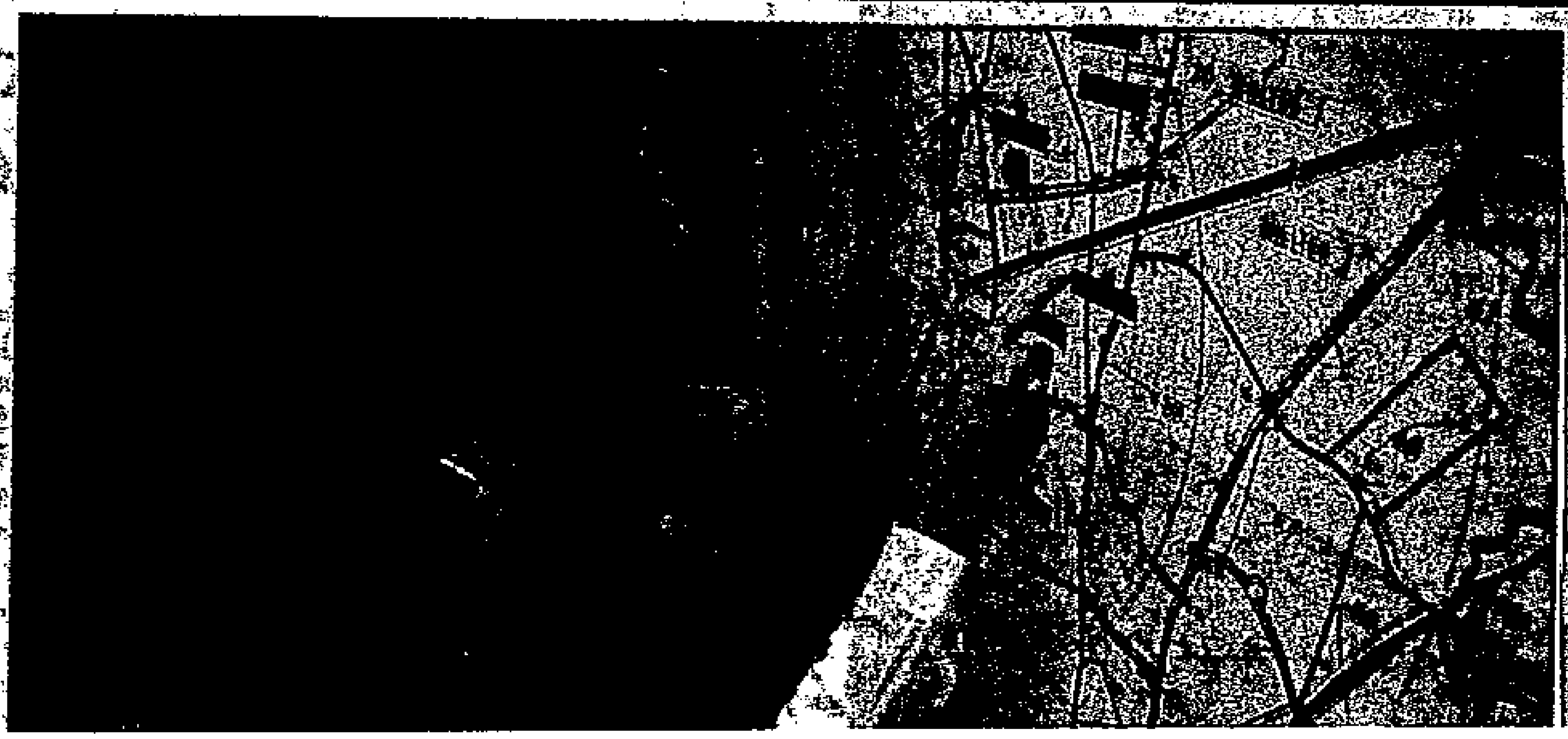
No action was taken during the exercise which concentrated on dissemination of information, and residents who would be affected were warned in advance of the drill.

Taking part in the operation was a wide range of specialised personnel such as members of the Council for Nuclear Safety, the health department, international observers, an Eskom technical adviser, traffic officials and the fire brigade.

People in the red zone would be evacuated in 30 buses to a mass care centre in Elsies River where they would be frisked to measure levels of radiation, and decontaminated.

Those with "heavy" contamination would be taken to a special unit at Tygerberg Hospital.

A mobile emergency control centre on a bus was stationed on the Mamre/Darlington Road near the N7 intersection to co-ordinate about 12 roadblocks manned by 30 traffic officers



LINDSAY BARNES, Staff Reporter

WHILE life in most parts of the Western Cape continued normally, a major exercise at Koeberg, simulating emergency reaction to a disaster, had at least 200 highly-skilled people in its grip.

The exercise was carried out yesterday by Koeberg nuclear power station in co-operation with all emergency personnel within a wide radius of the site of a potential nuclear disaster.

About every 12 to 16 months this exercise is repeated, and minor exercises are carried out four to six times a year, said emergency controller Geoff Laskey.

The operation was controlled from Cape Town where an emergency control centre in a building in Wale Street was manned by 20 people looking calm but alert, and ready for action.

On the board in front of them was a large map indicating the affected site around Koeberg, showing wind direction and the nine zones containing 1 600 people that needed to be evacuated.

Clearly marked were the immediate danger zones within a 10 km radius of the nuclear plant and from which residents would have to be evacuated.

Within the 10 to 16 km radius were standby or "shelter" areas such as Atlantis where residents would be warned to stay indoors and to shut all windows, but ultimately, would also have to be evacuated.

"The danger zone is the 16 km radius and to a much lesser degree outside of that," said Steve van Rensburg, head of emergency planning, training and marketing for the Cape Metropolitan Council Civil Protection.

No action was taken during the exercise which concentrated on dissemination of information, and residents who would be affected were warned in advance of the drill.

Taking part in the operation was a wide range of specialised personnel such as members of the Council for Nuclear Safety, the health department, international observers, an Eskom technical adviser, traffic officials and the fire brigade.

People in the red zone would be evacuated in 30 buses to a mass care centre in Elsies River where they would be frisked to measure levels of radiation, and decontaminated.

Those with "heavy" contamination would be taken to a special unit at Tygerberg Hospital.

A mobile emergency control centre on a bus was stationed on the Mamre/Darlington Road near the N7 intersection to co-ordinate about 12 roadblocks manned by 30 traffic officers to stop motorists entering the danger area.

Halls would be organised to house and feed people who had been evacuated until the situation returned to normal.

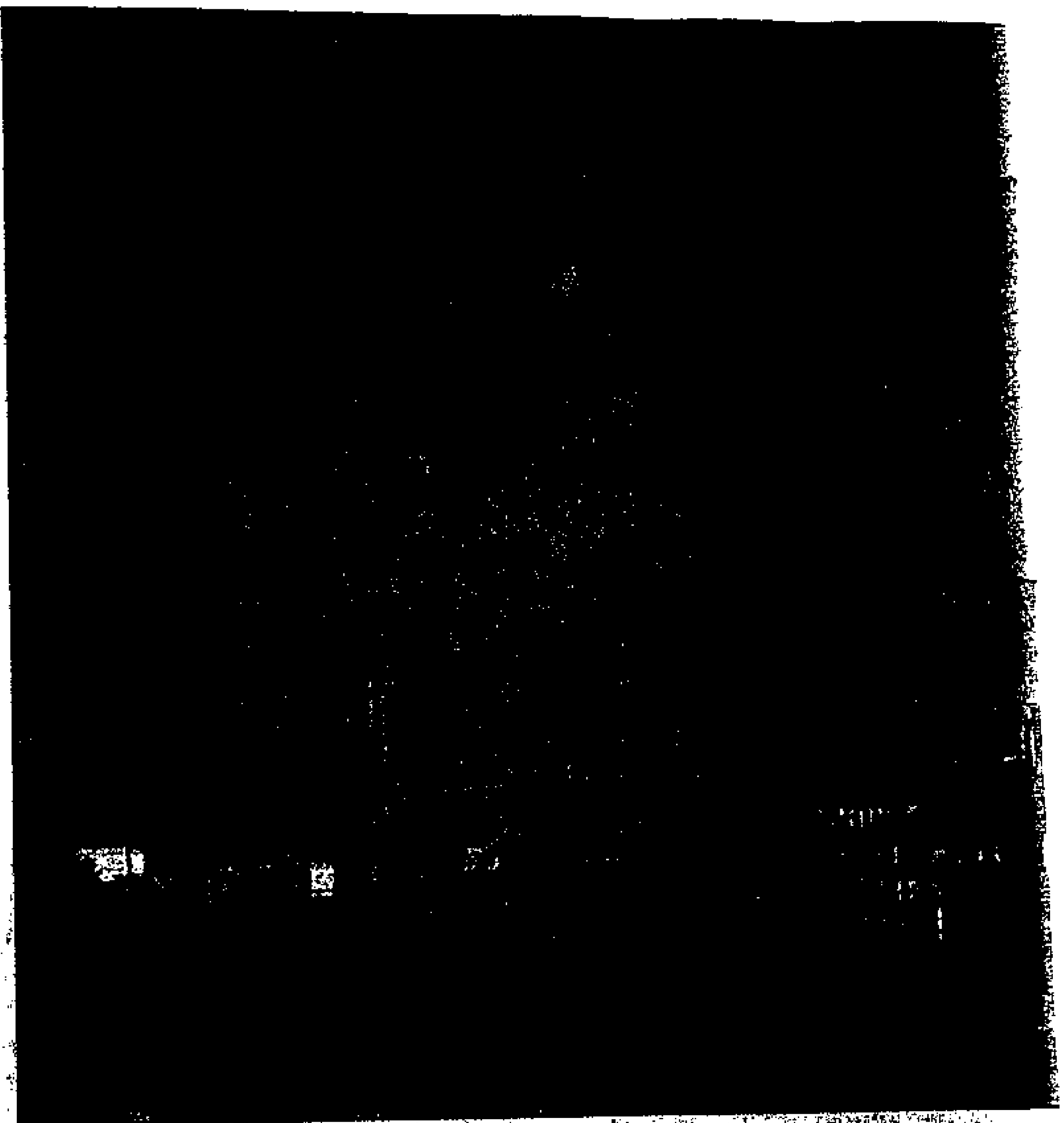
About 20 engineering services personnel were on standby to detect problems with water and sewage.

The exercise began at 7.20 am when a soft north north-westerly wind was blowing.

But by 11 am it had swung 180 degrees, making it necessary to reconsider strategy in terms of isolating the affected area, said Mr Laskey.

However, the drill was not based on real conditions but on a worst-case scenario in which gentle winds would spread the plume over a wider area, and the concentration diminish at a slow rate.

At 1 pm the exercise was ended and rated a success by those involved, declared Mr Laskey.



ABOVE: Steve van Rensburg of emergency planning, training and marketing for the Cape Metropolitan Council Civil Protection, and Schalk de Waal of the Council for Nuclear Safety, go over the plans for mass evacuation in the event of a crisis at Koeberg.

BELOW: Traffic personnel man a mobile control centre from which the roadblocks preventing cars from entering the danger zone would be co-ordinated.

Regional power plan under fire

BD 18/3/96 (55)

Mungo Soggot

KEY industries have hit out at the handling of the electricity supply industry carve-up, rejecting the move to create several regional distributors which they say would fuel inefficiency and not bury it.

The energy end users' forum — representing companies including Sentrachem, Afrox, Sappi, Mondi, Tiger Oats and Consol — said at the weekend that the electricity working group had failed to include major electricity users in its deliberations.

It said the only motivation for creating regional distributors was a political one — it would protect local authorities which depended on revenue from electricity sales, whereas the other available options would not.

Forum chairman Johan Hees said it was absurd that the working group was charging ahead with its plans without adequate consultation with industry.

There was only one industry man in the group, and he worked for Alusaf, which has a special deal with Eskom.

Hees said the working group often asked for official reaction from the forum, but never acted on it. He scorned the working group for pretending to be transparent.

The working group, which is about to present its recommendations to government, includes Eskom, the national electricity regulator and government representatives. After initially favouring the idea of shunting all Eskom's and local authorities' distribution assets into a decentralised national distributor, it has swung around to the idea of having several regional distributors.

The regulator, Eskom and local authorities involved with electricity supply are adamant the current setup, with its plethora of tariffs and widespread inefficiency, has to be shelved, but are divided as to which route will be best for the customer and the mass electrification programme.

Hees said the forum was convinced a national distributor was the only route to improving quality, cutting prices and eliminating cross-subsidisation.

It was a fallacy that SA's electricity was the world's cheapest. With help of cut-price coal, SA's generated electricity was cheap. Yet once Eskom and local authorities had added transmission and distribution cuts, it was on a par with most developed countries.

The move to regional distributors would exacerbate these inefficiencies, he said.

Hees said the forum believed it was crucial that cross-subsidisation was eliminated — simply by changing the way local authorities handled their billing. Local authorities could itemise the cost of services currently subsidised by the electricity price.

The regulator could not be reached for comment.

Electricity body denies accusations

(~~260~~) (55)

Mungo Soggot

THE National Electricity Regulator yesterday shrugged off accusations that the electricity supply industry is forcing through plans for an industry shake-up without adequate consultation.

Regulator spokesman Johan du Plessis said the electricity working group, which includes the regulator, government officials and Eskom, had consulted industry and taken any suggestions seriously. But the shake-up could not please everyone.

The revamp would involve all Eskom's and local authorities' distribution assets being turned into either several regional distributors or a decentralised national distributor. The working group was about to present its plans, which included both options, to government. Cabinet would decide which route would be best to keep prices competitive and guarantee the success of the mass electrification programme.

Du Plessis was responding to accusations from the forum for energy end users, which represents several major companies, that industry was being ignored. The forum rejected the idea of creating regional distributors which, it said, would not help improve the industry but merely safeguard a key source of income for local authorities. It was a "political" option which would destroy the industry's competitiveness.

Du Plessis said the forum did not represent industry. There were many other important players which had very different views. He added that the forum's fears were premature — the proposals could include plans for both regional distributors or a national distributor with regional arms. Although most of the supply industry believed regional distributors were the ideal, it might not be feasible to get there in one step.

BD 19/3/96

Koeberg 'expensive and unnecessary'

55 ~~256~~ ~~56~~

EUNICE RIDER
STAFF WRITER

CT 20/3/96

THE Koeberg nuclear power plant is "probably an expensive and unnecessary source of power", a British scientist said in a report released by UCT yesterday.

Nuclear economics expert Mr Steve Thomas, of the University of Sussex, said a detailed analysis of the plant's operating performance showed it was "unreliable" by international standards and had about 30% less output than similar plants elsewhere.

This unreliability could have serious implications for the safety of the plant if it reflected poor standards of maintenance.

His report, released by the UCT Energy and Development Research Centre (EDRC), raised questions about whether South Africa should be devoting scarce resources of skilled labour and finance to nuclear technology when the returns were so poor.

Coal power plants would be cheaper for South Africa, he said.

Mr Tony Stott, Eskom's generation nuclear assurance manager, said yesterday that Eskom, which runs Koeberg, had not yet seen the report and so could not comment.

Eskom had been trying to get a copy of the report since last week to establish on what grounds Thomas made his claims. EDRC promises to fax him a copy in Johannesburg had not been kept.

He said, however, that Eskom was surprised at allegations that the plant was "unreliable". Koeberg was part of the Eskom network of power stations — not an isolated station — and so was operated to conform to the requirements of the network.

"We consider it highly unprofessional of a research organisation such as the EDRC to publish and publicise a paper such as that of Mr Thomas, without verifying the facts, which they could very easily have done by approaching Eskom," Stott said.

Atomic energy body 'not in business of secrets anymore'

~~25~~ (58) ~~(...)~~

By Tamsen de Beer

The Atomic Energy Corporation (AEC) has entered an era of public transparency, head of nuclear management Brian Hambleton-Jones told residents at an information session on the nuclear waste issue at Radiation Hill yesterday.

"We are not in the business of secrets anymore," he said, adding that the public would immediately be informed of any incident that affected them.

The policy shift follows recent media coverage of the excavation of trench 7 on Radiation Hill after an exclusive story by The Sunday Independent.

The incident was interpreted as a major nuclear incident, although the public's watchdog on nuclear activities, the Council for Nuclear Safety (CNS), said there was never any risk to the public, only a breach in procedural regulations when the trench, containing low-level radioactive waste, was erroneously excavated last year.

"Yes, the decision to excavate the trench was a mistake," Hambleton-Jones told residents.

But once Pelindaba management discovered the error, excavation was suspended and the CNS informed, he said.

A moratorium has been in place for a year since then, suspending any further excavation of the trench.

The AEC also announced the formation of the Pelindaba Communication Forum, to discuss and address residents' concerns surrounding the about 30-year-old site.

The first meeting of the forum, to include community representatives and environmentalists, is due in April.

Residents asked that water samples be taken from a greater cross-section of areas in the vicinity of Pelindaba, and that an analysis be done on the level of incidents of cancer and genetic deficiencies, the main consequences of radiation exposure, in the Hartbeespoort dam area.

But AEC environmental manager Dr Cairns Bain responded by saying levels of radiation were so low that such additional measures were not necessary.

Radiation levels measured in milk, and the water, fish and sediment in Hartbeespoort dam were "one thousand times below the recommended limit", he said.

"We contribute less than one-hundredth of what the average person is exposed to in terms of radiation," he added.

Mineral and Energy Affairs Minister Pik Botha's address in Parliament coinciding with the briefing of residents included a suggestion that the name, Radiation Hill, be changed.

"But that doesn't mean we want to hide behind a nicer-sounding name," AEC chief executive officer Dr Waldo Stumpf told residents.

Reading extracts from Botha's address, Stumpf said people were exposed every day to radiation levels from natural sources that constituted 70% of their total exposure.

Medical x-rays constituted more than 25% of the remainder, with rays from television making up 3,4% of the total.

■ Nuclear drums excavated at Radiation Hill last year had been in breach of the AEC's licence obligations, although there had been no intentional negligence, Botha said yesterday.

Speaking during an interpellation by Marcel Golding (ANC), the minister said the workers had been properly protected and supervised in the presence of a health physics officer.

However, there had been a breakdown in communication between the superviser and health physics officer, and therefore the excavation had failed the AEC's licence obligations.

The personnel involved had been reprimanded.

Golding said there was no doubt that a serious breach of the licence conditions had taken place and senior management should take the blame. – Sapa.

Star 21/3/96

Row brewing over electricity distribution

Star 22/3/96 (55)

Councils want to continue supplying power, but National Energy Regulator says public firms will do better job

By Troye Lund

Consumers and businesses are caught in a battle between major local authorities and what has been called a secret bid to restructure electricity distribution by centralising it.

Although the bid stands to reduce electricity bills by at least 17%, consumers will have to make up the reduction through price hikes in rates or other municipal charges, local authorities have warned.

A final report is expected to be released to the councils in the next two weeks, after being submitted to Minister of Mineral and Energy Affairs Pik Botha.

The Major Urban Areas Association, which represents the country's 10 biggest cities and is chaired by Greater Johannesburg Transitional Metropolitan Council executive committee chairman Collin Matjila, is vehement that restructuring is necessary. But proposals to take electricity distribution away from local authorities and allow private distributors to do the job will cripple local authorities which depend on extra revenue from the sale of electricity, it says.

Johan du Plessis, spokesman for the National Electricity Regulator (NER) – a statutory body which regulates all electricity distributors and generators, and is the mastermind behind this restructuring – confirmed that the body intended making the electricity supply system more efficient by concentrating distribution under a single or several public companies.

There are about 400 distributors nationwide. Local authorities charge their consumers different fees for electricity, buying in bulk from Eskom and charging consumers more. The Greater Johannesburg council adds an 18c/kW surcharge for domestic users.

The Energy End Users Forum, which represents major industries including Afrox, Sappi, Mondi and Tiger Oats, has also lashed out at the restructuring proposals, saying they did not include major users and would boost inefficiency rather than do away with it.

Du Plessis said the NER aimed at controlling the supply of electricity in South Africa to make it available to the whole population at equitable prices. To do this, he said, the current plethora of tariffs and widespread inefficiency had to be eradicated.

"Municipalities will have to find other means to make up this income through increased rates and taxes and more efficient administration," he added.

(5) Yes. (Refer to (1)(a) and (b) and (4) above.)

Koeberg: running costs (55)

154. Mr J A JORDAAN asked the Minister for Public Enterprises:

(a) What were the annual running costs of Koeberg in (i) 1992, (ii) 1993 and (iii) 1994, (b) in respect of each such year, of what components were these costs made up and (c) from what source were these figures obtained?

N295E

The MINISTER FOR PUBLIC ENTERPRISES:

(a) (i) 1992: R622,7m

(ii) 1993: R660.6m

(iii) 1994: R671,3m

(b) Annual running costs for Koeberg Power Station

(Constant Rands, base year 1995)

	1992	*1993*	*1994*
Fuel	164,9	*1 159,8	181,1
Operating Costs	242,5	*2 288,9	262,1
Depreciation	167,5	160,9	150,8
Decommissioning	47,8	51,0	*3 77,3
Total	622,7	660,6	671,3
Gwh	9 287,7	7 236,3	9 674,7
R/MWh	67,05	91,29	*4 69,39

(c) *Source:* Official Eskom accounting records as adjusted for inflation, using Production Price Index as reported by the Central Statistical Services.

Explanations to major changes in costs

1993

Fuel

*1 Although energy spent out reduced by 22%, fuel costs only reduced by 3%. This is mainly due to a provision being restarted for spent fuel storage. The latter resulted in a major adjustment in respect of previous years.

Operating Costs

*2 Operating costs increased due to the fact that two refuelling overhauls were performed as opposed to only one in 1992.

1994

Decommissioning

*3 During 1994 the method used to calculate the provision for decommissioning was updated. This resulted in an increase to compensate for under-provisions in previous years.

R/MWh

*4 If the items mentioned in *3 above are eliminated the unit costs would reduce to R66,98/MWh.

Local Government Elections Task Group

159. Mr K M ANDREW asked the Minister for Provincial Affairs and Constitutional Development:

(1) (a) What amount was budgeted for the Local Government Elections Task Group for the 1995-96 financial year, (b) how many (i) members of the Task Group and (ii) other specified staff members were employed by the Task Group, (c) what annual salary was paid to each of the (i) members and (ii) staff members of the Task Group and (d) from which premises did the Task Group conduct its operations;

(2) whether the members and/or staff members of the Task Group were entitled to any (a) car, (b) travel, (c) subsistence and/or (d) other specified allowances; if so, what allowances in each case;

(3) whether the Task Group purchased premises from which to conduct its operations; if so, (a) which premises, (b) at what cost and (c) what other expenses have been incurred as a result of this purchase; if not,

(4) whether the Task Group rented premises; if so, what was the annual rental?

N300E

The MINISTER FOR PROVINCIAL AFFAIRS AND CONSTITUTIONAL DEVELOPMENT:

(1) (a) R2,010 million.

(b) (i) Four.

(ii) Five.

(c) (i) Slabbert, Van Z R218 800,00
Shubane, K R171 600,00
Roome, P R169 859,83
Craythorne, D R19 090,25

(ii) Schramm, G R18 332,68
Milne, V R19 959,65
Enthoven, A R40 593,50
Bothma, M R10 525,37
Luyt, M R4 378,03

(d) 240 Walker Street, Sunnyside, Pretoria.

(2) (a) No.

(b) Travel expenditure: Air transport in economy class and kilometres at prevailing government tarrifs.

(c) Accommodation expenditure: Real expenditure or daily pay as applicable to a chief director in the Public Service.

(d) None.

(3) No.

(a), (b) and (c) Fall away.

(4) No.

Minister: visits outside RSA funded by State

167. Mr C W EGLIN asked the Minister for Provincial Affairs and Constitutional Development:

(a) How many times did (i) he, (ii) his Deputy Minister and (iii) members of staff of the Ministry go on overseas trips funded entirely or partially by the State in the latest specified calendar year for which information is available and (b) what was the (i) purpose, (ii) cost to the State, (iii) destination and (iv) duration of each such trip?

N308E

The MINISTER FOR PROVINCIAL AFFAIRS AND CONSTITUTIONAL DEVELOPMENT:

(a) (i) 2 (by my predecessor).

(ii) 3.

(iii) 4.

(b) (i) (1) Study tour at the invitation of IDASA to investigate the relationship between the federal government of the United States and its state structures, the division of powers and functions, as well as the fiscal arrangements between these two entities.

(2) Attending a Congress on managing conflict in times of change at the invitation of the Foundation for Civil Society.

(3) Attending a Commonwealth Conference on Local Government.

(4) Constitutional study tour at the invitation of IDASA.

(ii) (1) R18 660,63.

(2) R43 399,86.

(3) R5 988,96.

(4) R58 158,37.

(iii) (1) United States of America.

(2) United Kingdom.

(3) Harare, Zimbabwe.

(4) United Kingdom and India.

(iv) (1) 28 April to 6 May 1995.

(2) 4 June to 10 June 1995.

(3) 27 June to 29 June 1995.

(4) 2 December to 13 December 1995.

Minister: time spent on visits outside RSA

183. Mr A J LEON asked the Minister for Provincial Affairs and Constitutional Development:

(a) How many days in 1995 did (i) his predecessor and/or (ii) his Deputy Minister spend outside the borders of the Republic, (b) what was the (i) purpose, (ii) destination, (iii) duration and (iv) cost of each visit and (c) who accompanied him in each case?

N341E

The MINISTER FOR PROVINCIAL AFFAIRS AND CONSTITUTIONAL DEVELOPMENT:

(a) (i) 17.

(ii) 21.

ment been honoured to date, or has there already been a deviation?

The MINISTER FOR PUBLIC ENTERPRISES: Madam Speaker, I think that a question arising from my answer will only be meaningful once the hon member has read my reply.

Ministers:

New questions:

Generals: "third force" activities

*1. Mr D H M GIBSON asked the Minister of Justice:

(1) Whether an official investigation has been undertaken into the alleged involvement in "third force" activities of certain generals, whose names have been furnished to his Department for the purpose of his reply; if not, why not; if so, (a) what stage has the investigation reached and (b) when is it anticipated that the investigation will be completed;

(2) whether he will make a statement on the matter?

N250E

The MINISTER OF JUSTICE:

(1) Yes. The alleged involvement of persons, including certain generals, forms part of ongoing investigations conducted by a Special Investigation Team headed by the Attorney-General of the Transvaal.

(a) and (b) The matter has been discussed with the relevant Attorney-General. Due to the difficulties inherent in investigating covert matters and to staff shortages (professional staff and police investigators), it is not possible to give a prognosis at this stage as to when the investigation will be completed.

(2) As the matter relates to certain pending prosecutions, no statement is envisaged at this stage.

Mr D H M GIBSON: Madam Speaker, arising out of the hon the Minister's reply, may I ask him whether he is satisfied about the fact that the allegations of the Goldstone Commission against Generals Basie Smit, Krappies Engelbrecht and Johan le Roux, which are now more than three years old, have still not been brought to court?

The MINISTER OF JUSTICE: Madam Speaker, it is desirable that where crimes have been committed and investigated and are ready for court, they should be brought to court as soon as possible. It is desirable, in the interests of justice, that prosecution be initiated as soon as possible. Obviously the time factor is of concern and every possible step is being taken to ensure that justice is proceeded with expeditiously.

Mr D H M GIBSON: Madam Speaker, further arising out of the hon the Minister's reply, will he be good enough to tell us what steps are being taken. He referred to staff shortages, but as long ago as 12 April 1994 Mr D'Oliviera, the Attorney-General of the Transvaal, announced that the investigation was commencing, and for two years since then these persons have lived with these allegations.

In addition I would like to ask the hon the Minister whether he agrees with the DP when we say that it is unconscionable for this to happen and that either these men must be charged or else the charges against them must be dropped.

The MINISTER: Madam Speaker, that is a very easy question. In principle I never agree with the DP. [Laughter.] Once again I think that the DP is being opportunistic. They know that there are problems relating to staff which arise from a number of causes. One of them is salaries, which are a big issue, and I think that if we resolved that issue then half of the problems would be solved. I may state, with regard to staff shortages in the offices of the attorneys-general, that they exist in the Witwatersrand office—that is still how it is known—and in the Pretoria office. In the rest of the country we do not have that kind of problem.

Historically also, as those who know those offices are aware, both have always had large turnovers. It is not a new problem which has arisen now. I do think that with salaries improving, as we hope they will in the course of this year, and as greater clarification is effected with regard to promotion prospects and also the application of our affirmative action policies, the position in both those offices will be satisfactorily resolved.

Mr A J LEON: Madam Speaker, further arising from the hon the Minister's reply and on the question of opportunism, on which the hon the Minister apparently is an expert, the three generals in question took early retirement, I understand, as a consequence of the evidence brought against them in the Goldstone Commission, which evidence the Minister will no doubt confirm was based on a single witness who was then a junior officer.

What steps is the hon the Minister taking to ensure that the three generals, or former generals, concerned are either brought to trial or have their names cleared, given that he has told us this afternoon in Parliament that every attorney-general's office outside the former Transvaal is running at more or less full capacity? Is it not in the interests of both the nation and, indeed, the persons concerned to second sufficient personnel to ensure that this matter, which arose in 1994 and generated a huge amount of international publicity three weeks before the general election, is brought to a conclusion one way or the other?

The MINISTER: Madam Speaker, that is another example of DP opportunism.

Mr A J LEON: Oh, you would know! [Interjections.]

The MINISTER: I am not in a position to answer those questions because they have not been put to me.

Mr A J LEON: But they are consequential on what you have been asked.

The MINISTER: Now that the hon member has asked those questions, I will look into the matter and I will furnish him with a reply.

(55) (254)

Atomic Energy Corporation: dismantling

*2. Mr M VAN S HAMMAN asked the Minister of Mineral and Energy Affairs:

(1) (a) What agency is responsible for the dismantling of the Atomic Energy Corporation's uranium facility in Pelindaba, (b) when is it expected that the dismantling will be completed and (c) what are the plans concerning the building itself;

(2) whether adequate steps are being taken to effect proper decontamination; if not, why not; if so, what steps;

(3) whether he will make a statement on the matter?

N251E

The MINISTER OF MINERAL AND ENERGY AFFAIRS:

(1) (a) The Atomic Energy Corporation established a project team, consisting mainly of personnel previously responsible for the operation and maintenance of the plant, for the dismantling of the AEC's uranium enrichment plants at Pelindaba. This was done for reasons of familiarity with the plant and with operating under a nuclear licence from the CNS and also for safeguarding the enrichment technology for reasons of non-proliferation.

(b) The bulk of the work will be completed by the end of March 1999 with possibly some continuation of decontamination of equipment over the next year or two. Decontamination of equipment is the critical path for the whole operation.

(c) There are no definite plans for utilisation of the building itself at this stage. It is envisaged that other projects within the AEC, currently in the development phase, could make use of the building.

(2) The whole question of dismantling and decontaminating of the uranium enrichment plant is performed under a special licence from the Council for Nuclear Safety. It is revision 1 (for dismantling) and revision 4 (for decontamination) of variation 17 of NL-27, the general nuclear site licence for Pelindaba.

Licence conditions determine decontamination standards and also monitoring procedures and conditions for releasing decontaminated materials from Pelindaba.

(3) Apart from the dismantling and decontamination of the uranium enrichment plants the AEC has also been involved in commercial—I stress the word "commercial"—decontamination operations of sites where contaminated scrap from mines, for instance, was handled in the past and also the commercial decommissioning of uranium plants belonging to mining companies.

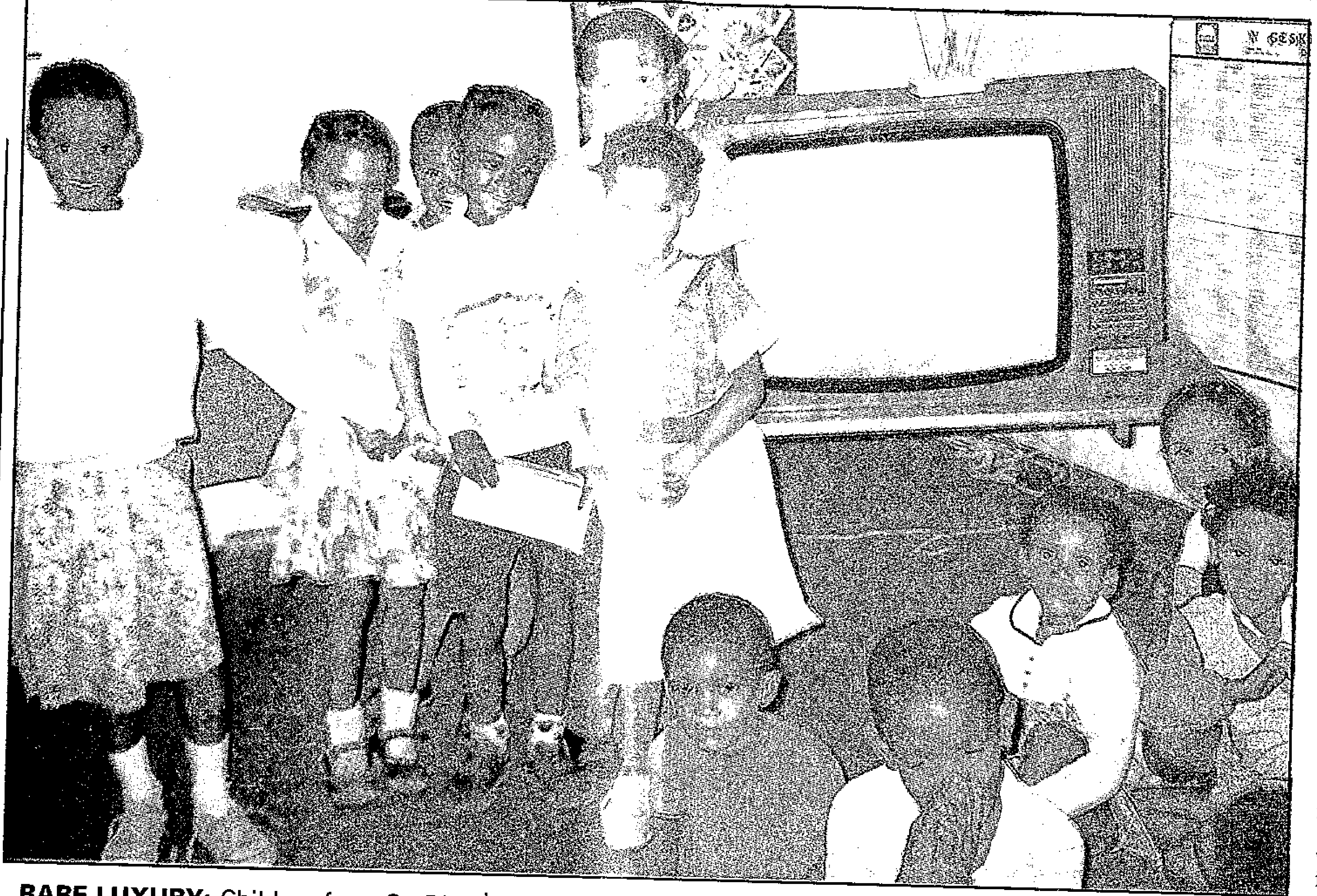
These other activities are being carried out within Pelindaba Technology Products (PTP), the commercial group of the AEC. The dismantling of the AEC's own facilities will in future also be handled as a commercial operation within PTP in con-

Magic moment at electrifying meeting

'Whole new world' opens up for pupils at rural primary school

ARG 3/4/96 (55)

TASLIMA VILJOEN
Staff Reporter



RARE LUXURY: Children from Op Die Kuile Primary School enjoyed every minute in front of the television set, which is a rare luxury for them.

IT WAS a moment of rare magic. Pupils crammed into Op Die Kuile Primary's tiny makeshift hall, waiting for electric light to flood the stage for the first time.

The atmosphere was charged as the children held their breath for the moment when principal Aron van Breda would flick the switch.

Afterwards Mr Van Breda likened the light to "manna from heaven".

"It's opened a whole new world for us," he said, speaking at the Porterville school's electrification ceremony.

For many years the school had struggled without electricity, which was especially bad in winter as the classrooms were very dark, he said.

"We had to struggle with candles and oil-lamps, but these didn't help much and were quite a fire hazard."

The seventy-six children present, from Op Die Kuile as well as surrounding schools, were quite beside themselves at the light, which they said was like magic.

But there was more to come. A farmer's wife had donated a television, which kept the children absolutely enthralled. For many it was the first time they had ever watched television.

Clara Ockhuis, a teacher at the small rural school, said: "As a teacher, not having electricity really limited me. I couldn't use any audio-visual equipment. Luckily now the problem is over and I can use more exciting teaching methods."

The electricity will not only benefit the children, but their parents too.

Mr Van Breda said parents would be able to attend school meetings at night as well as community meetings where they could be kept informed on issues and developments.

The school was one of many rural schools chosen for upgrading.

The electrification of all schools and clinics in South Africa is one of the objectives of the Reconstruction and Development Programme.

The project is being jointly undertaken by the Department of Mineral and Energy Affairs, Eskom, the provincial departments of education and the RDP office.

Their aim is to electrify 9 500 of South Africa's 25 900 schools without electricity this year.

This will include lighting for all classrooms, passages, headmasters' offices, staff rooms and halls as well as outside lighting.

About R550 million has been budgeted until 1999 for this purpose.

Of this, about R439 million will come from Eskom.

Black nuclear-reactor scientist 'left in the cold'

CT (BR) 4/4/96 (55)

By James Lamont

Johannesburg — South Africa's only black nuclear-reactor scientist said yesterday his contribution to the setting of national energy policy had been entirely overlooked by the ANC-led government.

Gordon Sibiya has a doctoral degree in nuclear-reactor physics from the University of Stuttgart and sits on the board of some of South Africa's largest companies. He said he had been marginalised from energy policymaking though there was only a handful of nuclear physicists in South Africa.

Sibiya runs a small electrical engineering consultancy and is the director of the Science and Engineering Academy of South Africa.

"I am not using my skills in the nuclear arena in South Africa. I don't understand how I have been left out of government bodies like the Atomic Energy Corporation."

He was nominated to join the board of the corporation, but was not appointed. Instead, he witnessed people appointed to energy committees and parastatals who had no involvement in science, let alone the nuclear field, he said.

Sibiya said that democratic government had brought no change to his exclusion from the nuclear establishment.

The corporation yesterday maintained that it had a representative board. Carel Fouche, the corporation's technical development manager, said that the board was appointed by the minister of mineral and energy affairs on the advice of the parliamentary standing committee on energy.

"The (corporation) has no say who is on the board," he said.

Fouche said the scientist "was never mentioned as a potential candidate for the board".

Marcel Golding, the chairman of the parliamentary select committee on mines and energy, could not be contacted for comment.

Sibiya's role in government is confined to advising Ben Ngubane, the minister of arts, culture, science and technology.

SIDELINED *Gordon Sibiya, a trained nuclear-reactor scientist*

PHOTO: JOHN WOODROOF

Plan to revamp SA's unwieldy power grid

(55) ST 7/4/96

By RAY HARTLEY
Political Correspondent

MINERAL and Energy Affairs Minister Pik Botha is planning a radical shake-up of South Africa's electricity distribution network in order to keep the government's electrification programme viable.

Mr Botha told the Sunday Times he would soon be approaching the cabinet "with recommendations to restructure the industry".

This would see a move to "cost-related tariffs" and "greater transparency" in the way local governments charge their customers for electricity.

Mr Botha said consumers who used electricity distributed by local governments did not know how much they were being charged, or how much of the charge was a "tariff" subsidising other services.

His proposal comes amid growing concern about the viability of Eskom's plan to electrify poorer households, with newly electrified houses using far less power than Eskom had anticipated.

About 60 percent of electricity is distributed by 420 local governments, some regional services councils and provincial governments. Eskom distributes the remaining 40 percent.

Mr Botha said fragmentation of distribution had led to about 2 000 different tariffs, a lack of capacity and "certain difficulties in raising money" for electrification: "Some distributors cannot meet their electrification targets because of their financial position."

He was considering suggestions by the National Electricity Regulator and the Electricity Working Group to streamline distribution by placing it in the hands of between five and 17 regional bodies.

If implemented, the move would require the relocation of 36 500 workers from Eskom, local governments and the former homelands to the new distribution bodies.

Eskom generates 96 percent of South Africa's power, and controls transmission from power stations to the national grid.

the go-ahead by the com- on competition in South counts. It must also pro- plied in Cape Town
Maclean has been given certain negative effects

ES!

Despite arrears, Eskom manages to boost profits

ST (BT) 7/4/96 (66)

By THABO KOBOKOANE

DESPITE a "healthy" 1995 financial year for Eskom, continued non-payment of arrears is "bleeding" the utility and could retard its drive to electrify 300 000 houses a year.

Allen Morgan, the utility's chief executive, said Eskom has lost R1,175-billion in arrears since the start of the rent and services boycott.

Presenting Eskom's financial results for the year to December 1995, Mr Morgan said there was a 40% rate of non-payment of areas in "19 problematic areas". However, this was an improvement from a 90% non-payment rate three years ago. Soweto, one of the "most problematic", had increased payments to 70% from only 20% three years ago.

Mr Morgan said Eskom was looking at ways to stem the losses and this included cutting off electricity to non payers and finding solutions with local government on how to deal with the debt problem.

Eskom, the fifth largest utility in the world, reported a 19% rise in income to R2,7-billion (1994: R2,3-billion) on the back of a modest 2,8% increase in sales.

An Eskom price increase of 4% resulted in an 11% increase in revenue to R17-billion (R15,4-billion).

Operating expenditure rose by 13% to R11 315 after provision for arrears debts of R302-million and medical aid post-retirement benefits of R151-million. The debt to equity ratio improved to 1,44 last year from 1,73 in 1994.

Willie Kok, financial director at Eskom, said the utility's financial health "continued to improve" and that Eskom was in "good shape".

John Maree, chairman of Eskom, said the utility had met three main targets set for 1995. These included being able to reduce the real price of electricity by 4% — and Eskom is on track to reduce the cost of electricity by 15% by 2 000, in line with its 1994 projections and to electrify 313 000 households.

He said 16% of the workforce was black, in line with a target of 50% by 2 000.

This year, the utility hopes to reduce the cost of electricity by 4% and connect a further 300 000 people to the national grid — which will bring total number of houses electrified since the drive to electrify 300 000 houses a year began in 1990 to over 1-million at an estimated cost of R2,9-billion.

Dr Maree said Eskom had a very good year technically as generation plant performance exceeded all targets with a unit capability factor of 84,3% — which was an all-time high for Eskom.

"If we can attain the UNIPEDE best quartile performance for a coal fired plant of 91,2% and also sustain it, we would be able to defer indefinitely the construction of one 3 600 Mw power station at a capital cost saving approximately R10-billion. Improved technical efficiency is a strong focus for management," he said.

Local authorities set to keep electricity function

(123) (55)

By Troye Lund

Star 8/4/96

After months of negotiations on restructuring electricity distribution in South Africa, local authorities across the country have accepted the electricity working group's (EWG) final report to the Minister of Mineral and Energy Affairs, Pik Botha, as an "acceptable compromise".

Local authorities were opposed to initial bids to take away their capacity as electricity distributors. Their opposition was based on the fact that councils depend on revenue generated from electricity sales. This revenue is used to subsidise other municipal services in poorer areas.

The report of the EWG, which includes representatives from all levels of government, Eskom and the National Electricity Regulator, must be considered by Botha before it goes public.

However, a body representing local authorities across SA, the National Consultative Body for Organised Local Government, has seen the report and met this week to consider it.

The chairman of this body, Christo Norton, would not divulge any details of the working group's report but was satisfied that electricity distribution would "remain largely in the hands of local authorities".

Eskom faces hidden costs in low price bid

(55)

Robyn Chalmers

BD 12/4/96

ESKOM's aim to provide SA with the cheapest electricity in the world had hidden costs which would have a huge effect on the future environment, according to a study under the Cosatu-linked industrial strategy project.

The study, conducted by the University of Cape Town's energy and development research centre researcher Clive van Horen, said hidden costs included injuries and mortalities in coal mines and the effects of air pollution on health.

There was also the threat of greenhouse gas emission which could lead to SA facing internationally imposed emission reduction targets, and the cost of state subsidies to the nuclear industry.

The main reasons for SA's low price of electricity were the abundance of coal reserves close to power stations and the high level of expertise in Eskom.

However, Van Horen said the electricity price was artificially low because inadequate attention had been paid to the environment and the associated health costs of generating it.

Trade and industry department director-general Zavareh Rustomjee said it was vital to consider the medium- and long-term consequences of neglecting the environmental effects of electrification.

Van Horen said should Eskom continue to meet its target on price reduction, the average electricity price in 2000 would be 60% of 1987 prices.

"This is likely to encourage a heavily energy- and resource-intensive growth path which, once taken, could be difficult to redirect," he said.

Reshuffle a blow to community groups

BD 12/4/96

Theo Rawana

THE impending closure of the RDP office following the recent Cabinet reshuffle had thrown community-based organisations into confusion over the fate of a funding mechanism former minister Jay Naidoo was to co-ordinate, the groups said yesterday.

National Community-Based Development Organisations Network secretary-general Shuffle Mokwele said the network's envisaged participation in a task group had been dealt a blow by the Cabinet reshuffle. The task group was to work towards the establishment of the National Development Agency when the Transitional National Development Trust's period of existence expired after two years.

"Although the establishment of the NDA task group has taken an unnecessarily long period of time, it was always hoped that the RDP ministry would continue to facilitate its establishment. With the closure of the RDP ministry, it is no longer clear as to who or which department will take the responsibility to co-ordinate efforts towards the ultimate establishment of a funding mechanism for non-governmental and community-based development organisations' projects and programmes," Mokwele said.

The networks seek clarity on this matter as the NDA process is viewed as its lifeblood, he said.

Mokwele said his organisation was also opposed to the Independent Development Trust and the Kagiso Trust being the sole players in the task of communicating with the communities in the area of development.

"The network is opposed to a situation where only the IDT and the Kagiso Trust will be responsible for consultations within communities while community structures are passively looking on. In the view of the network, this will be against the principle of a people-driven process which the RDP is all about."

He said the network had made a submission to the transitional development trust, whose secretariat comprises the IDT and Kagiso Trust, to consider the decentralisation of the trust's process.

Although the network and other stakeholders had participated in the establishment of the trust, the organisation could not form part of the secretariat as it had no resources. There were also no funds which the trust could use to employ the services of the network.

Mokwele said central and provincial government had an obligation to assist community-based organisations to be sustainable. "To this end, they should be considerate to the plight of these organisations without prejudice," he said.

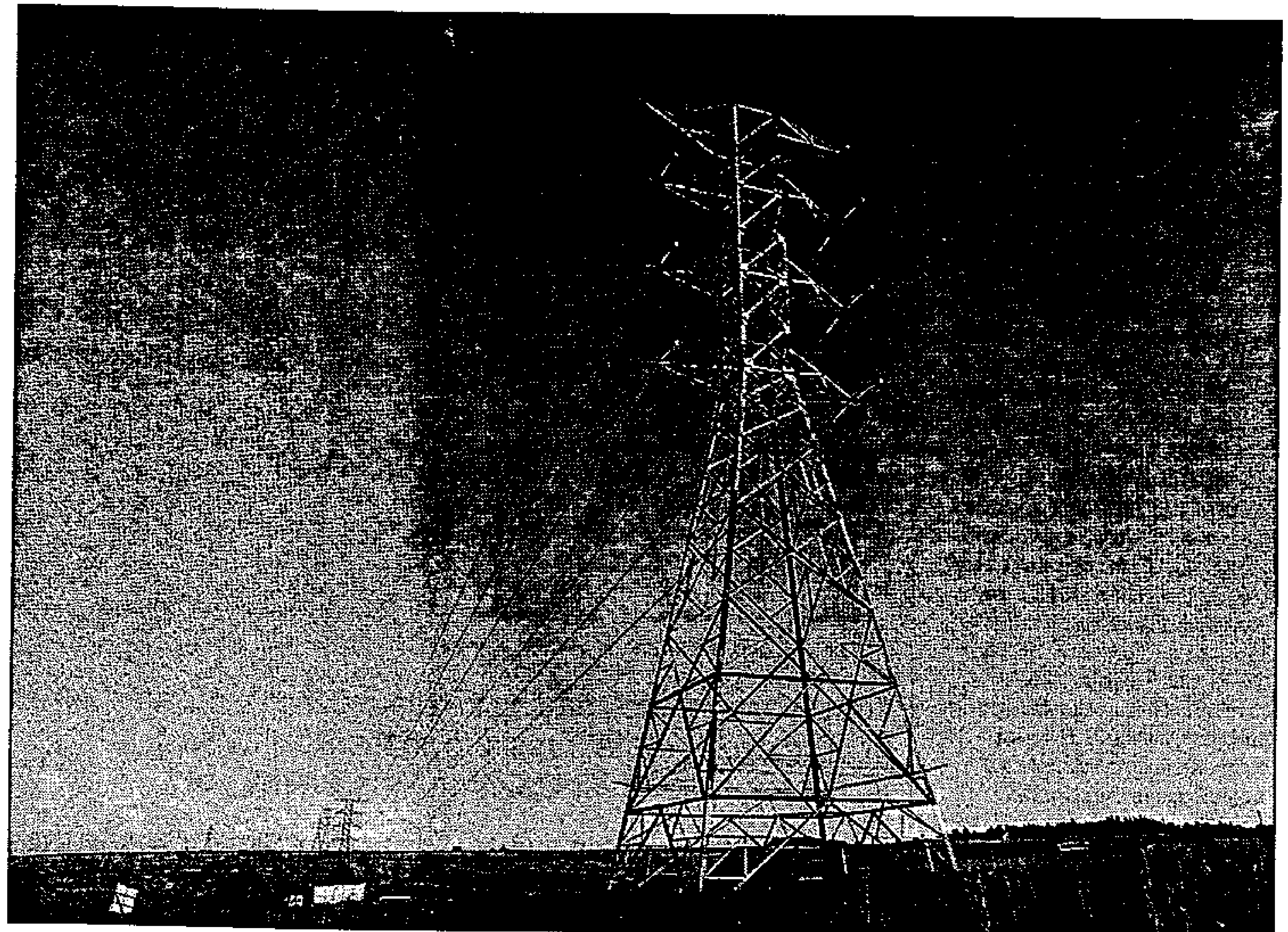
Eric Molobi, chairman of the trustees who decide on the issue, was not available for comment yesterday.

'Power' to the masses comes first

(55)

M+G 12-18/4/96

The need for electrification may outweigh the environmental factors, but there is a trade-off between economics and the social costs. **Madeleine Wackernagel** reports



High price for cheap power: 'The priority is getting electricity to as many people as possible' PHOTO: RUTH MOTAU

SOUTH AFRICA pays a high price for its cheap electricity, according to a new report published by the Industrial Strategy Project, a Cosatu-linked think-tank.

Clive van Horen of the Energy and Development Research Centre at the University of Cape Town, who conducted the study, says South Africans are already paying the price in terms of the impact on the environment and the population's health.

"We cannot afford to carry on ignoring these external costs," says Van Horen. "Nor can we go around raising the price of electricity willy-nilly. There has to be a trade-off between economics and the social costs."

Eskom is the fifth-largest electricity utility in the world, and power costs in this country are the second-lowest; only New Zealand is cheaper. On this basis, Van Horen believes the South African experience bears comparison with developed countries, rather than the less sophisticated industries of Mexico, Brazil or Malaysia, which are similar middle-income developing countries.

And by that standard, South African electricity is absurdly cheap. Prices in Germany and Japan are up to three times higher. But is this a reasonable comparison when most of the population has no electricity at all and electrification should be the top priority?

Dr Steve Lennon, research manager at Eskom, believes the external costs of not having electricity outweigh the environmental factors. Not that Eskom is ignoring the impact its emissions have on the atmosphere or people's health.

Indeed, most of its power stations burn low-sulphur coal, complying with international standards of acceptable pollution levels. And Eskom's second environmental performance report, released today (Friday), will show an overall improvement in standards, says Lennon.

Environmental standards and concerns have changed dramatically in the past 20 years; the next generation of power sources will reflect these factors, says Lennon. Eskom is already looking at the options of hydro-power, clean coal technologies and natural gas sources off Mozambique and Namibia.

But for now, says Lennon, the priority is getting electricity to as many people as possible. The cost of retrofitting a power station with scrubbers to cut down on emissions would add 30% to the price; Lennon believes it would be more effective to use that money on electrification.

Bringing electricity to the townships and rural areas does not necessarily eliminate the pollution cost, says Van Horen. Coal and firewood are still the favoured energy source in many areas.

Van Horen believes Eskom cannot afford to clean up its power stations and continue with electrification at the same time.

As more people fall victim to the effects of emissions, the social cost to society as a whole outweighs the benefits. He calculates the health effects of air pollution at about 4% of average electricity tariffs, excluding the long-term costs of acidification on buildings, crops and forests. Reducing emissions would cut the health cost by about 70%.

But Lennon insists South African standards are not out of line with international experience and to compare us with First World countries is unrealistic. Australia, for instance, has not a single plant fitted with scrubbing equipment; retrofitting one power plant in Britain cost £500-million.

John Loewen, an analyst at Ivor Jones Roy, agrees: "Eskom cannot afford a clean-up exercise at this stage. Right now the money is better spent elsewhere. And raising the price of electricity to pay for it is also not viable; the poorest would be hit hardest."

Concern over tax proposal

Robyn Chalmers (260) (55) BD 15/4/96

ESKOM's ability to finance its electrification programme would be affected by government proposals to tax the parastatal and implement a dividend payment system, chairman John Maree said in the 1995 annual review.

Maree said the electrification programme, and Eskom's other commitments to the RDP such as further reducing the price of electricity, had long-term social and economic benefits for SA.

"In-depth consideration will have to be given to the treatment of monies spent on the electrification under a different tax and dividend dispensation so that (these undertakings) continue as planned," he said.

During the year ended December, Eskom increased net income to R2,7bn from R2,3bn for the previous year on an 11% increase in revenue to R17,1bn.

Maree said Eskom had achieved its target of making 300 000 new connections last year against 250 000 in 1994 despite being prevented from working in a number of urban areas for lengthy periods.

"It is estimated that the lives of about 1,5-million people have been changed as a result (of the electrification programme). Research has shown that for every 100 homes electrified, between 10 and 20 new economic activities are started," he said.

Eskom also continued to make inroads into reducing the real price of electricity during the year ended December 31, with a price increase of 4% for the year against an inflation rate of 8,7% leaving a real reduction of 4,7 percentage points.

Maree said the increase for this year was again 4% with an anticipated real price reduction of a further 4%. Eskom was on track to reduce the real price of electricity by 20% between 1992 and this year.

The parastatal's international borrowing capability had been boosted by an improved credit rating by Standard and Poor's rating group while the new depository receipt programme for SA debt securities had been well received.

Discussions are being held over the shake-up of electricity distribution and Maree said the electricity working group's recommendations were being considered by government and an announcement was expected soon.

The Star ... Monday April 15 1996

Looking for a breath of fresh air

(55) (260) Star 15/4/96

By Anita Allen
Science Writer

Eskom is winning and losing the battle against air pollution from its coal-fired power stations, according to its 1995 Environmental Report.

On the one hand, emissions of particulate matter – visible smoke – decreased in 1995 despite an overall increase in the amount of electricity generated.

On the other, emissions of the main greenhouse gases have increased relative to the amount of electricity generated.

No explanation for the decline in performance on gaseous emissions of carbon dioxide, sulphur dioxide and nitrous oxide was given.

But, the report said: "Research on alternative generation and operation technologies to reduce gaseous emission levels is a long-term strategy receiving continuous attention.

"It includes nuclear and hydroelectric alternatives."

This is the second year that Eskom has produced an environmental report.

The major significance of the 1995 report is that Eskom has been able to quantify its performance against targets set last year.

Emissions of particulate matter showed an average decrease of 7 kilotons, from 122 kilotons in 1994 to 115 kilotons last year.

In the same period, electricity generated increased from 148 000 Gigawatt hours in 1994 to 152 000 GWh last year.

The improved overall performance in terms of air quality shows that in 1994 Eskom's coal-fired power stations produced 0,83kg of particulate matter per Megawatt hour of electricity produced, compared with 0,77kg per MWh last year – an overall improvement of 0,06kg per MWh.

In terms of air quality trends on the Mpumalanga highveld, the report showed that the decline in air quality of the region was continuing its trend from a high in 1984.

Eskom's power stations have also shown improved water consumption for electricity generated, down from 1,41l per kilowatt hour in 1994 to 1,38l per kWh last year.

In terms of meeting Reconstruction and Development goals, Eskom has exceeded targets, supplying electricity from the grid to 313 179 homes in 1995, against a target of 300 000.

In addition 893 schools and 37 clinics were supplied with electricity.

Eskom reinforced its commitment to the environment by appointing a corporate environmental affairs manager to be responsible for co-ordination and balance in addressing environmental matters, chief executive Allen Morgan said in his preface to the report.

"Environmental management is one of five core research areas regarded as critical to the long term health of Eskom and its customers," he said.

Of the R4,2-million allocated to capacity building and training at universities and technikons last year, about 20% went to environmental support programmes.

In addition, of the R10-million allocated to tertiary institutions for contract research, some 30% went to research on environmental projects.

Power dips cost SA industry R1,2bn

BD 17/4/96 (55)

Nicola Jenvey

DURBAN — Power dips cost SA industry R1,2bn a year, representing about 10% of Eskom's sales.

Key customer relations manager KwaZulu-Natal, Hugh McGibbon, said voltage depressions were caused by lightning, burning of sugar cane or veld fires near transmission lines and failures at plants. The US incurred losses of R102bn or 12% of total sales.

Eskom measured voltage dips at 130 locations on its high voltage transmission network.

Eskom and the National Electricity Regulator were drawing up acceptable supply standards.

The real cost of delivery of underground cabling would rise tenfold, while coal transportation costs discounted building power stations in KwaZulu-Natal.

The province experienced about 46 power dips annually compared to the Northern Province at 55, Eastern Cape 48, Mpumalanga 44 and Gauteng 23.

Eskom recently completed a R39m project to replace insulators on coastal KwaZulu-Natal lines.

FUEL IMPORTS

FM. 19/4/96 (55) (244)

SECOND PETROL PRICE SHOCK

With oil prices spiking at a five-year high and the battered rand bumping along at record lows, motorists can expect to be hit by at least a 12c/*l* petrol price increase on May 1. The increase follows the 8c/*l* rise on April 3, making an 11% price increase or 20c/*l* within a month.

The sharp petrol price rise results from the dual blows of the rand plummeting to R4,24/dollar on Tuesday, while sweet North Sea Brent crude oil prices simultaneously surged to over US$22/barrel.

The inflationary aftershocks of the increases are expected to permeate the economy for months to come, as the transport and energy sectors push the escalating costs on to customers.

While the petrol price hike is expected to push the PPI rate 1% higher over the next six months, the CPI rate should follow closely with a 0,9% increase.

Huysamer Stals chief economist Johan Rossouw says with petroleum prices making up about 5% of the PPI basket (4% in the case of CPI), a sustained 10% petroleum price increase will have a 0,5% direct impact on the inflation rate (0,4% in the case of CPI), while the longer term, "indirect" impact will add another 0,5% to both the PPI and CPI rates.

Optimists say the rand should recover some of its lustre soon. But, though other analysts say the end is not yet in sight, crude oil prices, at least, are showing some signs of bottoming out.

The tight global market conditions should return to normality over the next two to three months, with the northern hemisphere's petroleum inventories being topped up as refineries step up production.

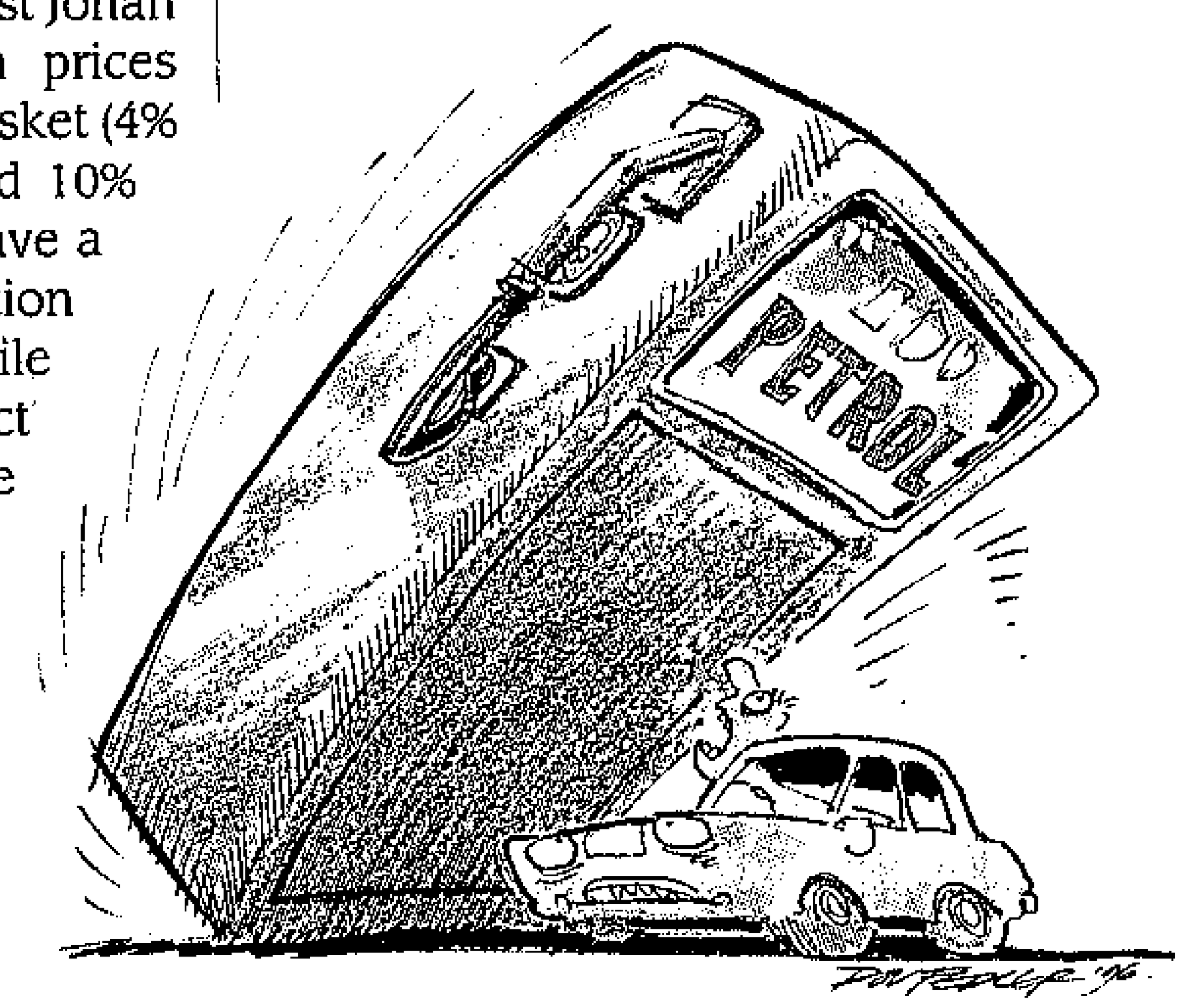
Northern refineries were caught short due to a combination of two other circumstances: with Iraq oil expected to start flowing "soon" — subject to a special oil-for-food deal being finalised with the UN — and the end of winter in sight, refineries kept stocks low. But the continuing delay with the Iraqi deal, coupled with the longest and harshest winter in decades, caught everyone short, leading to the oil price hitting five-year highs.

Crude oil futures trends signify that prices should return to more "normal" levels within the next two months. Brent spot prices started coming off their highs on Monday.

Meanwhile, SA's regulated liquid fuels pricing structure is adding to motorists' woes. SA Petroleum Industry Association spokesman Colin McClelland says SA's petrol prices are linked to international refined petrol prices, which are now rising as more motorists take to the roads in the post-winter thaws.

"In the northern winter, paraffin, diesel and heating oil prices are high, while the converse applies to petrol prices. SA's domestic liquid fuels prices reflect these northern trends."

Highveld motorists using 93 octane leaded petrol now selling at 192c/*l* will have to fork out at least R2,04/*l* from May 1. Unleaded petrol will still be available at a 4c/*l* discount.



Transnet economist Mike Schussler says even if oil prices recover, the low rand will keep petrol prices higher than before the latest hikes. And the inflationary impact of the increases will be felt up to July.

Fortunately, the weak rand also has some benefits — mainly that of depressing demand for more expensive imported products. Conversely, SA's exports will become at least 16% cheaper, due to the rand's depreciation since mid-February.

"Should the rand remain at current values, I expect import volumes to fall by 2%-3% over the next six months, while exports should show a similar rise as our goods become cheaper offshore."

Schussler says the strong dollar has had a far greater impact on the falling rand than political or domestic economic factors. ■

Shadow falls over lights of progress

(55) ST 21/4/96

By RAY HARTLEY
Political Correspondent

GOVERNMENT's most successful RDP project — to electrify 400 000 houses a year — has come under fire from investors, trade unions and non-governmental organisations, raising doubts about its ability to pay for itself.

The project, which is being undertaken by Eskom and local authorities, has failed to deliver levels of electricity consumption promised to investors, some of whom have begun to question their decision to place money with the programme.

The Sunday Times has learnt that Old Mutual, a major investor in the programme, has been involved in behind-the-scenes talks with Eskom to work out ways of protecting its investment.

The electrification of low-cost housing was financed on the basis that investment returns would be linked directly to the amount of electricity used.

For the programme to be sustainable, consumers need to use around 400 kilowatt-hours of electricity a month on average, according to Johan du Plessis of the Electricity Regulator, an independent body that oversees the electricity industry.

Instead, they have been using just over 100 kilowatt-hours, leading to low investment returns.

Old Mutual and Eskom officials were reluctant to comment this week, but confirmed that talks were under way.

Old Mutual's chief portfolio manager Adré Smit said: "It's a private matter between us and them."

An Eskom official said: "If investors went into it to make something for their own pockets, I would question why they went into it in the first place."

In October last year, Eskom's Henry Simonsen, who has since left the parastatal, drafted a report on the state of the electrification programme and its prospects. But his findings have been kept under wraps by Eskom officials. Mr Simonsen would not disclose the contents of the report this week, but it is believed to detail problems of under-consumption and non-payment by newly electrified households.

An Eskom statement released to the Sunday Times confirmed that low consumption, non-payment and the theft of electricity were problems.

It said: "Merely to recover the interest Eskom pays on the loans it has taken to do the electrification, and its supply cost, the average electrification customer should use, say 140 kilowatt-hours a month."

Meanwhile, Mark Pickering, of the non-governmental Mineral and Energy Policy Centre, has questioned the impartiality of the National Electricity Regulator.

Mr Pickering and other development officials have asked why the regulator's administration was made up of seconded Eskom officials and why former Eskom chief executive officer Ian McRae was made chairman of the regulator's board.

"Dr McRae is driving the process in a dogmatic fashion," Mr Pickering said.

Mr du Plessis defended the impartiality of the regulator, saying that Dr McRae was the person best qualified for the job precisely because of his Eskom experience. He said Dr McRae's decisions had to be approved by eight independent board members.

Eskom personnel had been seconded to set up the administration, but all posts had subsequently been advertised, he said.

But Mr Pickering said electrification resources were being used inefficiently, with some big urban areas left unconnected because local authorities were unable to finance electrification.

The huge settlement of Duncan Village outside East London had remained without electricity, while Eskom concentrated on far-flung rural communities in the former Ciskei and Transkei, areas where payment and consumption were low, he said.

The National Union of Mineworkers has meanwhile planned countrywide marches on Eskom offices to protest against what it sees as attempts to privatise distribution by creating independent regional electricity providers.

NUM organiser France Baleni said his organisation had reached an agreement with Eskom that it would take over electrification programmes if local authorities could not cope financially.

But Eskom had "gone behind our backs" with its plan to establish regional distributors, he said.

UNDER CURRENT . . . Lizzie Silaule's Ivory Park spaza shop uses less electricity than predicted Picture: JON HRUSA

France to process Eskom's raw uranium for Koeberg

Edward West (55) BD 22/4/96

ESKOM has shipped 222 tons of uranium hexa-flouride — raw material to fuel its nuclear power capacity for 18 months — to France for processing, following the closure last year of enrichment capacity at the Pelindaba Z plant.

The utility said at the weekend that the raw material, transported on 28 trucks from Pelindaba and shipped through Durban, would remain with French nuclear authorities until a French company had been contracted to enrich the material for SA's Koeberg power station.

Spokesman Gina Lamparelli said the shipment from the Atomic Energy Corporation's Pelindaba plant was the first to be undertaken by Eskom following the closure of the corporation's uneconomic Z uranium enrichment plant.

The shipment, enough material to process 53 to 54 fuel rods for Koeberg, would result in an R11m saving to Eskom compared to the costs for Pelindaba's enrichment.

The mineral and energy affairs department said early last month that the corporation would work with French parastatal Cogema in developing uranium enrichment technology.

Government has said the contract could boost SA's uranium exports R200m a year. The corporation and Cogema are researching separation technology used in commercial enrichment of uranium, with the joint project expected onstream in three years.

France to process Eskom's raw uranium for Koeberg

Edward West (55) BD 22/4/96

ESKOM has shipped 222 tons of uranium hexaflouride — raw material to fuel its nuclear power capacity for 18 months — to France for processing, following the closure last year of enrichment capacity at the Pelindaba Z plant.

The utility said at the weekend that the raw material, transported on 28 trucks from Pelindaba and shipped through Durban, would remain with French nuclear authorities until a French company had been contracted to enrich the material for SA's Koeberg power station.

Spokesman Gina Lamparelli said the shipment from the Atomic Energy Corporation's Pelindaba plant was the first to be undertaken by Eskom following the closure of the corporation's uneconomic Z uranium enrichment plant.

The shipment, enough material to process 53 to 54 fuel rods for Koeberg, would result in an R11m saving to Eskom compared to the costs for Pelindaba's enrichment.

The mineral and energy affairs department said early last month that the corporation would work with French parastatal Cogema in developing uranium enrichment technology.

Government has said the contract could boost SA's uranium exports R200m a year. The corporation and Cogema are researching separation technology used in commercial enrichment of uranium, with the joint project expected onstream in three years.

Electricity gives Nobody's folks time to relax

Star 23/4/96 (55)

Life in the Northern Province village has changed with a new sense of power

By Adam Cooke

Sarah Malatjie does not know how old she is. She also has no idea of when her two-roomed shack got electricity. But she does know that power has transformed her life.

Malatjie lives in a village with the odd name of Nobody – some 20km south of Pietersburg in Northern Province – in an area re-cently electrified as part of Eskom's ational commitment to, literally, ring power to the people.

Her little house is made of ood and plastic. In the immacu-ate living area is a host of basic ap-liances. A fridge, a hotplate, a tele-ision and light have replaced andles, paraffin cooker and a adio that she only used when she ould afford batteries.

"My life is new even though I m old. I now have time to relax here in the past I would have een gathering wood," she said.

Down the donga-filled road, egotiable only at about 10km/h, the Lazarus Khanyi Tuckshop, a aza shop that has more than oubled its profits since being able refrigerate drinks, milk and ocolate in the hot months.

"I sell about 10 cases of cool ink, milk and beer a day, where-s before I could only sell sweets d bread," said the owner.

Eskom committed itself in 1991 electrifying 300 000 houses a year. Nearly 1-million homes have been electrified nationally, and if Eskom keeps to its target, just over 65% of South Africa will have power by 2000.

But Northern Province's Sales and Customer Services manager Sipho Tjabadi said Eskom's vision was more than just delivering power: "It is part of our commitment to developing South Africa, and the spinoffs of electricity for economic development are huge."

But few people are using enough power for Eskom to see a return on its investments.

"We are now focusing on social and economic development, and providing people with the capacity to use more power," he said.

Eskom has spent almost R1-million in sponsoring community welfare organisations in Northern Province and has helped to establish 40 small businesses.

With more money going into rural areas, more stable communities will, Eskom hopes, use more electricity. And at a cost of R3 400 per unit that is installed, Eskom in Northern Province expects to see payback in 15 to 20 years.

The project in that province has also seen Eskom using local labour and contractors, and launching 19 new black contractors in 1994. These contractors have been awarded more than R2-million worth of contracts to date and employed at least 300 people.

ANDREAS VLACHAKIS

Switched on ... a light, hotplate,television and fridge have replaced candles, paraffin cooker and battery-operated radio in Sarah Malatjie's humble home in the village of Nobody.

Eskom investigates rural solar power

BD 24/4/96. (55) (108)

Robyn Chalmers

ESKOM was far advanced in its investigation into the viability of using solar power to provide electricity to rural areas, as electricity usage in poorer areas was lower than originally estimated.

Eskom CE Allen Morgan said yesterday the mass electrification programme remained firmly on track. More than 1-million connections had been made to the national electricity grid since 1988, with 313 000 connections having been made last year at a cost of about R1bn.

Morgan said the mass electrification programme was a long-term undertaking and could take up to eight years before a positive cash flow was reached. But this depended on, among other factors, higher economic growth, which would require commitment from government, business and labour.

"Investors in the electrification participation note are well aware that this is a lengthy venture, but the programme has long-term social and economic benefits for SA," he said.

However, Morgan said that electricity use in rural areas was significantly lower than in more developed areas, and Eskom was thoroughly investigating going the solar power route.

All the major life assurers had invested in electrification participation notes, and industry sources said it was too early to establish a trend. The bond was a 15-year instrument which had been going for only about 18 months.

One source said that some of the life assurers could be holding talks with Eskom regarding their return on the bonds, but it probably had more to do with the consistent monitoring of investments than with unhappiness regarding the electrification programme.

The source said the bond had been structured so non-payment — an ongoing thorn in Eskom's side — did not affect the investment of life assurers as it revolved around prepaid meters.

Nevertheless, arrears rose R300m last year to more than R1,2bn because of non-payment in certain areas as well as new problem accounts from the Transkei Electricity Supply Commission. The Masakhane Campaign had failed to have a significant effect on non-payment, despite the increased number of connections last year.

Limiting the hazards of radioactivity

Star 26/4/96

(55)

The cutting edge of research is determining safe levels of radiation in the environment and for humanity

By Anita Allen
Science Writer

Every day we are bombarded by radioactive particles, to the point that our own bodies are radioactive. However, as long as radioactivity is there as a natural occurrence, it is not dangerous, says Dr Arnaud Faanhof, consulting scientist at the Atomic Energy Corporation's Radioanalytical Technology Laboratories.

"As soon as you start extracting radioactive substances, it can become a problem. The more you concentrate the radioactive elements, the more chance they will become dangerous," he says.

This happens in all mining and mineral processing, where people working in high-risk areas, for example, in uranium extraction, need to be monitored. According to Faanhof, the only mining operations which need not monitor their workers on a regular basis are those involved with diamonds and oil.

"Every larger mining operation should be using a monitoring system for the safety of their workers. This includes quarries where young granite deposits are being mined," he says.

At AEC "high-risk" individuals are those in the decontamination teams, which are currently dismantling the old uranium enrichments plants, and people working in the Safari 1 reactor and hot-cell complex, where radioisotopes are produced and assembled.

International standards are applied in South Africa

Determining the radioactivity in humans is part of the daily work at the AEC laboratories. It forms part of a full analytical and monitoring service for any industry where radioactive materials are handled. The major clients are mining and mineral processing companies.

South Africa does not have any regulations governing radioactivity in the food we eat or drink, or even in our surroundings. Instead, international standards are applied. The only law governing radioactivity we have is the Nuclear Energy Act, which spells out which activities involving radioactive materials require a licence from the Council for Nuclear Safety.

Faanhof emphasises that all radioactivity has an impact on the human body, which can be monitored via urine testing and whole body and lung counting.

In 1995, about 10 000 urine samples from workers exposed to radioactivity were tested at the AEC labs, as well as 1 100 whole body counts.

"We will not only do an analysis, but discuss the problem, the design of the laboratory or workplace where radioactive materials are to be used, and evaluate the data from the plant, to determine whether it is a hazard in terms of the existing local and international regulations," says Faanhof.

Radioactivity stems from natural radioactive elements. Uranium, thorium and potassium are the three most abundant of naturally occurring radioactive elements. They are radioactive because their nucleus is unstable and emits alpha or beta particles. These elements and their radioactive decay products are present in foods we eat, the fluids we drink, the air we breathe and the water we wash in.

Analysis of this radioactivity has diverse applications. One recent programme at the AEC labs was the monitoring of radioactivity in water to determine the impact of industrial activities.

"Relatively high total radioactivity content was found, especially around mining and mineral processing areas," Faanhof says. "At this stage we are not able to say that the levels are dangerous."

Another programme for the University of Stellenbosch attempted to establish whether lesser kestrels breeding in South Africa had migrated from Russia or Spain.

Because of Chernobyl, it was thought that, as predators, kestrels originating in Russia would have ingested higher than normal levels of caesium 137 and strontium, which are the main radioactive elements resulting from a nuclear fallout. The tests did not detect any abnormal levels.

Another type of analysis, known as neutron activation, involves irradiating a given material by bombarding it with neutrons in AEC's Safari 1 reactor. In this way, artificial radiation is induced which produces gamma rays.

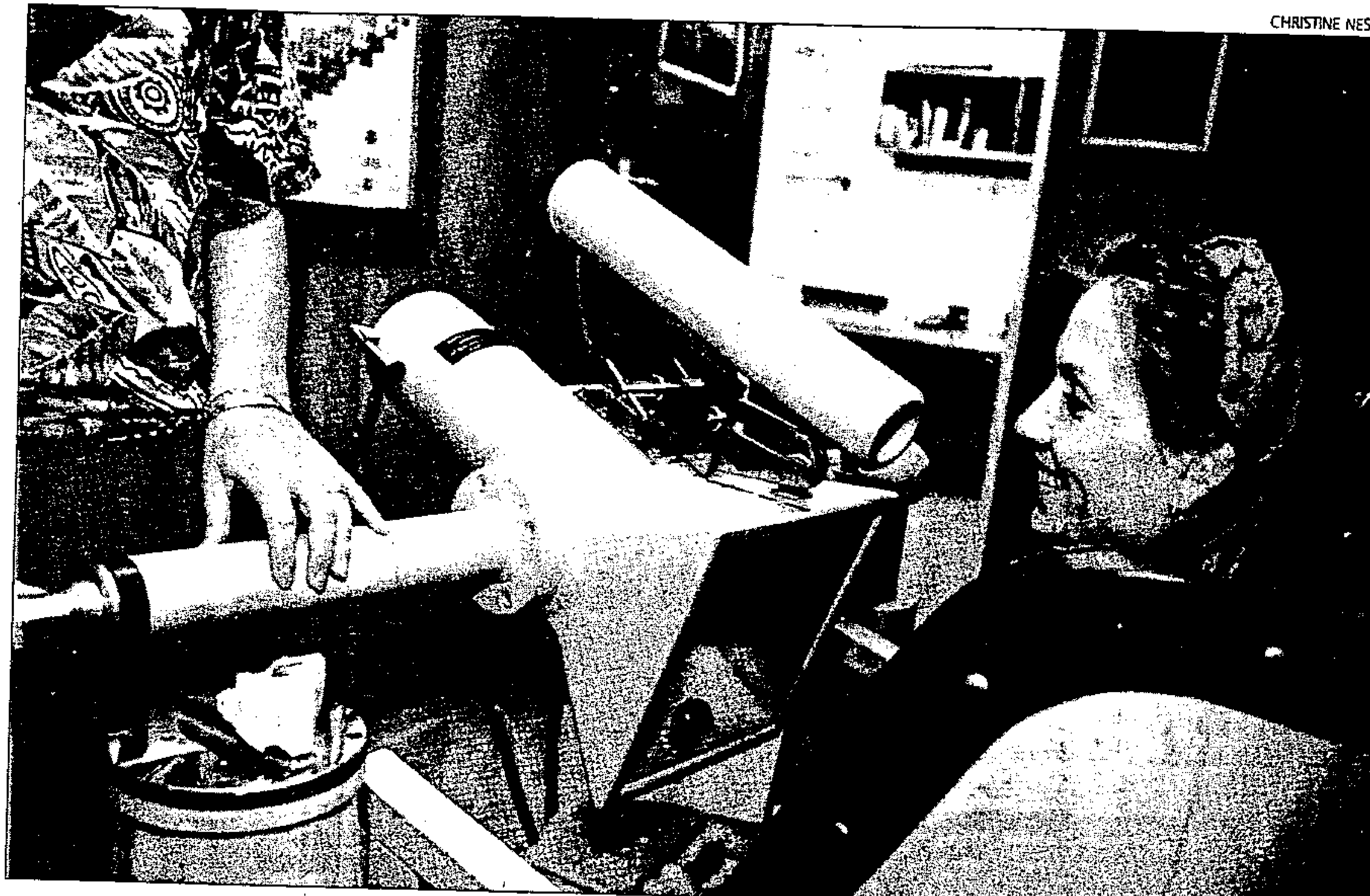
About 50 different elements can be identified from their gamma ray spectrum, as well as the amount of each element. This kind of analysis gives a fingerprint of the irradiated substance.

Regular testing at the AEC labs is also done for businesses exporting a range of agricultural products including milk powder, maize meal, peanut butter and sugar.

"One reason for the tests is to establish whether the products originated from Chernobyl-affected areas and are being routed through SA," Faanhof says.

An example of such a test was on a batch of strawberry jam, where a local supplier stuck his label over the original Russian one. The caesium and strontium levels were higher than local products but still within safe levels. "We are still exploring radioactivity, but the cutting edge of research is determining whether radioactivity is hazardous to the environment or humanity," Faanhof says.

As the effects are better understood, international standards change. In 1995 the International Committee for Radiation Protection put out new standards which lowered the levels for human exposure by a factor of about two. It also allowed for higher concentrations of natural radioactivity in the produce we consume daily.



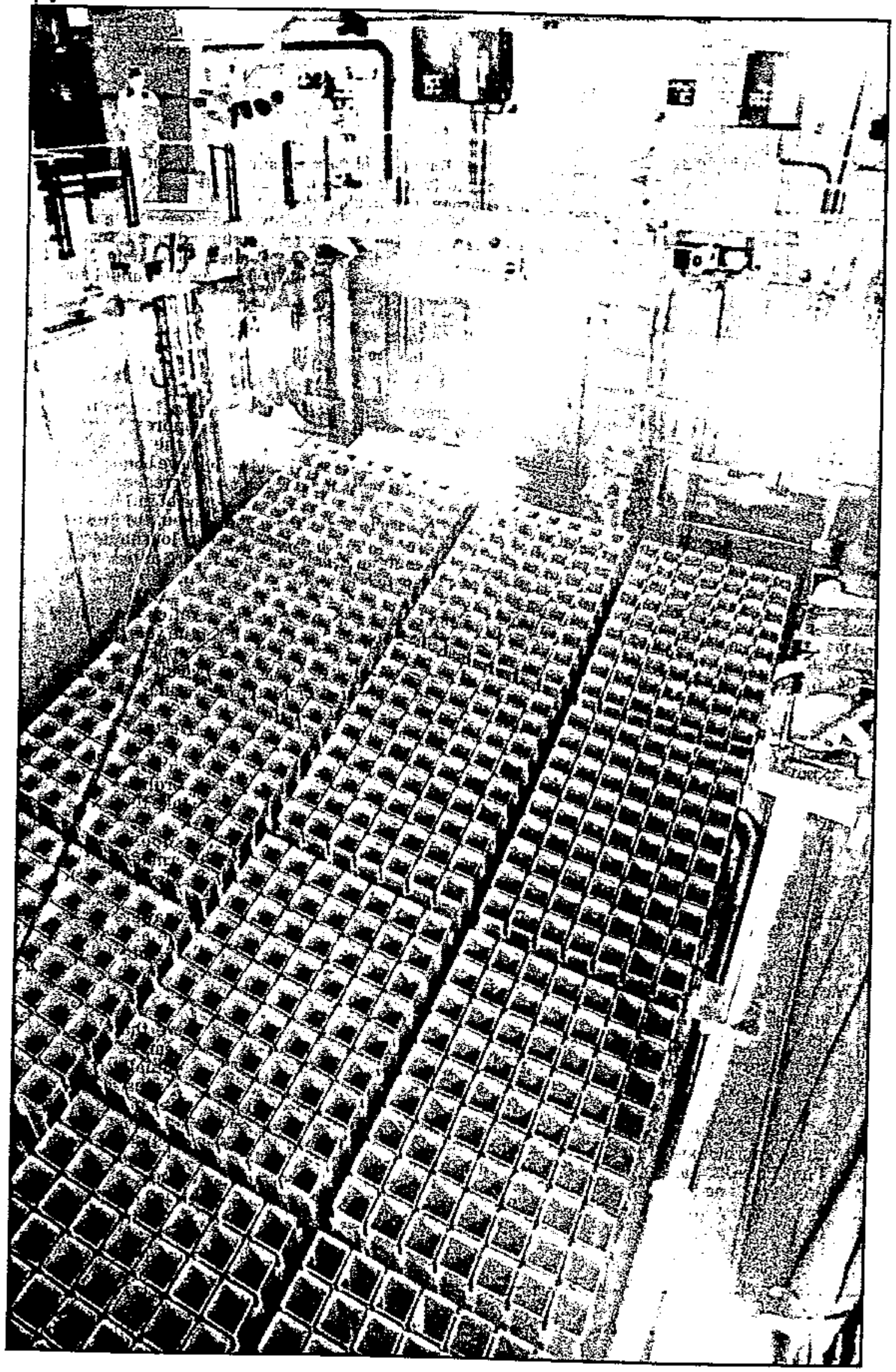
CHRISTINE NESBITT

A clean bill of health ... after six years of working at Pelindaba, public relations officer Lola Patric is analysed for radioactivity in her body at the Atomic Energy Corporation laboratories.

Koeberg: Awaiting a national strategy

ARG 27/4/96 (55)

■ The 10th anniversary of the Chernobyl disaster which shook the world has rekindled a long simmering row over the continued operation of South African only nuclear power station at Koeberg, writes Staff Reporter **ADELE BALETA**



Pictures: ANDREW INGRAM, Staff Photographer.

POOL ROOM: One of two spent-fuel pools containing high-level radioactive waste at Koeberg. As yet, no strategy is in place for disposing of waste, because no plants in the world have been decommissioned. No sound precedent has been set for nuclear waste-disposal.

TEN years ago on April 26 the worst nuclear power accident in history took place at the Chernobyl nuclear power plant in the Ukraine.

A combination of design faults and bad operatingpractices resulted in a power surge causing an explosion in the reactor which led to large amounts of radiation being released into the atmosphere.

Hundreds of people died from the rising incidence of thyroid cancer and radiation sickness in children in Belarus, in Ukraine and in Russia, which have has been directly linked to the Chernobyl disaster.

Plant and animal life as far away as Britain has been affected by the radiation.

The grim anniversary of the catastrophe with its lethal short and long term effects has rekindled the long simmering row over the possible dangers of nuclear power in South Africa.

Environmental and labour groups have demanded that South Africa's only nuclear power station at Koeberg be shut down before there is a meltdown.

But, Eskom management said: "Don't worry , we are confident that Koeberg is an asset to the people of South Africa and does not pose any kind of hazard."

They said an accident like the one at Chernobyl could never happen at Koeberg. They pointed out that the two plants were designed differently and operated with "different philosophies".

The electricity giant's management added that a plant such as Chernobyl would never have been licensed for operation in the Western world because "it relied on the competence of its operators to compensate for several design faults.

"Operators are people and as such

Mr Kantey said food grown as far away as 2 000km might not be edible. Farm produce from anywhere in South Africa could be contaminated with radioactivity.

"There is no such thing as engineered safety. The explosion of space shuttles in mid-flight is proof of that. In the real world there is a margin of safety, but there is no absolute safety. The issue is not engineering but the possibility of human error."

The campaign questioned the role of the Council for Nuclear Safety "which is supposed to regulate the nuclear industry, but they have not done a very good job until now".

Citing an example of their claim, the campaign stated that a major spillage had occurred at Radiation Hill (where nuclear waste is stored) near Pretoria.

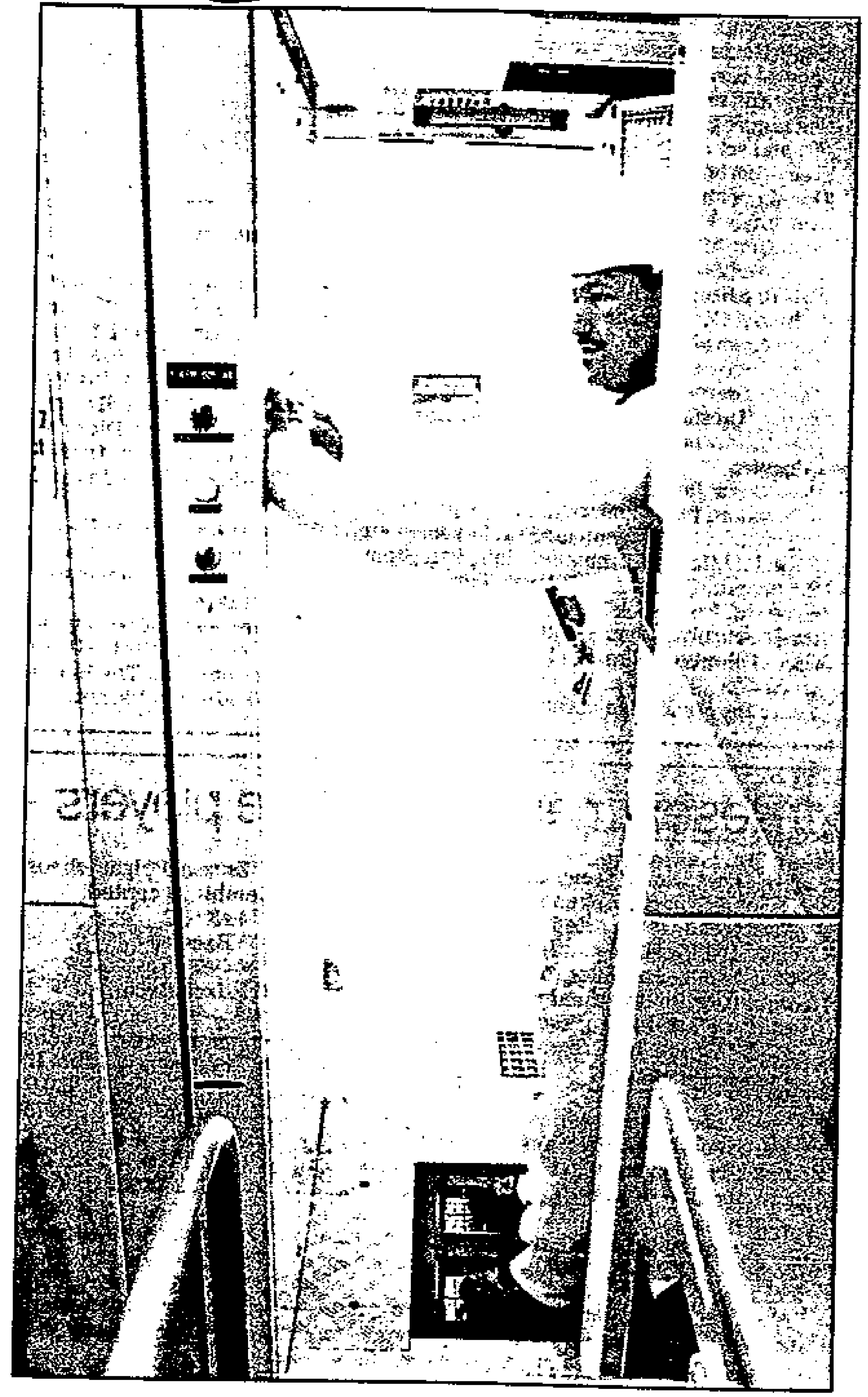
"It was only made public months after the event and the AEC has still not been brought to book for that."

Another issue is the disposal of nuclear waste. There is no national strategy in place, but a proposal is expected at the end of the year.

In the meantime Koeberg has bought four casks valued at R20 million for storage and transportation of nuclear waste. There are two spent nuclear-fuel pools at Koeberg. The pools have accumulated high-level nuclear waste. The power station was commissioned in 1984 and these these two pools would be filled by the end of next year.

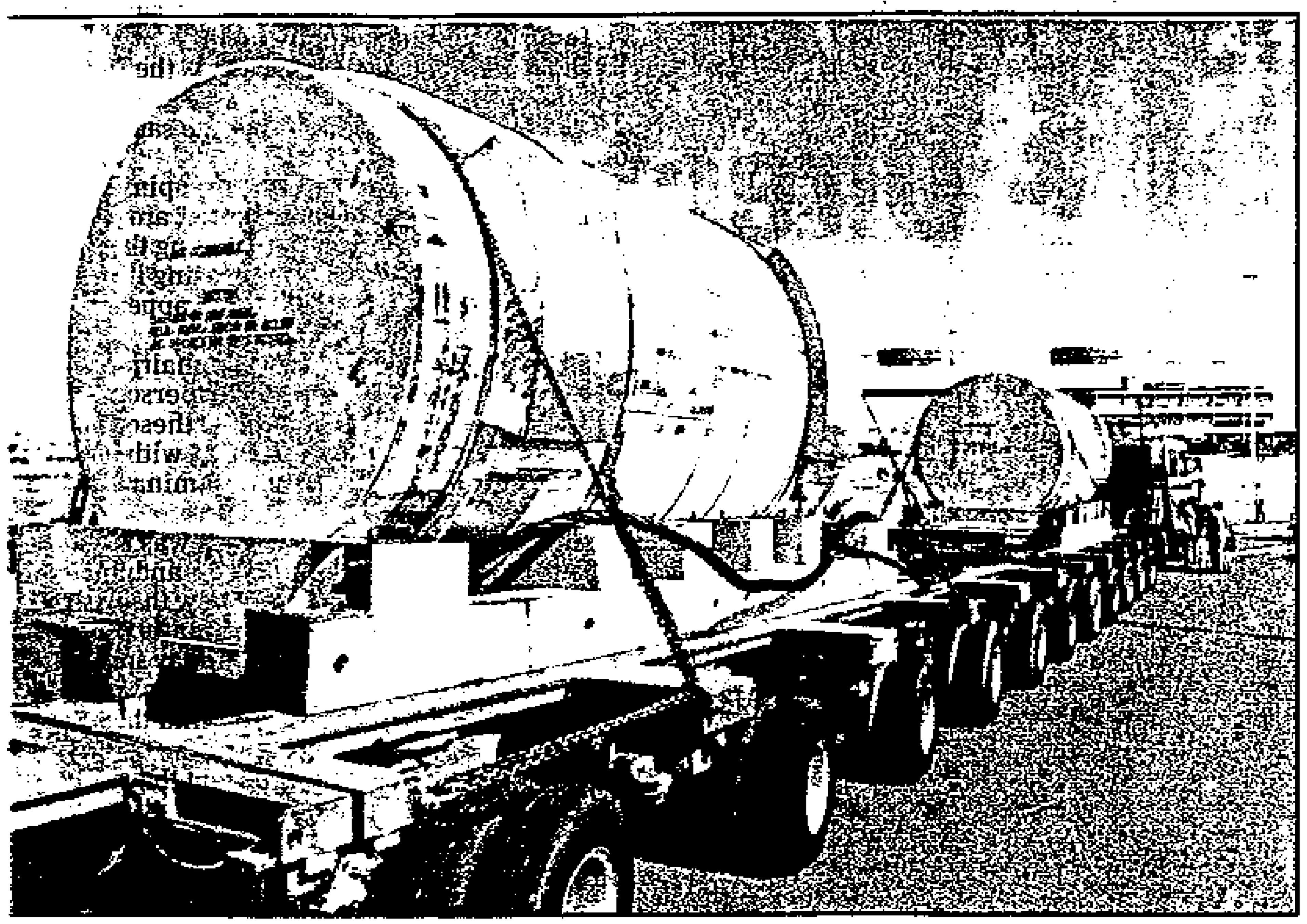
Storage casks will remain empty and on site at Koeberg until a national strategy on nuclear waste disposal is in place.

Storage of nuclear waste – which remains radioactive for 250 000 years and must be insulated against all dangers of leakage into the environment – is an on-going issue worldwide.



Pictures: ANDREW INGRAM, Staff Photographer.

POOL ROOM: One of two spent-fuel pools containing high-level radioactive waste at Koeberg. : yet, no strategy is in place for disposing of waste, because no plants in the world have been commissioned. No sound precedent has been set for nuclear waste-disposal.



NUKE COFFINS: Four German manufactured casks valued at R20 million and to be used for ɜ storage and transportation of radio active waste arrive at the Koeberg Power Station. The two me shaped nuclear reactors are visible in the background.

The electricity giant's management added that a plant such as Chernobyl would never have been licensed for operation in the Western world because "it relied on the competence of its operators to compensate for several design faults.

"Operators are people and as such can make mistakes. Koeberg has been designed to be safe in all eventualities without human intervention."

It said that it had passed several reviews by competent authorities to attest to its safety and reliability. "It has always passed with flying colours."

But, the South African anti-nuclear campaign comprising Earthlife Africa, Eco-Programme and the Workers Organisation for a Socialist Africa believe that Eskom's argument for continued operations at Koeberg are spurious.

The campaign agrees that there can be no comparison between the Russian and Western nuclear-power generating systems, but adds that the crucial point is that the reactors contain similar amounts of lethal radio active material.

Campaign spokesman Mike Kantey said:

"A different set of circumstances can lead to a different set of accidents with equally devastating effects. The risks at Koeberg may be small, but the consequences are the issue.

"If one extrapolated from the Chernobyl incident it could mean the evacuation of between two-and-a-half million and three-million people from the greater Cape Town area for anything up to 30 years."

is in place.

Storage of nuclear waste – which remains radioactive for 250 000 years and must be insulated against all dangers of leakage into the environment – is an on-going issue worldwide.

Discussing nuclear waste Eskom's chief physicist Gina Lamparelli said: "It would be safe to bury it in sealed containers at Vaalputs about a half a kilometre underground. It would be monitored regularly. The area is ideal as there is no ground water and its seismically safe."

The anti-nuclear campaign has lashed out at Koeberg saying its expensive and yet it contributes only six percent of South Africa's electricity which has an overcapacity of between 20 and 30 percent.

They argue that cheaper and safer ways of producing energy – solar, wind and wave energy – should be investigated. They add that coal-fired power stations and gas stations are good alternatives.

But, Eskom management flatly deny these arguments. They say that the costs of running coal-fired stations are rising adding that coal reserves are running out.

The cost of gas was four times the cost of coal, they said.

They also argued it would be too expensive (more than R2billion) to decommission the plant.

The plant's lifespan ends in the year 2015 and Eskom believed with increases in demand for electricity the continuation of Koeberg until then was critical.

The anti-nuclear campaigners want Koeberg mothballed immediately.

❑ **RADIO ACTIVE?** Health Operations manager Mark Maree is scanned for radio active contamination in a chamber after leaving the controlled zone where the spent fuel pools are situated.

Let safety be your shadow, it's always with you'

Ten years ago saw the Chernobyl ıclear power station disaster. This ɜek ADELE BALETA, Staff ɜporter, visited the Koeberg ıclear power station on Cape wn's doorstep to find out if a nilar disaster could happen here.

ONE of the prominent warnings marking the way to Koeberg nuclear power station once you make it past the first many security checks is: "Let safety be ır shadow, it's always with you".

3lesbok graze peacefully on the rolling ·ns, birds flutter by and a jogger negotiates uphill slope in the foreground to Unit 1 d Unit 2 – the two nuclear reactors at the ınt.

The magnificent backdrop of Table Mounn about 30 km away is a reminder of the proximately three million people in eater Cape Town who live in Koeberg's adow. How safe are they in the event of a clear accident.?

On the eve of the 10th anniversary of the ernobyl catastrophe The SATURDAY gus went to South Africa's only nuclear wer station to find out.

The nuclear reactors – housed in huge med cement structures – were out of 'unds as they were in operation, busily litting uranium nuclei and releasing enerharnessed and converted to electricity.

What was required to gain entry into this maze of impressive engineering was an ID book and the patience of Job as you are made to swipe your security card through security slots at the entrance of every door. Then you also have to cope with several body searches.

Our party made its way through the turbine hall and then onto the changerooms were we donned overalls, over-boots and hard-hats in preparation for the visit to the controlled zone where there is some radiation. After clipping radio-activity monitors onto our overalls we were reminded of why a forwarding address of the visitor was required.

"We do an immediate check on radioactivity levels and another check later and we need to know where to contact people if necessary."

Our destination is one of the 24-metre spent-fuel pools containing deadly radioactive fuel waste collected since Koeberg was commissioned 12 years ago.

The circuitous route was marked with several safety-precaution reminders.

Several areas – marked "hot spots" on the piping encircling the outside wall of the reactor – contained high levels of radioactive material.

The pool room which is 20 metres above ground level is monitored by the Vienna-based nuclear industry watchdog the international Atomic Energy Agency via cameras stationed at two corners inside the room.

Manager of Radiation Protection Mark Maree says pictures are taken at random intervals which enables the agency to check that fuel is not removed with the intention of making nuclear weapons.

If there is a radioactive leak in the pool the filtration system removes the radio activity. Tthis applied to every system in the plant, he said. For every possible accident there was a plan, he assured.

Gazing into the purple-tinged water with its uniformly stacked racks containing the lethal radioactive waste is an unnerving experience.

As we leave the pool area, our overboots are removed. We return to the control room exit where we have to undergo a rigorous test. SATURDAY Argus photographer Andrew Ingram enters the radioactive test cubicle and triggers off the alarms. Bells ring as the system indicates radioactivity on the heel of his boot. He is led into a room and tested with another instrument. The needle swings violently to the end of the scale.

Andrew reconciles himself to giving up his boot and the radioactive dust particle is removed by scrubbing the boot with soap and water. This was after an attempt to remove the offensive particle with masking tape proved unsuccessful. He got his boot back.

The control rooms form the core of the plant, one control room for each reactor.

The reactors can be shut down from any of these rooms, monitored by inspectors from the SA Council for Nuclear Safety.

There are at least seven council inspectors on site daily . There is also a medical centre and fire-fighting centre.

The nerve centre for emergency operations is one level underground, less than a kilometre away from the reactors and other buildings.

It's from this room that emergency operations would be handled, says the Emergency Planning co-ordinator Louis Koen.

There are several hotlines on the desk – some of which can access a conference of four people at once.

There are hotlines to the Cape Metropolitan Council and the SABC.

In a general emergency – such as an accident with a radioactive plume over Koeberg, stretching as far as Atlantis – all emergency staff are mobilised and in place within 30 minutes.

Koeberg is linked to civil protection units that can operate within a 16km radius of Koeberg. The emergency staff would organise an evacuation and if one lived within 5km of the station a warning would be issued immediately. As a precautionary measure people would be asked to stay indoors. In the case of squatters they would be evacuated.

Mr Koen said it was unlikely that areas up to 16 km away would be affected by a release of radioactive material which in any event would travel downwind.

A fixed public address siren system – which was routinely tested – would be used as well as public address units fitted to official vehicles of the Western Cape Regional Services Council.

Koeberg is safe, says Eskom; no way, says SA anti-nuke lobby

By ADELE BALETA

Ten years ago, on April 26 at 1.23am, the worst nuclear power accident in world history took place at the Chernobyl nuclear power plant in the Ukraine.

A combination of design faults and bad operating practices resulted in a power surge, causing an explosion in the reactor which led to large amounts of radiation being released into the atmosphere.

Hundreds of people died from severe radiation sickness, and the rising incidence of thyroid cancer in children in Belarus, Ukraine and Russia has been directly linked to the Chernobyl disaster. Plant and animal life as far away as Britain has been affected by the radiation.

The grim anniversary of the catastrophe, with its lethal effects, has rekindled the long-simmering row over the possible dangers of nuclear power in South Africa

Environmental and union groups have demanded that South Africa's only nuclear power station, at Koeberg, be shut down before there is a meltdown. But Eskom management says: "Don't worry, we are confident that Koeberg is an asset to the people of South Africa and does not pose any kind of hazard."

They say an accident like the one at Chernobyl could never happen at Koeberg. The two plants were designed differently and operated with different philosophies.

But the South African anti-nuclear campaign – comprising Earthlife Africa, Eco-Programme and the Workers' Organisation for Socialist Action – believe that Eskom's argument for continued operations at Koeberg are spurious.

The campaign agrees there can be no comparison between the Russian and Western nuclear systems but says the crucial point is that the reactors contain similar amounts of lethal radioactive material.

A campaign spokesman said: "A different set of circumstances can lead to a different set of accidents with equally devastating effects. The risks at Koeberg may be small, but the consequences are the issue."

(55) Star 27/4/96

Anti-nuke protesters march in Cape Town

Cape Town – About 30 anti-nuclear protesters marched on Parliament yesterday, demanding the closure of the Koeberg nuclear power station which, they claim, is 50 times more dangerous than Chernobyl in the Ukraine.

The demonstration was on the tenth anniversary of the Chernobyl explosion in which scores died and plant and animal life in Europe was harmed.

Green Coalition spokesman Andrew Fielding said Koeberg's nuclear plant was built in the form of a shell. One bullet could result in the whole of Cape Town being destroyed.

Safety precautions were also not the same as those taken by other nuclear plants around the world, Fielding claimed. Koeberg had emergency plans only for the surrounding 15km.

The hundreds of millions spent on the nuclear industry should be used to find cheaper energy, he added. – Sapa

■ See Page 7

(55)

Star 27/4/96

Eskom in R650m Namibian project

Robyn Chalmers (250) (55) (231) BD 3/5/96

ESKOM has agreed to construct a R650m, 900km power line with Namibian electricity utility Swawek, the first such interconnection following the creation last year of the southern African electricity power pool.

The line will be constructed from the Aries substation near Kenhardt to the Auas substation near Windhoek.

Swawek MD Leake Hangala said studies showed the most viable option was to build a line which would interconnect with Eskom's network and make electricity available to the pool.

An Eskom spokesman said the parastatal believed it could benefit in the longer term from the trade of electricity in the region rather than from immediate financial returns.

The spokesman said the finished line would make it theoretically possible to negotiate power supply agreements with Zesco from Zambia and from Inga in Zaire. Zesco was expected to join the power pool soon.

At least one SA company would be in the running for the international tender for the line and equipment.

Hangala said Eskom and Swawek would each finance that section of the line in its own country, with Swawek's share at between R450m and R500m.

The line, with a target completion date for the first leg of 1999, would be able to transmit about 400MW once complete, but could be upgraded.

Alex to get R1,9-m power boost

Star 6/5/96 (55)

By Anna Cox

An amount of R1,9-million is to be spent on upgrading the electricity network in Alexandra within the next few months to improve living conditions for hundreds of thousands of people, said Eastern Metropolitan Substructure executive committee chairman Nkele Ntingane.

The council approved the expenditure last week following reports that an extremely serious overloading problem existed in the system.

Ntingane said the large influx of people into the area had resulted in a significant increase in residential density and substantial increases in the electricity needs. The situation had reached the point where the existing supply within Alexandra was no longer adequate for a secure and continuous supply to be maintained.

"Repeated overloads and cut-offs occur on a daily basis causing great inconvenience to people and it can only worsen with the onset of winter.

"It is essential that urgent measures are taken to address the problem. This upgrading will make the lives of hundreds of thousands people a lot easier," she said.

Eskom, as the agent of the council, will undertake the work of installing the additional susbstations, reinforcing the main supply links and make all associated infrastructure rearrangements.

Cheaper electricity – yes but at what cost to health?

ARG 7/5/96 (55)

ANDREA WEISS
Metro Reporter

A DECISION to put the Athlone power station back on line has come under fire from residents of surrounding residential areas because they fear that pollution associated with coal-fired power stations will affect their health.

A delegation from Pinelands, Langa and Athlone – the three residential areas clustered in the vicinity of the power station – addressed a meeting of the city's amenities and health committee on their concerns yesterday. They have enlisted the help of the Legal Resources Centre to push for a public participation process, and for proper environmental monitoring in all surrounding residential areas.

The committee, which was holding its last meeting prior to the May 29 election, resolved that the matter should be taken up by the next council, but heard the objectors out.

William Kerfoot, from the LRC, said his clients were concerned about the lack of a public participation process because, although the power station was not a new project, bringing it back into operation was a significant departure from the past 10 years when it was not in use.

"We would have thought the Cape Town City Council should have felt it was important to embark on public participation. Why was this not done? What is the policy in matters of this magnitude?" he queried.

Mr Kerfoot also asked whether the council had considered an environmental impact assessment before bringing the power station back into full production, and whether there was any study focusing on the potential pollution to the greater Cape Town area.

Finally, Mr Kerfoot asked why the council had not made further representations to Eskom in an effort to bring down the cost of peak-time electricity, the chief reason for the use of the Athlone power station.

Brian Watkyns, a Pinelands councillor, suggested that residents had already begun to feel the health effects of the power station, based on letters he had got from people complaining of respiratory problems.

He also queried the safety standards being practised at the power station with regard to asbestos.

Simpiwe Mbuli, of the Langa Development Forum, said residents of Langa, where there was a high incidence of tuberculosis, feared that the power station would further compromise their health.

While the power station could provide cheaper electricity, he was concerned that the people of Langa would "pay indirectly" with their health.

City electrical engineer Fred Berwyn-Taylor said it was not correct to imply that the council was unconcerned, because it had put steps in place to keep a close watch on the power station.

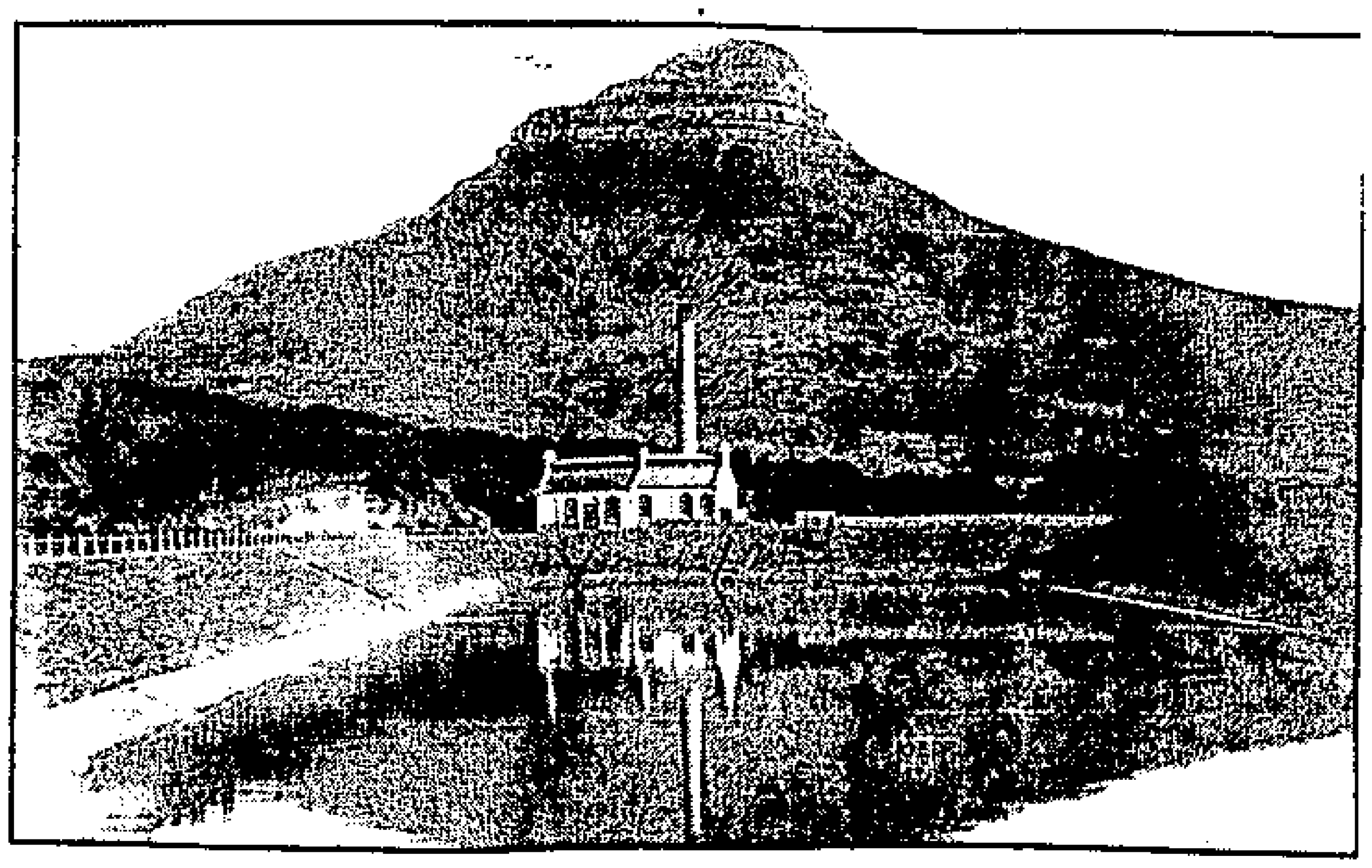
He said the Athlone plant was in good condition, and he believed it would be operating well within prescribed limits.

On public participation, he said he had always regarded the Athlone power station as part of his operational responsibility.

"I felt there were no new issues to be raised. It would be within limits. It was not an issue of public interest in my mind."

With regard to asbestos, Mr Berwyn-Taylor said the power station was complying with all safety requirements. Asbestos was a substance which had been widely used in society, but now the dangers were being realised. Large sections within the power station would have to be replaced, and the council was dealing with those areas where it was most urgent.

"I don't believe there is any danger."



Pictures: THE CAPE TOWN CITY COUNCIL

FIRST STATION: The Molteno Power Station was the first to produce electricity for Cape Town.

Council decision will save city millions

55 ARG 7/5/96

JOSEPH ARANES
Municipal Staff

THE controversial Cape Town City Council decision to fire up the Athlone Power Station, which has been on cold stand-by for the past decade, has stirred more than the dust now being emitted from the station's chimneys. A council report says the electricity supplied by the station during the periods when there is a high demand for power will save the residents of Cape Town millions of rands on their electricity bills.

But residents living in areas surrounding the plant say the pollution the power station is producing cannot be measured in rands, and that there are also other hidden costs which the council is not revealing.

For the past 35 years the power station's imposing towers have dominated the Cape Flats landscape, and residents living near it could easily tell the wind direction by watching the way its smoke blew.

Then 10 years ago the power station was placed on cold stand-by, and the smoke and the noise of the turbines stopped.

But inside the complex workers kept the boilers and other machinery in a constant state of readiness.

The ever-increasing flow of people into the Cape metropole demanding cheap electricity ensured that the power station was never shut down.

And today the power station's towers are again spewing out steam and helping to keep the city's electricity bill down, much to the consternation of the nearby residents in Langa, Pinelands and Athlone.

They say that in spite of the modifications done to the power station and the installation of a range of filters and sound mufflers, the noise and air pollution emanating from the plant still exceeds acceptable levels.

Athlone Power Station is a coal-fired station which means there will be ash emission and noise generated in the daily process of warming the steam turbines.

But plans are in place to keep these levels to a minimum and the Cape Town City Council has set aside R30 million to spend on improving the operation of the power station during the fire-up stages.

Power station manager Wouter Roggen said the national standard guideline for dust emission was 400mg/cubic metre, but that it was about to be lowered.

"We are working very hard to keep ash emission well within the expected new maximum of 170mg/cubic metre, and to reduce steam noise to a minimum.

"Fabric filters are to be installed on the boilers to limit ash emission to about 50mg/cu.m, and council engineers are experimenting with sound-attenuators to limit sound levels. We are also heating the steam turbines at night to keep the levels down." He said the recommissioning of the station was in the early stage and much of the light fall-out monitored in the vicinity of the station in recent months had turned out to be wind-blown particles from other sources.

The station was commissioned in 1961 with an initial capacity of 90 000 kilowatts, but doubled its output after additional work in 1973, and its current book value was in the region of R600 million.

It had eight, two-drum, high-head natural circulation boilers and six steam turbines - five Swiss Orlikos and a Japanese Hitachi - with an output of 180 000 kilowatts.

Before it went on cold stand-by, the station was run as a base load station providing power to meet the basic needs of the city.

Those two enormous Davenport natural draft cooling towers are about 85 m tall and each has the capacity to handle about 20 million litres of water an hour, and the diameter of the cooling pond is a massive 70 m.

The station's coal storage facilities can store up to 25 000 tons of the fuel, and handling equipment like the wagon tippler and weigher can process 400 tons an hour, and the automatic continuous belt weigher 200 tons an hour.

In 1985 the council and Eskom struck a deal which enabled the city to get cheaper electricity from the Electricity Supply Commission than the station could supply.

Mr Roggen said it made economic sense to use the Eskom supply as the costs of transporting the coal from up north were increasing all the time.

"Those very attractive rates of purchase made it difficult for us to compete and the station was no longer used but held in readiness to produce at least 50 megawatts on a 24-hour basis.

"During the past 10 years, the station was occasionally called upon to produce the energy. It was only when Eskom reduced their preferential tariff to the council that we were informed to prepare for the big switch-on." So after being put on cold stand-by for the past decade, the station is being fired up in stages to help keep Cape Town's future electricity bill down.

When back in full service in three years' time, the station will save the city millions of rands annually by reducing peak energy purchases from Eskom.

Mr Roggen said the council bought electricity from Eskom at two tariffs - one for the normal supply at a very cheap rate, and the other to meet the needs of consumers who use more energy during the peak periods like the cold winter months.

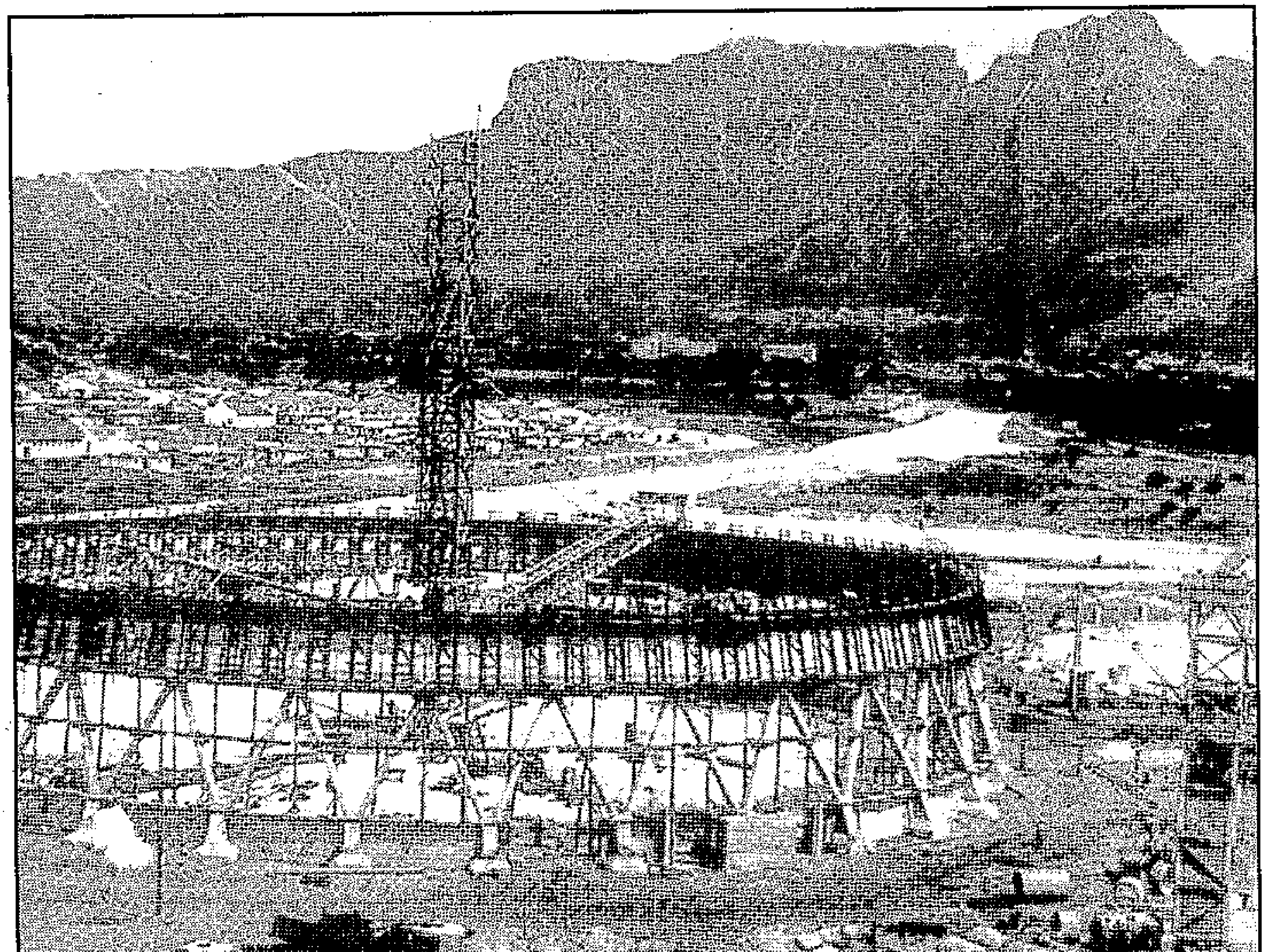
"It is the price of this peak energy purchase that pushes the city's electricity bill up and the station will now be used to supply power to help keep this cost at a minimum.

"In the past we operated as a base load station, now we will operate as a peaking station to meet the peak demand of electricity during the day."

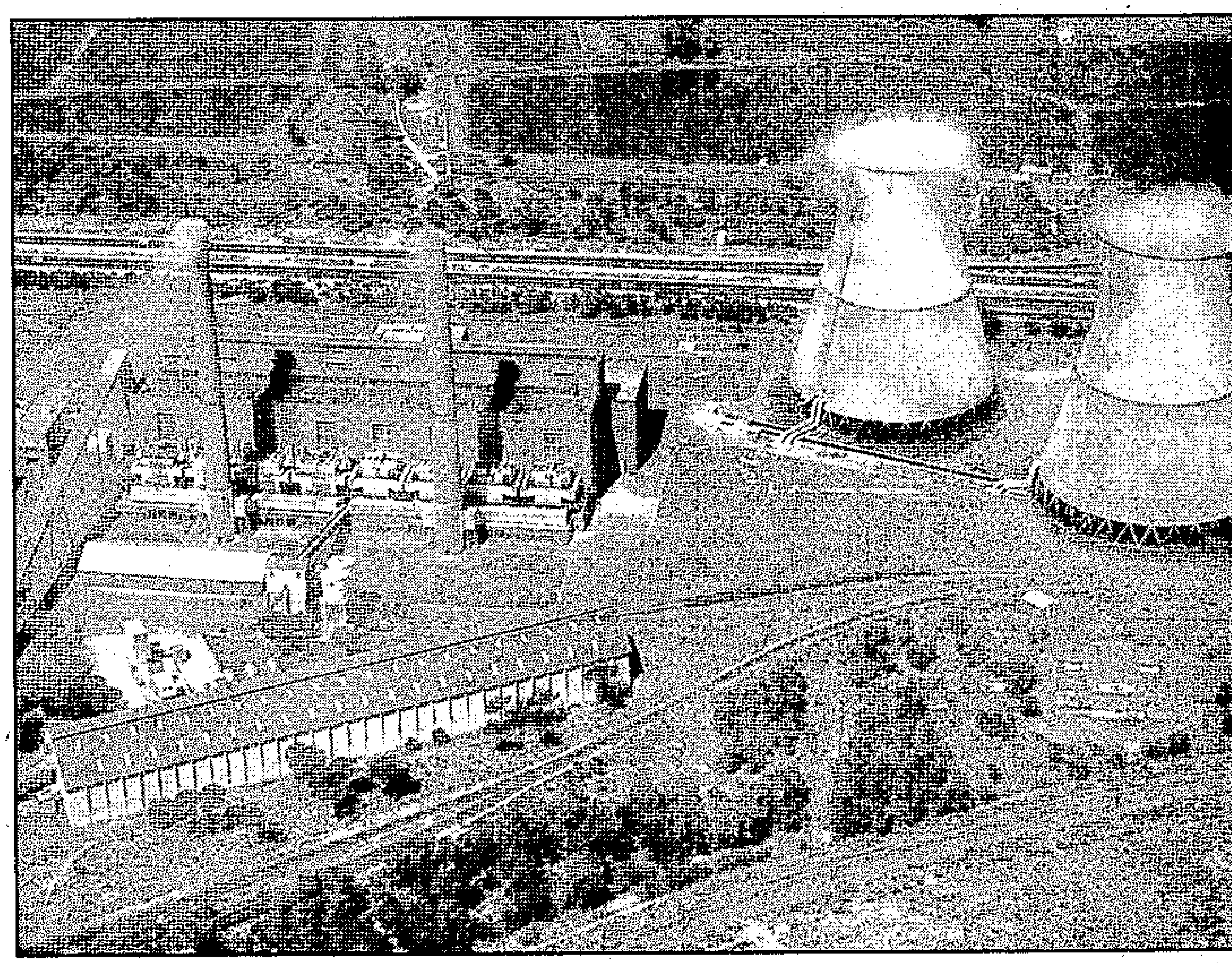
He said electricity generated at the Steenbras hydro-electric pumped storage scheme would also be used to help reduce the dependency on Eskom.

"Although it is very expensive to operate this coal-fired station, with the present peak rates offered by Eskom, we can deliver cheaper energy to the city and in doing so, save the consumer and the council millions of rands."

Residents fear power station pollution



UNDER CONSTRUCTION: The massive cooling tower of the Athlone Power Station slowly takes shape in 1958; today it is a common sight on the landscape.



ATHLONE POWER STATION: The famous Cape Flats landmark is being fired up again to help produce cheap electricity for the greater Cape Town area.

Nufcor in radiation control joint venture

David McKay BD 9/5/96

(55)

THE SA Nuclear Fuels Corporation has established a joint venture company with British Nuclear Fuels Limited to seek radiation control business from SA's uranium oxide producers.

Nufcor said yesterday that the company, Radpro, would measure, monitor and control radiation hazards, in a market expected to burgeon given the surge in uranium oxide prices. SA producers include Anglo American's Vaal Reefs gold mine.

The new operation would be backed by subsidiary BNFL Engineering, which has developed expertise in radioactive waste storage and management in the UK.

Chairman Tom Main said the Atomic Energy Corporation provided consultancy on the treatment of radioactive systems, but did not provide solutions to radioactive hazards — Radpro's specific aim.

World supply for uranium oxide was expected to double to 80 000 tons during the next 10 years to meet increasing demand for uranium oxide, Nufcor GM Charles Scorer said.

Govt to tackle issues cited in energy agency's report

55 BD 15/5/96

Samantha Sharpe

CAPE TOWN — Government was already tackling some issues which had been raised in the mineral and energy affairs department-commissioned International Energy Agency (IEA) report released this week, department chief director Johan Basson said yesterday.

The IEA, part of the Organisation for Economic Cooperation and Development, warned in the report that urgent energy policy decisions in SA were being frustrated by excessive consultation, and called for government to strengthen the professional public service.

Basson said government saw the latest recommendations in a very serious light, with "our job from here to evaluate the IEA document and take from it those recommendations which we believe should be implemented..."

The report was in no way binding on SA mineral and energy policy, but the IEA would review SA energy policies again in two years.

Basson said government was aware of many inefficiencies alluded to in the report. Steps were being taken, for example, to distinguish "the fine line between consultation and decision-making".

The department itself was trying to address its inability to handle its workload due to inadequate public service support, he said.

A draft version of the IEA report had also been used as part of SA's mineral policies development process, which is to publish a green paper in July, and by the authors of government's energy white paper, due in August.

SA Petroleum Industry Association director Colin McClelland said the IEA report was probably the best research into the mineral and energy sectors seen for some time. He welcomed its proposals for a deregulated liquid fuels industry.

Five blow R15-m

Officials suspended after unauthorised spending spree

Sowetan 16/08/96

By Khathu Mamaila

FIVE SENIOR OFFICIALS in the Northern Province education department have been suspended following unauthorised spending of more than R15 million, *Sowetan* learnt yesterday.

An official in the department told *Sowetan* that an urgent inquiry had been instituted to probe the case.

"Preliminary findings have produced sufficient grounds for the suspension of some very senior officials who are believed to be implicated," education department spokesman Mr La-Duma Thembe said.

Thembe said what was being investigated was whether the officials decided to spend R15 million without authorisation because they would personally benefit from the transaction.

"What they did is highly irregular," Thembe said.

He said the money was used to buy computers which were to be used in finishing schools throughout the province.

The department was informed that some of the computers had already been delivered to various centres.

Sowetan also learnt that Northern Province MEC for education Dr Aaron Motsoaledi was locked in an urgent meeting with premier Mr Ngoako Ramatlhodi yesterday to discuss the implications of this irregularity.

Thembe said he could not give exact details on the matter but a Press conference would be called soon.

"The department is convinced that the suspension, and any future action that will be taken, are in the interests of good governance and transparency," a statement released by the education department said.

Late last year, the province's health department suspended three senior officials who had paid themselves large sums of money.

The officials had authorised their own payments, arguing that their promotions were long overdue.

Further enquiries revealed that at least more than R10 million was used in unauthorised payments to various officials attached to the department, especially in the former Lebowa homeland.

Sowetan was informed this week that an undisclosed number of senior officials in the province's justice department had also promoted themselves and backdated their promotions to 1993.

The officials were paid large amounts of money. But some disgruntled officials who were left out of the scheme complained to the justice ministry.

The justice ministry reportedly established a commission of inquiry headed by a judge. The commission held its sitting in Pietersburg last week.

Finance and expenditure MEC Mr Edgar Mushwana disclosed earlier last month that seven officials had been arrested in connection with fraud amounting to more than R1,8 million from various government departments.

The latest scam in the province follows closely on another scandal which was unearthed in the Gauteng education department this week.

Two officials have been arrested in connection with a major salaries scam involving more than R800 000.

Electricity regulator's pay under fire

(2__) 55

Amanda Vermeulen

BD 17/5/96

THE National Electricity Regulator has come under fire after proposing salaries for its senior executives which are double those of their colleagues in the electricity industry, with some pay-outs topping R500 000.

The regulator, from which SA's estimated 250 electricity authorities have to obtain licences, was formed to rationalise electricity tariff structures and overcome the problems of supplying electricity to black and rural areas.

Funded by licence fees levied on electricity generators, it plans to pay its financing, pricing and tariffs executive manager up to R540 923 annually — almost double the salary of Johannesburg city council's chief director of electricity.

The packages are also up to 30% higher than those of mineral and energy affairs senior officials and 50% higher than the top salary of an Eskom manager at a similar level.

In the salary proposals, gazetted on March 8, the regulator said the packages were designed to attract top people who were earning competitive salaries elsewhere.

In a letter to Mineral and Energy Affairs Minister Pik Botha, Finance Minister Trevor Manuel and the regulator's board, the Mineral and Energy Policy Centre said the wage proposals were out of line with government practice. "There is a clear moral obligation for government to ensure equity between the regulator and mineral and energy affairs department staff wages. The assertion that the proposed salaries are market-related is astonishing."

The centre, an autonomous policy research body chaired by ANC secretary-general Cyril Ramaphosa said

Continued on Page 2

Regulator

55 (2__)

Continued from Page 1

BD 17/5/96

although the "excessive and unwarranted" proposed pay packets would come from off-budget finances, they were still sourced from public funds. The centre also objected to the proposed structure of the regulator, saying: "Our chief concern is that it appears very weak in the area of economic regulation." The skills base was "wholly inadequate" and seemed to be based on the regulator having little experience of serious economic analysis, placing too much focus on customer support and services.

A plan to employ 10 trainees would increase the load on senior staff, the centre said. "The regulator will have to implement affirmative action but this should be done by employing people to do real jobs rather than hiring people as trainees in an institution clearly not equipped to provide effective training."

Eskom, the regulator, Botha and Manuel could not be reached for comment.

'Drop extra Eskom tax'

(55) ([redacted])

Linda Ensor

BD 22/5/96

CAPE TOWN — The electrification industry in SA would be unable to sustain taxes as well as having to bear the cost of funding municipal surpluses and the electrification programme.

This warning was issued yesterday by the national electricity regulator's legal advisor, Kevin Morgan. Any additional tax on Eskom would be unsustainable for consumers, Morgan said at a presentation to public enterprises.

Government had suggested a tax rate of 35% and a 33% after-tax dividend, but this, Morgan warned, would "send the electrification industry into a nosedive".

"Government should think very seriously before imposing taxes on Eskom because it will have a significantly detrimental effect on electricity consumers," Morgan warned.

He noted that the profitability of the industry was highly skewed. In 1994, for instance, Gauteng alone made R777m, almost half the national surplus of R1,72bn, he said.

Public Enterprises Minister Stella Sigcau told the delegates "mistakes had been made in the past" by not incorporating stake-holders into discussions on the restructuring of Eskom's distribution networks, and she said "they should be brought in as a matter of urgency".

CT 22/5/96

Eskom owed over R1-bn

57

ESKOM'S clients owed R1,25 billion by the end of the last financial year, chief executive Mr Allen Morgan said yesterday.

This translated into a two percent increase in electricity costs, he told the House of Assembly Public Enterprises committee.

National Electricity Regulator (NER) chairman Dr Ian McRae acknowledged that significant problems arose when it came to billing end-users.

Some electricity distributors did not even have a customer database, and there were cases where people were billed at different rates and where meters were not read.

The NER's Mr Ian Morgan said the electricity industry was highly fragmented, and with nearly 400 distributors in operation there were wide disparities in prices paid by customers.

In the Eastern Cape, for example, domestic users were paying between 12 and 43 cents per kWh.

Electricity pricing structures were exceptionally complex, and it would take about a year to address the wrongs, Mr Allen Morgan said. — Sapa

Power lights way to SA future, says Pik

(55)

ARG 24/5/96

Business Staff

ELECTRICITY is the key to unlocking development in southern Africa, says Minister of Mineral and Energy Affairs Pik Botha.

He told the World Economic Forum-Southern Africa Development Community summit in Cape Town yesterday that energy drove development and growth and there were abundant opportunities for new energy projects.

"We have the resources and the will to develop these energy sources. Now we just need a little more money," he said.

But before overseas investors would commit their capital to the region, southern Africa needed to implement fundamental requirements for industrial growth.

First of these requirements was a stable political climate without corruption and violence, security of property rights for investors and fiscal policies that allowed equitable and exportable profits.

Governments would have to reduce involvement in business and show consistent and unambiguous support for a market-oriented economic system.

They also would have to reduce their consumption of capital (that is, tax), and leave more money in the hands of the people to create a demand-driven supply of industrial products.

Mr Botha said there would have to be a greater acceptance of the interdependence of all countries in the region.

"We need to pool our resources and skills and establish efficient co-operative structures and trading mechanisms."

The industrialised world did not expect the region to achieve these objectives overnight, but the region needed to establish a credible commitment, willingness and capability to do so.

"Our actions need to show that we are not only on the right track, but moving in the right direction on that track."

Working group to study shake-up of electricity

BD 24/5/96 (55)

Robyn Chalmers

A GOVERNMENT working group was being established to examine outstanding issues regarding the carving up of the electricity supply industry, a mineral and energy affairs department spokesman said yesterday.

The spokesman said the working group would consist of officials from the ministries of mineral and energy affairs, housing, trade and industry, finance and public enterprises, as well as provincial affairs and constitutional development.

The setting up of the working group followed a meeting on Wednesday between the ministers of the various officials represented in the group.

He said there were three outstanding issues the working group would be considering. One was the process that would be followed in the restructuring of the electricity distribution industry.

This follows the tabling six weeks ago of a report by the electricity working group on the distribution of electricity which could see the creation of several regional distributors. Alternatively, a single decentralised national distributor could be set up.

The report was drafted as a result of concern over the current electricity supply set-up and its plethora of tariffs and widespread ineffeciencies.

The group would look into the way in which the RDP target of a further 2,5-million houses connected to the national grid by 2000 would be funded.

The third issue was how certain municipal services such as refuse removal would be funded should they no longer be subsidised through loading of electricity tariffs in certain areas.

The spokesman said members of the working group were to compile a report for the ministers involved. After consideration, this report would be submitted to Cabinet before end-July.

In a separate development, Eskom and the National Electricity Regulator denied yesterday that some electricity consumer groups were subsidising other groups.

Plan to build powerline

Sowetan 27/5/96

(55)

By Tom Wiltshire-Robbins

NAMIBIAN and South African electricity authorities have announced plans to build a 400 kilovolt powerline between the two countries.

"A feasibility study is being conducted and so far it looks like the project will go ahead," says an Eskom representative who does not want to be named.

The 900km line will extend from Windhoek to the Northern Cape.

According to a Namibian electricity official Nina Viall, it is estimated that the project will cost about R750 million.

She says the plan is based on projected growth in Namibian electricity consumption.

Studies conducted by Swawek, Namibian electricity authority, found coal, gas and wind-driven power stations would be uneconomical.

Eskom officials says Namibia will be able to export electricity in the long run.

Each country will finance its own section of the line and because the distance is longer on the Namibian side, Swawek will finance the bulk of the project.

The target completion date is May 2000.

Interconnection

The line will become the first interconnection between electricity networks in Southern Africa since the establishment of the Southern African Power Pool (Sapp).

Sapp is made up of all members of the Southern African Development Community with the exception of Zambia.

"When completed, the line will make it possible for Swawek to negotiate power supply agreements with Zambia or even Zaire, where surplus hydro-electricity is available," says Viall.

At Present, there is an electricity link between Zaire and Ndola in northern Zambia. Zimbabwe is connected to the link and it, in turn, links the connection up with South Africa.

Southern African electricity supply experts believe that a hydro-electric scheme built at the Inga Falls on the Zaire River could produce a capacity between 50 000 and 120 000 megawatts.

According Eskom, Africa's total consumption is only 45 000 megawatts.

If such a project gets of the ground surplus electricity could be exported to the Middle East and Eastern Europe. – *Africa Information Afrique.*

Rural areas switching on

(55)(2)

Nicola Jenvey

BD 27/5/96

DURBAN — Eskom would spend R190m on electrifying more than 53 000 rural homes in KwaZulu-Natal this year, while local government would electrify another 28 000 households, Eskom area manager Kurt Dedekind said at the weekend.

Dedekind said more than 85% of projects scheduled for 1996 were already under way.

However, provincial connection costs per site exceeded the national average of R3 568 by nearly R1 400, he said.

Electricity connections were cheapest in Gauteng — at R2 475 — and the most expensive region was the Eastern Cape at R4 397. There were about 1-million homes in KwaZulu-Natal without power.

Eskom plans new West Coast substation

(55) CT 29/5/96

ESKOM plans to build a major electricity substation along the West Coast, on a 150ha site near Melkbosstrand.

The new substation, called Omega — about twice the size of the Acacia Park substation — is part of the upgrading of the electricity supply to meet the region's growing demand for power. The site, Groot Olifantskop Farm, is between the R27 and the N7, inland from Melkbosstrand.

The draft Bloubergsvlei Sub-regional Plan has allocated the area for conservation and agricultural use. The site will have to be rezoned for general industrial use before the substation can be built.

Eskom planners predict the Cape region will need about 3 000 megawatts of power by the turn of the century.

Though Eskom may not start construction for another eight years, it needs to buy the land now.

Eskom will hold a public meeting on the proposal at 7pm on June 4 at Koeberg's visitors centre. For further information telephone Kim Kruyshaar at 782-2192. — Environment Writer

Eskom's one-millionth switch-on celebrated in rural area of Eastern Cape

Star 3/6/96 (55)

By Patrick Phosa

South Africa's national electricity supplier has made its millionth electricity connection in the country, at Lencane near Idutywa in Eastern Cape, since the start of the electrification programme in disadvantaged areas 1991.

Celebrations were held in the village on Friday, when attention focused on the switch-on at the Diniswayo home.

An elated Paul Diniswayo (49) said his dark living conditions would become brighter. "I run a sewing business. Now I will buy an electric sewing machine to boost and expand my small business," he said.

The family were presented with a starter pack of electric appliances comprising a two-plate stove, a kettle, an iron and a coupon of electricity units for their prepaid meter.

Speaking at the occasion, Deputy President Thabo Mbeki said it was important that Eskom's millionth switch-on happened in a rural area because "it must be the central objective of Government to change the conditions of people, particularly in the countryside. We measure the better-life-for-all objective by the progress we achieve in the rural areas."

Mbeki said the installation of electricity should "give hope that industrialisation will become possible in this remote rural area".

He said the fact that it had taken so long to electrify Lencane indicated that development in rural areas had been stagnant for many years.

Eskom's electricity council chairman John Maree said electrification contributed to economic development countrywide. "For every 100 homes we connect up, between 10 and 20 informal businesses are started. This provides people with incomes, relieves poverty and impacts on unemployment."

Hansard

QUESTIONS

†Indicates translated version

For written reply:

Released prisoners rearrested

217. Mr D H M GIBSON asked the Minister of Correctional Services:

Whether any prisoners who have been released since 1 January 1990 as a result of (a) the completion of their sentences, (b) political amnesty and/or (c) general amnesty have been arrested for other alleged crimes committed since their release; if so, (i) how many in each category and (ii) what percentage of the total number of persons released in each category did the persons who were arrested constitute?
N411E

The MINISTER OF CORRECTIONAL SERVICES:

Information in this regard is not readily available and can only be obtained through a time-consuming expensive and manpower-intensive country-wide survey.

Black townships: electricity (55)

306. Mr N J GOGOTYA asked the Minister for Public Enterprises:

Whether any housing units in Black townships yet have to be supplied with electricity; if so, (a) which townships are involved and (b) what percentage of such units in each specified province had not yet been supplied with electricity as at the latest specified date for which information is available?
N540E

The MINISTER FOR PUBLIC ENTERPRISES:

Yes.

(a) All townships right through the country have housing units which are not electrified at this stage.

(b) The units in specified provinces which have not been electrified are as follows:

Figures reflect the situation at the end of 1995.

Province	No. of households	No. of houses electrified	% electrified	% not electrified
Eastern Cape	1 392 251	384 927	27,64	72,36
Free State	599 118	320 165	53,44	46,56
Gauteng	1 750 848	1 344 597	76,80	23,20
KwaZulu-Natal	1 795 740	774 671	43,14	56,86
Mpumalanga	588 916	262 695	44,61	55,39
North West	710 039	258 756	36,44	63,56
Northern Cape	183 053	120 523	65,84	34,06
Northern Province	1 055 397	306 527	29,04	70,96
Western Cape	933 313	766 361	82,11	17,89
RSA Total	9 009 175	4 539 822	50,39	49,61

National Peace Accord Trust: budget

315. Mr A J LEON asked the Minister for Welfare and Population Development:

(1) (a) What amount has been or is expected to be budgeted for the National Peace Accord Trust until 1999, (b) how many (i) members and (ii) other specified staff members are employed by the Trust, (c) what annual salary is being paid to each of the (i) members and (ii) staff members of the Trust and (d) from which premises is the Trust currently conducting its operations;

(2) whether the members and/or staff members of the Trust are entitled to any (a) car,

(b) travel, (c) subsistence and/or (d) other specified allowances; if so, what allowances in each case;

(3) whether the Trust has purchased any premises from which to conduct its operations; if so, (a) which premises, (b) at what cost and (c) what other expenses were incurred or are being incurred as a result of this purchase; if not,

(4) whether the Trust is renting any premises; if so, what is the annual rental?

N549E

The MINISTER FOR WELFARE AND POPULATION DEVELOPMENT:

(1) (a) An amount of R1 million is earmarked which, on receipt of an application from the Trust, will be considered by the Social Relief Fund;

(b) (i) members (trustees): none

(ii) 14 staff members and 25 student social auxiliary workers;

(c) (i) members (trustees): none

(ii) staff members: a total amount of R925 000. Individual amounts are not available;

(d) 112 Algernon Road, Norwood, Johannesburg 2192, as well as premises in Katlehong and Durban;

(2) (a)-(d) no;

(3) (a) no;

(b) not applicable;

(c) not applicable;

(4) yes; R72 000.

Each general amnesty: prisoners released

320. Mr D H M GIBSON asked the Minister of Correctional Services:

(1) (a) How many prisoners were released in terms of each general amnesty during the period 1 January 1990 up to the latest specified date for which information is available and (b) what percentage of the total prison pupulation did these figures constitute;

(2) whether any of these prisoners have been (a) arrested and (b) sentenced for crimes committed subsequent to their release in terms of such amnesties; if so, how many in each case?

N554E

The MINISTER OF CORRECTIONAL SERVICES:

(1) (a) Before furnishing any statistics the following perspective is necessary:

- prisoners who receive amnesty are not necessarily released immediately;
- several prisoners who benefitted by the said concessions have not yet been released as their sentences have not expired in spite of the amnesty they were granted;
- not all prisoners who are released necessarily benefit from the granting of amnesty as certain categories of crimes are excluded from such an award;
- all prisoners do not benefit fully from these types of concessions as their dates of release were in any event imminent at the time of the announcement thereof.

The relevant information is as follows:

Date implemented	*Number benefitted*
30 March 1990	3 903
10 December 1990	30 179
30 April 1991	25 467
1 July 1991	9 247
17 June 1994	26 627
27 June 1994	727
9 November 1994	256
18 January 1995	37
27 April 1995	20 818
4 May 1995	21

(b) The percentage of the prison population cannot be given considering that the prisoners who benefitted, were not released on the same day but were released over an indefinite period. The total prison population also changes daily.

(2) (a) and (b) Information in this regard is not readily available and can only be obtained through a time-consuming expensive and manpower-intensive country-wide survey.

Correctional Services: retirement packages

349. Dr M S APPELGRYN asked the Minister of Correctional Services:†

How many staff members of his Department at the (a) Central, (b) Zonderwater, (c) Modderbee, (d) Victor Verster, (e) Pollsmoor, (f) Goedemoed and (g) Grootvlei Prisons accepted retirement packages in 1995?

N601E

The MINISTER OF CORRECTIONAL SERVICES:

(a) eight members (all of them were discharged on medical grounds)

(b) 11 members (10 discharges on medical grounds and one retirement on pension)

(c) 17 members (16 discharges on medical grounds and one early retirement on pension)

(d) 10 members (eight discharges on medical grounds, one retirement on pension and one early retirement on pension)

(e) 10 members (nine discharges on medical grounds and one retirement on pension)

(f) two members (both were discharged on medical grounds)

(g) six members (five discharges on medical grounds and one retirement on pension).

Western Cape: number of prisoners

353. Mr J A JORDAAN asked the Minister of Correctional Services:

(1) How many prisoners are currently being detained in prisons in the Western Cape;

(2) whether any prisons in the Western Cape are overcrowded; if so, what is the extent of the overcrowding in each specified prison?

N606E

The MINISTER OF CORRECTIONAL SERVICES:

(1) 21 009 as on 30 April 1996.

(2) Yes. The details are as follows:

Prison	*% overcrowded*
Allandale Prison	57,5
Beaufort West Prison	90,8
Brandvlei Maximum Prison	41,0
Brandvlei Medium A Prison	66,6
Buffeljachtsrivier Prison	28,2
Caledon Prison	59,0
Dwarsfontein Prison	26,3
George Prison	33,5
Hawequa Prison	55,8
Helderstroom Maximum Prison	125,1
Helderstroom Medium Prison	14,2
Knysna Prison	91,1
Ladismith Prison (CP)	80,0
Malmesbury Prison	66,2
Mossel Bay Prison	70,8
Obiqua Prison	36,8
Oudtshoorn New Prison	62,9
Oudtshoorn Prison	42,3
Pollsmoor Maximum Prison	100,3
Pollsmoor Medium A Prison	18,1
Pollsmoor Medium B Prison	26,2
Prince Albert Prison	32,0
Riebeeck West Prison	47,3
Robertson Prison	42,9
Staart van Paardeberg Prison	47,9
Stellenbosch Prison	72,0
Swellendam Prison	51,4
Uniondale Prison	53,3
Van Rhynsdorp Prison	30,2
Victor Verster Maximum Prison	67,4
Victor Verster Medium A Prison	48,9
Voorberg Prison	56,7
Warmbokveld Prison	49,6
Worcester Prison	99,0

Durban police districts: crimes

376. Mr A J LEON asked the Minister for Safety and Security:

How many cases of (a) murder, (b) cuplable homicide, (c) assault with intent to do grievous bodily harm, (d) common assault, (e) rape, (f) robbery, (g) theft of vehicles, (h) theft of other items, (i) damage to property, (j) housebreaking with intent to steal and theft, (k) possession of drugs, (l) drunken driving, (m) vagrancy and (n) prostitution were reported at each specified police station in the Durban police districts in (i) 1994 and (ii) 1995?

N673E

Energy negotiations will be 'tough'

BD 10/6/96 (55)

Robyn Chalmers

RECOMMENDATIONS to carve up the electricity supply industry should go before Cabinet by the end of August, despite a lack of consensus among industry stakeholders, government sources said at the weekend.

The mineral and energy affairs department said the interdepartmental committee set up last month to study the implications of restructuring electricity supply had tough negotiations ahead of it.

Several players in the industry had differing views on the restructuring of the current electricity supply set-up.

The energy users' forum — representing companies such as Sentrachem, Afrox, Sappi, Mondi, Tiger Oats and Consol — have accused government of failing to consult major electricity users in its deliberations.

"There are also a number of trade unions that appear to be sceptical of the proposed shake-up, and there will have to be wide-ranging talks with union representatives before the process can move forward," a department spokesman said.

The major unions represented in Eskom and the related electricity supply sector include the National Union of Mineworkers, the National Union of Metalworkers of SA and the Independent Municipal and Allied Trade Unions.

Sources said that there was little consensus within the unions themselves, let alone within the industry.

However, the spokesman said government representatives in the talks had been given a mandate to have recommendations on the table within two-and-a-half months.

The talks will revolve around a report submitted to government two months ago by the electricity working group, which includes representatives from Eskom, the national electricity regulator and government.

The current proposals suggest either placing all of Eskom's and the local authorities' distribution assets into a decentralised national distributor, or else setting up several regional distributors.

The spokesman said there were a number of international and local consultants who could be called in to assist with the negotiations — a scenario that was likely should talks become bogged down.

Only once consensus has been reached on the way forward can government move ahead with restructuring — a task which sources said could take years to achieve.

Solar energy starts to show its power

(55) 10/6/96

(55) 10/6/96

SOLAR power, for decades regarded as environmentally worthy but uneconomic, is increasingly being seen as a viable energy option with vast commercial potential. In spite of hundreds of millions of dollars of investment during the past 20 years, the world market is still small. Only about 70MW of photovoltaic (PV) cells were produced last year for solar power — enough to power a small city such as Oxford in the UK.

Yet a combination of new technology developments, rising demand in developing countries and measures by western governments to kickstart their own markets is generating a brighter future and a potential multibillion-pound market.

According to Strategies Unlimited, a California-based consultancy, the industry has the potential to grow to 1 600MW by the year 2010, under certain conditions.

Growth like that would be a shot in the arm for the PV industry.

For several years, world production has shown steady year-on-year growth of about 15%, but manufacturing capacity still exceeds demand.

Cottage industry

Globally, there is an estimated annual turnover of just £450m, according to the Energy Technology Support Unit at Harwell in the UK.

It is "little more than a cottage industry", says John Harford, manager of strategic planning at BP Solar International, a subsidiary of British Petroleum, the UK-based oil group.

PV enables light to be transformed directly into electric power — when light falls on to the solar cells', a thin film of treated semiconductor material (usually silicon), electrical charges are generated and conducted to an external grid.

Much of today's demand comes from remote communities not linked to the national grid in industrialised and developing countries.

Philip Bouverat, commercial director at the Intersolar Group, a specialist solar electric company, says the markets in developing countries are large and growing, and there is a great need for low-cost solar devices to bring electrification to rural communities.

In Indonesia alone, an estimated 11-million families are without electricity. Depending on the volumes, the cost of some solar devices could be as low as £3 a watt, says Bouverat. He says that, as volumes increase and the price approaches £1 a watt, solar energy will become competitive with conventional energy.

At present, solar energy costs about 50p a unit (kWhp) as an installed working system. That compares with approximately 7p a unit for conventional electricity (nuclear and fossil fuel) and 20p a unit for wind-generated power.

In Western countries, expansion of the market could lie in grid-connected applications, where PV-generated electricity can be fed back to the national grid. Harford identifies two such applications, the first being centralised PV stations, regarded as "the holy grail" by many in the industry.

But a more likely application in the shorter term would build on PV's main advantages — power generation at point of use, avoiding distribution and transmission costs, and the fact it can be integrated into urban buildings.

It is this area, with its substantial market potential, that has caught the imagination of the European PV industry. Solar panels can be located in the facades or roofs of commercial or domestic buildings to generate a portion of a building's electricity needs.

UK Junior Energy Minister Richard Page supported this view at a recent PV conference in London. He emphasised the UK's commitment to renewable energy, including solar, which was reflected in such government projects as the technology foresight programme and the trade and industry department's new and renewable energy programme.

The DTI helped finance the £1,5m conversion of a building in Newcastle-upon-Tyne into the UK's first solar-power office block. Page said it showed that office buildings "will be able to generate one-third of their electricity needs from PV cladding".

But Greenpeace, the environmental lobbying group, says two-thirds of the UK's present electricity production could be generated by PV if it were deployed wholesale in homes and offices.

Harford says the industry faces a "chicken and egg" problem — PV-generated electricity is still more costly than that from fossil-fuel power stations, but, if manufacturers were guaranteed sustained demand, they would invest in high-volume production, reducing costs dramatically.

The US energy department has established a joint programme with the utilities to create what it sees as a necessary virtuous circle. It intends to double sales for solar products in four years and more than double the number of utilities using PV. It spent about £58m on initiatives last year and its cumulative expenditure is approaching £880m.

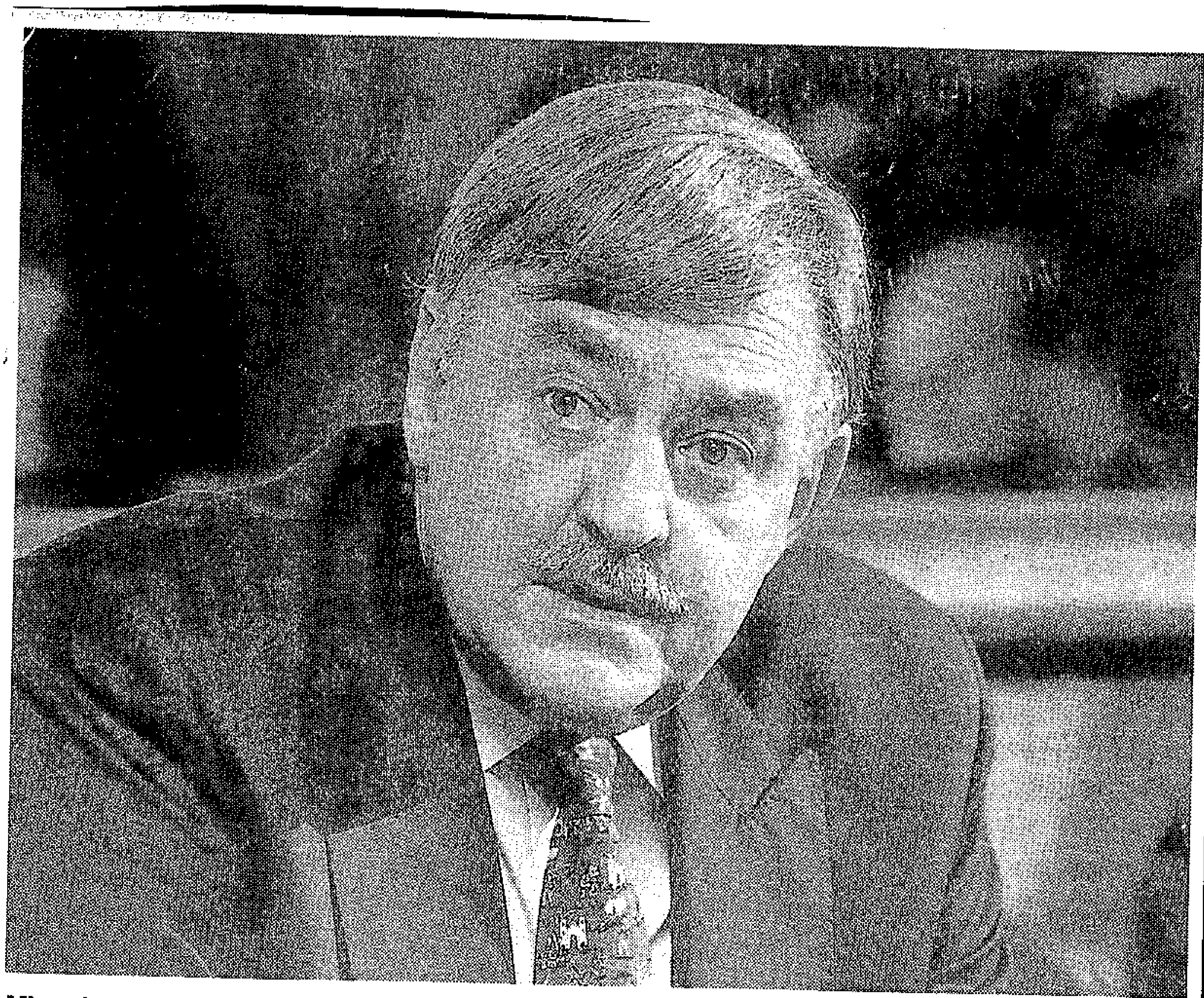
Fastest growing

For many years, Japan has promoted PV through its "sunshine" renewable energy programme to reduce the dependence on nuclear energy and on imported oil and gas. By 2000, it aims to stabilise carbon emissions at 1990 levels, a commitment also made by more than 150 developed nations. Japan also says new energy sources will account for 2% of its energy requirements by 2000, 3% by 2010.

That compares with the European Commission's "PV in 2010" study which calls for production of electricity from renewables to be trebled. It also concludes that roof and building-facade grid-connected applications represent the fastest-growing solar market in Europe.

Intersolar MD Philip Wolfe says the time is right to include PV in the UK's Non-Fossil Fuel Obligation, which subsidises electricity produced from renewable sources.

Inclusion would expand the market, he says. The DTI has so far excluded PV from the Non-Fossil Fuel Obligation mechanism. — Financial Times.



Minerals and Energy Affairs Minister Pik Botha speaking at a sub-Saharan oil and minerals conference yesterday.

Councils use cash from electricity to pay bills

BD 11/6/96

Reinie Booysen

LOCAL authorities and municipalities were adding an estimated R2bn annually to electricity bills to cover budget shortfalls unrelated to electricity production or distribution, Minerals and Energy Affairs Minister Pik Botha said at a sub-Saharan oil and minerals conference in Johannesburg yesterday.

Botha was responding to an International Energy Agency report which recommended distribution of electricity be removed from the control of local authorities.

He said it was unlikely Cabinet would accept this recommendation, but proposed nonetheless that local authorities be forced to make the electricity bills they issued more transparent, setting out separately the true cost of electricity and any additional charges.

"I urge the government to make sure that the electricity consumer knows where his money is going," said Botha, who retires from politics at the end of the month when the NP goes into opposition. This knowledge was a democratic right, as it was effectively related to local authority management of public funds, he said.

In a recent report, Energy Policies of SA, the agency recommended the finances and operations of the distribution utilities, largely controlled by local authorities in SA, should be "clearly ring-fenced, transparent and at arm's length" if they remained under local authority control.

According to the report, more than 50% of many authorities' revenue came from electricity.

"Many municipal authorities use electricity prices as a way of raising funds for municipal functions generally," the report said.

The International Energy Agency is the energy policy and advisory arm of the Organisation for Economic Co-operation and Development (OECD).

The agency said the electricity distribution sector should restructured to cater for the possibility of eventual full-blown competition among distributors, as was the case in many OECD countries.

Distribution should be handled by no more than 10, probably fewer, large distribution companies, each covering a substantial area of the country.

See Page 17

82% of W Cape homes electrified

(58) (56)

BARRY STREEK
POLITICAL WRITER

CT 11/6/96

HALF of the nine million housing units in black townships countrywide have not yet been electrified, but 82,1% of the houses in the Western Cape have been, Public Enterprises Minister Stella Sigcau said yesterday.

Outstanding bulk payments for electricity had almost doubled, with interest, to R1,2 billion at the end of 1995.

In reply to a question, tabled in the National Assembly by Mr John Gogotya (NP), Sigcau that 4,5 million of the nine million houses in black townships — 50,39% — had been electrified by the end of last year.

In the Western Cape, 766 361 of the 933 313 houses had been electrified and 17,89% still had to be electrified.

A higher percentage of homes are electrified in the Western Cape than in any other province.

In reply to a question tabled by Mr Keppies Niemann Sigcau said R788m was owed in outstanding bulk payments for electricity or R1 175m with interest, while at the end of 1993 R532m was owed or R690m with interest.

Most township dwellers are still in the dark

Star 13/6/96

(55) ([illegible])

By Justice Malala
Provincial Correspondent

Half of the households in South Africa's traditionally black townships still did not have electricity by the end of last year, when Eskom was owed R1 175-million in outstanding bulk payments by the provinces.

Of the more than 9 million households in these townships, only 4,53 million or 50,39% were electrified, while 49,61% were not.

In a written response to NP MP John Gogotya, Public Enterprises Minister Stella Sigcau said townships throughout the country had houses which were not electrified and still had to be supplied with the commodity.

The figures she released showed that the Eastern Cape had the least number of houses with electricity, with 72,36% of the province's 1,39 million households living without the commodity.

The Western Cape was the most connected province, with 82,11% of the houses having electricity, the figures showed.

Northern Province came close to the Eastern Cape, with 70,96% of its households still without electricity.

North West Province, where 63,56% of households lived without electricity, was third.

In KwaZulu Natal, 56,86% of households were still in the dark. In Mpumalanga, 55,39% of the households were without electricity. And in the Free State, 46,56% of the households were in the dark.

The Northern Cape had 34,06% of its households without electricity, while Gauteng had only 23,2% of its households living without electricity.

On outstanding payments owed to Eskom by the provinces, Sigcau said a total of R788-million was owed by the end of last year. With interest, the money amounted to R1 175m.

The worst defaulters were to be found in Gauteng, which owed a staggering R888-million with interest. KwaZulu Natal and the Northern Cape do not owe a cent.

Gauteng has led the defaulters' list for the past three years, with the debt at R592-million in 1993 and at R666-million in 1994.

Mpumalanga owes R79-million, Northern Province R60-million and the Free State R54-million. The Eastern Cape owes R51-million, North West R35-million and the Western Cape only R8-million.

Power utilites urged to embrace private sector

CT (BR) 13/6/96 (255) (55)

By James Lamont

INDUSTRIAL EDITOR

Andries Calitz, Eskom's senior transmission manager

PHOTO: JOHN WOODROOF

Johannesburg — Southern Africa could become the "electricity valley of the world" if it brought competitive principles and private sector finance into its power utilities, Andries Calitz, Eskom's senior transmission manager, said at the Sub-Saharan Oil and Minerals conference yesterday.

Calitz identified six priorities for the private sector for reform of the sub-equatorial African electricity sector, over and above the linking of transmission systems into an integrated power pool.

He proposed that a framework be adopted for independent power production, that large consumers be given a choice of energy supplier and that private sector finance be used to build and operate new transmission lines.

He also said power utilities should be commercialised, proper pricing policies should be implemented and the industry should be broken up into generation, transmission and distribution sectors.

"There are mechanisms to bring in finance that did not exist five years ago," said Ian Goldin, the chief executive officer of the Development Bank of Southern Africa, addressing the same conference. "Private finance for infrastructure is becoming more and more the norm."

He said that although Africa's 2 percent share of global capital flows was expected to decline, finance of infrastructure could increase by 10 percent a year from $1,5 billion to $5 billion by the end of the century.

Common problems that beset the southern African power sector, he said, were governments' unwillingness to raise tariffs, contributing to the disastrous financial performance of utilities, the use of prices to give subsidies to customers and the underperformance of electricity plants.

He said the bulk of African populations had not had access to electricity and that a culture of non-payment prevailed that included government departments.

In most sub-Saharan countries less than 5 percent of the population has access to electricity. Because of an electrification programme begun in 1992, about 48 percent of South Africans receive electricity.

However, Calitz questioned the commitment of the South African government to restructuring its larger assets, including Eskom. He said the restructuring of Eskom had been restricted to identifying separate distribution entities.

Calitz said Eskom offered major industrial customers with continuous operations a price of between 2c and 3c a kilowatt hour and maintained a 2:1 ratio between the prices of residential and industrial electricity.

He said the board of Eskom had recently agreed that Eskom become a net importer of electricity from next year.

AEC unfastening the apron strings

(55) ST(MT)16/6/96

By ZILLA EFRAT

THE Atomic Energy Corporation, a heavily state-funded strategic parastatal just five years ago, is fast improving its commercial viability.

In 1990 it had a single customer, Eskom, and supplied only one main product, nuclear fuel.

Today it sells more than 100 hi-tech products and services to a host of different local industries and 22 export markets. Locally produced nuclear fuel for Eskom accounts for only 4% of its income.

Waldo Stumpf, chief executive officer of AEC, attributes the changes to the AEC 2000 Plus plan which was initiated in 1990.

Since then, the AEC's annual dependence on state funding has fallen by 72%, or R621-million, in real terms each year.

The AEC has achieved this by boosting sales, closing down non-commercial plants, discontinuing programmes, contracting out non-mission related services and downsizing its support functions.

As part of its restructuring, AEC staff numbers have fallen by 72% — from 8 166 in 1986 to the current 2 227. It has also written off non-commercial projects worth over R1-billion, the biggest being the Z Enrichment plant which closed last year.

Dr Stumpf says: "The AEC wanted to remain in the nuclear fuels business, but operations had to be commercially viable on the international market. Those which were not were closed down."

To enhance its commercial viability, the AEC has ploughed its vast pool of knowledge into developing a host of industrial products which are used in areas as diverse as medicine, construction and space travel.

Over the next five years, Dr Stumpf expects state support to decline by a further 50% or more as new projects are introduced.

The AEC's financial results for 1995/96, which will be tabled in Parliament soon, show that sales of nuclear and industrial products have risen from almost nothing in 1990 to R230-million.

Exports made up 24% of this figure while industrial or non-nuclear fuels sales accounted for about 53%. More than half of the AEC's exports went to Asia and Australia while 22% went to Europe.

Dr Stumpf expects local and foreign sales of industrial products to rise significantly, making up more than 80% of sales in five years. This growth is expected eventually to reduce the AEC's dependence on the state from the current R245-million to a level where it gets paid only for contract work it does for the state.

In the early part of the next century, however, sales of nuclear fuel products should again start rising, thanks to a 50/50 joint industrialisation venture with French group Cogema on the AEC's molecular isotope laser separation process.

Both organisations hope to make inroads into the international uranium enrichment market, worth R15-billion a year. The technology they are developing will add 100% in value to local uranium resources, thereby doubling the value of South Africa's uranium exports.

Congema and the AEC will each inject R83-million into the project over the next three years.

Of the R245-million in state funding the AEC will receive in the current year, R84-million will be spent on functions it performs on behalf of the state.

These include international relations, nuclear waste management, operating nuclear facilities and preserving nuclear technology.

If the AEC achieves its current five-year plan, Dr Stumpf expects it to earn R500-million from exports and provide South Africa with foreign exchange savings of R250-million through subsidised import replacement.

COMPANIES

A 'gradual' revamp for electricity sector

(55) BD 18/6/96

Robyn Chalmers

THE rationalisation of the electricity supply industry had to be done gradually, Eskom CE Allen Morgan said last week.

The electricity working group recently submitted proposals to government on restructuring the supply industry, which could lead to a single national distributor being established or several regional distributors.

Morgan said one of the ways forward could be for Eskom or the strong municipalities to take over distribution functions of an ailing local authority unable to pay its electricity bills.

Eskom has about R1,3bn accumulated debt on its books as a result of non-payment.

Decisions about absorbing some municipal electrical undertaking activities would, however, have to be taken by the national electricity regulator.

Government sources said recommendations from an interdepartmental committee studying implications of restructuring electricity supply should be before the Cabinet by end August. Tough negotiations are expected before the recommendations are tabled.

On the question of Eskom's restructuring, Morgan said the parastatal was continuously studying effects of transformation, and recognised the need to adapt to its environment on the political, business and international level.

Eskom's restructuring and transformation committee — representing Eskom management, trade unions and employees — was far advanced in talks on the parastatal's future structure.

Morgan said the electricity council — which formulates policy and oversees the management board — was being closely scrutinised.

It was possible the council could play a greater role in linking policy and Eskom's objectives.

There was also a need for greater accountability and focus within Eskom's three core businesses of generation, transmission and distribution, he said.

Public Enterprises Minister Stella Sigcau announced recently that a Bill would soon be placed before Parliament to establish state ownership of Eskom, after which it would be transformed into a corporation.

Morgan said that he was not opposed to such a move.

The precise dates when the White Papers will be presented to Cabinet will be determined by the time necessary to process the comments received and by the cycle of scheduled Cabinet meetings. The Department will take into account the comments received, revise the Draft White Paper as necessary and then submit them to Cabinet during August or September. Subsequent to this, these White Papers will be presented to Parliament.

Trade and Industry: White Paper

*32. Mr I D VAN ZYL asked the Minister of Trade and Industry:†

Whether his Department is drafting a White Paper at present; if not, why not; if so, when will it be published? N1000E

The MINISTER OF TRADE AND INDUSTRY:

The Department published a "White Paper on National Strategy for the Development and Promotion of Small Business in South Africa" in March 1995. Based on this White Paper, a National Small Business Bill was presented to Cabinet.

A "Green Paper on Customs Tariff Policy with Regard to Agricultural Products" was jointly published for comments by the Department of Trade and Industry and Agriculture. The comments received are at present being studied. The "White Paper on Customs Tariff Policy with Regard to Agricultural Products" is expected to be completed by August 1996.

Mineral and Energy Affairs: White Paper

*33. Mr M VAN S HAMMAN asked the Minister of Mineral and Energy Affairs:† 66

Whether his Department is drafting a White Paper at present; if not, why not; if so, when will it be published? N1001E

The MINISTER OF MINERAL AND ENERGY AFFAIRS:

Yes. The Department of Mineral and Energy Affairs are currently in the process of drafting White Papers on Energy Policy and on Mineral and Mining Policy.

White Paper on Energy Policy

A 200 page detailed and technical Energy Policy Discussion Document was written and released for analysis and comment in August 1995. More than 100 written responses totalling more than 1 500 pages were received including detailed comments from the United States Department of Energy, International Energy Agency, Danish Government, International Institute for Energy Conservation and a number of international commercial energy organisations. In addition five structured consultative workshops were organised and attended by about 900 persons. Fifteen issue rapporteurs summarised all the results, followed by active consultation with major stakeholders and the Parliamentary Portfolio Committee on Mineral and Energy Affairs. An editing committee compiled all the components and developed additional sections. The draft White Paper will be published by August 1996 and submitted to Cabinet and Parliament toward the end of the year. The final White Paper is expected to be published by February 1997.

White Paper on Minerals and Mining Policy

After extensive consultations, workshops and public meetings, a Discussion Document on a Minerals and Mining Policy was published in November 1995. Since then a tripartite Working Group have been consulting with the Mineral and Energy Affairs Portfolio Committee, various mining companies, the Chamber of Mines, organised labour, the Provinces and other interested and affected parties. By the end of July 1996 a Green Paper will be published for submission to Cabinet and Parliament. The final White Paper is expected to be published by October 1996.

Public Enterprises: White Paper

*34. Mr P W COETZER asked the Minister for Public Enterprises:†

Whether her Department is drafting a White Paper at present; if not, why not; if so, when will it be published? N1002E

The MINISTER FOR PUBLIC ENTERPRISES:

No, we have realised that the implementation of the options of the restructuring process may not be effectively implementable without the backing of the legislative process. In this regard, once the sectoral task teams have developed proposals on the option for restructuring, a policy document will have to be developed

which we envisage will result in a draft piece of legislation to be submitted to Cabinet.

Supply of uranium to France

*35. Mr W A HOFMEYR asked the Minister of Mineral and Energy Affairs:

(1) Whether South Africa has supplied any uranium to France since 1975; if not, what is the position in this regard; if so, what are the relevant details;

(2) whether any such sales were subject to restrictions regarding the use of uranium for military purposes; if not, why not; if so, what are the relevant details;

(3) whether it has been determined whether any South African uranium was used by the French government in the recent series of nuclear tests in the Pacific Ocean; if not, what is the position in this regard; if so, what are the relevant details;

(4) whether the Government has taken or intends taking any steps to prevent the use of South African uranium in nuclear tests or for other military purposes; if not, why not; if so, what steps? N1003E

The MINISTER OF MINERAL AND ENERGY AFFAIRS:

(1) Yes, uranium is exported to France in two forms—as ore concentrates (the so-called yellowcake), and uranium hexafluorides (UF_6).

Yellowcake exports to France amounted to:

1977:	655 t (metric tons)
1978:	227 t
1979:	2 404 t
1980:	3 057 t
1981:	2 927 t
1982:	1 487 t
1983:	2 231 t
1987:	900 t
1988:	450 t
1989:	300 t
1990:	100 t
1991:	133 t
1992:	133 t
1993:	134 t
1994:	691 t
Total:	15 829 t

Uranium hexafluoride exports amounted to:

1995:	337 t
1996:	115 t (up to present, June 1996)

The total quantity therefore amounted to 16 321 t since 1975.

The quantities quoted above were obtained from the Atomic Energy Corporation's (AEC) existing records as reflected in export permits granted.

(2) In terms of the Nuclear Non-Proliferation Treaty (NPT), France is one of five nuclear weapon States (NWS). The NPT does not lay down any restrictions for the supply of uranium to NWSs.

Although SA concluded specific contracts with the UK and the USA for the supply of uranium for military purposes in the 1950s, these contracts expired in the late 1960s and early 1970s. South Africa has never had a similar contract with France.

In spite of the fact that the NPT does not lay down any requirements for NWSs, conditions of supply were gradually introduced over the years and made more restrictive. In 1982, with the creation of the present Atomic Energy Corporation of SA, Ltd, it became policy to require recipient NWSs to give an assurance of exclusive peaceful use and to subject nuclear material to international (IAEA) safeguards. In the present Nuclear Energy Act (1993) the export of nuclear material to NWSs for non-peaceful uses is strictly forbidden. Exports must be authorised by the Minister of Mineral and Energy Affairs.

(3) France has publicly stated that its civil and military nuclear cycles are operated separately and that for the latter it uses uranium, only for powering nuclear submarines, from its own uranium mines in France.

France is a large user of uranium for the production of electricity for civil use—more than 70% of the electricity in France is produced by uranium fuelled power reactors. France imports uranium from many supplier countries, especially through French companies with activities in Niger and Gabon.

COMPANIES

Home wanted for white elephant

Edward West

55

BD 20/6/96

GOVERNMENT is attempting to lure foreign companies into bidding for the redundant power station erected by former Bophuthatswana president Lucas Mangope.

The mineral and energy affairs department said the R177m plant, which has never produced a watt, would never be commercially viable in SA.

Government had tried previously to sell the plant at a commercial price, but failed to find a buyer.

The department said the station would be sold to the highest bidder — probably an island state where prohibitively high generation costs would justify spending more on the Bop plant.

The plant, built in the 1980s, lacks ash, coal and water supply systems.

Last year the Skweyiya commission investigators said it was a "monument to apartheid's folly or a fraudulent scheme not paralleled in SA history".

Mineral and energy affairs said attempts over the past two years to find a buyer had failed because of potential foreign buyers being unable to obtain permits to erect a power station in their own countries, and foreign labour legislation. The plant would now be offered through the Tender Board, with the highest bid winning.

Studies by mineral and energy affairs and Eskom indicated that the plant was not commercially viable in SA, given the country's relatively inexpensive electricity.

The power station was originally intended to provide 60MW of power, while Eskom's power stations generally produced about 600MW.

The department said a few companies, notably from the Philippines and Malaysia, had expressed interest.

Eskom owed billion rands

ARGT 22/6/96 (55)

ADRIAN HADLAND
Financial Staff

■ Parliament heard that some communities refuse to pay their electricity bills, leaving Eskom with a burgeoning billion-rand debt. In spite of this, the power giant claims it can cope.

MORE than a billion rands is owed to Eskom in electricity arrears. This has been revealed in parliament by Public Enterprises Minister Stella Sigcau.

Delivering her departmental budget speech on the last day of the current session of parliament, she told MPs that non-payment for electricity in certain areas continued to be a source of "grave concern."

While Eskom was in good financial shape, solutions were being urgently sought in a bid to tackle the huge amount of outstanding payments.

"The government at central and local level is working together with all stakeholders and the communities as well as Eskom to seek practical and functional solutions to this problem," she said.

In a speech that was expected to clarify the government's position on the privatisation of state assets and corporations, she failed to unveil any significant new plans or initiatives.

The restructuring of state assets was an "important pillar" of government macro-economic strategy, she said.

Public enterprises currently under restructuring review employed in excess of 300 000 and many of these were "understandably apprehensive" about the future.

"Restructuring should develop the human resource capacities of South Africa through decent employment conditions, efficient use of training and retraining, redressing previous discriminatory practices and enhancing technical and managerial capacity," said Mrs Sigcau.

Restructuring could involve a number of options including the total sale of an asset and the partial sale to strategic equity partners.

Mrs Sigcau said a special adviser would be appointed next week to draft a final model for the whole programme which was expected to be ready by the end of the year.

"The restructuring of state assets is not ideologically driven but constitutes a pragmatic economic imperative," she said.

It would aim at boosting economic growth, involving foreign partners in the provision of infrastructure at an estimated cost of R173 billion, reducing debt and making state corporations more efficient and competitive.

"Significant strides" had been made in plans to find a strategic equity partner for Telkom and implementation of this plan was expected in the second half of the year.

A change in the ownership of the parastatal Aventura, which provides leisure accommodation and facilities, was also inevitable with up to a quarter of the shares going to staff.

Further decisions on the sale of Sun Air and Transkei Airways, as well as the reactivation of mothballed Eskom power stations - with a view to attracting strategic partners - were expected later in the year.

"The restructuring programme is destined to be a protracted and carefully considered process," Mrs Sigcau told parliament.

Illegal connections, high demand blamed for daily blackouts in Alex

Star 24/6/96 (55) (...)

By Anna Cox

Alexandra residents are experiencing power cuts every night between 6 and 10pm and are complaining bitterly of not being able to cook, bath and get children's homework done.

David Mphake said the power cuts had happened every night for the past four weeks and were causing great inconvenience to people who were unable to get on with daily living.

"The electricity goes off when my wife and I get home from work, so we cannot cook, and most nights my children go to sleep without eating a proper meal," he said.

Eastern Metropolitan Substructure (EMSS) public relations officer Daleen van Wyk said the authorities were aware of the cuts and a R2-million programme to upgrade the electricity infrastructure was in progress but not yet complete.

She said illegal connections and a high demand during the winter months were causing the power to be cut off.

"We are taking action against the illegal connections, but once the upgrading is complete, things should improve vastly. Further provision has also been made on the 1996-97 operating estimates to continue with the upgrading programme," Van Wyk said.

A meeting to allow Alexandra residents to decide on increases in electricity charges will be held on Saturday.

Residents will be asked to provide input on how proposed increases in electricity tariffs should be phased in.

A public meeting was held last month but although the community agreed that tariffs should be increased, they asked for more time to consider how they should be implemented.

A number of options have been put to residents and published in a local newspaper. Residents who are unable to attend the meeting can vote for the option they prefer with a ballot paper outlining the options.

Concerns raised by the community regarding illegal connections, the non-payment by hostel residents and inadequate infrastructure will be discussed.

The EMSS is also planning an education programme for the community to address all issues related to the electricity supply.

The planning of the programme was at an advanced stage and would be implemented towards the end of June, said Van Wyk.

Eskom signs agreement plan to repay arrears

(55) (260) (?) Sowetan 1/7/96

By Shadrack Mashalaba

GIANT electricity supplier Eskom signed a more than R9 million bulk debt agreements at the weekend with the Pretoria metro northern substructure (Acacia/Soshanguve) and the Alberton Transitional Local Council.

The agreement for the repayment of electricity account arrears was a culmination of protracted negotiations between state-owned electricity supplier, Gauteng province and local government officials.

Speaking at the official signing ceremony with the Alberton council members at Sunninghill, Johannesburg Eskom's executive director Jac Messerschmidt said he believes close collaboration with local authorities will go a long way to addressing the predicament of the arrears trap.

In terms of the agreement, the Alberton Council has agreed to pay Eskom in full for all electricity used in their area of supply from May 1 1996 onward. In exchange, Eskom has agreed to write off all arrears debt incurred before June 30 1995.

"If nothing transpires we will consider legal action against local authorities who still owe us R280 million.

Next week we will be announcing plan of action to be taken against local authorities who still owe us," Messerschmidt said.

Resuscitate

The agreement comes in the wake of the government's intention to resuscitate the Masakhane campaign and local authorities' resolve to crack down on service defaulters.

"All that we expect from now on was for the local authorities to perform by ensuring what is due to them was recovered. Past debts accumulated will be transferred to a suspense account which will be subject to performance," Messerschmidt added.

This means that, provided full payment is maintained for 14

Town Councillo, Doctor Nkonyana.
PIC: MOTLAPELE SEGALE

months, Eskom will stop adding interest to the arrears amount and eventually write off the arrears.

Any debt incurred between the two dates, June 30 1995 and May 1 1996, will be repaid on or before April 30 1997, with interest.

In the case of the Pretoria Metropolitan Substructure (MSS), they have already met the conditions and the arrears have been written off.

"People will be willing to pay their debts if the services they are utilising are adequate and seen to be provided. The time has come to instil a culture of payment and this will be done if we do not operate from a distance," he said.

Door is open

He further added that the agreement did not exclude Alberton and Pretoria local councils, but their door was open to other local authorities who want the same deal, so long as they make an unequivocal undertaking to deliver. Alberton town councillor Doctor Nkonyana unconditionally accepted the terms of the agreement saying it will be viable as part of their endeavour in developing local communities.

Eskom said these agreements have established a mechanism for local authorities with problems over the repayment of service debts to clear themselves of the burden.

Failure to perform

They also put it straight that concession is dependent on their performance. However, any failure to perform according to the terms of the contract will result in Eskom cancelling the agreements.

Eskom's senior general manager for sales and customer services, Joe Matsau said: "This is a major step in the realisation of the Masakhane ideals. We trust that many local authorities will make use of this opportunity to escape from the trap in which the non-payment of bulk accounts has landed them.

Currently Greater Alberton (TLC) which includes Thokoza has between 80-90 percent payment ratio, said Messerschmidt, adding that Sowetoi has an 80 percent payment ratio.

PRIVATISATION PROTEST *Bheki Magagula, the Gauteng regional secretary of Numsa, and Jerry Mafereka, a shop steward, at a press conference yesterday* PHOTO: JOHN WOODROOF

Eskom accused of covert sell-off

CT (BR) 5/7/96 (55)

By James Lamont

INDUSTRIAL EDITOR

Johannesburg — Eskom's management is privatising parts of the national electricity utility behind closed doors, Bheki Magagula, the National Union of Metalworkers' regional secretary in Gauteng, said yesterday.

An anti-privatisation protest march takes to the streets of Johannesburg and Durban today.

"Eskom management wants to privatise," said Magagula, "If we don't stop them now they are going to privatise all of Eskom."

Magagula said that Eskom had already hived off its housing assets and other strategic areas.

Rotek Industries, a multi-million-rand division of Eskom, was also some way down the road to privatisation.

"The government seems to be really moving forward with privatisation and is not addressing delivery," said Jerry Mafereka, a Numsa shop steward at Eskom.

The ANC-led government needed to wrest control of the utility from business interests for the good of upgrading the country, Mafereka said.

"The debates are taking place in boardrooms while we as unions are taking the issues out and making them public. Very few people understand what is going on."

Numsa was concerned that covert privatisation was being undertaken on a piece-meal basis and neither it, nor the community at large, were having a say.

But an Eskom spokesman said the union's fears were unfounded because the utility was not discussing a change of ownership with the government and did not believe it should be privatised.

Sharp increases, but SA's electricity is still cheapest

BD 9/7/96 (55)

Robyn Chalmers

SA CONSUMERS experienced the highest average electricity price increase, for the second year in a row, out of 15 countries participating in the annual National Utility Services SA cost survey.

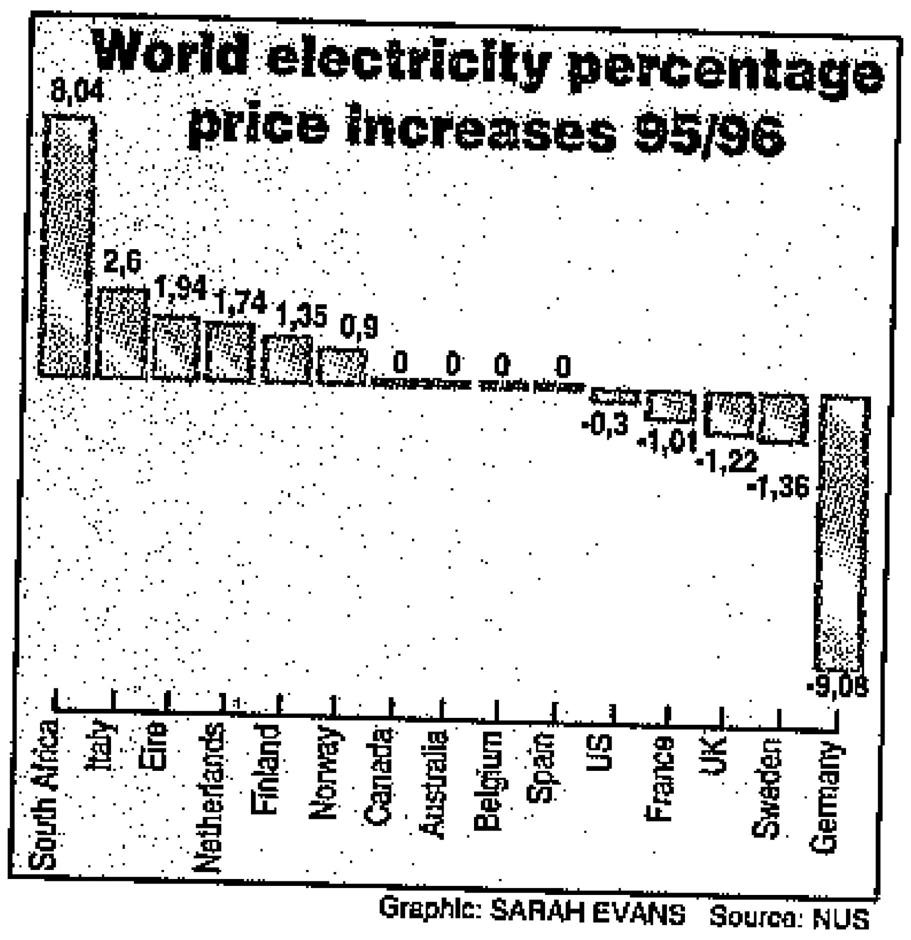
However, the survey showed that despite the latest increase of 8,04% in price against an official inflation rate of 6,3%, SA still had the cheapest electricity of all countries surveyed.

Spain has taken over from Germany, having the most expensive electricity at 42,81c a kw/hour, with the average cost a kw/hour in SA standing at 15,87c.

The survey showed although there was no change in the cost of Spain's electricity between April last year and April this year, prices in Germany had fallen an average 9,08% during the period, knocking it from the top spot.

Italy's consumers saw an increase of 2,6% which meant Italy retained its position with the third highest electricity price, followed by Belgium, the Netherlands, Eire, France, the US and the UK.

National Utility Services SA national sales manager Rob Mackenzie said the organisation, which provided analysis on energy, water and fuel costs, was monitoring developments within the electricity distribution industry.



Graphic: SARAH EVANS Source: NUS

Mackenzie said the government-backed National Electricity Regulator's aim was to ensure electricity was made available to the whole population at equitable prices, but there were several problems to be overcome first.

Not least of these was the elimination of widespread inefficiency in the fragmented distribution system involving Eskom and more than 400 local authorities, he said.

The regulator had postponed issuing final licenses to distributors to give it more time to negotiate a more rationalised distribution model. Proposals were being assessed by a government task team.

Mackenzie said a new system was needed for business and the consumer which would "vary in many ways to the old one".

He expected more cost-related tariffs would be introduced, but businesses would still need to ensure that the new tariffs imposed were the right ones for them.

ESKOM

SHOCK TACTICS

FM 12/7/96

A crisis has erupted in electricity supply — with widespread political implications. Eskom has taken judgments against the Northeast Rand Metropolitan Council and Springs City Council for more than R440m of unpaid debts.

It says it intends to enforce these judgments, which means cutting off power to areas that include large mining and industrial customers. The National Electricity Regulator says it will prevent this.

Northeast Rand claims the problem is caused by the merger of Kempton Park with Tembisa.

The new authority inherited a situation where Tembisa was not paying enough to cover its electricity bill. One aspect of the problem was illegal power connections. A spokesman for Springs says it will negotiate with Eskom to reach a compromise.

This damaging situation was foreseeable when the Regulator was established and it became clear that government's policy was to cross-subsidise poor households' power bills at the cost of commerce and industry.

This policy was entrenched through the boundaries established for new local authorities, which merged poor areas with economically stronger entities such as mining. Many warnings were given when the Regulator was set up, not least by the *FM*.

Now the predicted problems have arrived. Consider the dilemma faced — ultimately — by government. If Eskom, by whatever means, is denied the right to enforce payment of its claims, its own profitability and creditworthiness will be impaired. So, too, will its ability to raise loans abroad. Even local borrowing could become more expensive.

Adding together nonpayment by municipal authorities and end-users, Eskom is now owed R1,2bn, equal to 7% of 1995 revenue, and well up on 1994's R873m.

As for future privatisation, possible foreign buyers will simply point to the electricity payments problem as an immovable obstacle.

If the Regulator's attitude leads to this, what is the alternative? By inexorable logic, local authorities must be able to recover electricity charges or shut off power and enforce the shut-off.

This would bring to a head the unresolved political tussle between government or, perhaps more correctly, the ANC, and the civics. It also raises the embarrassing issue of law enforcement in general in black residential areas.

If recent precedent is a guide, government will fudge the issue and end up with the worst of both worlds. It will allow Eskom's finances to be impaired and will ineffectually attempt to see its writ run in black urban areas.

What is needed is a firm decision at the highest level to change whatever needs to be changed to deal a heavy blow to the culture of nonpayment.

It is time for government to admit its Masakhane programme is a myth. Nonpayment for services cannot be allowed to impinge on the rights of business in the affected areas. Industry must not be penalised for a culture spawned by government's attitude to nonpayment.

The solution may even entail significant changes to the local government dispensation. But whatever the key, this lamentable situation cannot be allowed to continue. ■

Eskom will not be allowed to pull plug

(28) (123) (55) Star 13/7/96

The National Electricity Regulator has reassured consumers in 11 municipalities with unpaid electricity bills that steps will be taken to avoid cutting off bulk supply.

The regulator is trying to resolve the deadlock between Eskom and the Springs and North-East Rand councils over unpaid bills of R460-million.

NER chairman Dr Ian McRae said that, if necessary, the regulator would exercise its statutory powers to transfer licences of defaulting distributors to competent and financially sound distributors.

The Government was looking at ways to restructure the electricity supply industry, and a decision by the Government was expected to be announced soon.

McRae said non-payment of electricity was placing a risk on the financial viability of the entire electricity distribution industry.

Also, those who had electricity and were not paying for it were denying those who did not have it the opportunity of getting it.

He said the NER supported the action taken by Eskom to cut off the electricity supply to individual consumers who refused to pay for it.

However, cutting off the bulk supply to whole cities, towns or areas was a different matter altogether.

"Pulling the plug will result in cutting off the supply to industrial and commercial consumers who are paying their bills, and also to the majority of residential consumers who are also paying their way – so those who pay suffer with those who don't."

McRae said Eskom had at least three options; it could negotiate a satisfactory settlement, pursue its normal civil remedies through the courts, or it could terminate the bulk supply. – Sapa

Naturena indignant about squatter site

Sowetan 15/7/96

By Themba Sepotokele

RESIDENTS of Naturena, south of Johannesburg, have lodged an appeal with the Greater Johannesburg Metropolitan Council to intervene in the planned relocation of squatters to the area.

In a 53-page petition signed by more than 650 people last week, residents appealed to the GJTMC planning department to stop the resettlement at Naturena of squatters from the Misgund North informal camp in Lenasia.

The squatters are scheduled to be resettled in October and residents plan to use every means at their disposal to stop the move.

In a petition delivered to the chief executive officer of the GJTMC, Professor Nicky Padayachee, residents said there had been a lack of communication and no consultation as required by the council's policy and the Reconstruction and Development Programme before the resettlement was planned.

Ignores strategic goals

Residents said the proposed resettlement ignored the strategic goals of the Urban Development Strategy, which stipulates that low-cost housing should not be part of an up-market suburb. The resettlement would also be a health hazard because no environmental impact study was done as required by the Environmental Conservation Act.

To make matters worse, they said, the Naturena Civic Organisation was not informed about the move.

The residents said that as citizens and ratepayers of the country, they demanded that their case and their objections be heard.

A resident said: "To have squatters in our area will lower the value of our houses. This should not be allowed to happen."

Padayachee has given residents an undertaking that the council will discuss the matter. "An option would be to put the issue on the agenda of the Petitions and Public Participations Committee's meeting scheduled for July 30," he said.

48 000 residents to get electricity

(55) Sowetan 15/7/96

By Josias Charle

ABOUT 48 000 Soshanguve residents are to benefit from a new R29 million electricity project launched at the weekend.

Under the project 7 500 homes have been electrified, benefiting the communities in sections FF, GG, HH, JJ and LL. At least 19 schools and 37 other stands will also have access to electricity.

The "switch-on" was performed by Soshanguve mayor Mr O Lukhuleni. Several parliamentarians including Deputy Education Minister Father Smangaliso Mkhatshwa attended the ceremony.

Lukhuleni urged residents to continue paying for their services as this would allow the council to be in a position to render better services to all.

"The special relationship that exists between a local authority and its residents places a responsibility and obligation on each citizen. A local authority and the services it renders can only be as good as the support and financial contributions it receives from its residents," Lukhuleni said.

The driving force behind the project, local councillor Mr Benny Makena, said the project has set an example of what can be achieved if the cooperation between the community, local authorities and developers was sound. He said the project was completed in seven months.

Makena said in under the project, 7 500 homes have been electrified as well as 19 schools and 37 stands and about 48 000 people will now have access to electricity.

Makena said the project was financed by the Greater Pretoria Metropolitan Council.

"This project was labour-intensive. About 302 residents were employed and benefited by about R1,5 million in wages," he said.

Editor dies in accident

By Victor Mecoamere

THE EDITOR of *The Sunday Independent* and *New Nation* supplement *Higher Education Review*, Mrs Karen McGregor, has died in a car accident in KwaZulu-Natal.

McGregor's 18-year-old daughter, also named Karen, who was an architecture student, also died in the accident which occurred on the N2 highway between Izingolweni and Harding last Thursday.

McGregor's husband Mr William Saunderson-Meyer, who is the communications and development director at the University of Natal, and their other daughter Amy (16) were injured in the accident.

Amy reportedly broke a collar bone and cracked a rib.

Saunderson-Meyer is in the intensive care unit of a private hospital but is reportedly recovering well.

REINVENTING A PORTFOLIO

Penuell Maduna, the new mineral and energy affairs minister, has had to deal with a number of controversial issues since taking over from Pik Botha

PHOTO: JOHN WOODROOF

Boxing Maduna

CT(BR) 16/7/96 (55)

James Lamont

INDUSTRIAL EDITOR

Penuell Maduna, the new mineral and energy affairs minister, has had an unenviable first week in office.

Pik Botha melted into the veld, leaving his successor to handle Mossgas's failed privatisation and fill the empty shelves in a chilly Pretoria office. Maduna had to scramble his legal brains over whether private bids for the synfuel producer should be made public and what to make of the sudden firing of 28 000 Amplats miners. Botha, meanwhile, was enjoying the first week of retirement on a hunting holiday, no doubt with some relief.

Just as Botha has had to learn to govern a conservative mining industry, aggressive international oil companies and organised labour, so will Maduna. He will also have to overcome the ANC sense of deployment by which President Nelson Mandela informed Maduna of his appointment 10 minutes before the new Cabinet was made public last May.

Of course, Maduna buried his judicial ambitions and accepted, ahead of Marcel Golding, the parliamentary mineral and energy committee chairman who was the widely expected successor. But Maduna says, "I wouldn't have gone out of my way to get it."

He is better known for handling the illegal immigration of Mozambicans as the deputy minister of home affairs, and while in exile, the ANC's legal and constitutional affairs.

He has inherited one of the toughest ministerial portfolios. Ahead of him lies the unbundling of mining houses, a new national energy policy, a search for an Eskom equity partner, the formation and co-ordination of regional power pools and the declining protection for synfuel production.

He also has to consider stitching together a gas policy that accommodates the potential of gas reserves in the Pande field in Mozambique and the Kudu field off the coast of Namibia.

All of these require urgent ministerial attention. Investors are deterred by the lack of a clear strategy which will prepare the industry for the next century, as the Mossgas bid process has shown.

Behind the new minister lies the inglorious R12 billion Mossgas, a legacy of apartheid's isolationist mindset which has inadvertently false-started national privatisation.

Furthermore, he has to reinvent a portfolio which before was jealously guarded by the National Party. Maduna bravely defends procedures put in motion by his predecessors and defers critical decisions to Cabinet authority.

A former amateur boxer, Maduna is still feeling his way and does not threaten any surprises. "It is still early days to see what I want," he says. "But let's have change and do things differently."

As his top priority for change, he places transforming black South Africans from "purveyors of cheap labour" into equity holders in industry. "We must initiate processes to bring blacks into the economy," he says.

"I am beginning to imagine blacks in refining, in the business of importing crude, owning and operating mines. Nothing prevents us from doing that," says Maduna.

He argues that a more representative share of equity is not a question of blacks receiving handouts of marginal mines, but buying their way into the economic bedrock of the nation.

They have the resources and we can invent creative ways of buying their way in, he says.

Of the mining houses, Maduna says, "Some are going the right way, others are not."

He was not specific about which found favour with him and which did not.

Maduna would also like to see more black people integrated into his 677-strong department, but acknowledges that public service salaries are not as appealing for the young graduate as those in the corporate world.

Maduna's immediate ambitions end there. On the issue of privatisation, he takes the now standard government non-committal approach.

"Privatisation is one element but should not dominate the debate. It is not as simple as it might seem," he says.

He appeals to the government's wider responsibility to the national interest and the environment, but says that if private capital would help, then he would support it.

He confirms that an equity partner for Eskom, the national electricity utility, is being sought because the state does not have enough money to be the sole financier. That is not privatisation, it falls into the realm of state restructuring, he says.

The state's hand is everywhere in the energy sector, from synfuel subsidies to price setting, and Maduna does not want it pared back yet. But he warns against the strictures of command economies.

"One thing we are not going to allow is to become a highly centralised economy."

Maduna is suspicious of deregulation and compares it with the unruly and deadly taxi industry. In that laissez faire environment, he says, "they have been thoroughly slaying one another". Though competition is stiff, the same is unlikely to happen in the oil industry, but Maduna will not put it to chance.

"You can't say the government must have no role whatsoever. As the government, it has to address the concrete reality of South Africa's situation." He says the experiences of other countries are useful, but cannot simply be transplanted to South African soil.

"I am the last person to say we should leave everything to the tender mercy of the private sector," he says.

He argues that the private sector is not prepared to take on a developmental role like low-cost housing and mass electrification. Until it will, government must provide.

Maduna is yet to find his feet but like the boxing legend Mohammed Ali, he is playing rope-a-dope.

You can write, phone fax or e-mail a letter to: The Editor, Business Report, PO Box 1014, Johannesburg 2000
Phone: (011) 633-2996 Fax: (011) 838-2693 e-mail gol@star.argus.co.za
Business Report reserves the right to edit all contributions

Mondi to supply Eskom electricity poles

CT(BR) 16/7/96 (55)

By James Lamont

Johannesburg — Eskom and Mondi Forests have entered a partnership to alleviate a shortage of electricity poles that had threatened to hold up the national electricity utility's mass electrification programme in South Africa's remote rural areas.

The shortage arose because of the heavy summer rainfall.

Mondi Forests is a commercial forestry enterprise and a wholly owned subsidiary of Anglo American Industrial's Mondi.

The company agreed at the end of May to supply 4 000 poles a month to Eskom as part of a two-year contract. The contract guarantees a reliable supply and has the option of being extended for two years.

Eskom was unable to attach a value to the contract. The poles are used in a third of Eskom's electrification business, which is critical to the Reconstruction and Development Programme.

New customers

Eskom's electrification drive aims to connect 300 000 new customers a year. It ran into problems earlier this year when the supply of 9m to 11m electricity poles used in remote rural areas dried up because of increased demand for power infrastructure. Eskom electrified 313 179 homes last year.

The poles take between nine and 12 months to dry out before they can be used and the summer's wet weather had delayed the drying process.

Mondi has built a kiln in the Pietermaritzburg area to reduce the drying time to 15 days. Zella Rickett, an Eskom spokesman, said many local forestry companies were unable to supply poles of the required length.

"Import of the poles has been considered, but it is better to keep it within the South African economy," she said.

Call to bypass struggling councils

Business bid to pay Eskom bills directly

55 280 103

BD 16/4/96

Robyn Chalmers

BUSINESS is calling on the National Electricity Regulator to allow it to pay electricity bills into a special account, bypassing local authorities which face being cut off by Eskom for failing to pay their accounts.

The Forum for Energy End Users — representing companies such as Sentrachem, Afrox, Sappi, Mondi and Tiger Oats — said yesterday Eskom's threatened action against authorities would lead to production losses with "huge ramifications for SA's economy".

Chairman Johan Hees said industry was an innocent party and companies needed a fund to send accounts to if they feared local authorities — about 50 are in debt to Eskom — could be cut off. Business would pay local authorities that were not in arrears to Eskom.

The call has been triggered by Eskom's attempt to recover R440m from the Northeast Rand council and Springs. Eskom has warned it will cut the two councils' supply, though the regulator has vowed to prevent this.

The business proposal would deprive the local authorities of a major portion of the R1,7bn a year they net from premiums on electricity sales. This is used to subsidise other local authority commitments, and compensating the authorities for losing the surplus is a major sticking point in talks to reshape the distribution network.

The regulator has previously indicated it would be prepared to let Eskom deal directly with consumers to maintain supply should the local authorities be cut off. But it dismissed business's proposal, saying it was unnecessary.

"It is the wrong approach because it will constitute a breach of the existing agreements between companies and their distributors, giving local authorities the legal right to cut off electricity supply to businesses," said regulator spokesman Johan du Plessis.

He said a meeting to find a way forward would be held today with representatives of central government, the Gauteng government, Eskom, the regulator and the local authorities. Proposals being considered by the Cabinet on restructuring electricity distribution included ways of dealing with nonpayment and, if accepted, could go some way towards solving the issue.

Hees said that during recent discussions on restructuring the industry, forum members had lobbied for the electricity supply to be taken away from local authorities.

There was evidence of a growing number of local authorities not paying their accounts to Eskom, despite the payment of electricity accounts by business. The culture of non-payment had resulted in Eskom being owed R1,5bn by local authorities.

Eskom agrees not to cut East Rand power

(55)

By Adam Cooke

Sowetan 17/7/96

Eskom has undertaken to suspend its planned power cut to large sections of the East Rand until the case appears again before the Rand Supreme Court on August 20.

Businesses have called for the National Electricity Regulator to enable the business community to pay Eskom directly. At present the Springs council buys power in bulk from Eskom, and adds a fee before billing the individual or business consumer.

As part of its undertaking in the Supreme Court yesterday, Eskom agreed not to interfere with contracts between the Springs City Council and businesses. The undertaking annuls businesses' attempt to bypass local authorities.

The chairman of the Forum for Energy End Users, Johan Hees, maintains that businesses are often at the mercy of inefficient local authorities.

Differing costs of energy often resulted in opposition industries paying different prices, which was unfair to businesses, he said.

Bill to grant local govt powers okayed

Sowetan 17/7/96

By Jovial Rantao

Political Correspondent

The Government is to publish draft legislation which will grant and define powers of local government structures, Constitutional and Development Minister Mohammed Valli Moosa has announced.

Moosa secured the support for the draft bill on further regulation of local government or "the bridging legislation" from the nine MECs in a meeting he held with them yesterday.

Once the bill is published, the public will be given 21 days to comment before it is tabled before the Cabinet for approval, and then in Parliament.

The "bridging legislation" covers the powers and functions of metropolitan councils and local councils, district councils, standalone local councils, rural councils and representative councils. It also deals with the alteration, redemarcation and re-delimitation of municipal areas, and creation of a municipal demarcation board.

Eskom strikes deals to cut power

(55) (BR) CT 18/7/96

By James Lamont
INDUSTRIAL EDITOR

Johannesburg — Eskom is offering to pay large customers for temporarily interrupting their electricity supply so that power can be delivered to other customers during demand surges and sudden losses of generating capacity.

Eskom started offering interruption agreements two years ago with Alusaf, the aluminium producer. It now has interruptible load agreements with 26 smelters and furnaces, it said yesterday.

The power is needed during surges in electricity demand or when generating units feeding the electricity grid temporarily go off-stream. The agreements allow Eskom to curtail the electricity supply at short notice for not more than two hours a week. In return, Eskom offers a discount on the customer's account or a lower tariff.

Andries Calitz, Eskom's senior transmission manager, said that customers normally received compensation after an interruption had taken place, but otherwise remained on a normal tariff.

The average rate of compensation for interruption is 10c a kilowatt hour across peak, standard and off-peak times. The peak rate is 28c a kilowatt hour during winter and 25c a kilowatt hour during summer.

This arrangement is considerably cheaper for Eskom than building additional generation capacity.

According to Eskom, the agreements virtually eliminate the need for expensive gas-turbine emergency generating plants.

The company said it hoped to make 3 200MW available through the initiative. The agreements were available to all of its large customers, Eskom said.

ESKOM

DARK MOMENTS

FM 19/7/96

Threats and counterthreats by Eskom and the National Electricity Regulator serve more to cloud than illuminate the dispute over nonpayment for bulk electricity. At immediate issue is the total amount of R440m due to Eskom by the Northeast Rand Council and Springs City Council (*Business* July 12).

Eskom has threatened to cut off bulk power and Regulator chairman Ian McRae in turn threatens to revoke Eskom's licence. The total amount due to Eskom — from local authorities and individuals — is now at the dangerous total of R1,2bn, equal to 7% of 1995 revenue.


Ian McRae

The ultimate cause of nonpayment by local authorities is that they have not been paid by an important segment of their customers. These comprise many black households in places such as Tembisa, which falls under the jurisdiction of the Northeast Rand. The problem persists despite efforts by government to end the culture of nonpayment.

The Regulator now says that it supports action taken both by Eskom and municipal distributors to cut off power to nonpayers. McRae argues that consumers receiving a good electricity service are prepared to pay. Further, some municipalities do not pay over to Eskom all the receipts from electricity supplies.

Eskom, says the Regulator, has at least three options: to negotiate a satisfactory settlement of its debts, pursue its legal rights through the courts or terminate bulk supplies. The last remedy the NER correctly rejects as unfair and economically destructive. Not only this, but the Regulator in the last resort will intervene to revoke the licences of defaulting municipalities, which it will transfer to Eskom or another distributor. Then the interests of consumers and Eskom can be protected as Eskom could apply effective credit control measures.

Government, says McRae, is also considering ways of restructuring the electricity supply industry. Various models are being considered.

In an alarmist response, the Forum for Energy End Users, representing threatened companies, such as Sappi and Mondi, has proposed that they should pay for power directly to Eskom. The Regulator replies that this is unnecessary. Not only that, it would also constitute a breach of contract between companies and local authorities. More practically, a meeting is being held between government and other stakeholders to deal with the problem.

It's ironic that Eskom, even as a temporary expedient, could be brought back as the electricity retailer of last resort, after much fanfare about restricting it to the functions of generation and transmission. The wheel has come full circle, as Eskom originally found itself a distributor of electricity in black urban areas through the collapse of apartheid-era black local authorities.

In the face of reality, the idea that cross-subsidy of electricity to poor households could be promoted through the intermediation of local authorities is collapsing.

Some good may yet come out of the issue, though Eskom itself could still be made to act as the agent of cross-subsidy. In the course of its deliberations, government must be reminded that subsidies should be made explicit and not implicit. This enables the cost of the subsidies to be made visible so that government can decide how much money to use for this purpose. Implicit subsidies foul up cost structures and their cost is difficult to determine. ■

ENERGY

1996 — 1997

Atomic Energy Corp staff suspended after financial irregularities

(55) ([redacted]) Star 2/8/96

Several staff at the Atomic Energy Corporation near Pretoria have been suspended following the discovery of financial irregularities.

The AEC said today these concerned controls of tender processes in the sale of obsolete plant and equipment and within contractual arrangements with labour brokers who supply temporary contract labour to the AEC.

It gave no indication of the amount of money or the number of people involved.

"Staff members allegedly involved have been temporarily suspended from duty while external audit investigations are proceeding," a statement said.

"If warranted, criminal prosecution could follow."

W Cape tops in power stakes

MORE homes — 82,1% — were electrified in the Western Cape than in any other province, the Minister for Public Enterprises, Ms Stella Sigcau, said yesterday.

Replying to questions tabled in the National Assembly, she said 27,6% of the houses in the Eastern Cape and 29% of those in the Northern Province had been electrified.

Sigcau said 76,8% of the houses in Gauteng had been electrified, as had 65,8% in the Northern Cape, 53,4% in the Free State, 44,6% in Mpumalanga, 43,1% in kwaZulu-Natal and 36,4% in North-West.

Nationwide, 50,4% of homes had been electrified.

(55)

Political Writer

CT 7/8/96

Electricity industry revamp 'next year'

BD 15/8/96 (55)

Robyn Chalmers

RESTRUCTURING of the electricity supply industry should get off the ground early next year, with recommendations to go to a Cabinet committee before the end of the month.

Mineral and energy affairs ministry chief director, energy, Johann Basson said yesterday that several restructuring proposals had already been agreed on within an interdepartmental committee.

The most contentious of these is the structure of the industry which, Basson said, the committee had tentatively agreed on.

But details would be released only after the Cabinet had considered the committee's recommendations.

The three main options include establishing a single national electricity entity which would handle generation, transmission and distribution of electricity; creation of two national bodies, one handling generation and transmission and the other dealing with distribution; and the setting up of a few regional distributors as a merger between a number of local authorities and Eskom, which would be owned by them.

The current set up has Eskom generating and distributing electricity, while more than 400 local authorities are also distributing electricity.

Basson said that whatever form was chosen, implementation was unlikely to follow a big bang or an incremental approach. It would most probably be a managed transformation process taking place over a few years.

Basson said the real work would begin after the Cabinet had come to a decision on the recommendations, when an attempt would be made to reach consensus on the way forward with the various stakeholders.

Final electricity decision expected

Robyn Chalmers

CABINET is expected to make a final decision on the restructuring of the electricity supply industry in the next three weeks, says the National Electricity Regulator.

Regulator customer services manager Johan du Plessis said yesterday the decision was initially expected at the end of last month, but it was hoped a decision would be forthcoming by the end of this month.

Du Plessis said a growing number of municipalities were unable to pay their electricity bills. This was evident in the recent agreements signed between Eskom and the Springs and northern East Rand councils, which together owed R440m.

"Many municipalities could become nonviable as suppliers of electricity due mainly to non payment on the part of consumers along with greater demands being made on municipalities by disadvantaged communities," he said.

A number of restructuring proposals have been submitted to government by the Electricity Working Group, representing government and suppliers. These are being considered by an interdepartmental committee.

Du Plessis said the essence of the proposals was that the distribution functions of Eskom and municipalities be hived off and merged into a number of regional distributors. A single national distributor might also be considered.

At present, both Eskom and 400 local authorities are generating and distributing electricity.

Income lost through the hiving off of these functions could be substituted by a local authority tax which government would have the right to cap.

~~(250)~~ (55) BD 6/9/96

Solar projects win politicians' support but not financiers'

(55) ET(BR) 18|9|96

By Cris Chinaka

Harare — The world conference on solar energy ended yesterday after winning resounding pledges of political support, but some delegates were unhappy over the lack of concrete financial backing for a plan to provide energy to all.

Several speakers said at the opening of the two-day World Solar Summit on Monday that they were solidly behind a United Nations Educational, Scientific and Cultural Organisation (Unesco) world solar programme that aimed to provide energy to 2,4 billion people living without electricity.

But some said the emphasis should be on winning financial help to implement about 300 projects presented at the summit.

Farooq Ahmad Khan Leghari, Pakistan's president, commended the World Bank for its recent pledge to help promote the use of solar and other renewable sources of energy.

He said he hoped other multilateral agencies and "enlightened" donor countries would also commit themselves.

In his opening address, Robert Mugabe, Zimbabwe's president, lamented poor funding for renewable energy sources, which he said averaged only 3 percent of the lending portfolios of multilateral banks. He called this ironic in view of the value of the emerging worldwide market for renewable energy technologies, which is estimated at $40 billion a year.

Mahathir Mohamad, the Malaysian prime minister, on Sunday criticised rich Western countries for showing little interest in the Harare summit. He said on Monday there was need for technological and financial co-operation between the developed nations and the Third World.

"Our agenda should focus on development of a more effective partnership," he said hours after complaining about the absence of leaders from industrialised states. The conference attracted only 10 heads of state and governments compared with the 25 that organisers originally expected.

Boutros Boutros-Ghali, the secretary-general of the United Nations, said the world needed new sources of energy because conventional power sources not only damaged the environment but were inadequate to meet increasing global energy demands.

"It is estimated that global demand for fuel will increase by 30 percent (over the next 30 years), while demand for electricity will rise by well over two-and-a-half times," Boutros-Ghali said in a statement to the meeting, which was held under a scorching sun in Harare.

"Conservation and efficiency measures alone will not be enough to cope with this increase in demand. New sources of energy need to be found, developed and exploited quickly."

Christos Papoutsis, a member of the European Commission in charge of energy policies, urged the delegates from 100 countries to mobilise financial resources to make renewable energy a reality.

"The implementation of hundreds of strategic and priority projects on a global level now has to be our first priority," he said. — Reuter

Council shocked by earth wire theft

ANDREA WEISS (55) ARU 18/9/96
METRO CORRESPONDENT

Theft at city council electrical installations has reached crisis proportions.

City electrical engineer Fred Berwyn-Taylor told the Cape Town executive committee that thieves stole earthing wire at such a rate that it was difficult to keep up with replacing it – and this put electrical installations at risk.

Mr Berwyn-Taylor's warning came during a debate in the council on in-house theft – prompted by a report on the theft of 10 overhead line-pulling devices, and also a fire extinguisher worth about R18 000, from a toolbox in a locked vehicle at the council's Ndabeni complex.

The report described the theft as "a planned operation by people familiar with the layout and operation of the workshops as well as knowledge of the contents of the tool box on the vehicle".

Exco head Nomaindia Mfeketo said she found it unacceptable that it was not possible to trace the thieves.

She said she had been a victim of in-house theft when her purse was stolen out of her bag in her office last year.

Housing committee head Sydney Ncate said vehicles in the Ikapa area were "bought today, tomorrow gone".

The executive committee decided the council needed to find a way of countering in-house theft which would possibly include searching people and cars as they left council property.

DP to meet Sexwale over rates and allowance row

(48) BD 19/9/96

THE DP would meet Gauteng premier Tokyo Sexwale today to discuss the Sandton rates boycott and the 95% increase for councillors' allowances in Johannesburg's eastern substructure, a DP spokesman said yesterday.

Gauteng MPL Jack Bloom said the DP would try to convince Sexwale that the levy demanded by the Johannesburg metropolitan council was inequitable and open to legal challenge.

Bloom said in terms of Sexwale's own proclamation, the metropolitan substructures were empowered to draw up their own budgets and the DP believed this ensured direct accountability to voters in each substructure.

He said the practical implementation of this principle would go a long way towards resolving the Sandton rates boycott, rather than enforcing one single, uniform rate.

The DP proposed a rate of 4,5c in the rand for properties in the eastern substructure as opposed to 6,45c, which would meet all running expenses and contribute R220m to the R400m which is currently demanded.

Regarding the 95% increase in allowances, voted for by the ANC and NP, Bloom said the DP would urge Sexwale not to approve the increases. "The DP believes the increases were exorbitant and were voted in without the necessary two-thirds majority for any matter which requires extra budgetary provision," Bloom said.

Gavin Du Venage reports that up until now municipal councillors had been treated as part-time elected volunteers paid only a small allowance to cover the expenses of their posts.

Several Johannesburg local authorities voted to almost double the capacitation allowances of ordinary councillors from about R2 800 to R4 500. The northern and eastern substructures have voted for the increase.

Giving more money to councillors has only heightened ratepayer suspicions that their money is being used to fund an inefficient and self-serving entity.

However, local government officials say the role of municipal councillor has changed substantially within the new system and remuneration needs to be revised.

NP spokesman and councillor Yakoob Makda said few councillors could hold down a job and still carry out the duties to which they were elected.

Councillors in former white administrations were invariably retired people with legal and management skills, and a source of income like a pension . Others were business people whose activities allowed them to devote substantial time to municipal affairs without drastic reduction in income.

Few black councillors had access to a reasonable income, Makda said. Most held down low-paid jobs and were torn between giving them up or compromising on council duties. He said employers quickly lost patience with workers who constantly asked for time off to attend committee meetings.

"I know of several councillors who in the first part of this year have used up all of their leave and sick leave time already," he said.

Another disadvantage many black councillors face is the lack of support facilities. Many live in townships where telephones are non-existent and they have to use cellphones to keep in touch with their council and caucus.

Makda says even simple things like typewriters and stationary and other items essential for administration are costs carried by the councillors. — Sapa.

Call for equalising SA energy

BD 19/9/96 (55)

Deputy Mineral and Energy Affairs Minister Susan Shabangu. Picture: TREVOR SAMSON

THE existing energy system in SA had discriminated against the country's poorest communities, Deputy Mineral and Energy Affairs Minister Susan Shabangu said yesterday.

Shabangu said this was because the system failed to use solar energy resources,

After returning from the world solar summit in Harare, Shabangu said she was eager to see solar energy used more among developing communities in SA and would soon take up the matter with the organisations concerned.

"I am keen to see solar energy put on at least a level playing field with hydrocarbon-based energy.

"Solar energy is free, plentiful, renewable and a far more environmentally friendly energy source than hydrocarbon fuels."

Shabangu said SA's energy system was biased against the extended use of solar energy. "Our grid electrification programme includes a subsidy to new consumers, reducing their costs for electricity.

"However, those not connected to the grid and using environmentally friendly solar energy receive no subsidy at all," she said.

This had the effect of discriminating against the poorest and most marginalised communities in remote rural areas of SA.

"The government has for decades actively supported the development of energy institutions for conventional forms of energy but has done very little in comparison for renewable energy," Shabangu said. — Reuter.

See Page 13

The Star ... Thursday September 19 1996

Poor people can harvest nourishment from the sun

Star 19/9/96

(55)

Harare – An African woman cooking for her family on a wood fire inhales smoke equivalent to dozens of cigarettes a day. And her food won't last long in the heat before the rot sets in.

Behind complex presentations at the first United Nations solar summit lay the plight of 2,4 billion of the world's poor who have no access to electricity for cooking or simple refrigeration, said Habib Thiam, Prime Minister of Senegal.

"I hope the summit will nourish development through solar technology and translate it into a reality that can relieve destitution," he said of the two-day meeting that ended on Tuesday.

Politicians and scientific experts from more than 70 countries were in Harare to promote a broader world commitment to natural power sources as a way to improve the health of the poor and save the rapidly degrading environment.

Experts say basic solar cookers using reflected, concentrated sunlight can be built from simple materials for a few rand.

Such cookers can boil water, broil meat and bake cookies and though they need direct sunlight and won't work every day, large savings are made on firewood.

Solar panels with a life span of up to 30 years can power ordinary refrigerators for an initial outlay of around 5 000 Zimbabwe dollars (about R2 100).

The cost of installing sun, wind, water and other naturally driven power sources was the down side.

But the long-term advantages and cost savings on conventional fuels were enormous, said Boris Berkovsky, the engineering and science director of the UN Educational, Scientific and Cultural Organisation, the agency that staged the Harare summit.

"These sources are clean and environmentally friendly and they pay themselves off several times in their normal life span," said Berkovsky.

The Harare meeting adopted nearly 300 projects in 60 countries.

These projects are expected to boost renewable energy production from 18% of the world's total commercial energy in 1996 to about 30% over the next decade – if funding is found to develop them.

The projects range from solar desalination of sea water in Cyprus and Jordan and wind power in Ghana to rural electrification in Namibia and Zimbabwe.

President Sam Nujoma of Namibia told people at the conference that, although his nation of 1,5-million people received an average of nine hours of sunshine a day, nearly 250 000 homes were still without electrical power.

President Nelson Mandela, as the new head of the Southern African Development Community, supported the projects.

The meeting, chaired by President Robert Mugabe of Zimbabwe, adopted an international convention calling for a renewed worldwide will to embrace natural power sources and to mobilise investment in solar and other projects.

In his closing address, Mugabe said the delegates had showed unwavering support for the aims of the convention to redress destructive uses of energy.

"Our planet is under greater threat than ever before. The crisis has largely been brought about by ourselves," he said.

The meeting was the first full gathering of the World Solar Summit Process, which was launched after the UN Earth summit in Rio de Janeiro in 1992.

Organisers have shrugged off suggestions that the absence of Western and other powerful world leaders undermined the success of the gathering.

Only nine heads of state, most from southern Africa, were in Harare. – Sapa-AP.

Call for Africa to take initiative in energy conservation

(55) BD 19/9/96

Support from the developed world is vital to Africa's bid to exploit alternative energy sources but the continent must participate in the search for a breakthrough, writes Michael Hartnack from Harare

IF AFRICA and the developing world want to break free from dependence on costly and environmentally hazardous fossil fuels, they will have to take the scientific and financial initiative.

That was the message of the two-day "world solar summit" held as a follow-up to the 1992 "earth summit" in Rio de Janeiro.

Even summit chairman, Zimbabwean President Robert Mugabe, alluded to underlying fears that the gathering might have been a waste of time. Of the 23 heads of state due to attend, only 11 showed up.

"Let us not disappoint those millions of men, women and children who have entrusted us with this historic mission," Mugabe said in his closing message.

He was echoing Malaysian Prime Minister Mahathir Mohamed, who attacked industrialised nations for not giving the summit greater support.

Mugabe said the threat of environmental pollution emanating from the developed nations' use of conventional power could become a "global catastrophe".

"It is my sincere hope funding will receive urgent attention and that a financial mechanism for implementation of projects will be a priority," Mugabe said.

The 3 000 delegates from 80 states and 22 non-governmental organisations endorsed a plan to increase global use of renewable energy from 18 to 30% by 2005.

Namibia's President Sam Nujoma expressed frustration at Zimbabwe's inability to exploit solar power when he said that although his 1,5-million people were bombarded with a daily average of nine hours of intense sun, nearly 250 000 homes lacked electricity.

Delegates heard of the vicious cycle of deforestation and erosion caused by the use of wood and animal wastes as fuel and the threat to the health of those (particularly women) who cook over open fires.

UN educational scientific and cultural director Boris Berkovski voiced hopes of developing a year-round effective solar cooker which would cost a mere few rands and last a lifetime.

At present rural families could pay up to R2 000, more than their entire annual income, for photo-electric panels that would work effectively only at noon on cloudless days.

Southern African Development Community secretary-general Kaire Mbuende, backed by a special message of support from the organisation's chairman President Nelson Mandela, said energy initiatives must come from those most affected by environmental degradation.

Africa must devote its own resources to the search for a breakthrough, he said.

"It does not help to hit the poor on the head with the bible of conservation without providing alternative sources of energy," Mbuende warned.

Mugabe predicted that without financial backing — for which the developed world was the obvious source — scientific and technical development was unlikely to make progress.

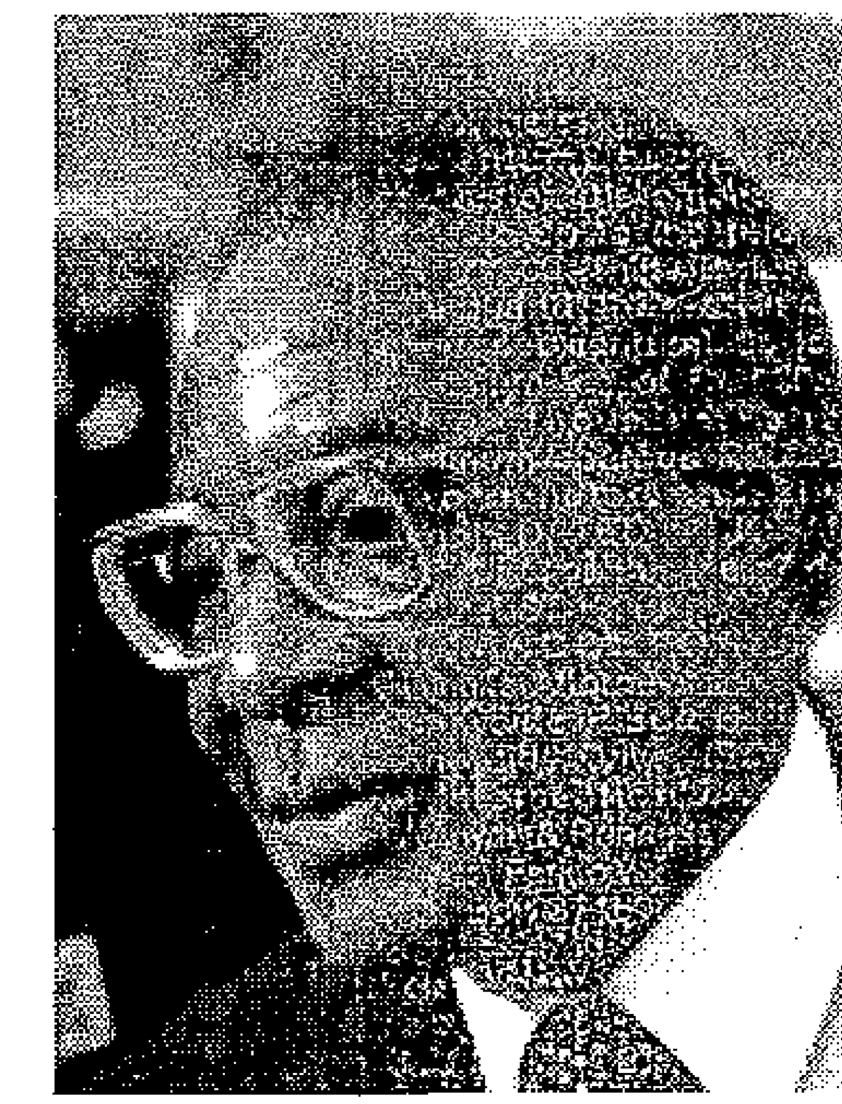
International Energy Agency executive director Robert Priddle said one of the solutions was for developing states to open themselves up to foreign investment in solar energy development.

"Those with the vision to liberalise energy markets would create exciting opportunities," he said.

Many Third World states have heavy government participation in coal or petroleum monopolies, intrinsically hostile to the development of alternatives.

Politics repeatedly upstaged environmental issues at the summit. Palestinian President Yasser Arafat flew in for a day, expending most of his energy chiding Israel. Malaysia's Mahathir took his usual swipe at western concepts of human rights while Zambia's Frederick Chiluba defended his exclusion of ex-president Kenneth Kaunda from the next elections.

The only group of people to regard the summit as an unqualified blessing will be Zimbabwe's cabinet ministers, now taking over R20m worth of new limousines, specially imported by Mugabe to ferry around guests.



MUGABE

New electricity connections have hit 478 000 mark

(59) BD 25/9/96

Robyn Chalmers

LOCAL government, Eskom and other institutions took the number of new electricity connections to 478 000 last year from 82 000 in 1991, putting government on track to meet its electrification targets.

The National Electricity Regulator's first annual report for the year to March — it was formed last year — showed that about 50% of the dwellings in SA had no access to electricity, but that inroads were being made.

The report said that if the current rate of electrification could be maintained, government's objective of raising the percentage of electrified houses to 70% by 2000 from 40% in 1992 would be met.

However, the viability of electrification programmes was being affected by a lack of funding, low consumption by newly connected customers, the remoteness of communities from the grid and non-payment by consumers.

The Eastern Cape was the most severely affected by limited access to electricity, with 72% of dwellings not electrified by the end of last year. It was followed by the Northern Province at 71%, the Northwest at 64% and KwaZulu-Natal at 57%.

Only 18% of dwellings in the Western Cape were not electrified, 23% in Gauteng and 34% in the Northern Cape, the report showed.

The regulator was set up last year to regulate the electricity supply industry. It was given the power to issue or revoke licences, regulate tariffs and structures and to regulate service standards and the achievement of electrification and other national targets.

During the review period the regulator issued new guidelines on an interim tariff system and established a transmission tariff working group to consider issues surrounding the purchase price of electricity by distributors.

The report outlined recommendations made by the electricity working group to government on restructuring the electricity supply industry. An announcement on government's decision is expected within weeks.

The recommendations included that the electricity distribution industry be consolidated by merging the distribution business of Eskom and local governments into financially viable independent regional distributors.

The group proposed that tariffs be cost reflective to ensure the industry's financial viability and that separate, transparent taxes to fund electrification and other municipal services be introduced.

A full-time and specialist transformation team should be established to finalise various outstanding issues, plan and negotiate transformation with stakeholders and draft legislation for restructuring.

Business calls for single electricity distributor

(55) BD 26/9/96

Robyn Chalmers

BUSINESS energy users including Sappi, Mondi and Sentrachem have called for a single national distributor as a transitional move to take over the supply of electricity from the more than 400 distributors which are presently operating.

Government is studying recommendations on the restructuring of the electricity supply industry, with a proposal expected to go to Cabinet soon. An announcement on its decision — originally due at the end of August — should be forthcoming within weeks.

In a position paper to government and stakeholders locally and abroad, the Forum for Energy End Users — which represents business energy users — says there are significant shortcomings and inefficiencies in the electricity supply industry.

"It is our view that SA should move towards a trading system as soon as possible. As a transitional position ... a single or central distributor for a limited period would be a possible solution."

The single, unopposed trading organisation could replace the present distribution monopoly, thereby maintaining the status quo, said the position paper.

Chairman Johan Hees said generation competition would be important to optimise SA's low-cost generation possibilities. An option could be that 51% of the generation pool remained as a parastatal and 49% as an independent power producers market.

Transmission and the power pool would have to be regulated closely as a national grid and pool system while traders would have to be separate and independent entities.

Hees said local governments and municipalities should rationalise their billing systems and ensure that bills were completely transparent.

"Electricity should not carry and should not be used to cross subsidise any other services or activities, including electrification programmes and local authority services," Hees said.

It was therefore crucial that the billing structure referred to the actual service rendered, he said.

Should a local government or municipality wish to substantially add or upgrade services, these services needed to be tendered to the market and adjudicated before they were implemented or built.

ELECTRICITY GENERATION 655

WATTS IN STORE?

FM 27/9/96

Government must make clear its long-term electricity industry policy by next year, says National Electricity Regulator chairman Ian McRae. He says Eskom will need new generating capacity by 2005 and, with lead times of seven years for new power stations, Eskom or private investors must know by 1997 which way government will jump.

In the short term, McRae expects the State to retain control. Later, he expects the R21bn/year industry to open to increasing competition.

"The major current policy focus is to electrify the 60% of national households which do not benefit from access to electricity — and to provide electricity infrastructure in underprivileged urban and ecorural areas as an essential base for economic growth. State-owned utilities perform better in providing such infrastructure because private investors and stakeholders would be interested only if they get big returns on their investments," he adds.

At least for the next four to five years, the State is expected to continue playing a dominant role: in generation and transmission through Eskom, and in distribution through a handful of new regional utilities. He expects about 80% of SA to be electrified by 2005 and says the future restructuring of a State-controlled industry should be opened for discussion now.

"Government should make it clear whether independent power producers would be allowed to compete on the generation side, or whether it wants Eskom as the sole future generator. But competition could be introduced at any time, and there's no doubt that this will drive prices down."

Another possibility is to allow private sector equity partners to obtain stakes in Eskom. And the door is half open.

Eskom CE Allen Morgan says the utility has mothballed three power stations — the 1 000 MW Komati, 1 200 MW Grootvlei and 1 600 MW Camden — which could be brought back into the grid after a two-year refurbishment. "Government has expressed interest in allowing joint ventures or strategic equity partners to be brought in. These could be technology providers or coal mines," he says. Such potential partners should provide synergistic qualities.

This option has been put on ice, subject to discussion by sectoral committees involving trades unions and six government departments — Mineral & Energy Affairs, Trade & Industry, Finance, Housing, Public Enterprises and Provincial Affairs & Constitutional Development.

Siemens divisional MD Francois Schutte says the company is interested in new greenfields power stations, buying mothballed stations or obtaining a strategic equity stake in Eskom stations. Siemens operates "independent power producers" elsewhere in the world — and obtaining coal or even gas should be no real problem. "The ball is now in government's court," he adds.

McRae says that allowing private-sector participants should also fit in well with the expected regionalisation of the electricity sector.

"The potential future availability of cheaper, imported power from Zaire's Inga and Mozambique's Mepanda Nacua hydropower projects could help lay the groundwork for a competitive regional free market in electricity. The Southern African Power Pool — with SA's Southern African Development Community partners — provides the mechanisms for an interdependent, regional electricity exchange to evolve here."

McRae adds that the subcontinent should move away from the traditional view of electricity as a government service to that of a freely traded commodity "like bread or a bag of maize."

However, he says the regulator would still "set the rules of the game" by determining tariff and pricing levels. ■

Councils in line for electricity earnings shock

(55)

ST(BT) 29/9/96

Reforms are needed to forestall a crisis, SVEN LUNSCHE reports

WELL over a third of the 400-odd local authorities which distribute electricity could soon default on their bulk payments unless the government implements wide-ranging proposals to restructure the electricity-supply industry.

The proposals, by the statutory National Electricity Regulator and Electricity Working Group, will drastically reshape the finances of local authorities by removing their power to sell electricity directly to consumers in their areas.

The recommendations were presented to the Cabinet in May, but a decision has been delayed pending investigation by various sub-committees.

In terms of the proposals, the 400 distributors of electricity will be rationalised into a small number of new regional electricity distributors (possibly five). These will sell electricity directly to consumers and take over responsibility for the electrification programme. Local authorities will be compensated for the loss of income by a capped amount levied on electricity sales.

However, the plan envisages that tariffs will in future be cost-reflective and not merely a revenue-raising tool for municipalities. It is therefore likely to lead to cheaper electricity for consumers in the long run.

Ian McRae, chairman of the regulator, said few of the 2 000 odd tariffs were cost-reflective. "Income from electricity tariffs is used to make up municipal budget shortfalls and some industrial and commercial tariffs are almost double what they should be."

The regulator estimates that about 150 local authorities will soon be in serious financial trouble and likely to default on their payments to Eskom. Eskom is owed about R1,4-billion, mainly by municipalities, which in turn face non-payment from townships users.

In terms of the proposals:

□ A number of distributors will be established in defined geographical areas. Provincial boundaries will not be used to determine the areas. Instead, provinces have been grouped together to create financially viable entities.

The regions could be grouped around Gauteng; KwaZulu-Natal; Western Cape; Eastern Cape and Free State; and Mpumalanga, Northern Province and North-West.

□ In a defined area the resources of Eskom and local authorities will be merged and facilitated by a joint supervisory board or through a shareholding structure.

□ The distributors will supply electricity and set up the administration to collect payments. A portion of the income from electricity sales will be returned to local authorities through a transparent tax.

Some large customers will have a choice of suppliers and may, for example, negotiate supplies directly with Eskom.

□ The distributors will also be responsible for the electrification programme in their regions. The programme will continue to be financed by the electricity supply industry internally. Eskom is the largest contributor to electrification.

An alternative proposal is that Eskom be transformed into a tax-paying company and that the electrification programme be financed through the fiscus.

McRae warns that delays in implementing the proposals will sharply reduce the pace of electrification.

Eskom is on track to electrify 300 000 homes this year, in line with its RDP commitment of 1,5-million homes over five years. However, certain local authorities have consistently failed to meet their electrification targets and are unlikely to connect the targeted 150 000 homes this year.

McRae says the rationalisation of distributors is also vital as local authorities are losing skilled people rapidly and are thus not able to deliver electricity efficiently. He says a number of municipalities have already asked the regulator to transfer their licences to Eskom or other distributors. He warns that if the proposals are not implemented the regulator will be compelled to regulate the industry through stricter controls on distribution licence requirements.

GENTLE JOLT . . . Ian McRae says the alternative to an overhaul is stricter control

Eskom to raise electricity price and change tariff structure

(55) BD 4/10/96

Robyn Chalmers

ESKOM will raise the average price of electricity 5% on January 1 next year and has announced changes to the tariff structure for both small and large power consumers.

Electricity Council chairman John Maree said yesterday that with consumer price inflation expected to average 8,5% next year, the 5% increase translated into a price reduction in real terms of 3,5% for the year.

"However, recognising the considerable uncertainty that exists within the electricity supply industry, a further price adjustment may be considered next year if a new financial framework so requires," he said.

Maree said Eskom had consistently reduced the real price of electricity over the past 10 years. The real price of electricity today was 68% of the price in 1985 and Eskom was committed to reducing the price 15% between last year and 2000.

Eskom has also proposed a long term tariff plan which envisages cost reflective tariffs rather than tariffs which can be used as a tool for local authorities to raise funds.

Few of the 2 000-odd tariffs are cost reflective and the proposals could lead to longer term reductions in electricity prices for consumers.

Eskom CE Allen Morgan said yesterday that Eskom was determined to become the world's lowest cost producer of electricity. This would benefit the local economy and make electricity affordable to a larger number of people.

"The real electricity price reductions achieved to date and forecast for the future will provide a major boost to the international competitiveness of SA companies," he said.

Figures released yesterday by the Central Statistical Services showed that in the first eight months of this year, electricity consumption rose 5% over the same period last year.

The survey said industrial and bulk users such as municipalities were mainly responsible for increased consumption.

While consumption has risen, Eskom said its drive to lower prices was taking place amid uncertainty and risks associated with plans to restructure the electricity supply industry being contemplated by the National Electricity Regulator.

Regulator spokesman Johan du Plessis said restructuring proposals were with government and he expected direction on the way forward next week.

However, a decision on the proposals is long overdue, having originally been scheduled to go before Cabinet towards the end of August. Sources close to government said the matter was "extremely urgent" and was affecting Eskom's ability to make longer term decisions on the supply industry.

Eskom said it was also having to operate in an environment of continued non-payment by certain customers and there was the possibility that it would become a tax and dividend paying entity. This has been suggested by the finance ministry.

Govt indecision 'hurting electrification'

AD 9/10/96

(56)

Robyn Chalmers

GOVERNMENT's indecision on the restructuring of the electricity supply industry was causing a host of problems and could result in SA failing to meet its electrification targets, National Electricity Regulator chairman Ian McRae said.

The time had come for government to make a decision on the recommendations of the electricity working group and the regulator on restructuring the supply industry, he said in the latest issue of NER News.

A report containing the recommendations was submitted to government earlier this year and is being considered by an interdepartmental committee. The deadline for a final decision on the proposed restructuring was the end of August, but government has failed to meet it.

McRae said this indecision was causing considerable insecurity among industrial and commercial consumers as well as making the task of rationalising the more than 2 000 tariffs imposed in the industry more difficult.

Insecurity was being created among investors in the electricity industry, who needed an indication of the direction of electricity supply, and decisions on the voluntary transfer of licences from distributors were being delayed.

"It is also having an impact on business consumers of electricity who, for price and/or quality of supply reasons, want Eskom or another distributor to take over the supply.

"They are losing their local and international competitiveness as a result of the present position and will go out of business or, even worse, will go elsewhere," he said.

McRae said that if government was unable to make a decision on the restructuring recommendations it should admit this rather than keep stakeholders waiting.

"The regulator would then have no choice but to move on the licence defaulters and poor performers and bring about some rationalisation through this process."

The recommendations before government were that the electricity distribution industry be consolidated by merging the distribution business of Eskom and local governments into financially viable, independent regional distributors.

Tariffs should be cost-effective to ensure the financial viability of the industry and separate, transparent taxes should be introduced to fund electrification and other municipal services, he said.

A full time and specialist transformation team should be established to finalise outstanding issues, plan and negotiate the transformation process with relevant stakeholders and draft the legislation necessary to effect any restructuring, McRae said.

(55) BD 9/10/96

Energy conference fired up over gas

CAPE TOWN — Gas-fired power stations were unlikely to be viable in SA, despite a choice of large natural gas fields in Mozambique and Namibia, industry officials said at the Africa Oil conference yesterday.

"Gas in SA has great difficulty in competing with coal which is available to Eskom at extremely low prices," said Tony Way of Enron, which is developing Mozambique's Pande gas field project.

"It is difficult to foresee when a time would come when gas would be able to compete with coal in gas-fired power generation." Gas-fired power stations have been mooted on SA's east or west coast to utilise gas from Pande or Namibia's Kudu field.

Johan Fourie from the gas division of synthetic fuel producer Sasol, agreed power generation from natural or coal-based gas was simply not viable.

Residential usage was also effectively ruled out for climatic reasons — the short SA winter would not create enough demand — and Way said the Pande field was too small to justify a liquefied natural gas project.

Instead, the focus was on industrial applications. Way said developments were encouraging in this respect.

Initial investigations into establishing an SA iron ore reduction plant using Pande gas were going well, he said. Enron and the Mozambique government's ENH hydrocarbon concern had signed a heads of agreement with the Industrial Development Corporation on the potential export of gas to fuel an iron plant in SA. — Reuter.

New electricity tax set to push up tariffs

55

PETER DENNEHY

CT 9/10/96

A NEW TAX on electricity — probably 14% — is to be imposed from next year, according to a progress report on the electricity industry.

Yet the 10% surplus which municipalities already get from electricity bills will remain in place, says Mr Dave Wilken, chief executive officer of the Goodwood municipal administration, who drew up the progress report.

His report was tabled yesterday at the first annual congress of the Western Cape Local Government Association in the Strand.

He reported that an electricity working group under the National Electricity Regulator had been trying to electrify all the areas in need of it within five years, without increases or funding.

International consultants have said the working group's goals are not practical. Tariffs will probably have to increase.

The working group has recommended to a panel of government ministers that five Regional Electricity Distributors (REDs) should be formed to take over distribution from both local authorities and Eskom. These REDs will be controlled by boards on which all interested parties have seats — including municipalities.

The working group also recommended that sales of electricity to these REDs should be taxed, to help those areas with a large backlog, like the Northern Province and the Eastern Cape.

Wilken said this tax could just be VAT at the usual 14%, but this has not yet been decided.

Up to now, the power that the Cape Town electricity undertaking buys from Eskom, for example, has not been subject to VAT.

The new tax will raise the price of electricity which the consumer has to pay in the end.

The Western Cape will be under a single Regional Electricity Distributor. This will have three subdivisions: the Metropole, the Southern Cape and the West Coast.

Eskom to spend R5bn over five years to expand electricity network

Robyn Chalmers

ESKOM is planning to spend R5bn over the next five years on upgrading and expanding the electricity transmission network in SA and Africa.

Eskom capital budget manager Antonie Mammes said at the weekend that about R4,7bn of the R5bn would be spent on boosting the transmission system in SA, with the remainder to be spent outside SA's borders.

Mammes said while a huge surge in the demand for electricity was not expected, Eskom's infrastructure would have to cater for increased demand from Saldanha Steel as well as future links with Mozambique and Namibia.

The formation of the Southern African Power Pool — the creation of an electricity power pool in the region — would also open up a range of opportunities. The operation of the pool would allow trading of energy as far north as Zaire and the increasing role of cross-border electricity trade would play an important role in Eskom's future.

Eskom senior GM Andries Calitz told Engineering News that the parastatal's transmission capex programme would increase to R1,12bn next year from R800m to be spent in the year to December.

Calitz said Eskom would spend about R1bn in 1998 and a similar amount in 1999 on transmission infrastructure. The capital programme would decrease to about R900m at the turn of the century and about R700m in 2001.

He said the capex programme was aimed at adding value and would focus on expanding and refurbishing the transmission infrastructure.

Calitz said that when Cahora Bassa came on line in the middle of next year, Eskom would begin importing power — the first time SA would become a net importer of power.

The decision to import power was taken to reduce the real cost of electricity, as it was being imported at 2c a kilowatt hour — about 5c cheaper than SA-produced power.

Eskom CE Allen Morgan said in the group's annual report that transmission system expansion would focus on a number of growth centres, one of which was the greater Durban-Maritzburg area. Two major substations were commissioned this year to support the growing industrial and electrification load in the region.

Attention had also been paid to the transmission system feeding up to Matimba and Zimbabwe, as well as providing for an increased industrial and mining load in the Brits-Rustenburg area in Northwest.

Morgan said supply to the Western Cape was also being strengthened with the building of an additional 400kV transmission line and voltage support equipment to a number of substations.

(56) ~~(100)~~ BD 14/10/96

(55)

Time to put foot down on over-consumption

CT 14/10/96

SUPPORTING all the environmental good causes doesn't necessarily mean we have a "green" lifestyle. Environment Writer **MELANIE GOSLING** reports.

WHAT is the size of your "environmental footprint"? Chances are that if you are reading this you fall into the income group that has a pretty big one.

In the same way that we leave the imprint of our feet on the earth when we walk, our lifestyles leave a "footprint" on the environment — the impact we make on our natural resource base.

The size of our footprint is determined by how much of our resources — such as water, soil, minerals, fuel and plants — we use. The more we consume, the bigger our environmental footprint.

While some of us may feel comfortably "green" because we take our glass to the bottle bank, contribute to the Save the Rhino Fund, use recycled paper and never litter, a more realistic measure of how "green" we are is the amount of our natural resources we use — and how much we waste.

In South Africa, where we have a tiny group of wealthy people and a mass of poor, one might assume that the masses have a far bigger environmental footprint. But a comparison of how much a family in Constantia and a family in Khayelitsha use of two of our natural resources — water and fuel — shows a different picture.

The Khayelitsha family of five use 2 660 megajoules of energy in their household a month, mainly in the form of paraffin. This is half the energy (electricity) that the Constantia family of five use every month, which amounts to 5 400 megajoules.

If one converted the 5 400 megajoules into a heap of coal, it would amount to 783kg.

If one added the petrol the Constantia family use — 25 000 megajoules — their total monthly energy consumption leaps to 30 400 megajoules.

But our environmental footprint left by fuel consumption is a lot bigger than we may think.

For instance, our electricity comes from coal-fired power stations which themselves use a lot of water — more than 200 million cubic metres a year. We generally don't think that somewhere in the former Transvaal 1,4 litres of water are used for every kilowatt hour of electricity we use.

If one takes the greenhouse gas emissions from power stations, and the subsequent effect of global warming, our footprint gets even bigger. Eskom released 142 million tons of carbon dioxide into our atmosphere in 1994. Every time we flick a switch, we're indirectly using water and pumping out greenhouse gases.

But is paraffin any better? It is an inefficient fuel for some uses, and much of the paraffin burnt in squatter camps for cooking and heating water is wasted in this way.

It also has a marked impact on environmental health. The pollution from burning paraffin is generally not as serious as that of coal, but it has another cost — accidental poisoning. The total costs of medical treatment for paraffin poisoning in South Africa — generally by children drinking it — is more than R2m a year.

Perhaps the biggest difference in the environmental footprints between Constantia and Khayelitsha is in the use of water. In most of the more affluent former "white" suburbs, people tend to use water as if they lived in a rain forest, instead of a country where large sections are arid.

The amount of water the Constantia family use on their garden every month, 40 000 litres, would fill an average suburban swimming pool. This means the equivalent of 12 swimming pools are poured out on to the garden every year.

In contrast, the amount of water the Constantia family use on their garden in just two days would keep the Khayelitsha family going for a month. Or, put another way, one swimming pool of water would keep the Khayelitsha family cooking, drinking and washing for a full year.

This vast use of water on gardens has led one scientist to remark: "Lawns are probably the biggest and the least productive 'crop' grown in the world."

But our footprint on the country's water resources is bigger than just direct use alone.

All our appliances, clothes, vehicles, toiletries etc use water in their manufacture.

The more goods we have, the more water we have indirectly consumed. For example, the average 1600cc car takes about 400 000 litres of water to produce.

For this we can add about 60 000 litres per car to our water consumption every year.

The more we investigate, the bigger our environmental footprint grows.

The Constantia family's costs to the environment are high. In fairness, one must balance the costs with benefits. The Constantia family contribute rates, taxes and generate employment, none of which the Khayelitsha family do.

But the time is coming when we need to move away from the idea that if we can afford to pay for it, we can consume as much as we like.

If the millions of South Africans are going to be uplifted through development, the more affluent minority is going to have to reduce the size of its environmental footprint.

If not, our resource base, particularly water, will battle to cope.

The time to start is now.

WHAT'S COOKING?: Siphokasi Stuurman, 10, prepares a meal for the family on two par[illegible] stoves are also used to heat water for baths and a solid iron for ironing.
[illegible]TURE: MELANIE GOSLING

Squeeze of shack life

MS IRENE STUURMAN lives in Site B, Khayelitsha, with her three children, her cousin's child and occasionally her boyfriend. She came from the Transkei four years ago.

HOUSE: About 24m^2. The walls are wood and chipboard and the roof, corrugated iron. The sand floor is covered with black linoleum. Stuurman and the two youngest children share the double bed and the two older ones a mattress.

APPLIANCES: Two paraffin stoves. A solid iron, heated on a stove. Tiny car battery-powered TV.

LIGHTING: Two paraffin lamps.

BATHS: Plastic basins, water heated on a stove.

LAVATORIES: A friend's loo five minutes' walk down the road.

HEATING: One of the paraffin stoves.

PIPED WATER: Stuurman collects water daily from a tap at a shack across the road.

TRANSPORT: She seldom uses taxis or buses and walks to shops, school and her part-time job.

ENERGY CONSUMED:
Paraffin: The family uses about 70 litres a month — equivalent to 2 660 megajoules.
Electricity: Stuurman charges the TV's car battery about six times a month — 7,8 megajoules.

WATER CONSUMED: The daily need is 70 litres. Washdays bring this up to 2,6 kilolitres a month.

High-powered Constantia

MRS OLWYN DE VILLIERS lives in leafy Constantia with her husband and three children. The couple are from Cape Town and designed their house for their 1 500m^2 plot.

HOUSE: The floor area is about 290m^2. It includes an entrance hall, living room, dining room, four bedrooms, sewing room, kitchen, maid's room, laundry, garage and office in the attic.

BATHROOMS: Two baths, three showers, four handbasins and four lavatories.

APPLIANCES: Electric double oven, four-plate stove, microwave, iron, kettle, Snackwich, toaster, dishwasher, washing machine, fridge, three deepfreezers, hairdryer, sewing machine, computer, fax machine, television, CD player, video recorder, vacuum cleaner, borehole pump, swimming pool filter, two geysers, lawnmower, Weedeater.

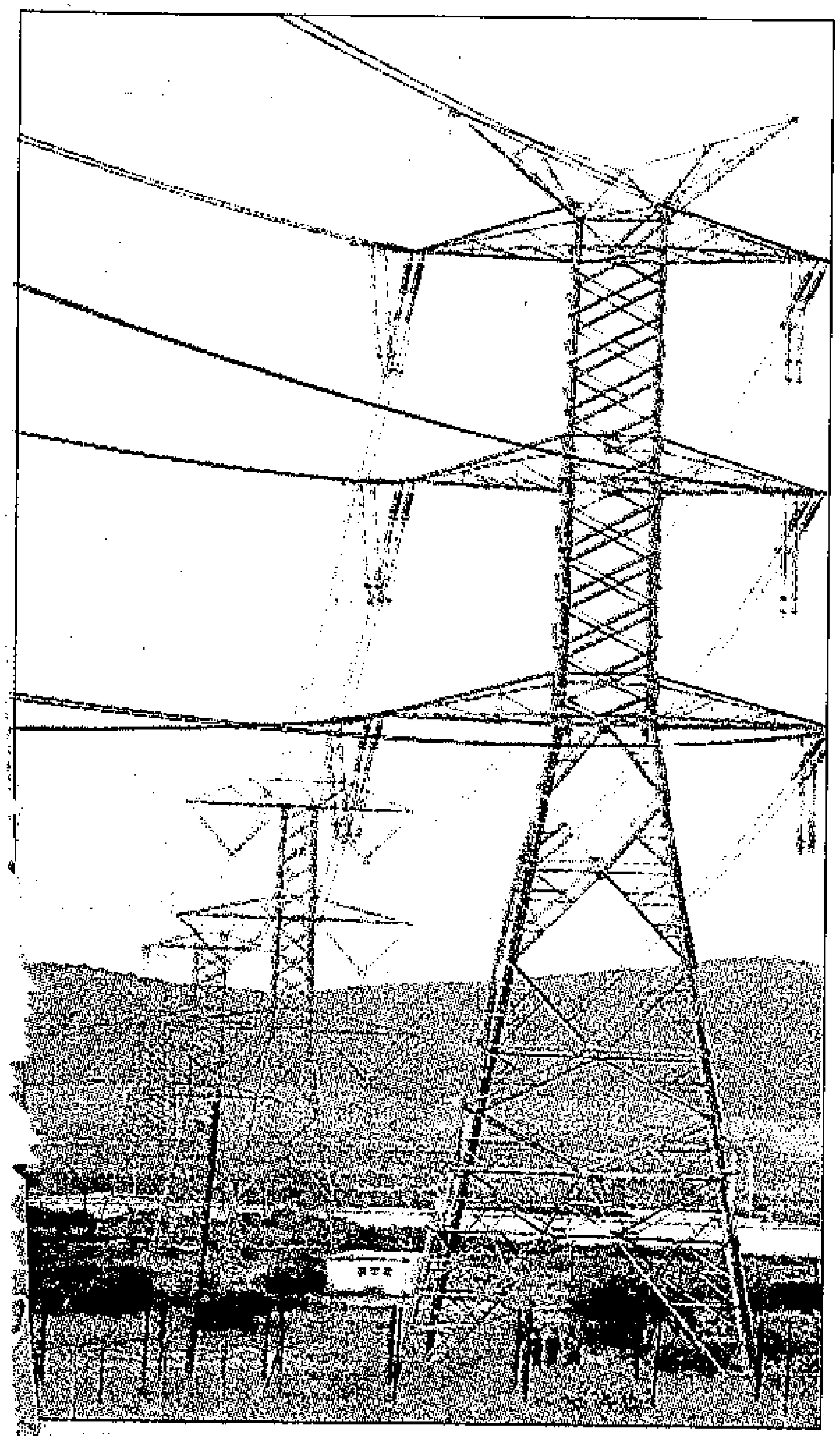
LIGHTING: At least two electric lights in each room, plus outside lights.

TRANSPORT: One sedan and a minibus.

ENERGY CONSUMED:
Electricity: 1 500 kw/h a month or 5 400 megajoules.
Petrol: 400 litres a month — or 25 000 megajoules.

WATER CONSUMED:
From the mains: 80 000 litres or 80 kilolitres a month. From the borehole, which is used for the garden for an average of two hours a day, 20 days a month: 40 000 litres a month or 40 kilolitres. The swimming pool holds 40 000 litres and is topped up in summer. Total: 120 000 litres.

MOD CONS: Mrs Olwyn de Villiers and daughter Michelle in Constantia use twice the amount of energy as a household in Khayelitsha. *PICTURE: THEMBINKOSI DWAYISA*



lons: like these may soon march through Tyger Valley

Tyger Valley electricity plan sparks power battle

Residents fight pylons

ARG 19/10/96 (55)

IRVING STEYN
STAFF REPORTER

A plan to form a link between two electricity substations by building 16m high pylons through the beautiful Tyger Valley has angered residents on both sides of the valley.

The Kenridge Ratepayers Association this week joined objectors from other suburbs such as Protea Valley, Door de Kraal and Welgemoed in lodging "the strongest objection" to the plan, which was "totally unacceptable" to the owners of about 1 000 homes it represents in Kenridge.

A study document outlining three options for the electricity connection has been circulated and two public meetings held to tell people about it, but those most affected – the residents of Kenridge – are unaware of the plan, according to Kenridge Ratepayers Association secretary Brian Hynes.

'The dilemma of the Tygerberg city council is whether the will of the people holds sway'

What makes matters worse, says Mr Hynes, is that the deadline to lodge objections expired yesterday.

The dilemma the Tygerberg city council now faces is whether a decision is made for economic reasons or whether the will of the people will hold sway.

The two cheapest options being considered call for overhead cables. The third, about 308 percent more expensive, suggests an underground option. The cheapest, and most objectionable to residents, will take overhead cables from the substation below the Tyger Valley Centre and along the length of the Tyger Valley Road to the historic Altydgedacht farm, from where they will swing west to connect with the other substation. This will be 1,4km long and cost R4 221 000.

The second overhead option goes further north, will be 6,2km long and will cost R8 403 180.

The third, underground option and the one the residents overwhelmingly favour, will cost R12 938 920.

'It would be very problematic to attach a figure to the loss of a view'

The overhead cables are suspended between steel or concrete masts about 16m above the ground and 100m to 120m apart.

The council could decide an overhead line is the most appropriate option, in spite of objections from those most affected, according to the report.

The pylons will be erected along a corridor several hundred metres across at its widest point. The width of an overhead alignment is 12m and the width of the underground alignment is 6m, according to the report.

If the council decides on an underground cable the only environmental work that might be required will be a management plan to ensure the cable is installed without causing unneces-

"This impact might be reduced by the fact that the poles will be 100m to 120m apart. Therefore most residents along the route may see the conductors and nothing else."

According to a Mr O Parker of Altydgedacht Estate, an overhead line already exists on his farm, and affects his ability to carry out aerial spraying and topdressing. An additional overhead line will further affect spraying and topdressing and could even stop these activities, he says.

On the other hand, the report says, if an underground link is installed, all the ratepayers of Bellville may have to pay for the cost difference because the costs will be too high for the ratepayers of Protea Valley alone to absorb.

"The argument was raised that the costs of an overhead line will not reflect the truest costs, the value attached to views and potential decreases in property values will not be reflected in the total cost," the report says.

"In theory the cost should include a financial value attached to the potential drop in property values and the loss of the scenic view in the valley. However, in South Africa there is no legal right to a view and it would be very problematic to attach a figure to the loss of something as intangible as a view."

The proposed link between the two substations will provide an additional source of supply at Doordekraal substation to help cater for the projected growth in the Tyger Valley area.

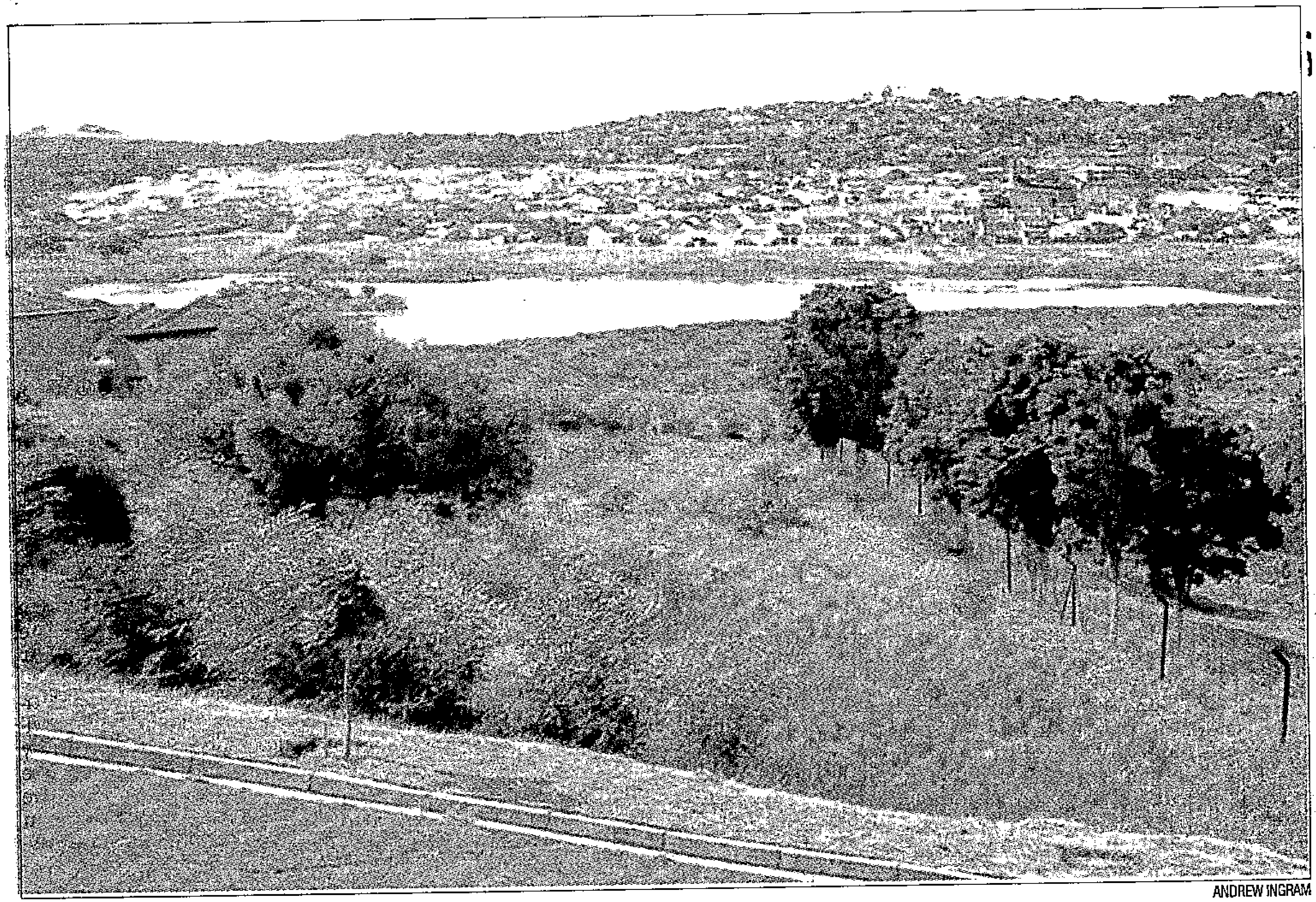
The city council study says that if the link between Westhof and Doordekraal substations is not created, there will be future problems with Bellville's electricity supply. Bellville's dependence on the Eskom Stikland supply will be maintained and if the supply to or from Stikland is interrupted, up to 95 percent of Bellville will be without electricity.

If the power supply from Eskom's Springfield substation is interrupted, Westhof substation and hence a large part of the north-western residential areas will be without electricity.

If the council decides on overhead cables, further detailed environmental work will be undertaken to determine the route.

A draft environmental impact report will be compiled and released to the public for comment. A final environmental impact report and a comments report will be compiled and submitted to the council.

However, at two public meetings interested parties argued that any additional studies would be futile if the communities' choice was already clear. In light of this, Bellville electrotechnical services decided that all information and investigations would be compiled in a document.



ANDREW INGRAM

Valley: the scenic Tyger Valley where an option to erect electricity pylons is being considered. Now residents are on the warpath over the proposed plan

Threat to councils' electricity licences

(55)

Robyn Chalmers

UNDERPERFORMING municipalities could have their licences to distribute electricity withdrawn following the development of a performance framework by the National Electricity Regulator.

Spokesman Johan du Plessis said yesterday the framework would not be implemented until government made a decision on the restructuring of the electricity supply industry — expected before the end of this year.

"However, we cannot wait indefinitely for government to make a decision and we will implement the framework should it become clear that government will defer its decision.

"The implementation of the framework will undoubtedly lead to at least some municipalities losing their licences," Du Plessis said.

The regulator's framework states that licences could be withdrawn or reallocated if electricity distributors, mainly municipalities and Eskom, do not measure up to one or more criteria.

These include non-payment of bulk electricity accounts or failure to honour agreements in this regard, and the non-viability of the electricity business when measured in terms of income and expenditure, cash flow and a prescribed return on assets.

Those municipalities with large bulk arrears include Springs, the northeast Rand, Sasolburg, Randfontein, Johannesburg, Umtata, Witbank and Ermelo. There are more than 30 municipalities with bulk arrears.

Inadequate billing and revenue collection procedures, high connection costs, failure to connect the targeted number of new consumers within a reasonable period and poor quality of supply will also be taken into account and could lead to the loss of licences.

Speaking at a privatisation seminar yesterday, mineral and energy affairs director-general Gert Venter said stakeholders in the electricity supply industry generally agreed that change in the sector was vital.

Venter said the fragmented nature of the industry had led to a wide disparity of pricing and cost of supply. Electricity tariffs were used to finance other municipal services and there were large differences in service and supply quality standards.

He said there was a need to provide low-cost, equitable tariffs to all consumers, to maintain the financial health of the industry, improve the quality of supply and meet SA's electrification targets.

BD 23/10/96

Continued on Page 2

Electricity

(55)

Continued from Page 1

BD 23/10/96

Proposals for the restructuring of the electricity supply industry have been placed before government by the electricity working group. These include that the industry be consolidated by merging the distribution business of Eskom and local governments into financially viable, independent regional distributors.

Tariffs should be cost-reflective to ensure the financial viability of the industry and separate, transparent taxes to fund electrification and other municipal services should be introduced.

A full-time and specialist transformation team should also be set up to plan and negotiate the transformation process with relevant stakeholders and draft the legislation necessary to effect the restructuring, the working group proposed.

Eskom attacked for not giving special treatment

(55) BD 19/11/96

Nicola Jenvey

DURBAN — Durban Electricity executive director Howard Whitehead delivered a scathing attack on Eskom at the opening of the R120m Hector substation yesterday for not supplying the municipality with electricity at rates below industry, claiming Durban Electricity's electrification programme justified preferential treatment.

Whitehead said the burden for Durban Electricity to supply low-cost electricity grew daily, but Eskom insisted on charging the municipality rates which were equal to industry rates.

Durban Electricity's industrial customers were therefore "forced to carry the burden and feel the effects" of the cross-subsidisation and electrification programme.

Eskom CEO Allen Morgan defended the electricity supplier, saying the parastatal sold 40% of its electricity through redistributors, including municipalities, at a standard tariff.

The National Energy Regulator was investigating the electricity industry, and tariff structure recommendations and amendments would be made by early next year.

"Adjusting the tariff structure to one municipality when further adjustments would be made in the future would cause distortions later, particularly when the system is already under review" he said.

Increases in real terms from Eskom had been 2% last year and 3% this year, while the corporation had faced 4% and 5% increases respectively.

Whitehead said 100 000 people remained without access to electricity in the Durban metropolitan region and, although paltry when compared with the 300 000 annual connections made by Eskom, the municipality was "pleading" for a resolution of its case.

The Hector substation would significantly stabilise the electricity supply to East Griqualand, the KwaZulu-Natal south coast, midlands, and Durban and Maritzburg metropolitan regions.

Morgan said demand within the region was growing at 12% a year and the substation had been designed to double capacity over the next 25 years.

The next stage in strengthening the electricity supply within the province and along the Transkei coast involved the development of the Eros substation in Harding, planned for 1998.

Electricity prices to be standardised

(55) (153)

METRO WRITER

THE price of domestic electricity is to be standardised across the Tygerberg municipality from January 1 next year.

The price will be 22,6 cents per kilowatt hour for those with conventional meters, and 21,5c for those with pre-payment meters, according to papers presented to the Tygerberg council at its monthly meeting yesterday.

In the past, electricity prices in Bellville, Khayelitsha, Parow, Durbanville, and Goodwood were different.

Now all those suburbs are in the same municipality. To arrive at equal prices within the same category, increases of different percentages have had to be imposed on the various areas.

In the conventional meters category, Bellville's domestic tariffs must go up 3%, Parow's down 1%, Durbanville's and Goodwood's up 5%, and Mfuleni's up 4%.

In the pre-payment meters category, Parow's tariffs go down nearly 6%, while Mfuleni's go up by more than 43% — from a relatively very low 15c per kilowatt hour — to get to the uniform 21,5c per kilowatt hour.

CT 27/11/96

Electricity industry role players to talk

BD 27/1/97

(55) (88)

Robyn Chalmers

THERE were moves afoot to hold a series of high-level workshops next month in a bid for greater clarity of government's position on the restructuring of the electricity supply industry, national electricity regulator Ian McRae said at the weekend.

The lengthy delay in government's response to proposals on restructuring put forward last March was causing problems in the industry. He warned that the sector would moving towards a national crisis this year and the next if nothing was done.

"Many distributors of electricity (mainly local authorities) are failing to meet their temporary licence conditions and are in jeopardy of losing their licenses due to default.

"Consumers and industry are becoming more and more concerned and are pushing the regulator to take action to secure their supplies and service and to rationalise pricing structures," he said.

McRae has made it clear that he will step down as full-time executive chairman of the regulator at the end of March, although he is prepared to remain part-time nonexecutive chairman. He is willing to offer his services to government to assist with the sector's restructuring.

McRae said the regulator was already moving in on licence defaulters and it could have to look for regional solutions and interim tariff and pricing structures due to the number of problem distributors in particular areas.

"It is hoped that this action and the subsequent impact may bring about a better understanding of the issues and the crises in the industry. This would help government to respond to the recommendations for rationalising the distribution industry and funding compensation for local governments," he said.

It was important for all stakeholders in the electricity industry, including government, to decide on the road ahead. However, a vision of the industry in the future was needed before deciding on one aspect alone. Whether or not to introduce and free customer choice could influence the future direction, he said.

"Electricity is more than a light bulb and a plug point in a house to improve quality of life. It is the energy base upon which economic performance and development are built."

McRae said recommendations that Eskom become a tax and dividend payer to government could have a significant effect on the industry. This proposal must be considered along with other recommendations on restructuring the industry, he said.

Koeberg to expand capacity to store spent nuclear fuel

(55)

Linda Ensor BD 3/2/97

CAPE TOWN — Koeberg's capacity to store spent nuclear fuel was almost fully utilised and the power utility would invest R80m in expanding capacity, Eskom spokesman Gina Lamparelli said at the weekend.

New high-density storage racks would be installed by next year. These would be able to store all the spent fuel used by the station through its full lifespan of 40 years. Koeberg's first unit became operational in April 1984 and its second in July 1985.

Unlike other countries such as Japan, which had sent its spent fuel to either France or Britain for reprocessing, SA had not taken a decision about the future use of its spent fuel.

Lamparelli said Koeberg could store 728 spent fuel assemblies in each unit. A total of 527 assemblies were stored in the spent fuel pool of unit one and 475 assemblies in the pool of unit two. The assemblies were stored underwater to shield operators from radioactive particles in the fuel and to allow cooling.

Koeberg would produce about 3 000 fuel assemblies in its lifespan.

The spent fuel lost 99% of its radioactive content during the first 10 years in storage. However, radioactivity would remain for up to 100 years.

SA did not produce sufficient spent fuel to warrant a reprocessing plant and the glut of uranium internationally meant there was no demand for it.

A decision on a plant would have to emerge from discussions with all industry role players, Lamparelli said.

Apart from spent fuel, Koeberg also produced solid waste with low levels of radioactivity, such as discarded gloves, overalls and broken tools.

These were compressed into steel drums and taken to Vaalputs in Namaqualand, where they were buried in deep trenches covered with clay to prevent water seepage.

Intermediate level waste contained, for example, in filters and resins, was compressed into steel-lined concrete drums and also taken to Vaalputs. This material would take about 200 to 300 years to decay.

Energy competition 'after 2000'

(55)

Reinie Booysen

BD 4/2/97

GOVERNMENT expected to introduce competition in the energy sector — "irrespective of public or private sector ownership" — after 2000, a senior government official said yesterday.

Minerals and energy chief director Johan Basson told a Pretoria business forum on energy and environmental technologies in SA, sponsored by the European Union, that the focus of national energy policy after 2000 would shift to the "creation of a level policy playing field".

He said that "equal attention would then be given to the effective use and supply of energy, while competition would be introduced to the energy sector, irrespective of public or private sector ownership".

Minerals and Energy Minister Penuell Maduna said government's eagerly awaited draft white paper on energy policy was "nearing completion".

The draft would be open to public scrutiny once cabinet agreed on it. Once finalised, the "necessary legislation would be enacted to give expression to policy", said Maduna.

New board for CEF

M+G(BM) 7-13/2/97

~~185~~ 55

Mungo Soggot

THE Central Energy Fund (CEF), which holds the state's fuel assets, has quietly limped into the new South Africa with the appointment of a new, far more representative board.

The new players on a board that until recently was synonymous with the CEF's sanctions-busting past, include what chairman Roy Pithey describes as a fair cross-section of academic, private and state sectors.

His new board includes black empowerment guru Don Mkhwanazi, Kayo Ngqula of Norwich Union Trust, Mojalefa Ralekhetho and Johan Basson of the Department of Mineral and Energy Affairs, black empowerment Coca-Cola bottler Keith Kunene, Professor Renosi Mokate of Pretoria University, and Coen Kruger of the Department of Finance.

CEF repeatedly pushed for a new board during the reign of former mineral and energy affairs minister Pik Botha. It and Botha failed, despite the efforts of parliamentary committee chairman Marcel Golding. The changes are one of the more obvious achievements of Penuell Maduna, who took over from Botha last year, giving the portfolio more political clout.

Maduna has chosen to appoint the same board for all of the CEF group of companies, which includes Mossgas and the Strategic Fuel Fund, oil trader and manager of South Africa's strategic stockpile. Insiders say this could signal Maduna's intention to rationalise the group, perhaps preparing parts of it for a sell-off.

Atomic Energy Corp's reliance on state to decline

(55) BD 11/2/97

Linda Ensor

CAPE TOWN — The commercialisation of Atomic Energy Corporation (AEC) activities meant that its dependence on state finance would fall to less than R100m a year by 2000, mineral and energy affairs director-general Gert Venter said yesterday.

It was envisaged that by then the state grant would be spent only on matters of national interest.

Deputy Minister Susan Shabangu said the deregulation of the fuel industry was planned to take place by the end of the year.

The AEC had generated R226m during the 1994/95 financial year from the sale of more than 200 nuclear and related commercial products and a new technology which added up to seven times the value of zirconium-based minerals would earn about R300m a year in foreign exchange.

Shabangu said the AEC was developing a molecular laser isotope separation uranium enrichment process together with French energy corporation Cogema. "Successful development of this process would enable SA and her partner to earn hundreds of millions of rand through the sale of the enriched uranium for peaceful purposes and the licensing of the technique internationally."

Department officials said that the state grant to the AEC for its running costs would be reduced to R220m in the 1997/98 financial year from R245,4m this year. This excluded the state's responsibility for redeeming AEC loans which amounted to R81m this year and would total R231m in the coming financial year. In 1990 the state granted the AEC R665m.

Venter said the restructuring of the electricity industry was far advanced, but government still had to work out its position on what would be the biggest single restructuring of state assets.

Government was working towards a single uniform electricity tariff for domestic consumers although this had to be worked out jointly with the provincial affairs department and constitutional development as local authorities derived income from this.

Eskom had achieved its 1996 target of 300 000 connections last year, although local authorities had lagged slightly behind target at about 120 000 connections.

The drafting of the new Electricity Regulatory Bill had been completed and would soon be submitted to the cabinet.

Shabangu noted that major policy initiatives in the department also included the finalisation of a draft green paper on minerals and mining policy which would be published soon.

The department was also working towards a draft white paper on energy policy which would include a proposed national gas policy.

A draft of the National Gas Regulatory Bill had been completed and SA was discussing the harmonisation of a regional gas policy with its neighbours. There were also negotiations with Mozambique and Namibia on the exploitation of the Pande and Kudu gasfields respectively.

A working draft of the Southern African Development Community mining protocol had also been developed and would be discussed with members.

Shabangu said the commission of inquiry into the diamond industry, specifically the reasons for its decline, would start its hearings on February 19.

The downscaling of government's fuel stocks of 55-million barrels to bring it to three-and-a-half months stock would be managed over a period of time to get the best prices on the international market.

Eskom on target with R1,2bn home electricty plan – Sigcau

(65) ARG 12/2/97

WILLIAM-MERVIN GUMEDE
POLITICAL STAFF

Early estimates showed Eskom had exceeded its ambitious target of connecting 300 000 homes to electricity by the end of last year, Public Enterprises Minister Stella Sigcau announced in Cape Town.

The company spent R1,2 billion on the project.

Ms Sigcau said at a press briefing that Eskom had maintained its pricing levels below inflation. The parastatal had continued to perform well above the overall economic growth rate of the country with revenue jumping 11 percent to R17,1-billion or 19,8 percent.

Other state enterprises had been performing well overall, said Ms Sigcau. Arms company Denel, forestry company Safcol and mining company Alexkor had good years but Aventura, the leisure company, and Transnet made losses.

Transnet lost about R250-million, but the company had recently showed a turnaround.

An investigation of irregularities in Transnet's pension fund had almost been completed by the Finance Ministry. It would be reviewed by the Cabinet before being made public.

South African Airways' restructuring was to be speeded up. This would involve changes in management structure, legal form, personnel, contracts and balance sheet structure, and separation from Transnet's pension and medical aid fund.

A workshop on restructuring SAA would take place on February 25 and 26.

The Cabinet had decided that the previous limit of 25 percent foreign ownership of a South African airline should be raised to 49 percent, Ms Sigcau said.

This could affect Sun Air, which is to be privatised soon. Shareholders in a privatised Sun Air could include a trade investor, a black grouping and a national empowerment fund controlling the interests of "historically disadvantaged investors".

She said proposals for a strategic equity partner for the Airports Company were being discussed with labour with the next round of talks scheduled for Friday.

The government needed to revise figures of what state enterprises were worth before they were restructured, Ms Sigcau said.

Some evaluations had been carried out by management and were inaccurate. For example, land owned by Aventura, some of the most valuable in the country, had been rated as agricultural land.

The way had been cleared for the sale of Aventura to a consortium.

The government's overall adviser on privatisation, the Hong Kong Shanghai Banking Corporation, was co-ordinating an advisory team to oversee the sale.

Forestry company Safcol was also being restructured, Ms Sigcau said.

Eskom beats connections target

BD 18/2/97 (55)

Robyn Chalmers

ESKOM exceeded its electrification target of 300 000 new connections last year, bringing the total number of connections since 1994 to nearly 1,3-million, an Eskom spokesman said yesterday.

However, the minerals and energy department indicated last week that local authorities had missed their target of 150 000 connections last year, having made a total of 120 000 new connections.

Eskom distribution executive director Sifiso Dabengwa said more than 1 000 homes were electrified every working day last year, bringing the total number of connections to 307 047.

The largest number of connections were made in Pretoria with 129 024 last year, followed by Cape Town with 66 602, Durban with 50 449, Bloemfontein with 35 579 and Johannesburg with 25 393. Dabengwa said that while meeting the year's target was gratifying, Eskom faced an overall mark of 1,75-million connections by 2000, which required a significant amount of capital and work.

"With an annual electrification bill of more than R1bn, costs must be watched closely and continuously," he said.

Dabengwa said the cost a connection was becoming increasingly important as the lines were getting longer and the target areas more distant. Costs had to be contained to around R2 500 a connection if Eskom was to meet its electrification targets.

"The programme is a world leader. No one else is doing anything comparable and the costs ... are huge."

Government set a target of 2,5-million connections throughout SA between 1994 and 1999, of which Eskom has to deliver 1,75-million new connections and local authorities 750 000 connections.

Eskom CE Allen Morgan said in the 1995 annual report that Eskom was pursuing electrification in rural areas wherever feasible. "However, the cost of bringing network electricity to such areas is very high compared with urban areas," he said.

Morgan said loan agreements worth R237,4m were concluded for 1995 and 1996 with the Development Bank of Southern Africa.

In a separate development, the public enterprises ministry is expected to announce the restructuring of Eskom's electricity council this week, including a new chairman and council members.

ST (BT) 9/3/97

ENERGY DISTRIBUTION

The electricity REDs are coming

(55)

By SVEN LUNSCHE

THE distribution of electricity to consumers could be the responsibility of only five regional electricity distributors (REDs) once proposals backed by government this week are implemented.

The proposals will drastically reshape the finances of local authorities and municipalities by removing their power to sell electricity to consumers in their areas.

Minerals and Energy Minister Penuell Maduna's announcement of a restructuring in the R25-billion electricity supply industry caused an outcry among trade unions and is likely to be resisted by local authorities.

However, the proposals, which could take two to three years to be implemented, come in the nick of time for almost half of the 400-odd local authorities which could soon default on their bulk payments to electricity supplier Eskom. The utility is owed an estimated R1.5-billion by municipalities, which in turn face non-payment, largely from township users.

Maduna said in a statement that government's plans had the support of major industry players, who understood and accepted the need for electricity transformation.

But the National Union of Mineworkers on Friday rejected the recommendations, saying they represented only the views of employers in the industry and that the process of canvassing views had been secretive. "We call on the minister to facilitate a public debate on the secret process that was followed."

The NUM's claims were rejected by other sources who stressed that the union was consulted but that its views simply did not prevail.

Many municipalities and local authorities are likely to be angered by the move as they use electricity charges to subsidise other costs.

In terms of the proposals, only a portion of income from electricity sales will be returned to the local authorities via a transparent local government tax. Central government will cap the local government tax.

The proposals, which were tabled with government almost a year ago by the statutory National Electricity Regulator, will be fleshed out by a restructuring team comprising all major stakeholders.

At the heart of the consolidation of the electricity distribution industry is the creation of "a maximum number of financially viable and semi-independent regional electricity distributors". Sources say the viability clause dictates that REDs transgress regional boundaries. The regions could be grouped around economically strong regions as a core of the REDs.

Apart from electricity distribution, the REDs will also take over responsibility for the country's electrification programme, currently run successfully by Eskom and less successfully by the municipalities. Last year Eskom electrified 300 000 homes at a cost of R1.3-billion whereas local authorities came nowhere close to their stated target of 150 000 homes.

The NER's Johann du Plessis says the programme will in future be financed via a levy on electricity sales, which will be channelled to an electrification fund administered at national level.

The REDs will be in a powerful position to exercise credit control and, if need be, take action against payment defaulters, says du Plessis.

The proposals also recommend the introduction of cost-reflective and transparent tariffs to replace the present 2 000-odd tariffs that are levied by municipalities. Du Plessis says that the realignment of tariffs would see the gradual phasing out of unnecessary subsidisation among various customers.

Cabinet nod for electricity shake-up

BD 7/3/97

(55)

Amanda Vermeulen

THE long-awaited restructuring of the R25bn electricity supply industry has moved up a gear after Minerals and Energy Minister Penuell Maduna announced last night from Malaysia that the cabinet had finally approved proposals to transform the industry.

In a statement released by minerals and energy chief director Johann Basson, Maduna said cabinet had approved the electricity working group's March 1996 recommendations, and consultation with stakeholders — set to kick off next month — would pave the way for implementing proposals to "restructure the distribution sector of the electricity supply industry".

The decision follows criticism from big business electricity consumers that the lack of progress in transforming the industry would force local and international investors to look elsewhere if delays continued. Maduna's statement put a three-year timeframe on the restructuring process.

Cabinet had approved a range of proposals in principle, including the consolidation of the electricity distribution industry into the maximum number of financially viable and semi-independent regional electricity distributors — the number of which still had to be determined. This consolidation would result in the merger of Eskom and municipal electricity departments at a regional level.

The second proposal approved was that consultation between the ministers of minerals and energy, finance, public enterprises, provincial affairs and constitutional development, and all the various stakeholders, must take place. This followed criticism from certain quarters that wide consultation had not taken place.

Third, cabinet had agreed on the introduction of cost-reflective tariffs (tariffs that match the cost of the service), an electrification levy and a capped tax, imposed by local government on electricity sales, to part-fund municipal services. Municipalities have, in the past, depended on the revenue from electricity supply.

Basson said the tariffs, any subsidies and taxes would be "fully transparent" because although some already existed, they were unknown to the average consumer.

Fourth, the levy on electricity sales would be paid into an electrification fund which would be administered on a national level. A full-time restructuring team would be appointed to investigate detailed issues as well as involving all the major stakeholders in planning the transformation process.

"We are fortunate that the major players in the industry understand and accept the need for transformation. It is important that they support the direction government is giving to the industry," Maduna said. "The next step will be to consult the leaders in provincial and local government structures, Eskom, organised business and labour, the national electricity regulator (NER) and others. They will form part of the process that will shape the future of an effective and efficient electricity supply industry in SA."

Consultation is expected to begin

Continued on Page 2

Electricity

(55)

Continued from Page 1

within the next month, with planning structures functioning three months later. The restructuring should take about three years.

Johan du Plessis, customer services GM at NER — which has played a crucial role in the restructuring process — said last night the regulator was delighted with the cabinet decision. "The rationalisation of the electricity industry is a quantum leap towards rectifying its shortcomings. It will result in an efficient and effective industry which will better serve all electricity consumers."

BD 7/3/97

Electricity tariff principles approved

BD 11/8/97 (55)

Robyn Chalmers

THE National Electricity Regulator has approved a broad set of principles for electricity pricing and tariffs in a bid to rationalise the more than 2 000 tariffs levied by municipalities around SA.

The approval of new tariff principles comes amid the cabinet go-ahead last week for proposals to restructure the R25bn electricity supply industry into a number — probably five — of regional distributors.

Other proposals agreed by cabinet included the introduction of cost-reflective tariffs, an electrification levy and a capped tax, imposed by local government on electricity sales, to fund municipal services in part.

The general principles on tariffs approved by the regulator say electricity pricing policies should facilitate extensive electrification of disadvantaged areas while pricing and tariff levels should be cost-reflective. The principle of transparency should be a key tenet in pricing and any deviations from cost-reflective tariffs should be transparent.

"The subsidies and distortions in existing tariffs, however, make strict adherence to cost-of-supply principles unattainable and necessitate a compromise between cost-of-supply and social pricing policies," said the principles.

The regulator's newsletter, NER News, said a discussion document on developing a strategy for rationalising electricity pricing would be published soon. "It is important that this subject (of tariffs) is approached in an integrated manner in conjunction with the proposed restructuring of the distribution industry," it said.

The principles approved also indicated that customised and special pricing agreements could play a role in promoting social upliftment, electrification and economic growth as well as fair competition.

Customers had to be given a choice of electricity services and pricing options in the move to a more competitive structure. The degree of choice would depend on affordability, economic effectiveness and efficiency. "When fair competition has been established, pricing will become more market-related."

Labour shocked by Cabinet's approval of electricity changes

Star 13/3/97 (55)

BY ADAM COOKE

Organised labour has rejected recommended changes to the R25-billion electricity supply industry that were approved by Cabinet last week.

Unions objected to the content of the recommendations and to the pro-cess by which they were drafted, saying the input of labour organisations and civil society had been ignored.

However, in terms of the Electricity Working Group's recommendations, Mineral and Energy Affairs Minister Penuel Maduna and other Cabinet ministers will have to consult with unions and other role players before any changes are made.

Billed as the biggest merger in South Africa in terms of assets, staff and turnover, the recommendations seek to merge the functions of the power distribution businesses of Eskom and of local government. The end result will be that some individuals or businesses could pay less for their power than they are now, and others could pay more.

The National Union of Mineworkers (NUM) has gone so far as to threaten strike action if the "shortcuts" taken by the Electricity Working Group, set up by the Government, in drawing up the recommendations are not addressed.

Yesterday, the NUM requested a top-level meeting of the Government-labour "six-a-side" structure in terms of which all restructuring must take place.

The body comprises of six Cabinet ministers and six labour representatives and attempts to iron out problems in the privatisation of state assets.

NUM assistant general secretary Gwede Mantashe said Cabinet's approval of the recommendations reflected the success of employers in manipulating the Government.

The 80 000-strong Independent Municipal and Allied Trade Union said it would "vigorously oppose" the recommendations because they would "impoverish democracy by depriving communities of a say in electricity distribution".

The South African Municipal Workers' Union has also added its voice of discontent, saying there had been insufficient consultation.

Johan du Plessis, spokesman for the National Electricity Regulator, which monitors the electricity industry, said: "Each stakeholder had its own position and they could often not be reconciled. All the recommendations were referred to Cabinet and they made the decisions on which to choose," he said.

Recreation in a joint statement which was issued on 21 February 1997. But indications at the moment are that SARFU wants to renege on that initial undertaking, compelling the Department to write a letter to Dr Luyt stating that if they continued to play legalistic games around the probe we shall have no option but to recommend to the President to appoint a judicial commission of enquiry.

Salary of certain king re-evaluated

*23. Mr J A JORDAAN asked the Minister for Provincial Affairs and Constitutional Development:

Whether the Government is re-evaluating the salary paid to a certain king, whose name has been furnished to his Department for the purpose of his reply, in the light of certain comments made by a certain prince, whose name has also been furnished to his Department in November 1996 with the purport that the king was neglecting his official duties; if not, why not; if so, what are the relevant details? N257E

The MINISTER FOR PROVINCIAL AFFAIRS AND CONSTITUTIONAL DEVELOPMENT:

The king referred to in the question receives remuneration in terms of legislation administered by the relevant Province and his remuneration is thus a provincial issue. As far as it is known, no formal complaint regarding neglect of duties has been lodged against the king either with the Department or the Provincial Government. As there is no formal investigation, the Department is taking no action in this regard. Any further enquiries the hon member may have on the issue should, it is suggested, be referred to the Province concerned.

*24. Dr W J BOTHA – Health.† [Question standing over.]

Nigerian citizens arrested in SA

*25. Col N G RAMAREMISA asked the Minister for Safety and Security:

(1) (a) How many persons with Nigerian citizenship were arrested in South Africa during the period 1 January to 31 December 1996 and (b) how many of these persons were arrested as a result of drug smuggling and other drug-related offences;

(2) whether he will make a statement on the matter? N259E

The MINISTER FOR SAFETY AND SECURITY:

(1)(a) It has not been possible in the short time available for the Department to obtain the information requested by the hon member.

However our commitment to focus on the activities of criminal organisations who are responsible for a substantial percentage of crime in the country, means that the SA Police Service pays particular attention to crime syndicates that are involved in cross-border crimes. Therefore, as far as organised crime is concerned, it is possible to furnish the information requested by the hon member.

(b) 180

The above figure is based on the work of the South African Narcotics Bureau only, and for the period 1 January to 31 December 1996. The fact must also be taken into account that Nigerian nationals often use falsified travel documentation.

(2) No.

Prisoners qualifying for correctional supervision

*26. Mr G C OOSTHUIZEN asked Minister of Correctional Services:†

(1) Whether his Department intends doing an investigation to identifying prisoners that qualify for correctional supervision; if not, why not; if so, when;

(2) whether he will make a statement on the matter? N260E

The MINISTER OF CORRECTIONAL SERVICES:

(1) No. Correctional supervision is a sentencing option exercised by the Courts. All prisoners who are sentenced, in accordance with the stipulations of the Criminal Procedure Act, 1977 (Act No 51 of 1977), to imprisonment with placement under correctional supervision as an option, are automatically considered for such placement in terms of the placement policy of the Department of Correctional Services.

(2) No.

Hansard

Correctional Services: corruption in recruitment of new personnel

*27. Mr G C OOSTHUIZEN asked the Minister of Correctional Services:†

(1) Whether his or his Department's attention has been drawn to allgation of the corruption during the recruitment of new personnel for his Department in the Western Cape; if so, what was the (a) nature and (b) extent of such alleged corruption;

(2) whether he or his Department intends taking any action in this regard; if not, why not; if so, what action;

(3) whether he will make a statment on the matter? N261E

The MINISTER OF CORRECTION SERVICES:

(1) Yes.

(a) various complaints of the following nature have been received, following the recruitment of probationary officials in the Western Cape:

(i) that members of the selection panel only appointed their own family/friends;

(ii) that only family and friends of serving members were appointed;

(iii) that applicants complained that they were contacted to undergo HIV-tests, while the recruiting personnel were uninformed of this;

(iv) that insurance agents contacted applicants and informed them that their appointments had been approved – instructing them to take out an insurance policy;

(v) that applicants who did not originate from the surrounding areas were summarily rejected;

(vi) that applicants were rejected without any reason, and

(vii) certain members also complained that preference was not given to their family and friends.

(b) Complaints received were of a general nature in regard to a total of 616 appointments made in the Western Cape.

(2) Yes, the complaints of members of the public will be investigated/considered by the Department. Attention will also be given to the way of advertising and recruitment, compilation of panels, conventionality of information etc. The opinion is however held that the complaints received must be seen against the background of the current unemployment rate and the short period in which this recruiting action had to take place.

(3) No.

Restructuring of electricity supply: report

*28. Mr A H NEL asked the Minister of Minerals and Energy: 655

(1) Whether his Department has received the Report of the Electricity Working Goup Regulatory in respect of the restructuring of elecricity supply; if so, when;

(2) whether the Cabinet has already taken a decision on this,; if not, why not; if so, what decision;

(3) whether he will make Statement on the matter? N262E

The MINISTER OF MINERALS AND ENERGY:

(1) Yes, the Department received the Electricity Working Group's (EWG) report on the restructuring of the Electricity Distribution Industry (EDI) from the National Electricity Regulator (NER) in the beginning of 1996.

(2) Cabinet did not accept the recommendations of the EWG as per Cabinet Memorandum No 5 of 1996, but recommended that the matter be referred to a Committee of Ministers consisting of the Minister of Minerals and Energy (Convenor), Public Enterprises, Finance,

Provincial Affairs and Constitutional Development, and Trade and Industry to submit proposals as to the process to be followed and an action plan to deal with the matter in a consultative and transparent manner when the new Constitution is adopted by the Constitutional Assembly, taking into account the division of functions between the various levels of Government.

Against this backdrop, the Electricity Restructuring Inter-departmental Committee (ERIC) started its activities on 11 June 1996 to develop a recommendation for Cabinet to establish a Government position on the EDI. A complete report was developed by ERIC and was submitted to the Minister of Minerals and Energy towards the end of 1996. The ERIC recommendations were accepted by Cabinet as per Cabinet memorandum 3 of 1997 dated 6 February 1997.

(3) The Press release that went out on 6 March 1996 regarding the abovementioned recommendations was as follows:

PRESS RELEASE

GOVERNMENT MOVES ON ELECTRICITY DISTRIBUTION SECTOR

Consultation with relevant stakeholders will pave the way for the implementation of proposals to restructure the distribution sector of the electricity supply industry the Minister of Minerals and Energy, Mr Penuell Maduna, has announced. The Cabinet has approved the recommendations of the Electricity Restructuring Interdepartmental Committee. The Committee was indirectly appointed by Cabinet, as the successor to the National Electrification Forum (1993/4) and the Electricity Working Group (1995/6). These recommendations include:

- in principle, the consolidation of the electricity distribution industry into the maximum number of financially viable and semi-independent regional electricity distributors. The number of regional distributors still has to be determined;
- consultation by the Ministers of Minerals and Energy, of Finance, of Public Enterprises and of Provincial Affairs and Constitutional Development, with major stakeholders;
- the introduction of cost-reflective tariffs, an electrification levy and a capped tax for part funding of municipal services. The tariffs, any subsidies and tax will be fully transparent;
- the levy on electricity sales will be paid into an electrification fund which will be administered at a national level;
- the appointment of a full-time restructuring team to investigate detailed issues and involving major stakeholders in the planning of the transformation process and in moving towards a new dispensation.

"We are fortunate that the major players in the electricity supply industry understand and accept the need for transformation. It is important that they support the direction Government is giving. Mr Maduna said. "The next step will be for us to consult with the leaders in Provincial Government, Local Government organisations, Eskom, organised labour, organised business, the National Electricity Regulator and others. They will form part of the process that will shape the future of an effective and efficient electricity supply industry in South-Africa".

Issued by: Minister of Minerals and Energy, Mr P M Maduna

Enquiries: Dr W O Barnard (012) 317-9219, fax (012) 322-5224.

Date 6 March 1997.

Road accidents

*29. Mr P W COETZER asked the Minister of Transport:†

(1) (a) How many road accidents occurred during the period 1 January to 31 December 1996 and (b) in how many of these accidents were buses involved;

(2) whether he will make a statement on the matter? N263E

The MINISTER OF TRANSPORT:

(1) (a) 517 669 Road accidents occurred during the period 1 January 1996 to 31 December 1996 compared to 519 059 for the same period in 1995, and

(b) 10 160 buses were involved in road accidents during the abovementioned period compared to 10 592 for the same period in 1995; although the road traffic accident data compiled by the Central Statistical Services (CSS) is comprehensive, it is preliminary data. The comprehensive final report is only published after at least three years.

(2) I have already made statements on the unacceptable fatality rate on our roads and have suggested and put into place methods to overcome the complex underlying problems which have given rise to this unfortunate situation. I have also indicated that my Department is working tirelessly on all these issues, continuously striving to improve co-ordination between the activities of all role-players in the public and private sector at national, provincial and local level. I would also like to bring to the hon. member's attention the recently published *Business Plan Towards The Implementation of the Road Traffic Management Strategy (RTMS)*, and would recommend, for quick reference, the Executive Summary of this document, pp. 3-13. This document can be obtained from the Parliamentary Office in my Department. The RTMS is the result of a Road Traffic Quality Symposium which was held in Pretoria in July 1996, during which a target was set to reduce road fatalities by 1 0% by the year 2000.

Home-owners: non-payment of instalments

*30. Mr J A RABIE asked the Minister of Housing:†

(1) With reference to her reply in 1996 to Question No 1039 for written reply, whether she or her Department has taken any steps against home-owners who have taken home loans from the State and are not paying their monthly instalments at present; if so, (a) what steps, and (b) with what result, in each relevant province; if not,

(2) whether she or her Department intends taking any steps in this regard; if not, why not; if so, (a) what steps and (b) when;

(3) whether she will make a statement on the matter? N264E

The MINISTER OF HOUSING:

(1) The information requested is not readily available in my Department as the administration of home loans, financed from the statutory housing funds, vests with second and third tier Goveniment and the question should be addressed to the Provincial Administrations who keep records of both the second and third tier of governments.

(2) However, I am prepared to assist in obtaining the information and have already requested my Department to obtain the information from the authorities concerned.

(3) Should it be acceptable to Mr Rabie, I will within the near future send him a personal letter in which I will provide answers to his questions.

Parliamentary villages: robberies

*31. Mr J A RABIE asked the Minister of Public Works:†

(1) Whether he or his Department has taken any measures to prevent residents of Acacia Park and other parliamentary vllages from being robbed by persons who use keys to obtain access to residences; if so, what measures; if not,

(2) whether he or his Department will consider taking steps with a view to (a) replacing locks with locks of which the keys cannot be duplicated, (b) providing houses with alarms which indicate at the gate where the alarm has been activated in order to prevent unauthorised entry and/or (c) searching visitors' cars at arrival and departure; if not, what is the position in this regard; if so, what are the relevant details? N265E

The MINISTER OF PUBLIC WORKS:

(1) Yes, my Department is very concerned about the number of unforced entries into houses in Acacia Park Parliamentary Villages and has embarked on action plan to prevent such occurrences. Some of the preventative measures to be taken are:

Power drive held back by 'a range of challenges'

Robyn Chalmers

BD 9/4/97

A RANGE of challenges facing the electricity supply industry are limiting its ability to meet aggressive electrification targets and ensure world class supply quality, the National Electricity Regulator says.

The supply industry was collectively facing bankruptcy, the regulator said. "It is unable to continue funding other municipal services and the electrification programme without alternative funding and pricing mechanisms, a reduction in the generation and transmission prices or substantial tariff increases."

The industry was also fragmented. There were substantial differences in the financial health of municipal distributors, and a wide disparity in prices paid by the various customer segments.

Cabinet recently accepted a range of proposals by the Electricity Working Group to restructure the supply sector, which included consolidating the industry into a number of independent regional electricity distributors.

Other proposals were cost-reflective tariffs and a capped tax for part funding of municipal services, and a levy on electricity sales to fund electrification.

The regulator said a number of issues needed to be addressed if the proposals were to be fully implemented. More equitable and transparent mechanisms for funding electrification and other municipal services had to be developed if the industry was to meet its obligations in the long-term.

In addition, the consolidation of the industry into some form of regional distribution model would strengthen the municipal distributors most at risk and facilitate rationalisation of tariffs in the country.

"These two processes must be combined to provide a rational, inclusive and integrated restructuring process to move the industry from where it is, to where it has to go," it said.

Energy industry players decry lack of policy

BD 17/4/97 (55)

Linda Ensor

CAPE TOWN — Broad consensus emerged in the mineral and energy affairs industry yesterday that the department's R808m budget failed to earmark financial support for an energy, electricity and liquid fuels industries policy.

The main role players noted the department had failed to formulate a policy on key areas vital to the industry's future.

The SA Petroleum Industry Association, the Chamber of Mines and the National Union of Mineworkers raised the issued in briefings to the parliamentary portfolio committee on mineral and energy affairs on this year's budget vote.

The absence of a policy, as well as the lack of capacity to formulate one, had been identified by the International Energy Agency last year as a "major weakness" in the SA energy sector, University of Cape Town researcher Hilton Trollip said. He said the energy budget did not show how these issues were being addressed.

"It is now becoming increasingly urgent that action takes place as huge refinery investments are needed to meet the growing demand for liquid fuels in SA. These are on hold awaiting clarity on policy relating to the future of the liquid fuels industry," association director Colin McClelland said.

The chamber agreed. "A high level of expertise within the department is essential for it to effectively implement the Mine Health and Safety Act, and to regulate the environmental impact of mining."

The chamber said it believed the department's manpower levels and budgets did not place sufficient emphasis on delivering high-quality performance.

"Given the current national emphasis on mine health and safety, it is puzzling and disturbing to see the budget and manpower level decrease," chamber technology adviser Howard Hume said, especially as the amount allocated to pay off Atomic Energy Corporation (AEC) loans increased by R150m.

The chamber proposed an increase in the rate of the reduction of the budgetary provision for the AEC.

The chamber questioned the R28m set aside for energy management of which 60% was tagged for consultants' services.

"This implies that a good portion of staff time and effort will be expended managing this money," Hume said

The NUM agreed with reservations about the cutbacks in health and safety spending.

experience of developing countries for countries with small markets. tal regulation, aspects come rumous.

AEC takes on the world's best — an act of rare boldness

Despite downsizing and budget cuts, the AEC has placed itself at the cutting edge of international technological advancement, writes **Edward West**

(55)

BD 14/5/97

SA's Atomic Energy Corporation (AEC), with its French partner Compagnie Générale des Matières Nucleires (Cogema), are locked in a neck-and-neck race with US technology wizards to see who can develop the most effective method of uranium enrichment.

This is no straight race for technological superiority in the traditional sense. Nuclear industry technology development projects typically have 15-20-year lead times and involve hundreds of millions of rands. Unlike US utilities, AEC has scarce resources.

The production of enriched uranium for nuclear power in the US and other nuclear-weapon states has historically been subsidised through the use of facilities previously established for military purposes. But the AEC wants its process to fly purely on economic viability, thus giving it a slice of a \$5bn-\$6bn annual nuclear fuel market in the western world and effectively ensuring its survival as an operational nuclear utility.

The AEC began research into the molecular laser isotope separation (MLIS) uranium enrichment process a decade ago, and an agreement on joint commercialisation of the process was signed with Cogema last year. If MLIS proves its worth, the \$7bn-a-year Cogema, which supplies about half of Europe's nuclear power plants with fuel, will represent a major opening into the world nuclear market for the AEC.

The technical and economic demonstration phase of MLIS is scheduled to end next year, and component development and construction of a commercial plant could follow if all goes well. The AEC has not been specific about details of its MLIS programme — for competitive reasons.

The US Enrichment Corporation is developing the atomic vapour laser separation process (Avlis), which, broadly, will entail evaporating uranium metal and ionising the gas using visible lasers on the opposite end of the spectrum to those used by the AEC's process.

The US previously used a diffusion process to enrich uranium mainly for military purposes, but the energy costs of this process has become prohibitive.

The AEC believes its technology has more than a winning chance over the US's Avlis process. Being a tiny nuclear utility facing uncertain and declining government budgets, and having to transform at breakneck speed from its former role as apartheid's nuclear power and weapons manufacturer, has left it with a few advantages over other government-supported nuclear facilities.

Because of embargoes, the AEC had to develop technologies on its own, which in other parts of the world would simply have been sourced from other companies. It developed skills to make small-volume high-technology components effectively, and produced a local, vertically integrated, nuclear industry — from uranium mining to waste disposal — at Vaalputs in the Northern Cape.

This has made the commercialisation process easier. One innovative example is fluorine gas technology, which the AEC has successfully spun off from nuclear applications to fluorinate and reduce permeability of plastic containers such as car petrol tanks.

The result is that while hundreds of millions of rands have been spent on developing MLIS over the past decade, with Cogema also pledging \$20m last year for a three-year period, the operating cost of MLIS's development so far is only 10% of that of the Avlis project. Despite this, the AEC admits that without Cogema the project is unlikely to succeed.

The AEC believes that the major benefit of MLIS is that it is a one-step process to enrich uranium and is largely compatible with existing processes and facilities of the nuclear industry. Avlis will require the development of new processes such as the conversion of the more commonly used uranium "yellow cake" to uranium metal — an expensive and energy-consuming process.

In addition, the Avlis process will require operations at very high temperatures and the handling of highly corrosive liquid uranium metal and vapour. The MLIS process will use less extreme conditions of temperature, pressure and corrosion.

The AEC is in its fifth year of commercialisation. Because of SA's need to preserve a core nuclear competency and provide radiation and related services, it is unlikely ever to be totally free of government funding.

External revenue from the sale of nuclear and industrial products has grown from an insignificant amount in 1990 to R276m, with 48% of this total expected to be received from about 22 countries and 68% of the total expected to be derived from industrial sales.

Government budget cuts have been severe, from R1bn in 1991 (1997 rand value) to about R200m currently. Staff levels have fallen from more than 8 000 five years ago to just fewer than 2 000. In addition, uncertainty over the future of nuclear policy in SA has been hanging over the institution like a sword of Damocles.

Yet the AEC, through its MLIS project, has taken on the world's best at the forefront of technological advancement — a rare and much-needed boldness from SA.

Far-reaching changes to energy sector

(55) BD 22/5/97

Linda Ensor

CAPE TOWN — Details of far-reaching changes planned for the energy, mining and liquid fuel industries were outlined by Mineral and Energy Minister Penuell Maduna in his maiden speech in Parliament yesterday.

Included in his strategic vision was the consolidation of Central Energy Fund (CEF) companies and other state-owned energy assets into a major public energy company listed on the Johannesburg Stock Exchange.

Assets scattered over diverse state entities, for example, the Industrial Development Corporation's Sasol shares and Petronet in Transnet, would be brought together into one entity which would hopefully reduce the cost of energy to the fiscus.

Government would retain a controlling stake in the enterprise which would be responsible for formulating "an integrated pan-African energy strategy" and for developing partnerships with African oil and petroleum product exporters. In this way competition in the sector would be enhanced and ownership of resources redistributed to promote black economic empowerment, Maduna said.

But Democratic Party mineral and energy spokesman Kobus Jordaan said government seemed unwilling "to release the hard grip which the National Party had on the energy sector."

He said the International Energy Agency had recommended the scrapping of most of the CEF's functions which were now obsolete and noted that it was highly questionable for the state to continue to own it.

On the restructuring of the liquid fuels industry, Maduna said at a news briefing that the aim was to create opportunities for small operators to have an equity stake. He cited the example of Engen's 20% stake in Soekor's Oribi oil mine, suggesting that additional shares could be distributed in a black empowerment initiative.

Other reforms Maduna would like to see introduced were aimed at empowering small black entrepreneurs through the control of mineral rights and the promotion of small mines. He raised the possibility of state ownership of mineral rights and minerals, saying this was not incompatible with security of tenure and title. There was an urgent need to address whites' inequitable monopoly of mineral rights.

In the meantime, prospecting and mining rights over alienated state land would be given to new entrants. Guidelines for this had been formulated.

Maduna, with Finance Minister Trevor Manuel, planned to commission a feasibility study into a mineral rights tax to prevent the hoarding of mineral rights and "to encourage their private sale or transfer to the state" wherever they were not being utilised.

Other proposals to be investigated were the imposition of annual minimum work or investment requirements to discourage the holding of unproductive mineral rights and properties; and the imposition of regular payments of a per-hectare fee by holders of prospecting permits.

Maduna said mining houses often hoarded rights to small deposits that

Continued on Page 2

Maduna

Continued from Page 1

they did not wish to exploit and to large resources which they would mine only decades later. This acted as a barrier to entry by smaller operators.

He said there were 588 reporting, small mines which were generating an annual revenue of about R760m. There were a further 1 200 legal small mines not supplying information to his department and an even larger number operating outside the law.

Maduna also told Parliament an Eskom Amendment Bill was being drafted which would make it easier for private sector investors to enter the electricity generation sector.

□ Strategic Fuel Fund acting general manager Howard Roberts told Parliament's mineral and energy affairs committee that the fund's net income was expected to drop dramatically this financial year because of price movements in the international oil market.

In the 1996/97 financial year to end-March, the fund's total income amounted to R203,9m and net cash income R62,9m, while in the 1997/98 year total income of R198,5m and net cash income of R46m was expected.

Roberts said the fund's trade in crude oil was conducted on a no risk basis, with income fluctuating according to movements in the oil market. "We have no control over what opportunities present themselves."

He said net income of the CEF was projected at R120m this year.

Turning nuclear swords into ploughshares

Star 28/5/97 (55)

Maintaining the Atomic Energy Corporation and its capacity involves formidable challenges

THE THING ABOUT YOU

By Helen Grange

Mojalefa Murphy is happiest when explaining the physics of the atom to those of us whose interest in such things extend only as far as a very simplistic account of how "the bomb" is made.

At the end of his delivery, it is his passion for the subject, not the baffling computations, that make the greatest impression.

Pelindaba – an eerily silent village of nuclear plants and office blocks near the Hartbeespoort Dam – is now home to this Evaton-born scientist, who occupies a key position at the Atomic Energy Corporation (AEC) as its executive general manager of corporate external relations.

Not so long ago, it was also the impenetrable apartheid garrison behind which enriched uranium was being produced for South Africa's nuclear weapons programme – a history which still leaves a bitter aftertaste.

We weave our way past the research reactor, towards the office which houses Murphy's "baby".

Codenamed Afro Gammabrac, it's a radiation-based cancer treatment machine which has been produced by a team of scientists at Murphy's initiative.

The first prototypes have proved particularly effective in the management of cancer of the cervix and the oesophagus. These forms of the disease have reached epidemic proportions in the African community.

"I want (Minister of Health Nkosazana) Zuma to buy into the initiative," he says, pointing out that the fact that the Afro Gammabrac can be locally made will save the country from having to import similar systems for millions of rands in future.

Afro Gammabrac is not the only equipment for radiation therapy being produced by the AEC. The corporation is also using its stockpiles of uranium to make medical isotopes – substances which emit a low level of radiation and when swallowed by a patient can be seen by doctors using special scanning equipment.

But the AEC is also gearing up to make significant inroads into the fields of agriculture, mining, food processing and industry in Africa, and it's in this respect that Murphy is playing a pivotal role.

In his capacity as chairman of the African Regional Agreement, he must manage the transfer of nuclear technology for use in social economic upliftment programmes in South Africa and other African states.

"South Africa needs to be at the cutting edge of nuclear technology growth because we cannot compete with the rest of the world without it," he says.

At times, Murphy gets quite agitated. There are forces working against him which frustrate his desire to get the show on the road.

"Skill attrition" is one of them. "When I started here in 1992, I saw excellent scientists leaving.

"To produce a competent scientist takes years of investment, and they are being taken from us by countries like the US and Australia."

He blames the politicians, who he says have been unable to formulate clear post-apartheid policies for the AEC, much less provide enough funding to stem the brain drain and exploit the potential.

So it's all been a bit disappointing for 39-year-old Murphy, who returned from exile to South Africa in 1992 excited at the prospect of "turning swords into ploughshares" on joining the AEC as a research scientist.

A year after being arrested as a schoolboy in 1976, the penniless 19-year-old Murphy left home, crossing the Caledon River one night into Lesotho. He completed his matric at Maseru High School, and afterwards started a BSc degree at the University of Lesotho, winning a bursary after two years to study physics at the University of Manitoba in Winnipeg, Canada.

He went on to do courses in quantum chromodynamics and statistical physics at Calgary University in Alberta.

In 1985 he returned to teach physics and mathematics at a school in Bulawayo, a year later heading south to lecture physics at the former University of Bophuthatswana.

That was when he changed his surname from Mofokeng to his great grandmother's surname – a move designed to disguise his return as a banned person.

It was no guarantee, though.

While working in medical physics at Wits University's Hillbrow hospital in 1989, he was arrested and did a spell in detention – which effectively forced him back into exile.

He ended up working at London's Charing Cross Hospital and obtained his MSc in medical physics from the University of Surrey in 1991.

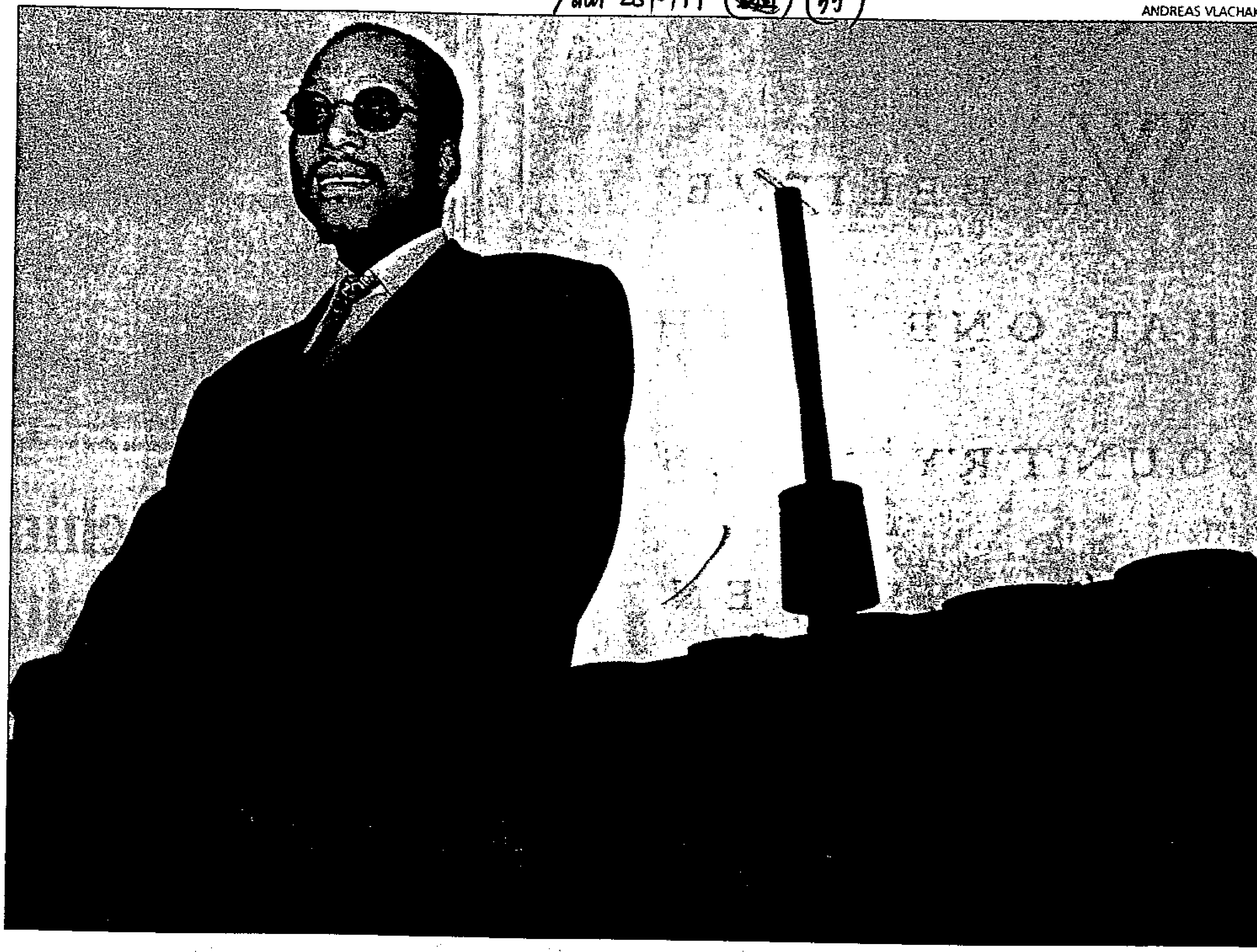
"Now I'm wondering if I should have returned," he says.

But the sentiment soon drowns in an enthusiastic gush about a post-graduate course in applied radiation science and technology he has proposed. The course, which would be available at the University of the North West, is aimed at redressing the skill attrition by training young African scientists and engineers in this particular field.

Whether or not this dream becomes a reality depends largely on government funding, which in turn relies on how much emphasis there is on long-term energy production strategies.

"We might need to sacrifice millions to maintain the AEC and the capacity to develop and deploy new generations of nuclear technologies for peaceful application in the future. It's a long-term vision," he says.

As we walk past the abandoned husk of a decommissioned processing unit, Murphy remarks: "This is what is tragic about the diminishing interest in the AEC. Millions must have been poured into this plant, but now it is going to waste."



ANDREAS VLACHAKIS

Hoping for an explosive future ... Mojalefa Murphy has visions of the ways in which nuclear technology can be implemented for peaceful purposes. But much will depend on the level of funding the Government makes available, he says.

Electricity demand drives expansion

Robyn Chalmers

REAL growth in the demand for electricity in SA is driving the need for a R1bn expansion and a strengthening of Eskom's transmission system this year, says Eskom CE Allen Morgan.

Morgan said the programme would be made up of new lines, substation extensions, refurbishment work and other projects.

"One of the main reasons for expanding the transmission grid into southern Africa is to exchange energy and ultimately, to stimulate development of the hydro generation sites in Mozambique, Angola and Zaire which could produce relatively cheap power," he said in the latest annual report.

Morgan said studies had been completed for a new 400kV interconnection of 420km between the Northern Cape and Namibia.

A study of Zaire, Angola, Namibia and SA was also being undertaken by the respective electricity utilities to develop a transmission interconnection from Inga to Zaire via Angola and Namibia to SA.

Feasibility studies had also been completed for the construction of two 400kV lines, each 300km long, from Arnot and Camden power stations to Maputo to supply the proposed Mozal aluminium smelter at the harbour by June 1999.

Morgan said last year was satisfactory in terms of financial and technical results, with net income rising 13,1% to R3bn on higher revenue of R18,7bn (1995: R17,1bn).

However, Morgan said many issues remained difficult or impossible to address until the future of the distribution industry became clearer. This included issues around reducing cross-subsidisation of one group of customers by another and making tariffs applicable to municipal redistributors cost-reflective.

BD 29/5/97 (55)

Eskom looks ahead to 2002

BD 30/5/97 (55)

Robyn Chalmers

MORE than 75% of all South Africans should have access to electricity by 2002, when more than 2-million houses should have been electrified, Eskom chairman Reuel Khoza said yesterday.

Speaking at a briefing on a "wish list" of what Eskom and the electricity supply industry could look like in five years' time, Khoza said there were likely to be far-reaching changes.

By 2002, more than 50% of all managers, professionals and supervisors in Eskom were likely to be black South Africans as the affirmative action policies would have taken hold.

Electrification would have played a major role in the lives of people within five years, with the poverty of the rural areas declining fast. It would also have affected schools, colleges and clinics.

"As the network of power lines spreads across the country, I see many more industrial and commercial centres being established where once there was nothing."

He said there were also likely to be far-reaching changes in the electricity supply industry, with close co-operation being forged between Eskom and local authorities around the country.

New co-operative electricity supply agencies organised on a regional basis would also have been established, with efficiency much improved, service more effective, bills accurate and repairs done promptly. He also foresaw an end to the culture of nonpayment.

Eskom eyes power from mineshafts

CAPE TOWN — Power utility Eskom was studying the possibility of using the country's numerous disused mineshafts to generate peak-hour electricity with falling water, officials said.

Eskom spokesman Peter Adams said the theory was that the water, which occurred naturally at the bottom of mines, would be pumped to the surface in off-peak hours then released back down the shaft to drive a turbine generator and help meet peak demand.

A scientist working on the project, Dave Blake, said research was at an early stage: "We're doing reconnaissance studies at the moment. The technology is fairly site specific. You need to find your site and then see if the whole thing comes together."

Another Eskom source said the proposal held great promise because it could provide a clean source of energy close to where it was most needed. "Imagine a 1 000MW plant right near Johannesburg," the source said.

Mine shafts vary in depth from a few hundred metres to thousands of metres. SA, producing most of the world's gold, has some of the deepest gold mine shafts in the world.

According to an Eskom report on research strategy for the five years from next year, talks on the "high head underground pumped storage" project have been held with, among others, the Chamber of Mines and the Council for Scientific and Industrial Research. — Reuter.

(59) BD 13/6/97

Eskom eyes power from mineshafts

CAPE TOWN — Power utility Eskom was studying the possibility of using the country's numerous disused mineshafts to generate peak-hour electricity with falling water, officials said.

Eskom spokesman Peter Adams said the theory was that the water, which occurred naturally at the bottom of mines, would be pumped to the surface in off-peak hours then released back down the shaft to drive a turbine generator and help meet peak demand.

A scientist working on the project, Dave Blake, said research was at an early stage: "We're doing reconnaissance studies at the moment. The technology is fairly site specific. You need to find your site and then see if the whole thing comes together."

Another Eskom source said the proposal held great promise because it could provide a clean source of energy close to where it was most needed. "Imagine a 1 000MW plant right near Johannesburg," the source said.

Mine shafts vary in depth from a few hundred metres to thousands of metres. SA, producing most of the world's gold, has some of the deepest gold mine shafts in the world.

According to an Eskom report on research strategy for the five years from next year, talks on the "high head underground pumped storage" project have been held with, among others, the Chamber of Mines and the Council for Scientific and Industrial Research. — Reuter.

(50) BD 13/6/97

Private electricity firm formed in Uitenhage a first

BD 26/6/97 (~~…~~) (65)

Robyn Chalmers

UITENHAGE in the Eastern Cape became the first town yesterday to form a private company encompassing Eskom, the local authority and the private sector in a bid to speed up the supply of electricity.

The Uitenhage Electricity Supply Company (Uitesco), whose shareholders are the Uitenhage transitional local council, Eskom and local industries in Uitenhage, was granted a licence of operation by the National Electricity Regulator last week.

Uitesco chairman Myekeni Seyisi said yesterday the joint venture was in line with government policy to encourage partnerships between government and other sectors.

"We are taking electricity delivery into the future in our quest to speed up electrification," he said.

Uitesco GM George Ferreira said the move was not a buy-out, but a pooling of partners with the skills and expertise to benefit more people.

"It makes good economic sense for a specialised company like Uitesco to focus all its attention on electricity delivery instead of being part of the municipality's full basket of varied services."

The company was awarded a grant of R14,5m a few months ago on condition that 8 500 erven in the area were electrified by the end of this year.

Ferreira said the new company was making inroads into the electricity provision backlog. Since the grant was made six months ago, 880 erven in the Kwa Nobuhle area had been electrified.

By December it was hoped another 8 000 electrifications would have been completed.

He said the electrification relied on community-based construction. Sixteen small township companies employing 50 workers were handling installations after training from the East Cape Training Centre. A further four companies were installing the prepaid meters.

Eskom marketing manager and Uitesco board member John Arnesen said the company provided an answer for SA's electricity industry. "It is the next step in evolution in the one-city concept," he said.

Port Elizabeth Regional Chamber of Commerce and Industry CEO Kevin Wakeford said the concept of focusing on core business activities confronted organised business as well as the public sector.

"Uitenhage presents a good example of a pilot programme which we are convinced will be monitored by all sectors and levels of government as to its viability and feasibility."

The wastes of nuclear power

(55) CT 30/6/97

STEPHEN LAW

ANDREW KENNY (Cape Times, June 19) provides very little substantive argument for why we should accept nuclear power as the answer to our energy needs and while claiming to have been won over by the facts, gets a few of them wrong.

Kenny is correct in stating that all forms of energy generation have their place. Solar power is as unsuitable for keeping industry going as nuclear power is for providing electricity to households in remote rural areas. It's a pity he did not mention energy efficiency, since this is applicable across the board and would lead to a substantial reduction of environmental problems attached to energy generation.

Here are just two of the gaping holes in the nuclear boat he pushes out:

The waste issue: Koeberg in its lifetime will produce about 1,1 million tons of highly radioactive spent fuel. There are essentially two options to deal with this waste — storage or disposal.

Storage implies that the waste is suitably contained, kept above ground and under constant surveillance. Any leaks or breaches can be traced and rectified as they occur. Advances in storage technology can be applied as they develop. But there is the cost of human surveillance over a few hundred years — which will have to be borne by future generations at no benefit to themselves. It also assumes social and political stability over thousands of years.

Disposal implies that the waste is encapsulated in steel and concrete containers and then buried in some deep, geologically suitable hole in the ground. It means that we surrender all capacity to monitor and intervene, and so need to design and build containers that will not fail. The problem is that we simply do not have the data to predict how concrete, steel and other materials will behave over periods of thousands of years in the kinds of conditions that will exist in the burial sites. Again we can only predict. Thus the design of a nuclear-waste disposal site is at best an educated guess with no past experience to guide us. So the waste is consigned to the ground and we keep our fingers crossed — because if something does go wrong we won't know about it, and even if we did, there would be little we could do about it. This false sense of security doesn't come cheap either. One study estimates the cost of disposing Koeberg's high-level waste at some $650-million (about R3-bn).

Which option will Eskom choose? They don't know yet. They did not consider the issue important enough to deter building Koeberg, and more than a decade later the experts still have not provided an answer. In fact, not a single nuclear country in the world has yet found a technically and politically acceptable solution to this problem.

The other issue is economic viability: To arrive at a single figure which represents the cost of nuclear power is a difficult, although not impossible, exercise. I will just look at some indicators which give an idea of what resources we would have to commit in following a nuclear path.

For starters, nuclear power stations are very expensive to build and, unlike most technologies, the more experience in design and construction that is accumulated, the more expensive they get.

NUCLEAR HAZARD: Intermediate-level waste, buried in trenches at Vaalputs 600 km north of Cape Town, consists of radioactive resin and sludge that is stored in concrete drums with a design life of only 100 years. PICTURE: ESKOM

The US has not placed an order for a new nuclear power station since 1974, largely because of escalating costs, exacerbated by the fact that actual construction costs of past stations have consistently exceeded original estimates by between two and three times!

Korea expects its new power station will cost between 19% and 28% more than the most recently built one. France and Japan have both built nuclear stations in the last decade but are unwilling to release full cost information.

Perhaps the acid-test of nuclear power's economic viability is reflected in the recent attempt by the Thatcher government to privatise Britain's nuclear industry. To cut a long story short, despite the bargain-basement prices there were no takers. It is significant that all nuclear plants ordered in the last 15 years have been by large monopoly or state-owned utilities that can pass excessive risks and costs on to the consumer and are not bound to show returns demanded by the market.

And what of our own country's financial commitment to the nuclear industry? Billions of tax rands have already been poured into building a nuclear industry in the 25 or so years of its existence. This year Parliament has been asked by the Department of Minerals and Energy Affairs to approve R474-million (59% of the total DMEA budget) to prop up an industry whose most significant products have been six nuclear bombs (now dismantled), two loss-making enrichment facilities (one has now closed), one nuclear power station and a statutory nuclear safety body.

This R474-million should be considered in relation to the shockingly inadequate R51-million allocated in the DMEA budget for mine health and safety; or the whole Department of Environment and Tourism's paltry budget of R370-million or the Department of Health's R358-million. Do we as a country truly feel that the nuclear industry is more important than the protection of the environment, or the health needs of our fellow citizens?

It is perhaps unfair to load the whole nuclear industry baggage on to Eskom and Koeberg, but the fact is that this baggage comes willy-nilly with nuclear power.

❑ *Stephen Law is a spokesman for the Environmental Monitoring Group.*

CAPE TIMES
MONDAY, JULY 7, 1997 ★

RADIOACTIVE DRUMS LEAKED

Nuclear industry poses 'unacceptable' risks

(55)

CT 7/7/97

THE RESULTS OF any inquiry into three recent nuclear incidents have not been made public, raising concern among environmentalists and politicians. **INGA MOLZEN** reports.

FIVE months after radiation exposure and radioactive leakage at South African nuclear sites, no results from any inquiry have been made public, nor has there been any publicly recognised independent probe.

Radioactive leakage and recent hairline cracks in six-ton concrete blocks containing nuclear waste at the Northern Cape Vaalputs storage site, are "unacceptable", say environmental groups and Environment Affairs and Tourism Portfolio chairwoman Ms Gwen Mahlangu.

'GO PUBLIC': Penuell Maduna

Mahlangu and environmental monitoring groups have repeated their calls to the ministers of Environment Affairs, Dr Pallo Jordan, and Mineral and Energy Affairs, Mr Penuell Maduna, to make public findings into breaches of safety at Koeberg, and the nuclear waste storage site it uses in the desert, about 100km from Springbok.

Mahalangu says there are "unacceptable risks" around the nuclear industry. Recent events show "the health and safety standards and procedures of our nuclear industry are not adequate".

The effects of Chernobyl are still being felt, where people exposed to massive doses of radiation were undergoing treatment,she said. Every effort had to be extended to ensure that South Africans were never vulnerable to similar disasters. After the Chernobyl experience, a 30km "dead zone" around Koeberg would include Atlantis, Philadelphia, Klipheuwel, Durbanville, Bothasig, Goodwood, Blouberg, Table View, Milnerton, Green Point, the CBD and the Waterfront.

Public lobby groups are concerned about the estimated 25-year lifespan of Koeberg, its allegedly "ageing computer monitoring systems and procedures" and the actual benefits of nuclear power.

Despite repeated calls since April for an independent inquiry, no response has yet been made public, raising questions about public accountability and the seriousness with which this issue was being treated.

The Department of Mineral Affairs and Energy has not yet released its policy on energy, and pressure groups are concerned about recent events at the country's nuclear facilities.

Mahlangu said yesterday: "There are no long-term depositories for high-level nuclear waste anywhere in the world. South Africa does not want to become the dumping ground for the world's nuclear waste.

"The risks of the nuclear industry are potentially lethal. Would our long-term needs not be better served by focusing on sustainable resources, such as solar energy?"

Parliament has been asked by the Department of Mineral and Energy Affairs this year to approve a R474-million (59% of the total DMEA budget) to "prop up an industry whose most significant products have been six nuclear bombs (now dismantled), two loss-making enrichment facilities (one has now closed), one nuclear power station and a statutory nuclear safety body," says Environmental Monitoring Group spokesman Mr Stephen Law.

The independence of the Council for Nuclear Safety, which will be asked to investigate these events and their implications for public safety, is under question.

"I am very uneasy that the Council for Nuclear Safety is conducting the investigation, as well as being the appointed public watchdog on these issues," Mahlangu said. Environmental groups agree.

Besides the Vaalputs drum leakages, there were two incidents in March in which workers were exposed to high radiation levels.

Three Koeberg workers entered a high radiation area without protective clothing. At Pelindaba, storage drums were punctured when they were moved last year.

Atomic Energy Commission chief executive Dr Waldo Stumpf called the leakage "insignificant".

Koeberg's nuclear assurance manager, Mr Tony Stott, said yesterday: "It is believed that exposure to rain and extreme temperatures of drums waiting to be covered by compacted soil led to the seepage of radioactive salts."

CAPE TIMES
TUESDAY, JULY 8, 1997 *

RADIOACTIVE STORAGE 'SAFE'

Koeberg keeping all its nuke waste

(65) ET 8/7/97

HIGH-LEVEL nuclear waste has always been kept at Koeberg, but now it is keeping its low- and medium-level waste too. Environment Writer **MELANIE GOSLING** reports.

RADIOACTIVE waste from Koeberg's nuclear power station has been stored at Koeberg for the last three years and not at Vaalputs — the site specially selected and designed to handle low- and medium-level nuclear waste.

Eskom said yesterday it had stopped shipping its low- and medium-level radioactive waste to the site at Vaalputs in the Northern Cape in 1994 to cut costs.

It had renegotiated its contract with the Atomic Energy Corporation (AEC), which runs Vaalputs, and will ship the waste to the site only every two or three years, instead of every second week, as it had done originally.

This came to light in a Cape Times inquiry into the problems of radioactive leakages at Vaalputs from 20 of the containers holding the waste.

But Eskom says the waste stored at Koeberg is an interim measure and is completely safe.

Asked if the radioactive leakages from drums stored at the remote Vaalputs could not also occur at Koeberg on the city limits, Eskom spokesman Mr Tony Stott said it was a possibility, but highly unlikely.

"After the leakages at Vaalputs were found, all the drums stored at Koeberg were immediately inspected, and found to be absolutely safe. The building they are in is designed to store the waste as an interim measure. Koeberg is a licensed facility to use nuclear energy and that includes having radioactive waste on site," Stott said.

Eskom had negotiated to move the waste out last October, but the Council for Nuclear Safety had stopped Vaalputs from receiving any more waste until it had sorted out the leakage problems.

This comes at a time when the portfolio committee on the environment has said that recent events in the nuclear industry — including two separate incidents in which Koeberg staff were exposed to above-limit radiation earlier this year — have shown that the safety standards are not adequate.

But the AEC and Eskom say their safety limits are above average.

Council for Nuclear Safety (CNS) spokesman Dr Schalk de Waal, who headed the investigation into the Vaalputs leakages, said yesterday their inquiry had recommended to the AEC that they change the way they managed the trenches where the drums are stored.

He said the two trenches had been dug at Vaalputs in 1986, one for disposal of low-level waste in metal drums and the other for medium-level waste in concrete containers.

The site had been chosen because of its geological stability, low population, low rainfall and high clay content which meant the radioactivity would be contained.

"Ideally the drums should be covered up fairly rapidly, but they remained uncovered for years because Eskom stopped shipping waste there in 1994 and the trenches were not filled to capacity.

"Because of the exposure to the elements, 20 of the concrete drums and one or two of the metal drums had started to leak. But tests showed that the radioactivity was contained in the trench only, where one wants it to be," De Waal said.

The CNS had recommended that the AEC adopt a special radiological protection programme which included stepped up monitoring of the drums, and also building a wall across the unfilled trenches, so that the drums there already could be sealed off by covering them with soil and putting a clay "cap" on top to seal them from water penetration.

"We have recommended that in future they dig a trench for a known quantity of waste only, and fill it up and cap it within a matter of months. This will prevent drums standing exposed to the elements for years, as those that leaked had done," De Waal said.

The green lobby has said that although they were unaware of a halt in the Vaalput shipments the low- and medium-level waste, they were not as concerned with this as they were with the high-level radioactive waste that had been stored at Koeberg for years.

South Africa has no site licensed to accept high-level radioactive waste. This waste, from the spent fuel, is kept in special pools at Koeberg.

Wildlife and Environment Society spokesperson Ms Marlene Laros said yesterday: "It is a concern to hear that the low- and medium-waste has been stored there, but it is much less of a concern than the high-level waste. Where are they going to dispose of that? It is symptomatic of a situation where we have no existing policies to manage radioactive waste and a public which is unaware of what is going on."

The CNS said they were developing a policy on waste.

Stott said the technology existed for safe disposal of high-level radioactive waste, but that "politics and emotion" prevented it from being disposed of.

Radiation leaks and huge financial losses from apartheid projects bedevil South Africa's nuclear industry

Nuclear dump shut down after leaks

60

M+G 11-17/7/97

Mungo Soggot and Christian Figenschou

SOUTH AFRICA'S main nuclear waste dump has been leaking radioactive material for years. Metal drums filled with radioactive waste and buried at the Atomic Energy Corporation's (AEC) Vaalputs site in the Northern Cape have leaked, while concrete blocks used to contain more dangerous waste have also failed.

Documents in the *Mail & Guardian*'s possession quote a senior AEC official slating Vaalputs management, warning of heavy radioactive leakage at the site stretching back years, and alleging that Vaalputs also stores high-level radioactive waste — in breach of its licence.

It also emerged this week that Vaalputs's operations have been suspended, on the orders of the Council for Nuclear Safety (CNS), apparently amid concerns about its management. AEC confirmed the moratorium and said it was struggling to meet the requirements of its licence because of declining government funding.

The leakage and Vaalputs's subsequent suspension fuels fears about South Africa's nuclear waste programme. Leaked material can remain a health hazard for hundreds of years. Last year, massive amounts of radioactivity were discovered around Pelindaba, site of the apartheid regime's uranium-enrichment unit, where drums of waste had been hastily buried.

The potential danger from the Vaalputs leakage was starkly underlined by recent floods in the area, which could have carried the radioactive material further afield. It sits close to the town of Springbok. One of the main advantages of Vaalputs trumpeted by the AEC when it was licensed in 1990 was that its Namaqualand location was in a low-rainfall area.

Industry officials said this week the sequence of events pointed to serious weaknesses in the AEC's nuclear waste management.

The Council for Nuclear Safety started investigating last October after AEC officials noticed leaks from 22 metal drums containing low-level nuclear waste. The waste includes low-level solid waste — used protective clothing and equipment — and intermediate-level waste, such as filters and resins.

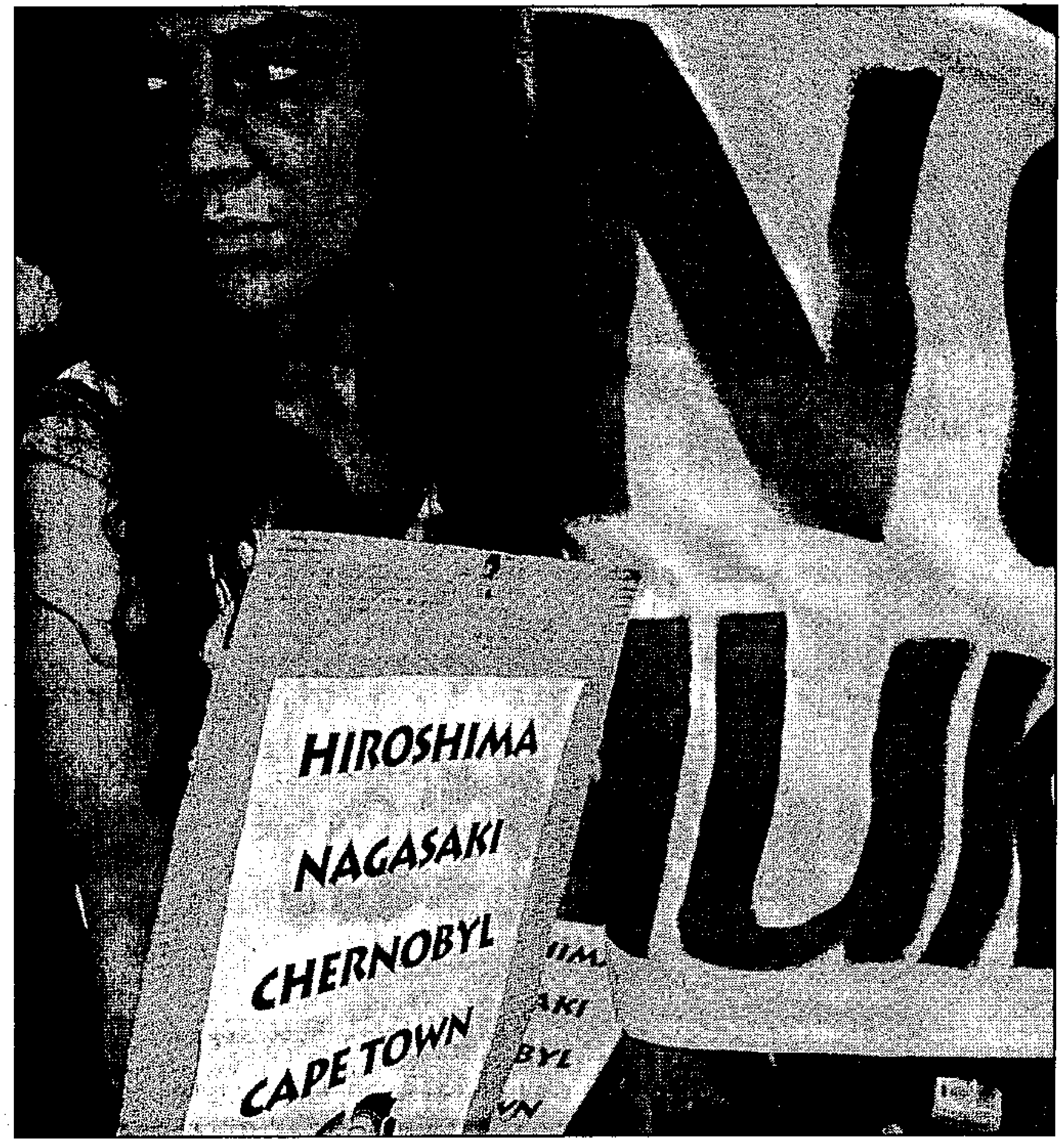
The drums were sealed with clay — which should contain the leakage — but the council decided Vaalputs's operations would be suspended until such problems had been overcome. "The moratorium included any waste, not just from Koeberg," said Eskom's spokesman on nuclear affairs, Tony Stott. "Vaalputs can't receive anything."

Council representative Tienie Fourie added: "The moratorium will remain until new measures are in place."

The AEC had not reported any leaks before those leading to last October's probe, Stott said, but an AEC representative said this week there could have been leaks which had not been discovered. While conducting its probe, the council had also discovered leaks in concrete drums stored in Vaalputs's trenches.

When reports emerged last month about the leaks from the concrete drums, AEC's head of nuclear waste, Brian Hamilton-Jones, blamed the unusually cold weather for corroding the concrete, and on the longer intervals between Koeberg's waste shipments. He said blocks of waste had been "standing for two to three years in the trench waiting to be covered".

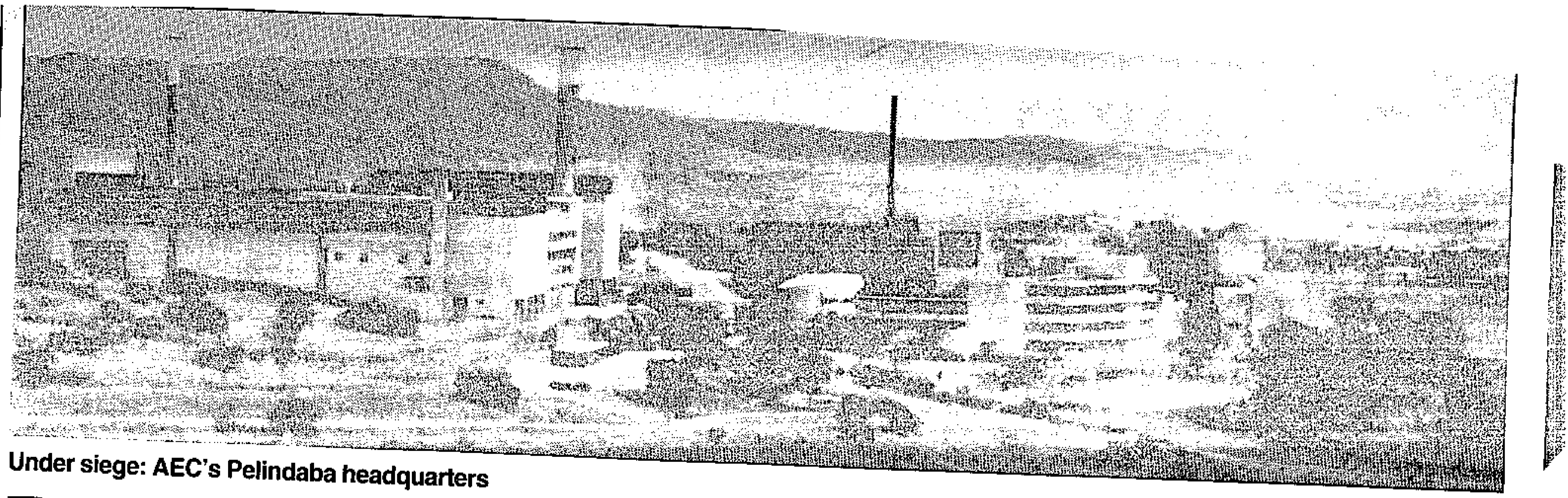
Hamilton-Jones said an investigation on how the leaking blocks should be handled was under way. AEC chief executive Waldo Stumpf added: "This is no crisis, and no danger of contamination exists."



Radiating suspicion: Protesters show Parliament how they feel about nuclear power in a demonstration last year
PHOTOGRAPH: JOHANN VAN TONDER/I-AFRIKA

A representative for AEC this week confirmed the moratorium, but said the site was surrounded by clay and designed to cater for such leaks. Any perception of mismanagement was due to its "insufficient manpower to perform according to its CNS licence" which he blamed on dwindling government support.

But the official quoted in the *M&G*'s documents paints a far more worrying picture of Vaalput's activities. He also said that although Vaalputs is only designed and licensed to han-



Under siege: AEC's Pelindaba headquarters

PHOTO COURTESY THE STAR

Bomb-fuel plant to be broken down for scrap

(55) M+G 11-17/7/97

Swapna Prabhakaran

THE engine of South Africa's nuclear warfare programme is being quietly broken up and sold as scrap. A tiny newspaper advertisement last weekend belies the massive project to dismantle Plant Z — the Pelindaba site in the North-West province that once held apartheid's dream of being a major nuclear power.

The former government spent at least R700-million building Plant Z to process South African-mined uranium for the Koeberg nuclear reactor and to bolster South Africa's manufacture of nuclear bombs.

But the Atomic Energy Corporation (AEC) said this week it would be lucky if the scrap sales raise R6-million.

AEC is currently inviting offers for 480 tons of mild Plant Z steel, 53 tons of stainless steel, one ton of plastic, 61 tons of aluminium, five tons of cast iron and two tons of instrumentation cable.

All the material for sale has been decontaminated, the corporation says, and material that remains irretrievably radioactive has been buried, pending its removal to the national dump at Vaalputs.

It was unclear this week whether the scrapping project, tagged Omega, signals the end of nuclear capacity at Pelindaba.

The corporation says plans are afoot to build a new uranium-enriching plant on the site with French nuclear specialists Cogema.

Such plans, however, have caught the Department of Mineral and Energy by surprise. It says building a new nuclear plant is not government policy.

Plant Z, which was preceded by a pilot Plant Y, was built in the late 1970s to a uniquely South African design. It was equipped with technology considered cutting-edge at the time and carried a price tag to match.

But the plant was rendered redundant when sanctions against South Africa were lifted, as the uranium could be processed cheaper if it was sent overseas.

The plant's expense, however, did not end with its usefulness. In fact, the AEC is spending R85-million to scrap the project.

AEC subsidiary Pelindaba Radiation Services (PelRad) is stripping tons of mildly radioactive metals from the buildings, and employing 100 labourers to scrub the materials clean. They wear protective clothing.

AEC senior consulting engineer Johan Niewenhuis says a new pilot uranium-enriching plant will be established in the Plant Z shell. A full-scale project would use newer nuclear know-how, including Cogema's Molecular Laser Isotope Separation process.

The new plant is intended to create enriched uranium suitable as fuel for Koeberg and other nuclear reactors, and will not enrich the uranium to the levels necessary for nuclear weapons. South Africa's nuclear weapons programme ended in 1991 and it is a signatory of the Nuclear Non-Proliferation Treaty.

The fledgling nuclear marriage between Cogema and South Africa was brokered by the former minister of mineral and energy, Pik Botha.

However, those remaining in Botha's department played down a lingering role for Pelindaba.

"We don't have any plans for a new plant," says the department's deputy director general, Dr Gordon Sibiya. "South African government policy says that is not on the cards."

Thulani Gcabashe, special adviser to Botha's successor, Penuell Maduna, initially said Plant Z was not being torn down, before revising his statement to agree with AEC's officials.

New electricity distributors 'can curb protest'

BD 15/7/97 55

Deborah Fine

THE proposed establishment of new regional electricity distributors to supply electricity instead of Eskom and local authorities, could help to stem the violent protests by residents against local councils that cut off electricity in response to nonpayment.

This was the view of National Electricity Regulator customer services GM Johan du Plessis, who said yesterday that the planned restructuring of the electricity sector would merge the distribution functions of Eskom and local authorities into financially viable and semi-independent regional distributors.

"The Reds, as we call them, would be neither Eskom nor the local councils. With the councils no longer directly supplying or cutting off electricity, we believe it could solve the problem of animosity towards the councils, as well as other major problems such as widespread tariff differences," he said.

His comments come after violent protests at the weekend in which the home of Secunda councillor Risco Fakude was petrol-bombed after a council decision two weeks ago to cut electricity supplies to Embalenhle residents who had not paid for municipal services. Secunda mayor Sipho Nkosi's house was petrol-bombed earlier in the week.

The Tsakane homes of Brakpan mayor Ace Phiri and councillor Tshidi Tsaone were also burnt to the ground on Sunday. Police said the attacks appeared to be related to the nonpayment of rates and services in the area.

Confrontations with police and damage to property occurred earlier this year when local authorities cut off electricity supplies in Popcorn Valley, near Boksburg, and Ennerdale, south of Johannesburg.

Condemning the protest action as unlawful, the Gauteng development planning and local government department yesterday reiterated its commitment to ensuring widespread electricity cut-offs were effected by local councils throughout the province next month if municipal payment levels had not risen by 10%.

Prince Hamnca, spokesman for Gauteng local government MEC Sicelo Shiceka, said yesterday that residents who attacked councillors who were "simply carrying out their duties" would have to bear the legal consequences.

The Gauteng branch of the SA National Civics Organisation (Sanco), has called on Shiceka and local authorities not to go ahead with the planned cut-offs, claiming this would spark more protests against councillors.

Sanco Gauteng provincial secretary Ali Tleane strongly condemned the attacks on councillors. But said that "arm-twisting tactics" by local authorities would only add to the frustration of residents who felt that their "genuine grievances" had not been properly addressed, and would not help to boost payment levels.

The National Party and the African National Congress both condemned the weekend attacks "in the strongest possible terms", calling on police and the justice department to swiftly bring the perpetrators to book.

(55)

New body to supply power

Sowetan 18/7/97

By Joshua Raboroko

THE newly formed National Electricity Regulator (NER), a body meant to supply electricity directly to consumers, could ease the burden of Eskom and the local councils in combating township residents' resistance to paying.

The NER, which has not yet been launched officially, will replace local councils and Eskom in supplying electricity to consumers. Eskom is the biggest supplier of electricity in the country.

NER customer services general manager Mr Johan du Plessis told *Sowetan* yesterday that the organisation aimed to supply electricity to consumers.

The organisation, which consists of provincial and local government, the private sector, trade unions, community and political organisations, is to hold an urgent meeting on July 29 to complete a final vision and strategy.

After the meeting it will send recommendations to Minister of Mineral and Energy Affairs Penuel Maduna with the view to introducing legislation when Parliament resumes next month.

The formation of the enterprise comes in the wake of confrontation in which the homes of Secunda councillors were petrol-bombed after a council decision to cut electricity supply to defaulters.

In another incident on the East Rand the homes of Brakpan councillors were burnt down in what police said appeared to be incidents related to non-payment of rates and services in the area.

Du Plessis said they planned restructuring the electricity sector by merging the distribution functions of Eskom and local councils into financially viable regional distributors.

It was hoped that with the councils no longer being responsible for supplying or cutting off electricity the whole issue would be depoliticised.

Gauteng MEC for development planning and local government Mr Sicelo Shiceka, who also serves on the NER, said service defaulters should arrange to pay their tariffs before August 1.

He said the NER meeting would propose that workers, including public servants, arrange payment for rates and services via stop orders from their bosses.

Mothballing Koeberg 'not economically viable'

BD 25/7/97

65

Edward West

THE Koeberg nuclear power station in the Western Cape was operating well in comparison with its international counterparts and decommissioning it would cost substantially more than R2,3bn, Institute of Nuclear Engineers spokesman John Walmsley said yesterday.

He was responding to speculation that the third draft of the energy white paper, soon to be handed to cabinet, would suggest the mothballing of Koeberg, an option which originated in a green paper drawn up in 1995.

The energy white paper has not been made public.

Koeberg has been criticised by University of Sussex nuclear economics expert Steve Thomas, who questioned the utility's safety and reliability on the basis that the plant was being operated at a capacity 30% lower than that of its international counterparts.

However, Walmsley said that while Eskom had at one stage deliberately cut output owing to a surplus of power, the plant's unit capacity factor was currently at 85%, which compared favourably with international norms.

While the station's overheads had in the past been inflated by a contractual need to buy nuclear fuel from the Atomic Energy Corporation, the fuel was now being imported, he said. Nuclear fuel available in SA was marginally cheaper than coal. However, the cost of producing electricity at Koeberg was slightly higher than at a large coal-powered station because of higher staffing and technology costs.

He said Eskom estimated a few years ago that it would cost R2,3bn to mothball Koeberg, a figure which would have risen substantially by now. Other sources of power would have to be constructed.

"I don't believe for a moment the white paper will propose the closure of Koeberg. It's just not economically feasible. I would be more interested to see what it proposes for future nuclear development, particularly with regard to the establishment of new facilities."

He said there were "understandable" fears about the future of high-level nuclear waste in SA, which did not have a site for such materials. However, high-level nuclear waste had to be stored in pools for fifty years to "cool" before its disposal could be considered. Koeberg had the facilities to store such waste prior to disposal, and there was enough time to consider the best method.

Walmsley said there was a perception that Koeberg had been built as part of the apartheid government's nuclear armaments programme. But the decision to build the plant had been taken in 1974, four years prior to the decision to establish nuclear arms, and had been based on sound economic viability studies at the time.

However, neither the coal price nor electricity demand had increased as forecast at the time, Walmesley said.

Consumption of electricity increases

BD 31/7/97 (56)

Lukanyo Mnyanda

ELECTRICITY consumption in the first half of the year showed a 2,9% increase compared to the figures for the previous six months, reflecting progress in Eskom's electrification drive and indicating that fears of a collapse in economic activity might be exaggerated.

Central Statistical Service (CSS) figures released yesterday also showed that electricity consumption had increased 3,3% on a seasonally adjusted basis in the second quarter compared to the three months to March.

Economists canvassed yesterday said the absence of a complete breakdown of the different users made it difficult to determine how much of the growth was driven by Eskom's electrification drive or robust manufacturing activity.

Eskom spends about R1bn annually on its electrification programme, aimed at ensuring that more than 75% of SA households have access to electricity by 2002, when more than 2-million homes should have been electrified.

An Eskom spokesman said yesterday that domestic households had accounted for most of its increased distribution over the past six months, reflecting progress in the electrification drive. The CSS figures showed that Eskom's electricity distribution increased by 2,6% in the period under review.

Econometrix chief economist Azar Jammine said the growth in consumption might have been driven by the electrification drive. But even if that was the case, it would have a spin-off for other sectors of the economy through increased demands for electrical appliances.

"These figures do not support the view that the economy is about to collapse. The economy is slowing, but the fears (of a collapse) seem a bit exaggerated."

SA Chamber of Business (Sacob) economist Penny Hawkins said the figure was "more or less" in keeping with earlier predictions for economic growth this year. But it was hard to say how much of the growth had been driven by increased manufacturing activity.

Sacob's monthly survey of the manufacturing sector had shown that although manufacturers were more confident about their long-term prospects, they were less optimistic on a short-term basis.

Applications for unemployment benefits received/approved

912. Mr V J MCHUNU asked the Minister of Labour:

> How many applications for unemployment benefits were (a) received and (b) approved in 1996 as compared to 1994 and 1995, respectively? N1605E

The MINISTER OF LABOUR:

The following information can be given with regard to applications for benefits:

Unemployment

(a) Number of applications received:

1994 – 683 738
1995 – 677 738
1996 – 775 430

(b) Number of applications approved:

1994 – 579 312
1995 – 605 756
1996 – 698 017

All benefits (unemployment benefits, illness benefits, maternity benefits, adoption benefits and payments to dependents)

(a) Number of applications received:

1994 – 816 721
1995 – 803 646
1996 – 907 135

(b) Number of applications approved:

1994 – 694 574
1995 – 721 030
1996 – 817 212

Households: access to electricity 55

917. Mr A H NEL asked the Minister of Minerals and Energy:

> What percentage of (a) urban and (b) non-urban households in South Africa had no ready access to electricity as at the latest specified date for which information is available? N1612E

The MINISTER OF MINERALS AND ENERGY:

(1) The status of electrification as at 31 December 1996 is as follows: (a) 21% urban households not electrified and (b) 73% rural households not electrified. However, at the end of 1996 in total 45,4% households throughout South Africa were not electrified, in comparison to 54,6% at the end of 1995.

(2) The electrification data are not collected on a racial basis and therefore no such percentages are available.

INTERPELLATIONS UNDER NAME OF MEMBER

Gas to liquid could be the answer for polluted world

ST(PT) 3/8/97 (55)

The world's oil companies, with Sasol in tow, are examining technology to produce ultra-clean fuel from what was previously regarded as worthless gas reserves. ROBERT CORZINE reports

A JUNGLE setting on the coast of Borneo may seem an improbable site for a high-technology experiment that could revolutionise the world's oil industry. But tucked away in a corner of Bintulu, a deep water port on the South China Sea, is the world's first commercial plant designed to turn natural gas into virtually pollution-free diesel, jet fuel and naphtha, a valuable chemical feedstock.

"It's possible that such a plant can be an alternative to a conventional refinery," says Jack - Jacometti of Royal Dutch/Shell, which operates the $750-million gas-to-liquid fuel facility.

The plant at Bintulu reflects growing belief in what has long been the oil industry's holy grail: to turn huge reserves of worthless remote natural gas — reservoirs too far from a market or too small to justify development — into an easily transportable high-energy liquid.

Successful exploitation of the technology could allow oil companies to earn billions of dollars from sleeping assets.

Bintulu, in Malaysia's Sarawak state, is a far cry from conventional crude oil refineries. Although natural gas is relatively low in potential, it is the cleanest hydrocarbon resource. Even the waste products are white, with the waxy consistency of petroleum jelly, which some Shell engineers claim is drinkably clean, and a soot-like residue that can be used as a soil conditioner.

But gas-to-liquid projects, which until now have not been seen as commercially viable, also pose potential problems for oil companies. Engineers believe further reductions in gas-to-liquid costs are inevitable. Conventional refineries could be made obsolete if governments took early action to insist on clean gas-based fuels.

"The companies are scared to push the technology because governments might simply say this is the new fuel standard," says Terry le Roux, an industry consultant. But these fears have not stopped a flurry of activity this year among some of the world's biggest oil companies to position themselves in the gas-to-liquid fuels market.

They are all seeking to use variations of a process based on the Fischer-Tropsch technology developed by the Germans in the 1920s.

Sasol recently signed a deal with Qatar's General Petroleum Corporation and Phillips Petroleum Company to construct a gas-to-liquids plant in Qatar. Sasol said the joint venture formed part of its vision to achieve sustainable growth in selected global markets by leveraging its technology.

The plant will make use of Sasol's Slurry Phase Distillate process technology to convert natural gas into approximately 20 000 barrels a day of naphtha and high quality distillate fuels. The plant could be ready for production in 2002.

Sasol has also agreed with Statoil, Norway's state petroleum company, to study whether its version of the process, developed during the apartheid era, could be adapted to offshore oil and gas platforms and production vessels.

Exxon, the biggest US oil company, is in talks to build a large plant in Qatar, but is reluctant to talk publicly about its plans. The Gulf state is keen to develop new markets for its offshore North field, the single largest gas reservoir in the world and among its cheapest sources. Exxon is also considering a plant in Alaska to be built in conjunction with British Petroleum.

Most of the other big oil companies are also investigating the technology. In the US, Syntroleum, a small Oklahoma-based company, has been aggressive in publicising technology that could be used on a smaller scale than that envisaged by Shell and Exxon.

Syntroleum intends to offer this to bigger companies under licence. The small units would be useful in ending the practice of flaring unwanted gas in offshore oilfields — a major contributor to the emission of greenhouse gases.

The key to commercial viability of gas-to-liquid fuel plants is the technologies' modern innovations — especially the cobalt-based catalyst over which the gas is passed at high pressure and temperature. Shell engineers at Bintulu say that marrying new technology there to the Fischer-Tropsch process initially proved difficult but that the plant, which has been operating since 1993, is now working about 97% of the time. "In the last three years we've learnt more than in the 15 previous years of research," says Saw Choo Boon, managing director of Bintulu. Engineers say the lessons will provide big cost savings on future plants.

The pace at which these proliferate will depend more on economics than technology. "With $20 oil prices (the 1996 average) you have a fighting chance to realise such a project," says Jacometti. But some industry analysts believe such plants could be viable with oil prices as low as $15 a barrel if combined with a power station or desalinisation facility.

Sasol estimates the total cost of a facility at between $25 000 and $30 per daily barrel of production — or about $300-million for a 10 000 barrel-a-day plant. That is roughly twice the cost of a conventional refinery but, as Cavan Hill of Sasol notes, feedstock costs of a conventional refinery are between about $16 and $18 a barrel; remote gas plants would only have to bear the cost of extraction.

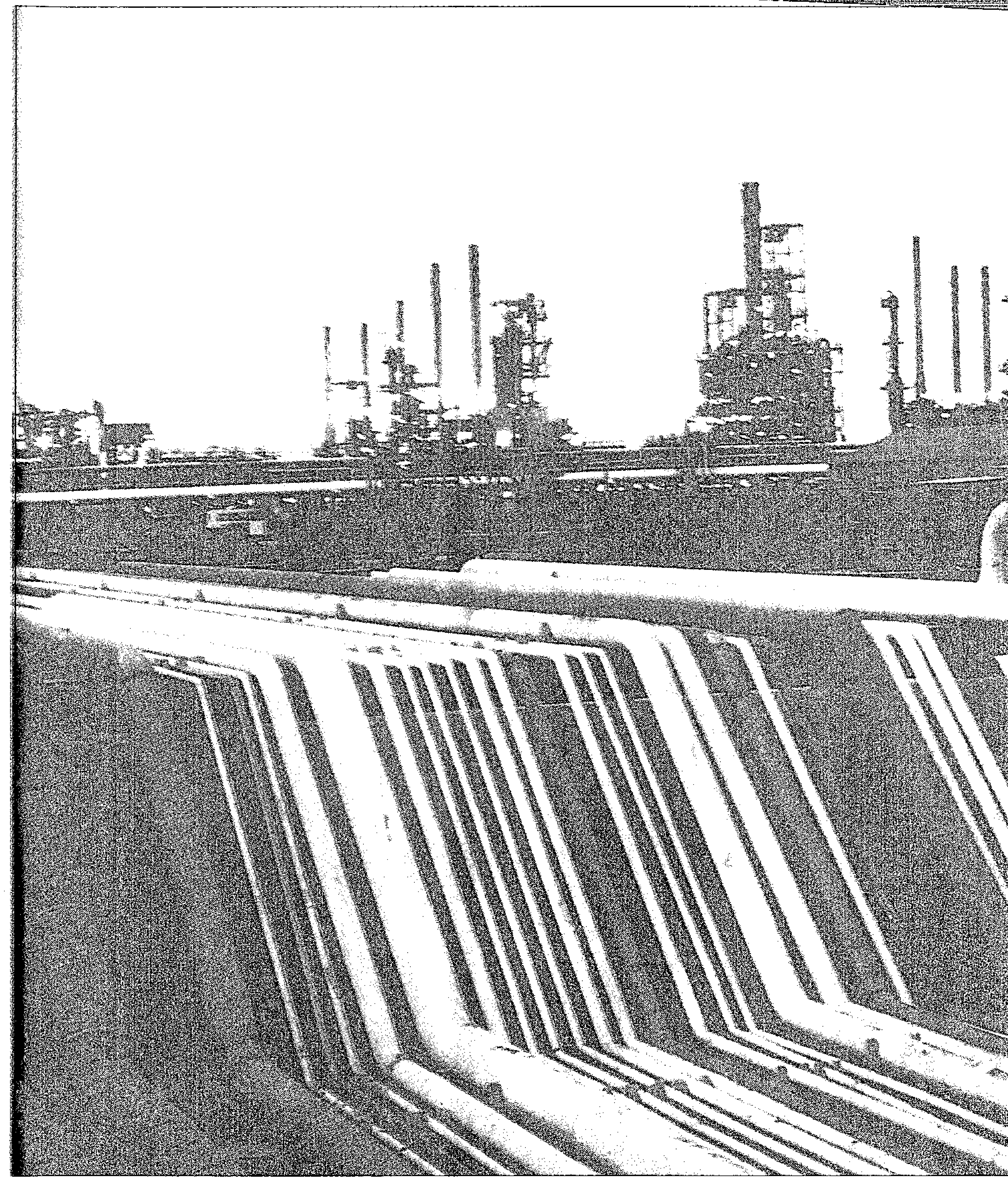
Some expect the technology to proliferate quickly once the first plants have been built. "When it does happen, it will do so in a big way," predicts Simon Blakey of Cambridge Energy Research Associates.

A report by consultants Wood Mackenzie estimates that half the world's proven gas reserves are located in remote areas that cannot economically justify the construction of pipelines; they would, however, provide a substantial base for a gas-to-liquid fuel industry.

Until now, oil companies have viewed the discovery of remote natural gas as more of a nuisance than a resource. Unlike oil, which can be easily transported, gas requires a fixed infrastructure of pipelines or liquefaction plants and specialised shipping to take it to market.

As a result, gas discovered in the course of oil exploration was often hushed up. Inside British Petroleum the announcement of a dry well was often accompanied by the statement: "The bad news is that we did not strike any oil, but the good news is there was no gas either."

Not surprisingly, there are no accurate estimates of reserves. Areas as diverse as the Middle East, Russia, Alaska, south-east Asia and Latin America all contain substantial amounts of remote gas. If the new technology makes such areas commercially attractive, the reserve figures are likely to grow quickly. Apart from areas close to markets, such as the North Sea or the US Gulf of Mexico, little exploration has aimed solely at discovering gas. — *Financial Times*



MAKING A CONTRIBUTION . . . Sasol's synthetic fuels plant at Secunda, which may provide some answers for a new deal

Council proposal on electricity rise rejected

BD 6/8/97 (55)

Deborah Fine

THE National Electricity Regulator has rejected the Greater Johannesburg Metropolitan Council's proposals to increase the nondomestic electricity tariff for large power users by 7%, and has instead recommended a 3% increase.

The proposed increase was adopted by the council during its 1997/98 municipal budget debate in June, but was subject to approval by the regulator. The council also proposed a 12% domestic tariff increase.

The 7% increase in large power nondomestic tariffs would have resulted in additional income of R74,4m for the council. This, combined with the domestic tariff increase as well as other adjustments in small power tariffs, would have yielded a total additional income of R149,6m.

The 4% decrease, which has been accepted by the council, has meant a reduction of R38,6m in the council's original estimated additional income from electricity.

National Electricity Regulator spokesman Johan du Plessis said yesterday that the regulator had rejected the council's original proposal because the current large power-user tariffs in Johannesburg were still regarded as "very high compared to the tariffs paid by large power users in some other metropolitan areas".

While the regulator would have preferred a zero tariff increase for large power users, it was decided to allow the council a 3% increase given the council's financial considerations and the fact that there had been no tariff increase in the 1996/97 financial year.

The regulator had, however, approved the 12% residential tariff increase and had recommended further increases to bring residential tariffs in line with distributors in other areas.

Council strategic development support executive officer Alton Lock said yesterday that the council's electricity department would now be looking to other revenue sources to offset the income loss.

The council would also be holding meetings with Eskom with a view to reducing purchase costs an electricity unit to compensate for the loss.

ESKOM

Costly operation to feed hungry power station

(55) (215)

FM 8/8/97

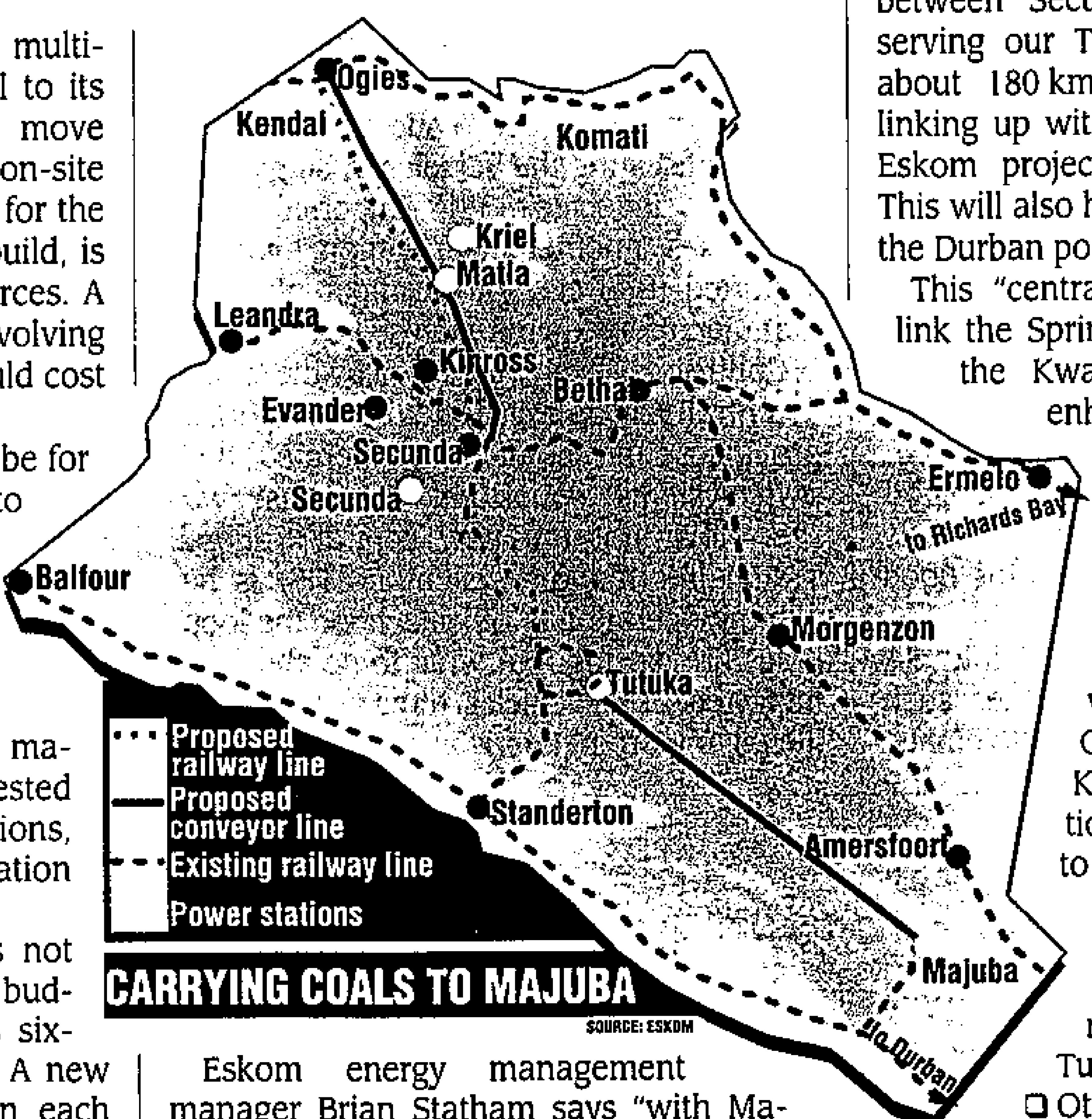
Thirsty turbines expected to gobble 12 Mt/year. Most mining houses keeping weather eye on opportunity

Eskom is working on a new multi-million rand plan to get coal to its Majuba power station. The move follows the closure of Rand Mines' on-site coal mine in the early Nineties. Coal for the station, which is costing R12bn to build, is now railed 330 km from various sources. A solution to the transport problem, involving new rail and conveyor belt links, could cost between R250m and R700m.

Another part of the solution could be for coal producer Ingwe Coal Corp to open a new mine in the Leandra area in Mpumalanga. "Depending on the requirements, capex could well total up to R1bn," says Ingwe project engineer John Pain.

Spoornet, Sasol and most of SA's major coal mining groups are also interested parties in the feasibility discussions, which could lead to an implementation decision by mid-1998.

The 4 000 MW Majuba station is not yet complete, with about 70% of its budget committed and only two of its six-pack generating units in operation. A new unit will be brought into operation each year, till the station is fully operational. Each unit is capable of generating 660 MW.



CARRYING COALS TO MAJUBA

Eskom energy management manager Brian Statham says "with Majuba being the most expensive live power station, the economics of its coal transport are critical. Opportunities to exploit the lucrative 'peaking' market — when daily demand for electricity peaks — are also an important part of the Majuba strategy for the next 10 years."

Eskom also remains bound to a number of contractors to complete the Majuba project — and the proposed transport logistics solution should reduce its cost premium.

"While nothing has been finalised yet, the phased new transport project might well kick off with a new R250m, 38 km rail link between Secunda and the existing line serving our Tutuka station. This will cut about 180 km from the round trip line linking up with the Durban rail line," says Eskom project manager Francois Retief. This will also help shorten Sasol's access to the Durban port.

This "central corridor" line would also link the Springs/Richards Bay rail line to the KwaZulu-Natal railway system, enhancing the north-south link between the Maputo corridor and KwaZulu-Natal.

Other possible "transport corridor" steps (see map) would include:

- A new rail line (or conveyor belt system) between Ogies and Secunda — via the Kendal, Matla and Kriel stations. This would allow access to cheaper coal from the Witbank/Middelburg export coal mines;
- A R350m conveyor belt route, linking Majuba with Tutuka; and
- Other future coal transport corridors which could benefit Eskom, Sasol and coal mining groups, as well as the farming and industrial sectors. With possible upgrading of some existing lines, total transport costs could reach about R700m.

Retief says while Ingwe has already been given the 6 Mt/year contract to supply Majuba's first half (2 000 MW), the coal supply contract for the second half is still open and might only become operational by about 2008. Coal companies are therefore still in the running for this 40-year supply contract.

Ingwe's Pain says meeting the initial 6 Mt/year commitment might require upgrading of existing mining infrastructure or opening the new mine in Leandra.

Spoornet strategic markets senior manager Philip van Heerden says the proposed lines could be owned and operated by Spoornet, privately owned or a combination, should a consortium of interested parties join forces. **Arnold van Huyssteen**

MANAGING CHANGE

Catalyst for transition

How do you recognise that your business needs to change, and how do you manage the exercise? These questions will be answered at the Sandton Sun on August 21 at a convention on executive change.

Andersen Consulting will host the convention, which is titled: "Managing the Journey: An SA Business Imperative." Topics will include:

- Understanding why an organisation needs to change and how it will benefit from doing so;
- Defining the opportunities and mechanisms for transforming performance;
- Examples from around the world of success and failure, and the reasons for it; and
- The bottom-line impact of change.

In conjunction with the convention, the *FM* will publish a special supplement, *Managing Change*, on October 10. The supplement, in association with Andersen Consulting, will draw on new market research among business leaders on how to transform business.

For more information on the convention, telephone (011) 328-3100. ■

French firm in solar energy project

Patrick Wadula

BD 11/8/97 (65)

TOTAL Energie, the French solar energy systems supplier and part of the Total group, has formed a joint venture company with the Rethabile Group to supply alternative electrification for rural schools, clinics and villages using solar energy.

The French company, via its subsidiary Total Energie Southern Africa (Tenesa), is to be part of a company called Khulumani in which both Rethabile and Tenesa will be equal partners.

Rethabile MD Moss Ngwenya said at the weekend the new company would also provide solar energy in the telecommunications industry and solar water pumping.

Five black subcontracting companies would be chosen to carry out installations as part of a broad strategy of empowerment.

"We are also looking at the possibility of local assembling and manufacturing of certain solar products in the medium to long term," he said.

Ngwenya said Tenesa had installed a mini power grid in a village in the Northern Cape. This was would be followed by more in other provinces, including Eastern Cape and Northern province. Tenesa has 15 years' experience in supplying solar energy systems in southern Africa.

Rethabile would lobby government for major projects in electrification, telecommunications and water pumping to supply communities.

Rethabile recently bought 20% of Altron subsidiary Altech for R125m. The company, which is also involved in leisure, tourism information technology and telecommunications, is part of a consortium bidding for Sun Air.

policy included the maintenance of a clinic/hospital-based control register;

the possible exploitation of poor citizens, Wilson said.

'Changes on the cards' for electricity sector

BD 14/8/97 (55)

Robyn Chalmers

SIGNIFICANT changes were on the cards for the electricity generation and transmission sectors as pressure from private sector players to enter these markets mounted, National Electricity Regulator chairman Ian McRae said in his annual report.

Customers were also demanding that competition in these sectors be allowed. "The entry into the market of independent power producers is a decision that government still has to make. Many regulatory 'rules of the game' will have to be established."

McRae said the distribution sector would experience change this year after the cabinet's acceptance of recommendations on the restructuring of the electricity industry. These included that the industry be rationalised into a number of financially viable regional distributors and that financing of the sector be restructured.

The regulator was improving its economic regulation of the 398 licensees which distributed electricity, but there were problems.

These included the fact that about 75 municipal distributors were supplying electricity at a loss; the poor quality of supply and customer service in many areas; the loss of critical staff; and continuing nonpayment for electricity services. The restructuring of the supply industry should address these issues.

There was also a need to rationalise the more than 2 000 tariffs in SA, particularly as there was a large degree of cross-subsidisation in the tariffs being used. A wholesale purchase tariff would be formulated which would be the basis on which Eskom sold electricity to future regional electricity distributors and certain large customers.

On the electrification programme the report said 307 047 residential connections were achieved by Eskom last year, which exceeded their target of 300 000 a year. Local government distributors achieved 126 057 new connections, other institutions completed 11 477, and 9 414 new connections to farm worker houses were undertaken.

"The number of new connections last year totalled 453 995. The electricity supply industry proved that with effective organisation and the efficient deployment of resources, it is possible to exceed the reconstruction and development programme target of 450 000."

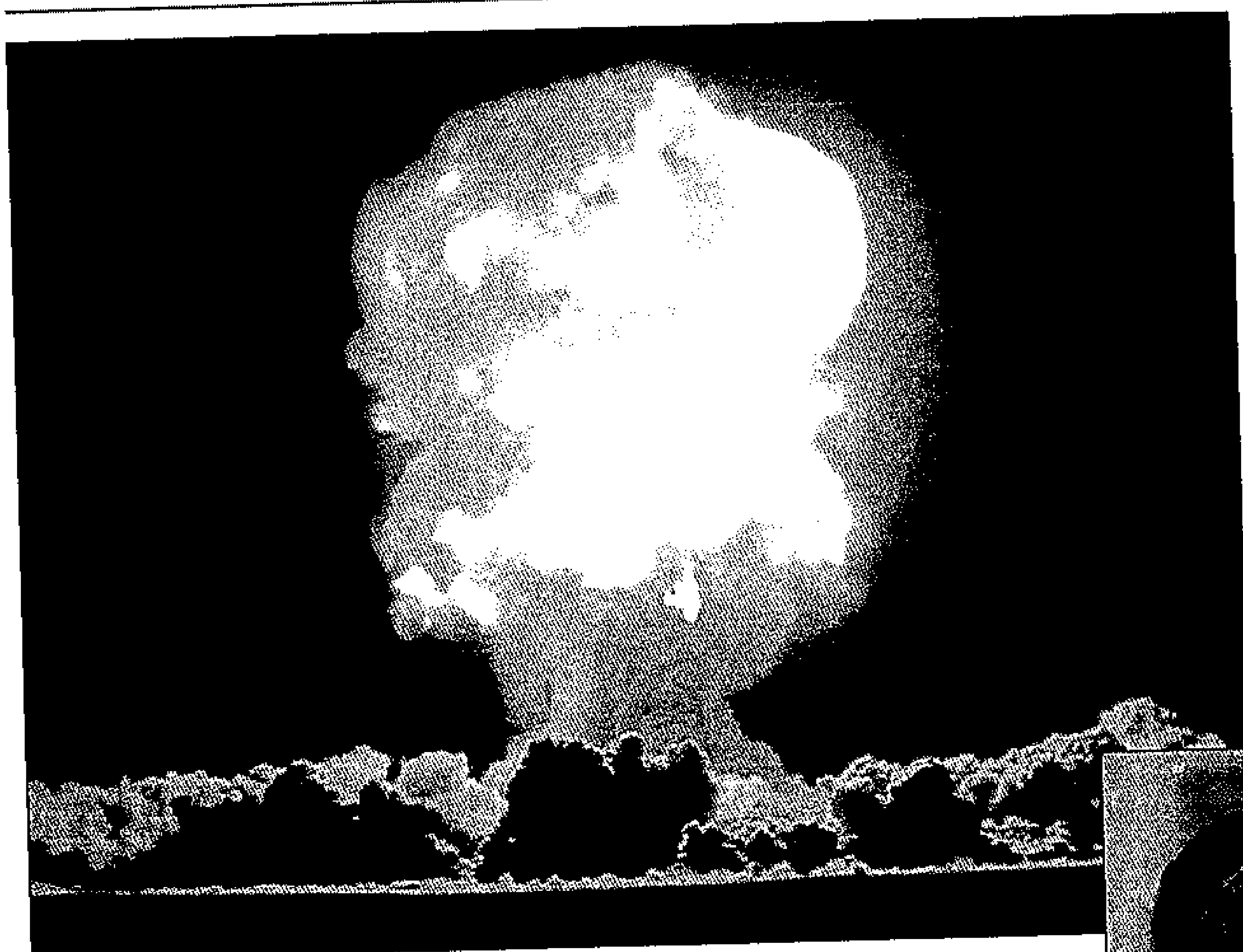
DRAFT NUCLEAR ENERGY ACT

FM 15/8/97

Atomic Energy Corp in danger of being vaporised

Proposed legislation likely to send shoals of boffins seeking friendlier, foreign climes

(55)



Once a formidable force in world nuclear rankings, the State-owned Atomic Energy Corp (AEC) has been whittled down to a shadow of its former self. Staff levels have dropped from 8 000 to 2 000 over the past seven years, with more losses expected.

These could be hastened by the draft Nuclear Energy Act, which calls for a reduction in the AEC's commercial independence and control functions.

There are also concerns that account has not been taken of the Department of Arts, Culture, Science & Technology's Science & Technology White Paper, approved by Cabinet last year and which will see a competence review of all science and technology organisations in September.

AEC executive GM Mojalefa Murphy is a worried man. "We have already lost hundreds of experienced scientists and engineers to overseas research institutions, and the draft Act would be the final nail in our coffin," he says.

With the termination of AEC's fuel fabrication activities last year, fewer than 30 internationally competent scientists and engineers remain, Murphy says. "We have moved so far down the commercial route that we risk losing all capability to do fundamental nuclear research."

He is not alone in his concerns. Other nuclear energy stakeholders, including the Department of Trade & Industry (DTI), Eskom (which buys nuclear fuel internationally for Koeberg power station) and others, have asked for more time to reply to this revision of the 1993 Nuclear Energy Act. The draft was released for comment only on July 22 and responses were due back on July 31.

The Act could also see AEC CE Waldo Stumpf out of a job.

Commenting on Section 43.4 of the draft Act, which states that the AEC's chief executive must reapply for his position, Stumpf says this is unconstitutional. "Should government want to replace me, this does not require legislation."

But Minerals & Energy Affairs deputy director-general Gordon Sibiya says the clause was included to ensure transparency and to allow all South Africans to have an opportunity to be involved in restructuring the sector.

Stumpf says the process was not "entirely transparent" and has sent Sibiya a letter outlining his organisation's concerns.

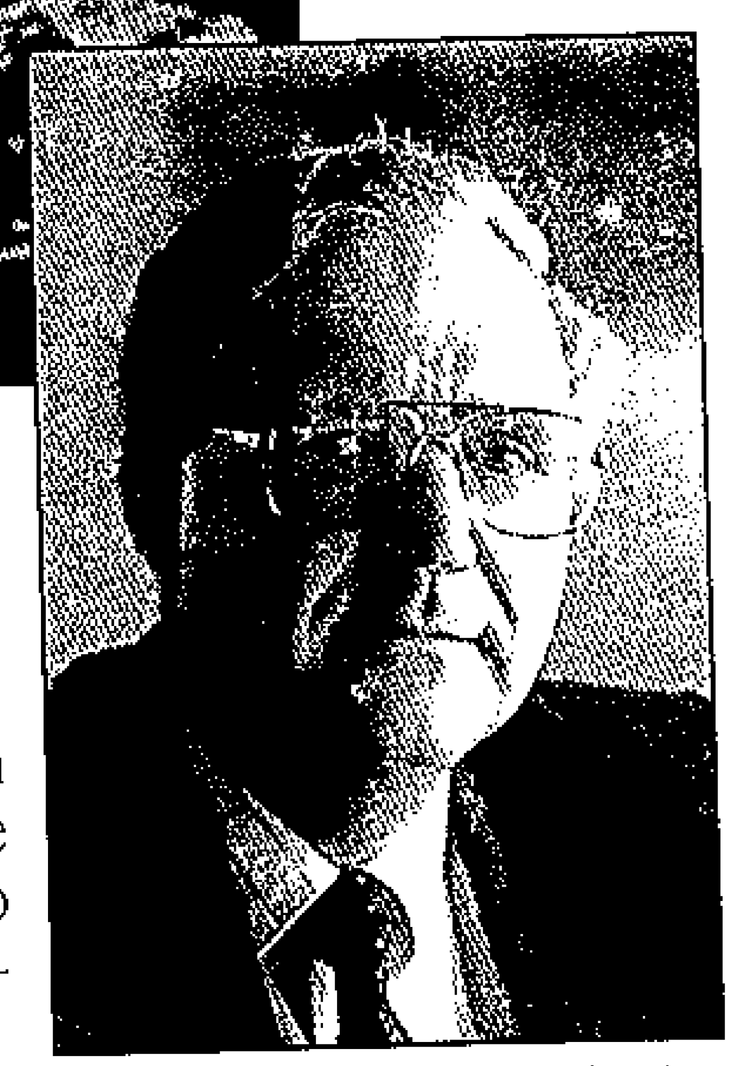
"We expected to have more input," he says, adding that the AEC board meets again only on August 27.

"Instead of our powers being taken away, we need more freedom if we are to move fast in an increasingly competitive environment. The way the Act is drafted we can't even approve the submission of patents," says Stumpf.

"Our mandate to revise the 1993 Act came from the Deputy President," responds Sibiya, who says his Minister has too little jurisdiction over the AEC.

Sibiya says many of the powers of the AEC pertain to nuclear safeguards and should therefore fall under the Council for Nuclear Safety (CNS), a government body.

Responsible for licensing nuclear installations and for ensuring safe transportation of nuclear material, the CNS has helped redraft its section of the Nuclear Energy Act into a draft Nuclear Safety Act, which will enlarge its role and is likely to go to parliament next year.



***Stumpf** . . . may be asked to go fission?*

"While the CNS does not have the capacity to administer the Nuclear Nonproliferation Treaty signed two years ago, an answer could be to transfer the specialists from the AEC to the CNS," says an Eskom source. He says this would be preferable to nuclear safeguards falling under the AEC, which is now both the regulator and a commercial player.

Stumpf disagrees, saying that the AEC, which processes about 80% of all safeguarded nuclear material in SA, has designed its internal management control system to double as the State system of accounting and control of nuclear materials, as required by the agreement with the International Atomic Energy Agency in Vienna.

He proposes the control function be vested in the Nonproliferation Council of the DTI, which could then subcontract maintenance back to the AEC, "avoiding costly duplication of facilities." **Marina Bidoli**

CT. 20/8/97

A man driven to make power for the people

(55)

THE NEW CHAIRMAN of Eskom, Mr Reuel Khoza, believes South Africa has a leading role to play in the African renaissance — but first the culture of non-payment must end. He spoke to **WINNIE GRAHAM**

REUEL KHOZA's grandmother was 97 years old when he gave her an electric heater. Her delight was a source of immense pleasure to him. His granny had brought him up at her home in Acornhoek, Mpumalanga, and no one knew better than he how she had struggled to find firewood, the only source of heat in their home. It was very important to him that she be warm during the last years of her life.

The gesture, of course, was typical of the man who was to become chairman of Eskom. The provision of power to the people is still a top priority for Khoza. Just as he appreciated the value of a heater to his grandmother, so he accepts the importance of electricity in all homes.

"When I was a schoolboy, I studied by the light of an improvised lantern," he said. "I passed matric and went on to the University of the North, where I majored in psychology, but I know how difficult it is to work by lantern-light."

Khoza's achievements were made under enormous difficulties, working first as a lecturer at the University of the North and then, after being "expelled as a troublemaker", joining Lever Brothers in Durban.

It was there that he was given the chance to study overseas, an experience which made him appreciate his own abilities. Despite his disadvantaged background, he found he was certainly no less brainy than anyone else. So started years of hard work.

After obtaining his MA in marketing management at Lancaster University, he continued to Harvard Business School where he completed the Programme for Management Development. He then went to Lausanne, Switzerland, where he attended the International Programme for Board Members, focusing his efforts on strategy, marketing and change-management assignments.

His main interest is undoubtedly empowerment issues and managing change and transformation in terms of the new challenges facing South African corporates. In 1981 he was founder and MD of Co-ordinated Management Consulting (CMC) where he had ample opportunity to refine his new skills. He worked on the strategic redirection and market development for a major South African transport organisation, provided strategic input at board level for a major South African conglomerate, was involved in a relationship building assignment with a major goods company and undertook affirmative action consultation for several big organisations.

His interest in Eskom started in 1986 when he took part in the Top 30 planning programme. He consulted on Soweto's non-payment issues and was involved in management-development programmes. With hindsight, his work for Eskom can now be seen as almost grooming him for the position he holds today.

Though the task of providing electricity to every home in South Africa was started by Khoza's predecessors (he gives them full credit for the job they initiated), power for the people has become almost a passion for the new chairman. Providing electricity to at least 300 000 homes each year is a marathon job, made more difficult by the theft of copper wire and other imponderables yet, Khoza says, five years down the track, most, if not all, South Africans will have access to power.

BRIGHT FUTURE: Eskom's commitment to putting electrical power in every home means, for these three children, that they can now do their homework at night.

While the chairman has a very practical approach to life, he is also something of a dreamer. When he looks ahead to the new millennium, he sees ordinary men and women who will have benefited from his organisation's efforts.

"Instead of the dim, flickering light of candles and lamps, I see bright electric light," he says. "Instead of poor discouraged students trying desperately to study in appalling conditions, I see proud, motivated young people with perfect illumination, using computers and other modern aids. I see them achieving great honours in academic institutions all over the world as their true worth is allowed to emerge, helped by the miracle of electricity."

He points out that electricity in South Africa is the cheapest in the world. This has made industrial growth in South Africa possible. "Our mines and manufacturing industry enjoy a significant advantage in terms of low-cost electrical energy inputs," he said.

But his faith in the future is not limited to South Africa. Already new power lines are spanning the continent, moving vast amounts of energy to sub-Saharan countries. New hydro-electric projects are powering new factories and industries and economies are booming as the handicaps of power shortages are removed and electrification spreads like wildfire across the sub-continent. He believes South Africa can play a major role.

"We cannot rebuild the economies of other countries but we can provide support structures for our neighbours," he said. This, at any rate, is how he views Eskom's involvement in Mozambique where they play the role of catalyst to stimulate much-needed economic growth. Mozal, from Khoza's view, is mainly an extension of Eskom's relationship with Gencor.

He points out that Alusaf's smelters at Richard's Bay are profitable because Eskom reached a carefully-crafted deal with Gencor where the price of electricity fluctuates according to prices ruling on the London Metal Exchange. "The Mozal deal is similar in principle, with certain adaptations to accommodate the Mozambican authorities," he said.

A similar situation exists in Namibia where Eskom is co-operating with Nampower in building a gas-fired power station scheduled for completion in the next five years. Further afield in Africa, they are searching for opportunities to become involved "as a worthy partner, working with our counterparts on the basis of full mutual respect".

"I take comfort from the fact that Eskom has been grappling with the Africa challenge for many years," he said. "Now we must position ourselves for competition — and competition is a reality in our lives. Companies such as East Midlands Electricity and Electricité de France are moving in, not only further afield in Africa but right here on our turf. They are hungry for expansion and acquisitions. We have a good base of expertise but we don't really know how good we are. The world is a competitive neighbourhood and we must learn to know our competitors in that neighbourhood.

"There is, of course, one thing which must be corrected before South Africa can think of becoming competitive on world markets, and that is the so-called culture of non-payment. This was acceptable when used as a political weapon against an illegitimate regime, but not any more. Everyone must understand that there is no free lunch — you must pay for what you use."

He is as excited about an African renaissance as is Deputy President Thabo Mbeki. The new Africans, he says, are in control of their destiny, they are people with a clear vision of the future, who know what they stand for, are profoundly moral, renowned for their integrity, able and competent, responsible for their actions, who build for the future and who, when they look in the mirror, "see the hand of God".

"The African I describe is each one of us," he adds.

His vision of his own country he outlines thus: "When I look ahead, I don't see palls of smoke hanging in the air from thousands of fires and stoves. As the network of power lines spreads across the country, I see many more industrial and commercial centres being established were once there was nothing. People will find jobs near their homes so they no longer have to spend hours travelling to work. Productivity will improve. South Africa's exports will grow so rapidly that we will be hailed as the world's new growth centre. That is our destiny."

❑ *Winnie Graham is an assistant editor on The Star.*

State will restructure electricity distribution

(55)

NCABA HLOPHE

CT (BR) 25/8/97

Johannesburg — The electricity distribution industry would be restructured into regional distributors to boost electricity delivery to 2,5 million households by 2000, Penuell Maduna, the energy minister, said last week.

He said the most pressing challenges facing the troubled industry included the disparity in the cost of supplying electricity; the electrification targets and costs, which varied widely by region; differences in service and supply quality standards and the funding of municipal services.

Speaking at the launch of the restructuring process in Pretoria last week, he said Cabinet approved the consolidation of the distribution industry and set up a state team to drive the process, which should be implemented by the middle of next year.

A national electrification fund would be set up to bolster the financial muscles of the distributors. Its structure still had to be determined.

The government has also approved the introduction of cost-effective tariffs, an electrification levy and a capped tax for part funding of municipal services.

The South African Local Government Association (Salga) said regional distributors must be the sole supplier of electricity within their jurisdictions.

"Ownership of all electricity distribution assets, including those of Eskom, should be seen as community property and be transferred to the appropriate regional electricity distributor," Collin Matjila, the Salga chairman, said.

Eskom suggested the electricity supply industry be restructured through "corporatisation" and Eskom be converted into a company by an act of parliament.

Consensus on electricity restructuring

BD 25/8/97 (55)

Robyn Chalmers

BROAD consensus on restructuring the R20bn electricity distribution industry — the biggest such exercise undertaken in SA — was forged at a workshop for stakeholders on Friday.

Mineral and Energy Minister Penuell Maduna told the workshop that the industry was in crisis and government recognised that action needed to be taken as soon as possible.

Stakeholders had been invited to nominate members to a stakeholders' advisory committee, which would in turn advise on a full-time professional transformation team. "The stakeholders' committee should be set up as early as next month with a transformation team operational by November."

Maduna said there was gross inefficiency in service delivery, with more than 2 500 different tariffs and an inability by some municipalities to pay their debts to Eskom.

The cabinet recently approved rec-

Continued on Page 2

Electricity (55)

Continued from Page 1

BD 25/8/97

ommendations on restructuring the sector. These included consolidating the industry into the maximum number of financially viable and independent regional electricity distributors. The number still has to be decided.

The introduction of cost-effective tariffs, an electrification levy and a capped tax for part funding of municipal services had also been approved. An electrification fund to be administered nationally was proposed. However, the proposals were approved on condition that public consultations be held with major stakeholders.

Public Enterprises Minister Stella Sigcau said Eskom carried most of the burden of distributing electricity. The proposed restructuring would go a long way towards alleviating this burden.

"The regional electricity distributors will be completely viable entities, so the problem of who (Eskom or municipalities) collects payment will not be an issue anymore either."

Sigcau said she was aware of industry concerns regarding proposals that Eskom pay tax and dividends — it is exempt from both — particularly regarding its impact on the low cost of electricity. This issue would be fully debated with each industry concerned. "We need to level the playing fields as other parastatals such as Transnet have to pay tax and dividends."

National Electricity Regulator CEO appointed

(55) BD 2/9/97

Robyn Chalmers

MINERAL and Energy Minister Penuell Maduna has appointed former independent civil and electrical engineering consultant Magate Sekonya as CEO of the National Electricity Regulator.

Sekonya, who has worked in electrical engineering on gold and base metals mines in various provinces, will replace Ian McRae, who was previously joint chairman and CEO. The new chairman has not been announced.

The announcement came after widespread confusion over McRae's replacement. He vacated his position last Friday and questions to the minerals and energy department on his replacement were referred to the National Electricity Regulator's board.

Mineral and Energy ministry adviser Thulani Gcabashe said last week the board had made a decision to release the information only once McRae had vacated his post at the end of last month.

However, regulator customer services manager Johan du Plessis said yesterday the board had not yet been informed by the department or the ministry on the new appointments, made by Maduna. Later he confirmed that Sekonya had been appointed.

Sources close to the process claimed it was only when Sekonya walked into the regulator's offices yesterday that staffers became aware that he was the new CEO, and they still did not know who the new chairman would be.

McRae said in an interview last week that he had previously indicated he wished to step down from his position as full-time CEO and chairman, although he would be willing to play a part-time role.

In April, it was agreed that he would be part-time chairman and CEO until the end of November, although this contract could be terminated should a new CEO or chairman be appointed. McRae was informed by Maduna at the beginning of last month that his replacement had been found and he should vacate his position at the end of the month.

Recent leaked documentation indicated that there had been a struggle between the board and the department over who should appoint the new CEO and chairman. The board believed that while the department and ministry should make new appointments, board members should be allowed a say in the issue.

In a sharply worded letter, department director-general Gordon Sibiya said the appointments would be at the sole discretion of the ministry and department, and no input from the board was required.

Decide on electricity structure, govt told

55

Robyn Chalmers

GOVERNMENT has to decide whether it wants a state-owned monopoly controlling the electricity sector, or if it wishes to go the private ownership route, says former National Electricity Regulator chairman and CEO Ian McRae.

McRae said in an interview last week pressure was building from a number of quarters for a decision on whether the private sector would be allowed into the generation and distribution sectors of the electricity industry.

"Eskom has already come under pressure with regard to the sale of its mothballed power stations while foreign and independent power producers are knocking on it's door. Government has to face up to these pressures," he said.

At a recent workshop on the electricity supply industry, Minerals and Energy Minister Penuell Maduna said government was prepared to consider the possibility of allowing independent power producers to enter the market.

"At the moment we are grappling with a crisis in the electricity supply industry and this is government's priority. Over time, we will address the entire electricity supply industry and debate the entrance of private sector players into various sectors of the industry," he said.

Public Enterprises Minister Stella Sigcau said Eskom needed to be taken into account in any industry privatisation debate. A masterplan for Eskom, similar to the one formulated for Transnet, was being looked at to determine future issues in the generation, transmission and supply sectors.

"There are fears within the industry that once a tax and dividend policy is implemented for Eskom, the price compact (to keep annual price increases below inflation) will be broken. We will discuss this with each industry player to alleviate their fears," she said.

McRae said globally, the trend was moving away from monopoly control of the electricity sector towards an open market which involved competition, private ownership and customer choice.

Electricité de France Southern Africa MD Corinne Block said the French model of delegating the management of public utilities to the private sector could prove an economically efficient solution to expanding and maintaining SA's electricity infrastructure.

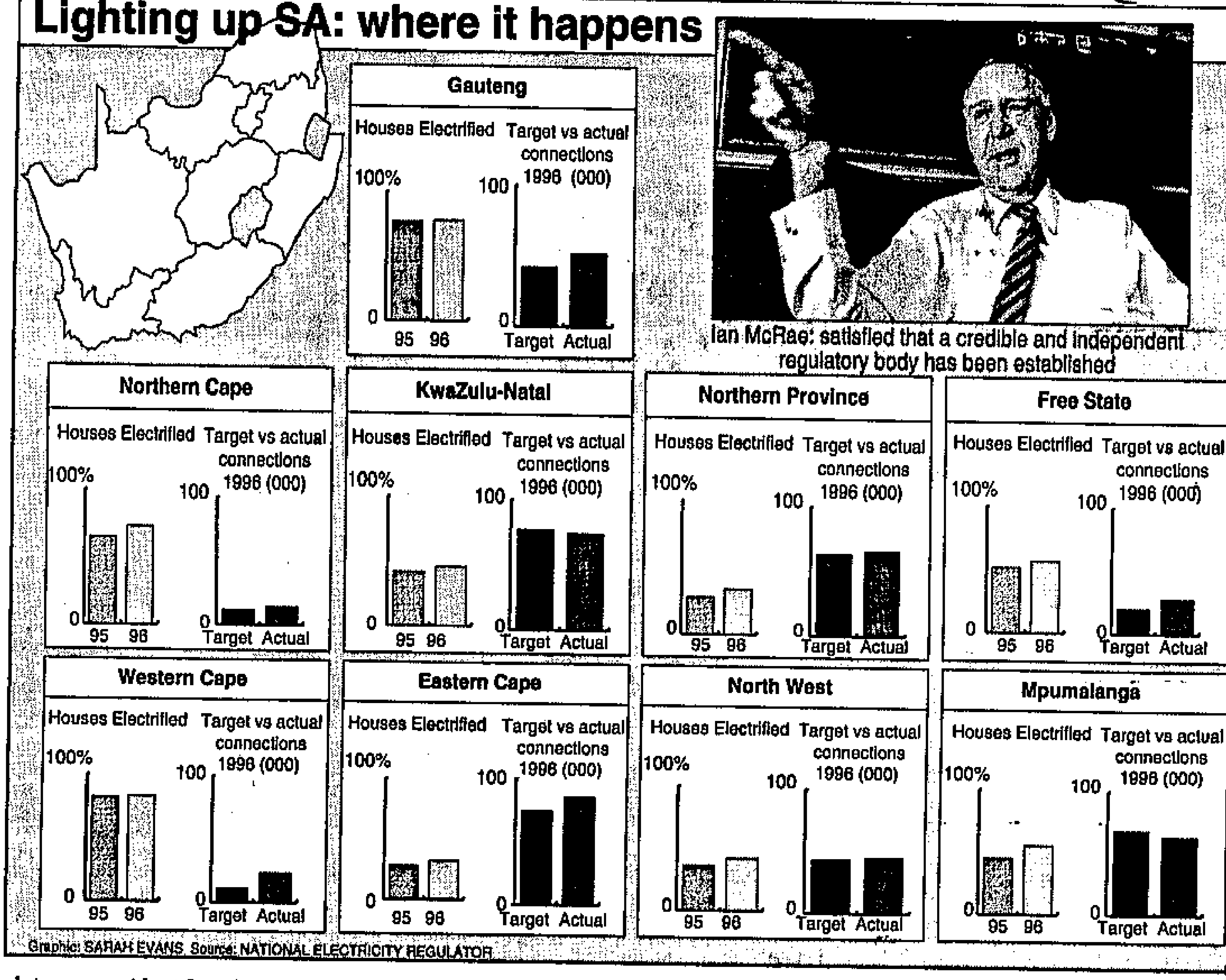
Block said large French companies were experienced at managing public services on behalf of local authorities. Local authorities delegated partial or total responsibility for delivering electricity services to a company while retaining ownership of the assets, monitoring of standards and the right to set rates and tariffs for end users.

BD 3/9/97

Mr Electricity tough act to follow

SA's former electricity chief Ian McRae spoke to specialist writer **Robyn Chalmers** after leaving office

BD 5/9/97 (55)



Ian McRae: satisfied that a credible and independent regulatory body has been established

FORMER National Electricity Regulator chairman and CEO Ian McRae has devoted his life to the electricity industry. He started as an apprentice fitter with Eskom in 1947 and moved up the ranks, eventually running the utility for many years.

McRae left the regulator last week and with his sudden, albeit largely expected, departure, the industry has lost one of its most experienced, most outspoken and most committed players. It is to be hoped he will still play a role in the electricity supply industry, possibly as an adviser. Commerce and industry is likely to call for McRae to guide new regulator CEO Magate Sekonya through his first months in the position.

Sekonya is a largely untested entity in a number of the areas in which the regulator needs to be active, but appears to have a broad background in electricity. Born and bred in the Northern Province, he obtained a BSc in electrical engineering from Wits University in 1985 and his postgraduate qualifications include an MBL from Unisa and an MSc from City University, London. He has worked in electrical engineering on various gold mines, and before joining the regulator worked as an independent consultant in civil and electrical engineering.

Sekonya must be given time to prove himself, but he takes on an onerous task which includes driving and keeping tabs on the complex restructuring of the R20bn electricity supply industry.

His path will no doubt be smoothed by the fact that he is an appointee of the current minerals and energy ministry and its department, whose officials he will have to liaise with on an ongoing basis.

McRae, on the other hand, was appointed by former minerals and energy minister Pik Botha in consultation with the Cabinet, although it was on the recommendation and, indeed, insistence, of a wide range of stakeholders in the supply sector. This may have made McRae's task a little more difficult once current minister Penuell Maduna came into office — despite his reputation as an "electricity guru". By his own admission, there were other problems with having McRae heading the regulator.

"I was concerned that, as the retired, former CE of Eskom, the link with Eskom would be seen as too strong and we would favour it. This worked both ways, of course, because Eskom complained that I knew too much about its inner workings," he said.

The regulator was set up in 1995 under the Electricity Amendment Act of 1995 as an independent statutory body to replace the Electricity Control Board, and its focus was on the amorphous electricity supply industry. The need for a regulator was evident from investigations and negotiations which kicked off among supply industry stakeholders in 1992 under the National Electrification Forum (Nelf).

The difficult task of the regulator is encapsulated in the lengthy and complex discussions which have ensued on the restructuring of the industry over the past few years.

Nelf's task was to develop recommendations to make the fragmented industry more effective and efficient and to recommend feasible strategies for accelerating electrification countrywide.

The regulator then called on government to take charge of the process, and Botha appointed the Electricity Working Group to further examine and implement Nelf's recommendations. Its report was submitted to government. An electricity restructuring interdepartmental committee (Eric) of government officials was established to formulate government's position on the group's recommendations.

Eric completed its report in October last year and the Cabinet broadly approved the recommendations in March. A stakeholder workshop was held late last month and Maduna has agreed to set up a stakeholder committee by November which will advise on members of a permanent task team to investigate, plan and implement the transformation process.

Effectively, therefore, it has taken five years for government to take a position on the supply industry, during which time local government has hit huge financial crises with current and inherited debts of R6bn.

This culminated in the recent spate of cut-offs and a sudden surge in payments.

Reflecting on his years at the helm of the regulator, McRae says he is satisfied a credible and independent body has been established. It is perceived as understanding the issues and problems distributors face, as well as an acceptance that it is aware of customers' issues.

"We played a lead role in the debate on the restructuring of the supply industry, we identified the problems facing the sector and realised change was urgently needed."

In fact, when the regulator issued warnings two years ago that the industry was in trouble, and that distributors could not be issued with permanent licences, some critics said the body was being alarmist, recalls McRae. Similarly, when the regulator told government that restructuring the industry through licensing would not be effective, and that government should take the lead by defining policy, some cynics said it had gone overboard.

Many municipalities which are close to bankruptcy — as well as Eskom — would no doubt disagree with those cynics today.

"We had to take many tough decisions," says McRae, "and we had to stand by them in the face of huge pressure."

He tells of Mdantsane township near East London which was experiencing problems with electricity supply and payment. There were supply problems, too, at a neighbouring industrial development, and complaints from tenants at the development alerted the regulator.

Regulator officials found that the East London municipality was the licence holder for the area, but it believed it was not responsible and that Eskom had shied away from taking over.

As a result, meters had not been read, bills sent or servicing undertaken for more than five years, so electricity supply was intermittent. After much debate, the regulator's board decided to take the licence away from East London and applied to the minister to do so — this would have meant a huge loss of income for the municipality, which also supplied East London with electricity and would not have been able to do so if it lost its licence.

"East London has now decided it will, after all, undertake and service electricity supply to Mdantsane.

"This was a difficult decision for the board, but I believe we performed well and achieved our objective of restoring electricity supply to an area," he says.

McRae says there are many challenges looming for the regulator's officials. There are still more than 2 000 electricity tariffs; major disparities in electricity prices; poor customer service and quality of supply in some areas; as well as a need to make 2,5-million new electricity connections under the reconstruction and development programme by the year 1999.

There is a huge amount still to be achieved in the electricity supply industry, but McRae and his team have made significant inroads into the problems facing the sector as well as forged a loose consensus within the sector on action needed in the future.

He will be a tough act to follow, and Sekonya will soon need to show himself to be a diplomat who has the ability to take firm decisions, often in the face of extreme opposition.

Eskom has ample power for everyone

The slogan "power to the people" has become a reality as Eskom connects up to a 1 000 households a day – and the good news is that there's plenty of electricity for all.

The company has disclosed it will be able to meet all electricity demands until after 2010 without any difficulty in spite of the huge increase in new users.

By then the company hopes to link into big hydroelectricity schemes in neighbouring African countries that should be able to supply South Africa's needs well into the next century.

The ultimate power source for the new millennium is the mighty Congo River, with its vast potential to generate electricity. Eskom energy manager Brian Statham said the company was now fully able to meet electricity demands and was not investigating new power sources or stations.

"It must be remembered we mothballed several power stations because we are well able to meet demands. When and if it becomes necessary, we can bring these stations back on line." – Own Correspondent

Star 6/9/97

Slow solar energy programme reappraised

BD 8/9/97 (55)

Patrick Wadula

THE minerals and energy department said yesterday that the electrification programme involving the supply of solar energy to rural areas had been a slow process and had to be reappraised.

The department's electrical energy director Tony Surridge said grid electrification was becoming costly because electrification extended further away from the main areas with power stations.

"We now need to establish which areas need grid electrification and which ones will need non-grid electrification," he said.

He said the process was presently being reviewed as approximately 2,5-million dwellings were eligible for non-grid electrification in SA.

Surridge said the cabinet approved a R1 500 single subsidy for home solar systems in some pilot projects that were in their demonstration phase for a year.

The state last year had established Renewable Energy for SA to look at implementing the programme in rural areas.

Company GM Isak Kotze said the firm, set up by government, would review the first project and its viability after one year.

"The company would also try and arrange to finance the difference between the actual cost of the solar energy system and the subsidy to be provided," he said.

However, Kotze said the company faced problems because no financial institutions existed in these remote areas and there was no infrastructure to sell these services.

He said technology was not a problem as solar panels lasted 15 years and batteries lasted almost three years. "The challenge is how to deliver these services in the rural areas in a sustainable way," he said.

Eskom should 'leap-frog to solar power'

BD 8/9/97 (55)

Josey Ballenger

SA COULD learn from other nations' mistakes and "get it right the first time" in developing more cost-effective and environmentally sound methods, an internationally renowned energy expert told Eskom and government officials last week.

"The unique and remarkable circumstances of SA (give the country) extraordinary opportunities to go with (its) challenges," said Amory Lovins, co-founder and research director of US-based Rocky Mountain Institute.

"Some of the most important (opportunities) are in energy and energy efficiency," he said.

Lovins, whose visit to SA is sponsored by Eskom and the departments of minerals and energy and water affairs and forestry, said government needed to take an integrated approach to development.

"Look at the whole picture. You cannot pass costs from one ministry to another."

On the other hand, "by reallocating your capital, you can have a magical affect on development. If you save on infrastructure, you could put more money into housing, health care, education or transportation," he said.

There was a paradox in Eskom "running wires out to people who cannot pay. It is socially essential to get electricity out, but it is not being done in the most efficient way". He suggested the parastatal "leap-frog" to solar energy, which would help customers pay their bills and Eskom meet infrastructure costs.

Many governments, such as Britain, had got it wrong by only rewarding utility companies for increasing electricity consumption. "But if you decoupled profits from how much they sell, you would have more efficient (energy) use," he said.

Government should reform regulations "so as to reward utilities for efficient behaviour".

North American utilities had gone that route and, as a result, had made massive savings and increased revenues. Southern California Edison, the third-largest US utility, for instance, gave away fluorescent light bulbs "because it was cheaper than operating incandescent bulbs". On the whole, US utilities saved \$40m through such measures.

Eskom research manager Stephen Lennon said managers had to "learn to think differently". "The electricity business is not just about increasing sales but about improving the bottom line (by decreasing costs)."

54,6% of SA homes have electricity

BD 16/9/97

(55)

Robyn Chalmers

ELECTRICITY consumption grew an average 1,8% a year between 1989 and 1995, with the largest proportion of electricity being consumed by factories, a Central Statistical Service census of electricity, gas and steam has found.

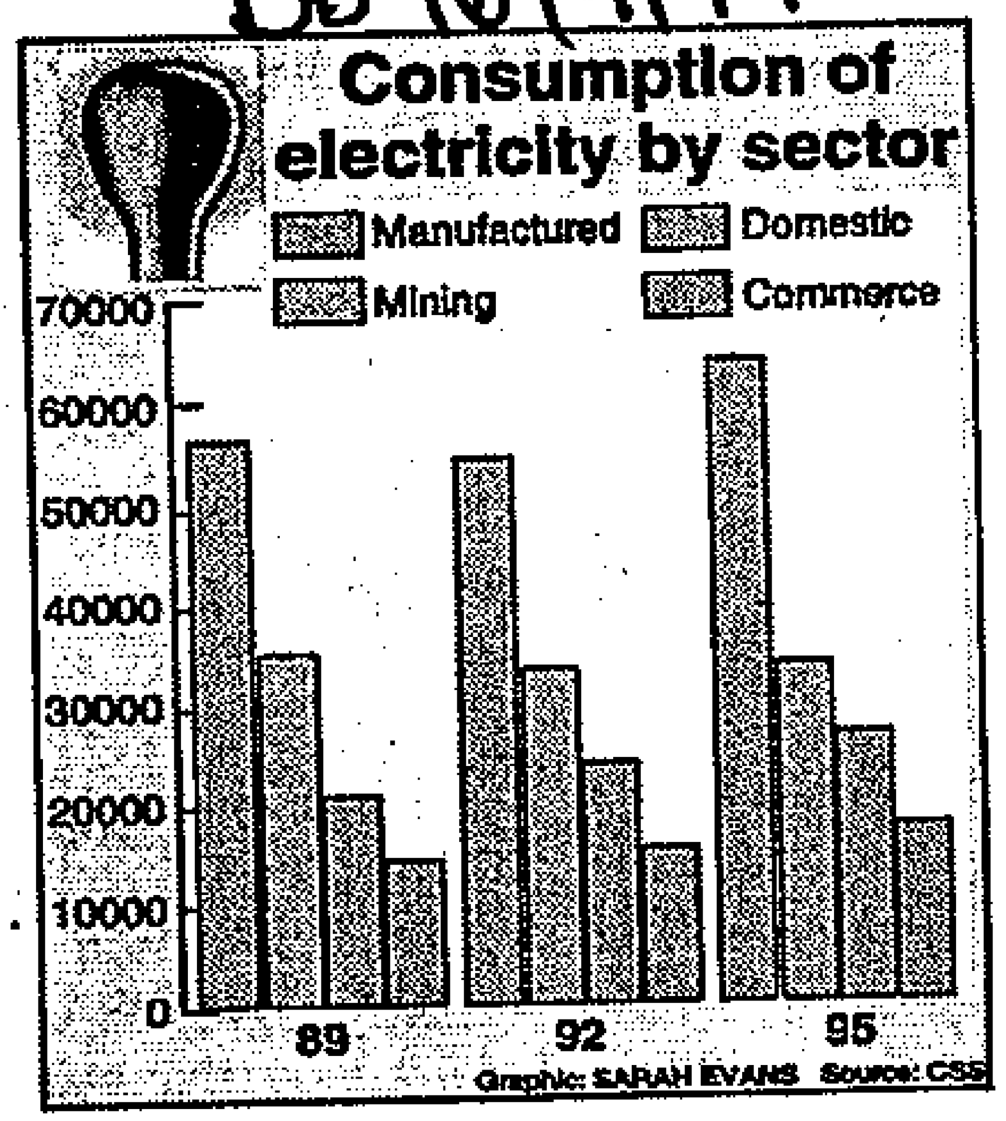
Between 1989 and 1995 the census indicated the growth rate of electricity consumption by households was 4% a year, compared with an average 2,1% growth rate for the manufacturing sector. The amount of electricity consumed a year by the mining industry dropped between 1989 and 1995 to 33 612 gigawatt hours (GWh) from 34 963GWh, while Transnet's consumption fell from 4 915GWh to 4 039GWh.

The total amount of electricity used during the period rose to 155 661GWh from 140 169GWh.

While KwaZulu-Natal had the largest population at 8,7-million people, most stayed in rural areas and urban Gauteng with its large manufacturing sector consumed by far the most electricity at 54 150GWh last year. This was followed by KwaZulu-Natal, Mpumalanga and the Western Cape.

The Northern Cape had the smallest population at about 700 000 people and also the lowest consumption of electricity, while the Eastern Cape had the second lowest electricity consumption figures at 6 027GWh last year.

The census found that Eskom produced about 94% of all electrical energy in SA, and the parastatal had made steady progress with its electrification programme — having made 952 473 new connections between January 1991 and December 1995.



Through an electrification incentive scheme, the census said 319 118 new connections were made during the same period by electricity suppliers in SA other than Eskom, such as municipalities.

The National Electricity Regulator's 1996 progress report on electrification showed that for the first time in the country's history there were more houses with electricity, at 54,6%, than without (45,4%) on December 31 1996.

"Since 1991, when the electrification drive took off, a total of 2-million new connections have been made.

"It can be assumed this changed the lives of approximately 15-million people," said the report.

Each province was given an electrification target to meet last year, and these targets were exceeded by Eastern Cape, Free State, Gauteng, North West, Northern Cape, Northern Province and Western Cape. KwaZulu-Natal and Mpumalanga did not manage to meet their electrification targets.

Eskom has lit up the future for many

Star 17/9/97

(55)

The flick of a light switch is a practice taken for granted by most urban South Africans. But the supply of electricity has only recently been taken to millions of citizens while many more, particularly in rural areas, still wait, reports Melanie-Ann Feris

As night falls over Johannesburg, the highveld skyline lights up. Yet, within the heart of southern Africa's financial powerhouse are pockets of darkness where people have no access to electricity.

It is an anomaly the Government is committed to eradicating.

Government-set targets aim to have 1,75 million more houses – 25 000 a month – electrified by 2 000.

Since 1994, 1,4 million houses have been given electricity.

This year 200 000 homes have received electricity, while 307 000 were electrified last year.

Provincial Affairs Minister Valli Moosa's spokesman Mpho Mosimane said government had, at this rate, exceeded all their targets.

But, while the Government has surpassed its initial electrification goals over the past two years, there are still three million people, particularly in the rural areas, who have not been connected.

And estimates are that 19 000 schools and 4 000 clinics in rural areas are without electricity.

The electrification of these institutions is a high priority.

Each year, Eskom spends R1-billion to meet the stipulated electrification targets.

Recently local governments received a further boost when Eskom donated R300-million for electrification during 1998.

The concept of electricity for all is becoming a reality as not only Eskom but local authorities commit themselves to bringing power to the people.

One example is the more than 3 000 households in the Mamelodi and Atteridgeville areas which received electricity from Pretoria Electricity at a cost of more than R10-million at the end of June this year, bringing the number of new connections to almost 11 000 households in the past two years.

Pretoria's Electricity for All campaign was launched in June 1995 when Atteridgeville and Mamelodi joined the Pretoria City Council.

Its aim is to supply electricity to everyone living in the area before the end of this year.

Despite this bold aim, however, electrification attempts are being crippled not only by a reluctance of people to pay – either through poverty or as a hangover from the payment boycotts of the past – but also the continuing theft of electricity.

The country is currently shouldering a multi-billion rand arrears debt, while millions more are being lost through illegal connections to the power supply grid.

To force debtors to start paying up, local authorities have, over the past few months, launched mass service cut-off campaigns supported by the Government.

They have also given those who cannot afford to pay an opportunity to register with local authorities for subsidised rates and services.

Local authorities cut off those who do not pay

"We are providing a service and putting the infrastructure in place as part of developing the country. In return, we will expect payment for services.

"It is important to have a well developed infrastructure to attract international development and encourage local economic development.

"So we are not throwing money down the drain, we are putting money into something that will bring economic development to the country," Mosimane said.

National Electricity Regulator (NER) general manager Kevin Morgan said there are two types of arrears: the boycott of payments and the general non-payment experienced worldwide.

The NER is an independent statutory body that regulates the supply of electricity including generation, transmission and distribution.

Morgan said payment levels at the 420 municipalities countrywide varied for each, and that nationally probably five percent of people were not paying their monthly accounts.

"What we have seen is that there is a general improvement in the quality of supply and service, including more accurate billing and customer services. Coupled with political support, particularly in Gauteng, this has led to an improvement in the situation.

"We believe that the problem is capable of being resolved, is being resolved and will be resolved," Morgan said.

But one problem that remains is the continuing spate of illegal connections still occurring, whereby electricity is re-routed into people's homes to bypass meters.

One of the measures introduced to counter not only illegal connections but also non-payment is the introduction of prepaid electricity meters.

This allows a household to buy as much electricity as they can afford, and to pay for it before they use it.

Since electricity now has to be bought in the same way as bread or milk, people are far more conscious of how much they use, how much they pay and the need to make provision for its purchase.

Electricity cards or tokens can be bought from as little as R5 up to R1 000 and have proved successful in a country where many people cannot make financial provision for accounts received several weeks after consumption.

But, in a country where unemployment and poverty are rife, some question why electricity is a priority.

In "winning nations" such as Japan, Taiwan and Korea, says Eskom spokesman Peter Adams, economic growth could not reach impressive figures before the overwhelming majority of houses there had been supplied with electricity.

"Experience in newly electrified black towns in South Africa shows a similar scenario.

"When people have access to electricity, their quality of life improves, health standards improve and their business instincts have a chance to develop.

"Standards of living improve through access to stoves, hot water, electric irons, televisions, computers etc.

"Women who previously had to spend hours each day collecting firewood for cooking fuel now have time for income generating activities and self development," noted Adams.

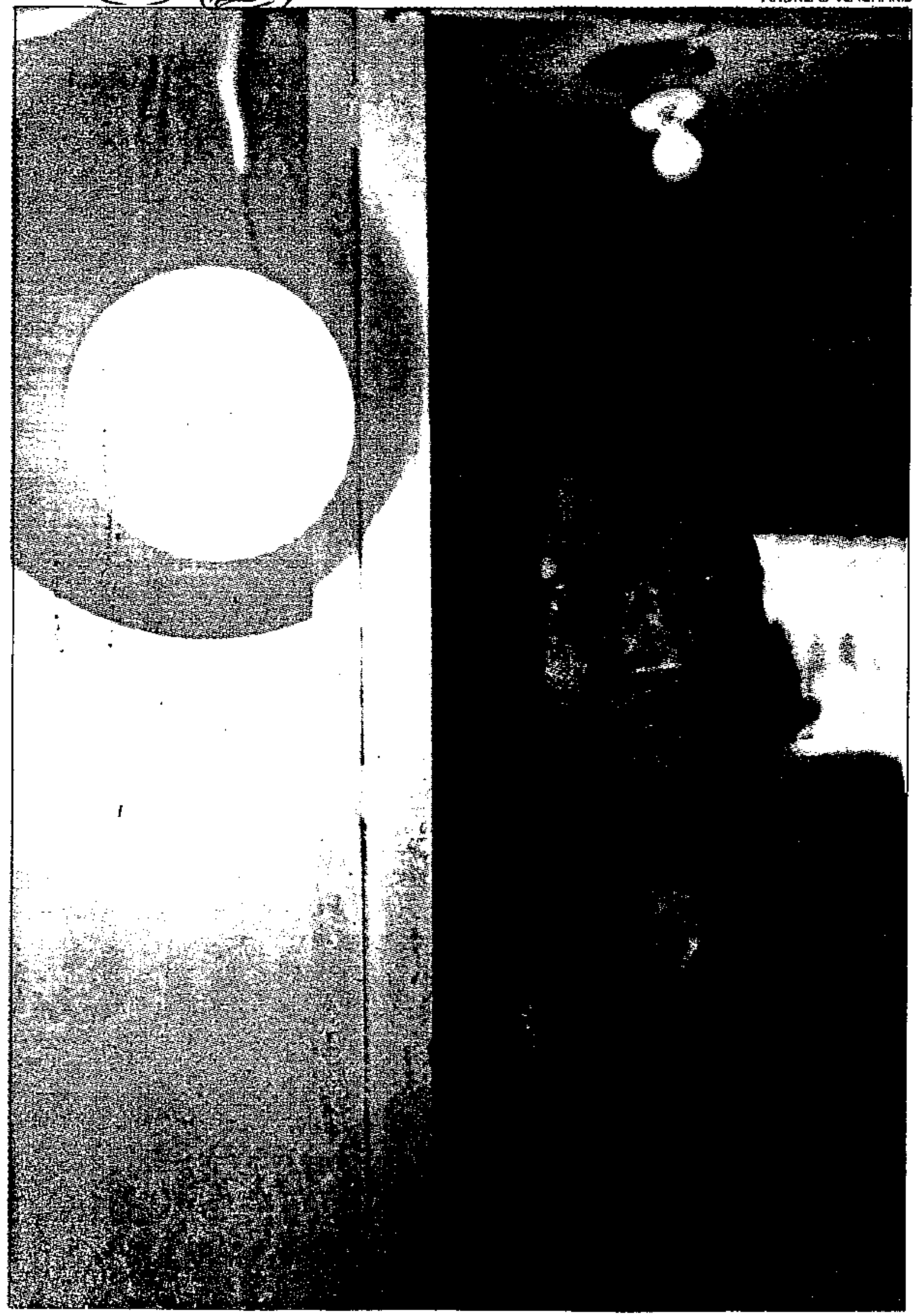
Women can earn money instead of collecting firewood

And, he added, standards of education improved through access to good quality light by which to study and access to electronic teaching aids, while health standards improved through access to refrigeration for keeping foods and medicines fresh and the reduction of cooking fire smoke in the home.

South Africa has a long way to go before the remaining three million households have access to electricity.

But the process has already started and those people who have already benefited show that there is light at the end of the tunnel.

ANDREAS VLACHAKIS



Into the light ... Themba Sibonyane is one of the many residents of Diepsloot Zone Two who has discovered the benefits of electricity.

55 (28)

ELECTRICITY DISTRIBUTION

Consumers pay for power game

FM 19/9/97

Durban is one of 400 municipalities stung by Eskom pricing anomalies

Electricity pricing is a sore point in Durban. Forced by consumer pressure to back off from planned tariff increases, the city council still pays more than its fair share for bulk electricity from Eskom.

Durban's problem is not unique, though it may be worse than most: nearly all of SA's 400 local authorities which distribute Eskom power are hit with pricing anomalies.

National Electricity Regulator (NER) GM Kevin Morgan agrees the complaints have merit but he says the issues are too complex and varied to rectify individually. The NER intends to fix the problem as a whole, once the long awaited electricity industry restructuring programme begins. But that could be several years yet.

The NER's response angers Durban Electricity executive director Howard Whitehead. Durban's problems, he says, stem from the fact that the city pays 25%-30% more for bulk electricity (275 KV) than Eskom's own distribution services pay for the same voltage. If the metro sold power to its consumers at standard Eskom retail tariffs, the city would lose R250m a year.

But that argument wins no sympathy from local industry. "If the metro can't distribute it as cost-effectively as Eskom then they shouldn't distribute," says John Barton, director of Mondi paper, one of Durban's biggest electricity users.

Whitehead says Durban's predicament is worsened by its being one of the few distributors of super tension voltages; Eskom's discounts don't cover the additional costs to the city of stepping down the high voltage into 220 V consumer power.

Durban also claims it is effectively penalised for taking the lead in RDP electrification. Since 1991 the city has electrified 116 000 homes and given power access to thousands more. The programme has cost the city R574m so far, says Whitehead. Meanwhile, Durban contributes to Eskom's electrification programme through a 4% surcharge on tariffs.

The NER's Morgan says it is "investigating the possibility" of making an exception for Durban. But Whitehead scoffs at that. The NER, he says, promised long ago to resolve Durban's problem, but nothing has been done.

Herb Payne

BUSINESS DAY,

Electricity regulator wants competition

BD 25/9/97 (65)

Robyn Chalmers

COMPETITION in all sectors of the electricity industry, but particularly distribution, should be encouraged over the longer term, says new National Electricity Regulator CEO Magate Sekonya.

Sekonya, who took over as CEO from Ian McRae at the beginning of this month, said competition should be promoted, although opening the electricity sector up to competition was a decision that ultimately government would have to take.

"Logically, one would start with the electricity supply industry where investment is vital as the generation and transmission industries already have infrastructure and sufficient funds. However, over the longer term this could apply to the whole industry," Sekonya said.

Before his departure, McRae also urged government to decide whether it wanted a state-owned monopoly controlling the electricity sector, or if it wished to go the private ownership route.

Pressure was building from a number of quarters for a decision on whether the private sector would be allowed into the generation and distribution sectors of the electricity industry.

Sekonya said one of the most urgent challenges facing the regulator was to facilitate the restructuring of the R25bn electricity supply industry. He agreed with recommendations on restructuring approved by the cabinet in March.

These included consolidation of the industry into a number of independent regional distributors, the introduction of cost-reflective tariffs, an electrification levy and a capped tax for part funding of municipal services, and the appointment of a transformation team.

"Reducing the number of suppliers will give critical mass and although it is important to rationalise ... we need to encourage competition. Restructuring is going to be a very big challenge," Sekonya said.

He has spent much of his first few weeks meeting the various roleplayers to canvass their views on the issues facing the regulator.

"There is broad consensus on the regulator's function and an appreciation of what it achieved in the past. There are still differing positions on the future direction of the supply industry but this will be discussed," he said.

On the structure of the regulator, Sekonya said a number of entities which belong together — such as the technical core which serviced internal needs — could be merged. The board was also developing views on its structure in terms of the new electricity bill which was likely to come before Parliament soon.

CAPE ARGUS, **MONDAY**, SEPTEMBER 29, 1997

Plan to merge Eskom with councils

Department wants to 'consolidate' electricity supplies

ARG 29/9/97 (55)

NORMAN JOSEPH
City Reporter

A huge merger between Eskom and the Western Cape's local authorities is on the cards.

The merger will go ahead if a national committee investigating the proposal, and the municipalities involved, give the plan the green light.

Woosey Barnard, deputy director for electricity supply in the national Mineral and Energy Affairs Department, said from Pretoria that similar mergers were in the pipeline throughout the country.

Dr Barnard said the department had formed the Electrical Restructuring Inter-departmental Committee, known as Eric.

He said the committe had a mandate from the Government to merge local authorities countrywide with Eskom, which supplies half the country's electricity.

National research by the department showed there were problems throughout South Africa.

There were 420 different local authorities licenced to distribute electricity, 2 000 different types of tariff structures, and most municipalities lacked a sound economic base.

Local authorities selling electricity to their residents last year collectively made a "surplus profit of R2-billion.

Dr Barnard said the new committee's ultimate aim was to see electricity supplies "consolidated".

In the Western Cape the committee would try to set up a Regional Electrical Distributor (Red).

The committee would probe the cost-effectiveness of this.

All roleplayers in all provinces would be consulted and taskteams formed to facilitate mergers.

Dr Barnard said that of South Africa's nine provinces, only the Western Cape – which was 83% electrified – and Gauteng had effective supplies.

The Eastern Cape and Northern Province urgently needed electricity supplies but had poor infrastructures.

The Northern Province, only 66 % of which was electrified, was worst off.

The committee's success depended largely on municipalities' willingness to amalgamate with Eskom and to form a uniform tariff structure.

Dr Barnard said the committee would also look at the issue of unequal numbers of engineers and electricians operating in different areas.

He said some informal settlements had none while affluent areas often had as many as five engineers and 20 electricians on duty.

Residents demand transfer of accounts

NORMAN JOSEPH
City Reporter

Angry residents of Mandalay on the Cape Flats are to ask Public Enterprises Minister Stella Sigcau to transfer electricity supplies and accounts from Eskom to the Cape Town municipality.

Hundreds of residents, mostly members of the South African National Civic Organisation (Sanco), have complained that Eskom charges too much for electricity and people cannot afford to pay their accounts.

Sanco's Mandalay spokesman Barb Mkhontwana said his organisation was spearheading the anti-Eskom campaign and was in the process of making arrangements to hold talks with the minister.

Residents said Eskom asked for a basic charge in addition to charging for electricity used and that the amount depended on whether people had an econo-meter or the normal switchboard panel.

Mr Mkhontwana said Eskom was "ripping people off" and that the Cape Town municipality's tariffs were more affordable.

Eskom's public relations officer Carin de Villiers said the company had a lawful licence to sell and to supply electricity and that protesters demanding the transfer were in the minority.

"We can't hand over large numbers of staff and assets to Cape Town municipality," she said.

"The whole industry is set to change but it will take from six to 12 months and then will merge with the local authorities."

Ms De Villiers said large bills were outstanding and that "at this stage we are not going to hand over to Cape Town municipality".

Meanwhile, Mr Mkhontwana said Sanco would take legal action against Mitchell's Plain police for wrongfully arresting some of its members for allegedly trespassing at Eskom's Mandalay branch on September 18.

Sanco supporters and police clashed during a protest march against Eskom's allegedly high electricity accounts.

Mr Mkhontwana said charges against some of Sanco's supporters had been withdrawn and that they had laid assault charges against the police. This was confirmed by Mitchell's Plain police captain Desmond Laing.

Captain Laing said trespassing cases against many other Sanco supporters were scheduled for court trials on November 3 at the Mitchell's Plain magistrate's court.

Electrification projects for SA schools in disarray

Linda Ensor

BD 6/11/97

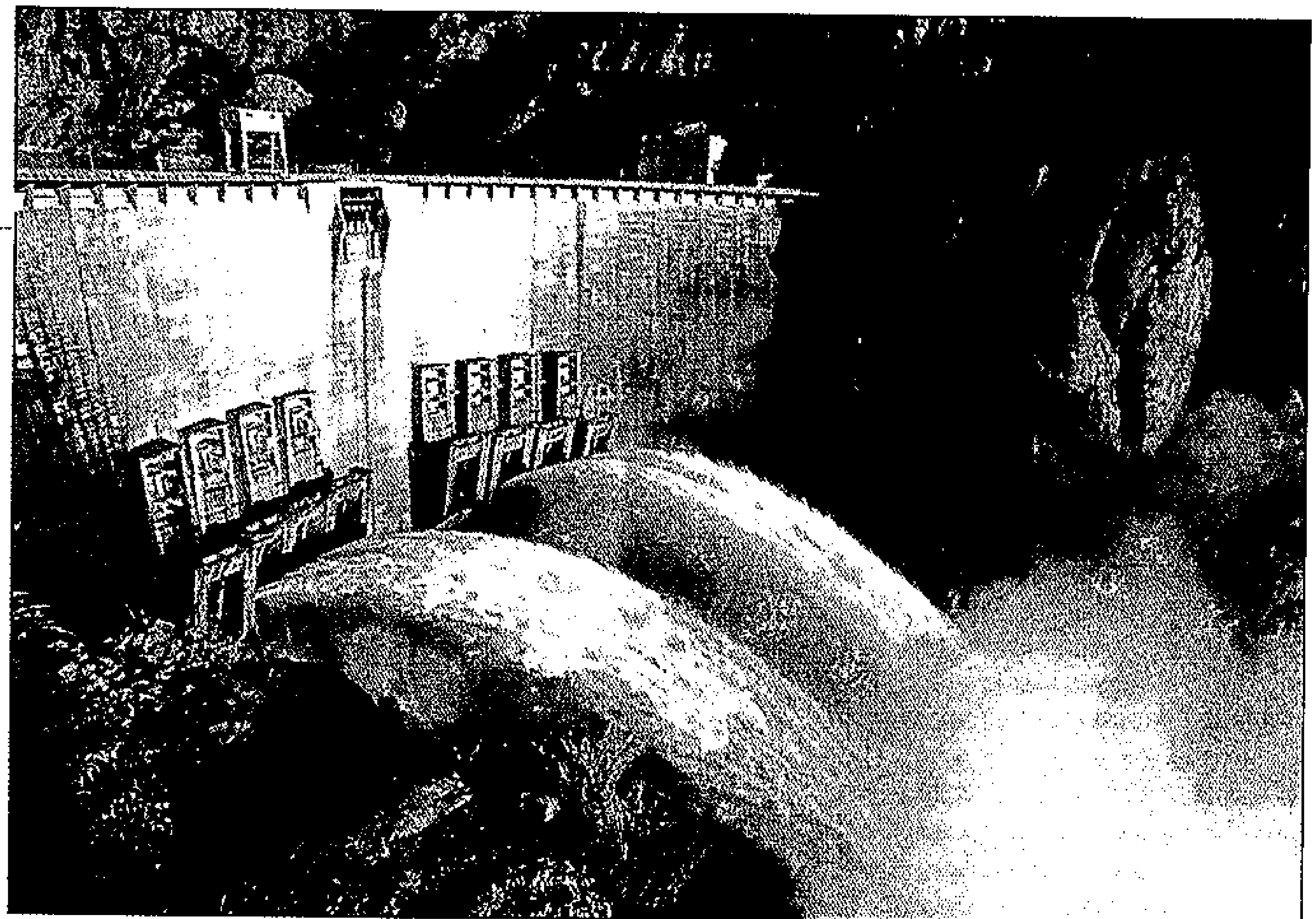
CAPE TOWN — Parliament's public accounts standing committee has recommended representatives of the mineral and energy affairs and finance departments, as well as Eskom and the auditor-general's office, meet urgently to address deficiencies in the school electrification programme.

The R1,2bn programme, planned to be implemented over 1995-1999, was aimed at providing electrification to 16 400 schools. During the 1995-96 financial year R17m was spent but auditor-general Henri Kluever was unable to give an audit opinion on the expenditure because of numerous flaws.

Deficiencies included the lack of a formal agreement between mineral and energy affairs and Eskom, the lack of a formal basis for prioritising the electrification of schools, the lack of formal arrangements to submit reports and the lack of formal strategic planning which resulted in one school being electrified twice.

The committee also urged the finance department to make provision in the 1998/99 Budget for the costs involved in adjusting the computers of all departments and public sector institutions in preparation for 2000.

The committee noted that next year's budget was the final chance for government to cover the cost of programming computers for 2000.



Cahora Bassa . . . Mozambique ready to pump out electricity, but at a price

CAHORA BASSA

Eskom holds whip hand in tariff negotiations

(55)

Glitch in talks as 20-year-old agreement comes back to haunt Portuguese government

FM 7/11/97

The Portuguese government, as owner of Hidro-electrica De Cahora Bassa (HCB), which controls Mozambique's Cahora Bassa hydropower plant, is in a difficult position in trying to negotiate a favourable tariff deal with Eskom.

Eskom is the only major buyer of Cahora Bassa power, and with 5 000 MW surplus generating capacity and contractual access to a further 450 MW from Cahora Bassa, the SA utility can decide the terms on which to do business.

Under the existing contract between the parties, Eskom has offered to pay US$0,2c/kWh — but the Portuguese want substantially more. The tariff agreement was struck in 1974, with no clause allowing for inflation adjustment.

Eskom and HCB's current discussions relate to the tariff Eskom is prepared to pay for the 750 MW of Cahora Bassa's capacity that should soon start flowing into SA's grid. About 200 MW of the dam's total generating capacity will flow to Mozambique. Zimbabwe has contracted to buy 500 MW till 2003, when this will also revert to Eskom — and SA.

HCB's asking price for the 20-year-old dam and hydropower station, with transmission lines to SA, is another issue. The Portuguese government is working towards meeting European Monetary Union entry requirements and has raised the possibility of selling Cahora Bassa.

Built in the Seventies for about US$500m and jointly owned by the Portuguese government, with 82% of the equity, and the Mozambican government, with 18%, Cahora Bassa is now on the market for $3bn. But Eskom is not interested in paying a tariff based on that price.

"Eskom is the world's cheapest power generator and is selling its power to the local market at about US2,5c/kWh on average. Anybody trying to sell us power at above this rate is knocking on the wrong door.

"Nor are we buying the argument that the owners of the Cahora Bassa project are entitled to recover interest at 8%/year since dam completion, together with $30m/year 'upkeep costs,' leading to a $3bn price tag," says Eskom corporate energy adviser Bain McIntyre.

There seems no reason Eskom should pay $1 500/kW for a 20-year-old, 2 000 MW power station when it has the choice of paying only $1 000/kW for a brand new station at Mepanda Uncua on the Zambezi below Cahora Bassa, which, consultants say, could be up and running by 2001.

But at this stage "Eskom needs additional generating capacity like it needs a hole in the head," says McIntyre, adding that it projects surplus capacity will last until about 2006-2010.

It already has a potential choice between a number of far cheaper, competing power generation options in the subcontinent. "Apart from Mepanda Uncua, the Democratic Republic of Congo (DRC)'s Inga project could provide hydropower at even cheaper rates."

Though the talk is tough and Eskom appears to hold all the aces, work is continuing with recommissioning and linking up the 1 432 km, 533 kV HVDC powerline from Cahora Bassa with the SA grid. "We are yet to settle the tariff issue, but the $125m line commissioning — paid for by the Portuguese government — should be completed within a few months," says McIntyre.

With or without Cahora Bassa, Eskom evidently has sufficient power "on tap" to meet the 450 MW demands of the first phase of Alusaf's planned Mozal aluminium smelter at Maputo, due to be launched by early 1998. But with a second phase for Mozal (also 450 MW) in the offing, and the Industrial Development Corp planning to build a linked iron and steel plant at Maputo needing an additional 850 MW, Mepanda Uncua's projected 2 000 MW might well be absorbed by future industrial growth in Mozambique alone. "Maputo and Beira also need about 100 MW each, and JCI's planned iron plant and harbour project at Beira could also get power from this project initially," says McIntyre.

The only cloud darkening the scene could be the equity and currency market upheavals in Asia, which have already affected the JSE, European bourses and the Dow Jones. Expectations of sharply reduced growth are also beginning to affect metal commodity markets — which could arguably put a number of regional projects on hold.

Arnold van Huyssteen

Energy issues are debated at seminar

(55)

Josey Ballenger BD 17/11/97

WHILE the potential for hydroelectric power in Africa was great, the transition from using biomass and coal energy sources would come with risks as well as benefits, utility and environmental experts from industrialised and developed nations agreed last week.

"Generally, hydropower is preferred in the US and the rest of the world, but there is no such thing as a free lunch in providing energy," said Dan Pearson, a project manager at US utility Southern California Edison, at a conference in Midrand.

However, environmental impact assessments — which conference delegates said were essential to development and "made good business sense" — would be necessary to study potential drawbacks and rewards with any type of electricity expansion, including hydropower.

Water-generated power was considered to be a "cleaner" and more efficient energy source, as it did not pollute the environmental nor deplete natural resources — as was the case with coal, wood and other sources.

"But there are costs associated with everything. If you're not polluting the air from coal (which is heavily used to generate power in SA), you may be blocking fish in rivers, for example, with hydropower," Pearson said.

The "disruption" argument could extend to human beings as well, said Yemi Katerere, regional director of the Geneva-based International Union for the Conservation of Nature. For instance, Namibia's proposed northwestern Epupa dam had been hotly contested by the nomadic Himba people whose ancestors were buried under the proposed area.

"Southern Africa has huge hydroelectric power potential," with the Democratic Republic of Congo alone holding 30%, he said.

The two-day conference was organised by the E-7, a group of eight utilities from the industrialised Group of Seven (G-7) nations, and the nonprofit organisation Southern African Development through Electricity.

SA parastatal Eskom has signed a memorandum of understanding with E-7 "as a framework to encourage joint actions".

Privatisation of electricity industry 'vital'

Robyn Chalmers

BD 19/11/97 (55)

THE privatisation of the electricity supply industry should be regarded by government as a priority, Eberhard von Koerber, executive vice president of engineering group ABB in Europe, the Middle East and Africa, said yesterday.

Von Koerber, who has held talks with government and business leaders in SA, said it was vital that large parts of the electricity sector be handed over to the private sector as soon as possible.

The distribution sector should be the first to be privatised into a deregulated environment. Government's concept of setting up a number of regional electricity distributors was a solid one, but they should be opened up to the private sector rather than being managed by Eskom and municipalities. "As opposed to stifling employment opportunities, this will create new avenues of investment for black entrepreneurs, where local capital can be used."

The global trend was towards splitting the transmission, distribution and generation functions and opening them up to the private sector in a phased manner. Government was unlikely to meet the electrification needs of the population unless it went the private sector route.

Row over black nuclear physicist

M&G 21-27/11/97 (55)

Lesley Cowling

Mojalefa Murphy, one of the country's rare black nuclear physicists who has been suspended by the Atomic Energy Corporation, hit back in the Pretoria High Court this week with a bitter attack on the AEC's chief executive, Waldo Stumpf.

Murphy, who was meant to be the new face of the AEC, has been suspended as executive general manager: corporate external relations for allegedly failing to submit proof of all credit-card expenses and failing to follow procedure in dismissing an employee.

This week he asked the Pretoria High Court to prevent Stumpf from presiding over a disciplinary inquiry into the allegations.

A returned exile and radiation physicist, Murphy was appointed to transform the image of the AEC, which laboured under the twin disadvantages of being perceived as an apartheid dinosaur and purveyor of the unpopular technology of nuclear power.

Murphy embarked on his task at the beginning of the year and became, according to one highly placed player in the science sector, an excellent ambassador for the AEC. He was appointed to various government committees concerned with the nuclear sector, and established links with educational institutions and other bodies.

He said in his affidavit that the charges against him were untrue, that Stumpf was biased against him and that he suspecfed Stumpf "intends to use the inquiry as a vehicle through which to lend legitimacy to his attempts to have my employment services terminated".

To demonstrate that there had been a breakdown of communication between them, Murphy submitted passages from a letter he received from Stumpf in June.

In this letter, Stumpf accused Murphy of having "strained relations between the two of us", referred to incidents that had affected "the trust in our working relationship in the future" and said he had reached the conclusion that there was far too much conflict and division surrounding Murphy's interaction within the corporation.

The chair of the AEC board, Don Ncube, and Stumpf submitted affidavits denying these allegations, and AEC lawyers argued that the company has a right to follow its own internal procedures for disciplinary hearings and to keep them "in-house".

They maintained that Stumpf, as chief executive, was the only appropriate person to mediate.

The court will decide whether the AEC should bring in an external mediator. Meanwhile, the transformation of the AEC's image hangs in the balance.

Affirmative action staffers for Koeberg

ARG 29/11/97 (56)

TWEET GAINSBOROUGH-WARING

An aggressive affirmative action programme will ensure that half the top positions at the Koeberg nuclear power station near Melkbos will be filled by affirmative action appointees within three years.

But officials say the programme will not compromise safety standards at the power station.

Nuclear power stations, nationally and internationally, are governed by strict safety regulations applying to their operation and staffing.

Tony Stott, spokesman on nuclear matters for Eskom, said the power station had to follow Eskom's policy of ensuring that by the year 2000, 50% of recruitments would be affirmative action.

He said the 50% target for affirmative action appointments was an overall figure for Eskom.

Koeberg fell under Eskom's generation of power section, he said, including hydroelectric stations.

Highly trained specialists are required to staff a nuclear power station, he said, and Eskom had recognised a shortage of people skilled in mathematics and physics.

To overcome this, Mr Stott said, Eskom had doubled the number of bursaries it usually awards to students at school and tertiary education institutions.

"Senior staff for the Koeberg nuclear power station have been head-hunted and suitable candidates have also been sent overseas for additional training," Mr Stott said.

Mr Stott said operators at the power station had to be well trained and licensed.

In addition to complying to the power station's training requirements, potential staffers had to pass external examinations set by the Council of Nuclear Policy.

Mr Stott said Eskom did not have a policy of retrenching staff, but that under its policy of voluntary separation, staff close to retirement age and those with easily marketable skills had opted to take separation packages.

(55)

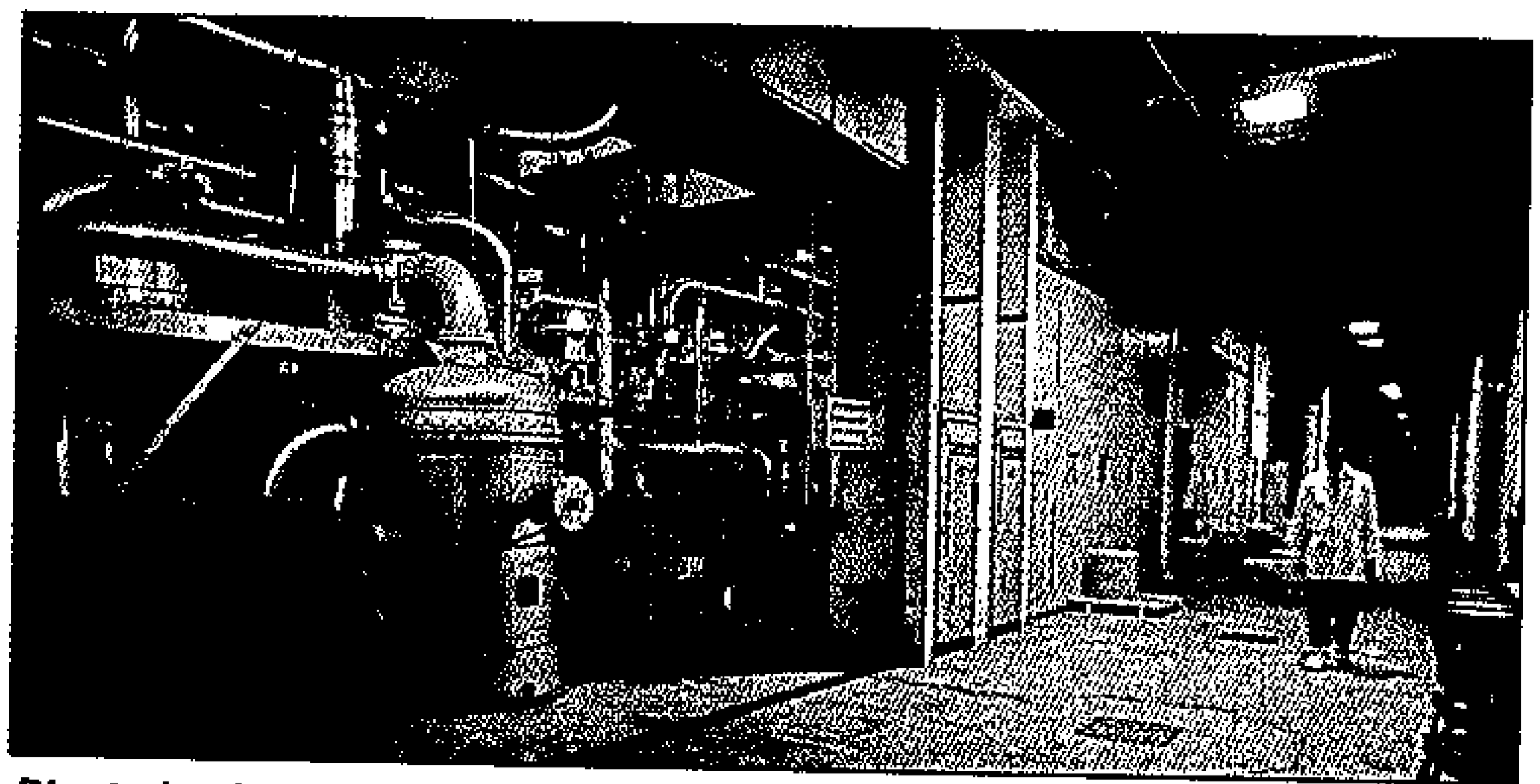
NUCLEAR TECHNOLOGY

FM 19/12/97

Meltdown in a teacup

No hanky panky in sale of SA nuclear plant to China

There is nothing secret or untoward about the sale of the Atomic Energy Corporation's (AEC)'s fuel plant to China. But police say they will investigate the reasons for their raid on Chinese technicians who were dismantling the Pelindaba plant.



Plant obsolescence *. . . inside Pelindaba's nuclear heart*

AEC executive GM Lawrence Hyslop says the tube plant was originally bought to manufacture precision zircalloy tubes as part of the AEC's programme to supply SA's only nuclear power plant at Koeberg with fuel during the sanctions era. The plant cost around R80m in the early Eighties; second-hand it will fetch US$4,65m — about R22m.

The AEC had a licence from the French company, Framatom, to produce nuclear fuel for Koeberg, which was also manufactured by Framatom. This meant that the AEC's fuel plant was specifically configured for Koeberg.

Once sanctions ended, SA was able to buy the apropriate fuel assemblies far more cheaply than it could make them. The terms of the French licence precluded export and when the plant was made redundant three years ago the AEC decided to sell the plant to China.

China could have bought the same type of plant from several countries, but it chose the SA plant for price and deliverability. It could have taken 30 months to commission a new plant from, say, Germany. The plant was designed to make fuel for nuclear power generation and has no bearing on nuclear weapons. Nevertheless, the AEC had to get clearance for the sale from the SA Council for the Non-proliferation of Weapons of Mass Destruction. The Chinese are also signatories to the Nuclear Non-proliferation Treaty, otherwise the sale would have been barred.

The politically sensitive plant used to make weapons grade uranium was dismantled in 1990. All sensitive equipment was destroyed under supervision of the International Atomic Energy Agency (IAEA). SA still has a small quantity of highly enriched, nuclear weapons-grade uranium which, also under IAEA supervision, is being converted into fuel elements to power the Safari reactor that makes nuclear medicines. SA's nuclear medicine production is now the 4th-biggest in the world.

With the reduction of government assistance, the AEC has been commercialising its activities. Hyslop explains that it uses spinoff technologies from its nuclear activities and makes them commercially viable. The AEC's turnover next year should exceed R200m, of which about 40% is exported. This is not yet enough, Hyslop says. The aim is to have a broad range of products and technologies, not necessarily all nuclear, to replace government's grant — which has been cut from R1bn in 1990 to only R200m next year.

Robin Friedland

(55) (183)

Deputy director-general quits energy fund in wake of bribery scandal

Star 3/12/97

The deputy director-general of Mineral and Energy Affairs, Dr Gordon Sibiya, resigned from the Central Energy Fund yesterday in the wake of a bribery scandal that has embroiled the energy minister.

Sibiya, a top nuclear physicist, said he was quitting the fund as a result of tensions within the board relating to the appointment of Liberian-born consultant Emmanuel Shaw II.

The appointment of Shaw, who allegedly took $10 000 (R48 300) from a top European oil trader to promote the trader's interests with Energy Minister Penuell Maduna, was unprocedural.

The Liberian was reportedly appointed by fund chairman Don Mkhwanazi, who allegedly was appointed chairman after Shaw recommended him to the minister.

Maduna on Monday denied reports that he knew of the bribe Shaw had taken from Fakhry Abdelnour, a prominent Egyptian who heads a Geneva-based oil company.

Sibiya said yesterday he could not be party to decisions surrounding the appointment of Shaw.

He also said that, in the light of the scandal, Mkhwanazi should reconsider his position as chairman of the fund.

"The (point) of saying restructuring is a managerial issue is not acceptable to me because taxpayers' money is involved," Sibiya told SABC-TV news.

"We should all look at getting consensus so that we are accountable and transparent. I think these issues have been very much violated and this is why I feel I cannot be party to these decisions."

SABC news also reported yesterday that Maduna had not yet responded to a report by an adviser recommending that the entire CEF board be suspended and its members reapply for the positions.

Maduna said he had appointed an inquiry to investigate the matter. The report had allegedly been lying on his desk since October 19. – Sapa

'Industry supports national oil company'

Linda Ensor (65) BD 4/12/97

CAPE TOWN — There had been overwhelming support within the oil industry for the creation of an integrated national oil company as proposed by Minerals and Energy Minister Penuell Maduna, Central Energy Fund chairman Don Mkhwanazi said yesterday.

However, the Chemical Workers' Industrial Union insisted that the fund companies should not be privatised.

Mkhwanazi said there had been an overwhelming number of submissions from oil firms, the union, organised commerce, black consortiums, professional institutions and consultants.

The aim of creating a listed, integrated oil company, consisting of fund companies and state-owned energy assets, would be to cut the cost of energy to the fiscus and involve it in the retail of f[illegible] products. Government would retain a controlling stake.

Mkhwanazi said a report with recommendations would be submitted to the minister, employees and all stakeholders before December 15.

Picture: ROBERT BOTHA | calls for "barrier-free" access guidelines.

People more concerned about jobs than global problems

(South) BD 4/12/97

Jacob Dlamini

SOUTH Africans were more concerned about unemployment, housing shortages and crime than they were about global problems such as illegal immigrants, a Markinor survey has found.

The survey, commissioned by the Johannesburg-based foreign policy think-tank Foundation for Global Dialogue, found that South Africans generally showed scant concern for international issues.

The survey was based on a national sample of 3 500 people, distributed across sex, age, race, education, working status and income. It was spread proportionally across provinces and metropolitan and rural areas. In areas where respondents showed any regard for international issues, the focus tended to be on human security matters such as poverty, drug trafficking and global unemployment.

Respondents wanted SA's foreign policy to be guided by the promotion of democracy, human rights and the combating of drug trafficking. However, they believed participation in the global economy was more important than co-operation with regional and other developing countries.

The foundation said the response suggested that South Africans preferred the maximisation of trade relations with Africa, Europe and North America.

There were marked responses to questions about SA's relations with countries such as Cuba.

About 35% of respondents agreed that SA should be a reliable ally and partner of Cuba, while 29% expressed uncertainty and 19% disagreed completely.

Those who supported relations with Cuba tended to be supporters of the African National Congress and the Pan Africanist Congress, while those who disagreed came from the Democratic Party and the Freedom Front.

Sibiya resigns over Shaw's appointment

BD 4/12/97 (483) (55)

Linda Ensor

MINERAL and energy deputy director-general Gordon Sibiya said his resignation from the Central Energy Fund (CEF) board — tendered to Mineral and Energy Minister Penuell Maduna — was motivated by his objection to Don Mkhwanazi's appointment of Emanuel Shaw as his personal adviser.

Shaw was appointed without board approval and without following normal tender procedures.

Sibiya also disagreed with Mkhwanazi that restructuring state assets was a day-to-day issue for management — Shaw's brief was to advise on this issue — as this was the responsibility of the state, and the sectoral task team of which Sibiya was chairman.

"Somewhere along the line there will be a collision between the CEF and the department on the restructuring of state assets and I don't want to be part of this."

Sibiya's stand was supported yesterday by the Chemical Workers' Industrial Union which said any corruption and lack of transparency must be attacked. The union demanded that Shaw and Mkhwanazi be removed and that appropriate action be taken after an investigation.

Acting mineral and energy director-general Dick Bakker noted the team appointed to probe Shaw's appointment would sit for three days from December 17. Mkhwanazi and the CEF staff and board would be called to give evidence, but Bakker said the inquiry would not involve Maduna himself.

The team would have to determine whether tendering procedures were followed in appointing Shaw; whether the powers of the chairman included the power to conclude contracts; and why Shaw was selected.

Bakker said the CEF board's term of office expired at the end of the month. As there would be no time to make new appointments before then, he had advised Maduna to extend their term of office until the end of March.

A departmental replacement for Sibiya would also have to be found.

Comment: Page 15

Union wants Mkhwanazi sacked

CT (BR) 4/12/97 (55)

JONATHAN ROSENTHAL

INDUSTRIAL EDITOR

AT ODDS *Don Mkhwanazi, left, and Gordon Sibiya*

PHOTO: JOHN WOODROOF

Johannesburg — The 45 000-member Chemical Workers Industrial Union (CWIU) demanded yesterday that the government sack Don Mkhwanazi, the first black chairman of the state-owned Central Energy Fund (CEF), over his award of a R3 million consultancy contract to Emanuel Shaw II.

The union's call comes one day after Gordon Sibiya, a deputy director-general in the department of mineral and energy affairs, confirmed he had resigned from the CEF board over Shaw's appointment, citing a lack of transparency and accountability in the CEF.

"CWIU supports ... the view that a lack of transparency and corruption must be attacked," the union said.

Shaw, a former Liberian finance minister, was appointed by Mkhwanazi without going through a tender process. He has reportedly been associated with fraudulent insurance claims and reportedly solicited bribes on the assurance that he could influence Penuell Maduna, the minister of minerals and energy.

CWIU demanded the removal of Shaw and Mkhwanazi "and following investigation, that appropriate action be taken".

Dick Barker, the acting director-general of the mineral and energy affairs department, said yesterday that an investigation, ordered by Maduna, was under way.

Sources close to the CEF board said it was expected to back Mkhwanazi and defend his appointment of Shaw at its quarterly meeting in the Western Cape tomorrow.

Both Mkhwanazi and Maduna failed yesterday to return telephone calls although staff in their offices confirmed they were present.

☐ Business Watch, Page 17

Atomic body loses round one to scientist

M+G 5-11/12/97. 1 (55) ...

Gustav Thiel

Mojalefa Murphy, one of South Africa's most senior black nuclear physicists, has won the first round in a dispute with the Atomic Energy Corporation (AEC). This week, the Pretoria High Court ruled that Murphy was entitled to have an independent mediator preside over a disciplinary hearing the AEC is holding against him. The corporation had planned to have its chief executive, Waldo Stumpf, as judge at the hearing.

Murphy was suspended in November from his executive position, pending a hearing into his alleged failure to submit details of credit card expenditure and also following the wrong procedure in dismissing an employee of the corporation.

Murphy, a returned exile who specialises in radiation physics, was appointed to transform the image of the AEC.

Judge BC van den Heever found this week that a binding agreement had been concluded between Murphy and Stumpf that an independent representative of the Independent Mediation Service of South Africa would chair the disciplinary inquiry. The AEC later reneged on this agreement.

Murphy had argued that Stumpf was biased against him, a charge the corporation denied. It had contended that it had a right to follow its own internal procedures for disciplinary hearings. The AEC has been ordered to pay costs.

Murphy said in response to the judgment: "The AEC has always been plagued with a high black staff turnover, which is attributed to the management's failure to create and maintain an enabling environment for people who were excluded from the development of the corporation and its culture."

CEF board absolves Mkhwanazi of responsibility for hiring Shaw

(66) BD 5/12/97

Linda Ensor

CAPE TOWN — Central Energy Fund (CEF) chairman, Don Mkhwanazi — who has faced calls for his dismissal for his role in the appointment of consultant Emanuel Shaw II on a R3m-a-year contract — was cleared yesterday by the board of directors.

The board, at a meeting in Mossel Bay, placed the responsibility for Shaw's appointment on the shoulders of acting general manager Howard Roberts. The board endorsed Roberts' decision to appoint Shaw to advise Mkhwanazi on the restructuring of state assets in the liquid-fuels sector.

The decision pre-empts a probe into the appointment announced by Minerals and Energy Minister Penuell Maduna and due to begin soon under the chairmanship of acting director-general of the department, Dick Bakker. It follows the resignation of minerals and energy deputy director-general Gordon Sibiya from the CEF board, saying Shaw's appointment was irregular.

CEF board member Seth Phalatse said last night the board had decided the correct procedure had been adopted in appointing Shaw. The issue had nothing to do with Mkhwanazi.

However, Phalatse said, it did appear there might be a conflict of interest in that Shaw had also been appointed to assist oil firm Engen establish a liaison network in Africa. Roberts was instructed to investigate the possible conflict and submit a report on it to a special meeting of the board.

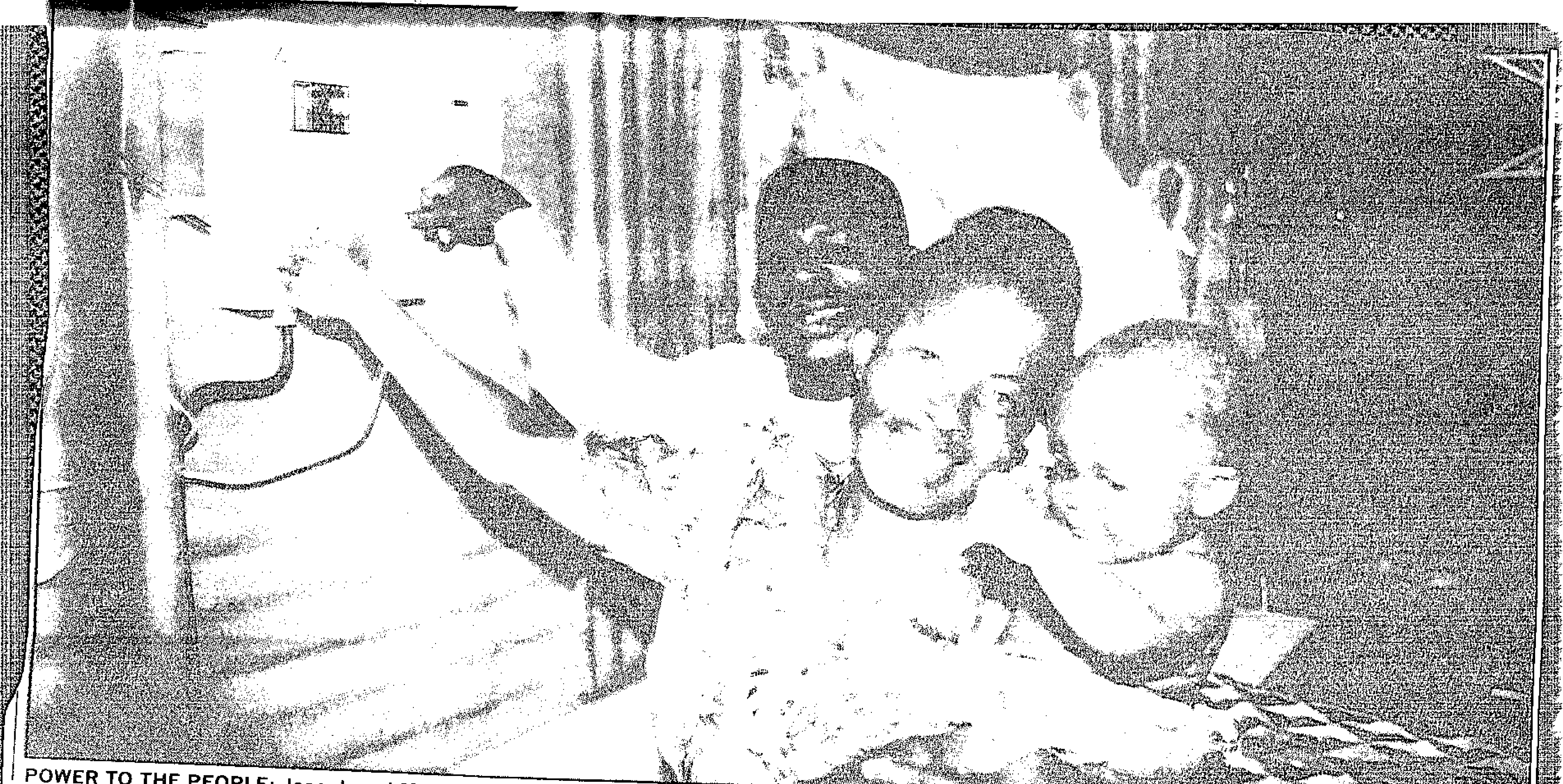
Engen corporate affairs manager Nthobi Moahloli has indicated it would seek a meeting with Shaw to discuss a potential conflict of interest. Engen would want to avoid misconceptions that it was privy to inside information.

Phalatse was emphatic it was Roberts who had appointed Shaw, and a number of other consultants such as Arthur Andersen. None of these appointments had been put out to tender and so there was no requirement for him to do this for the Shaw contract.

He conceded that Roberts made the appointment on Mkhwanazi's recommendation but said it was Roberts' responsibility to investigate whether the recommendation should be accepted.

Mkhwanazi has claimed that Shaw possesses impeccable credentials and any allegations to the contrary are racially inspired.

Phalatse said the board had not dealt with the character, history or suitability of Shaw for the job, saying this was not the matter before it. It had had to determine whether the correct procedures had been followed. Roberts had not been obliged to seek board approval for the appointment.



POWER TO THE PEOPLE: Joseph and Miriam Matlala, holding baby Sampson, now have electricity in their shack Picture: ELIZABETH SEJAKE

Lights for Christmas turn on the magic in shanty town

This festive season, candles will be just a memory for empowered family

(55)

CHRIS BARRON

ST 7/12/97

FOR most of the media it was just another forgettable item on the news diary, for the residents of Block X Soshanguve it provided a shiver of excitement and a legitimate excuse for missing work.

But for Joseph and Dorothy Matlala, Tuesday was a day they will remember as long as they live.

It was the day President Nelson Mandela turned them on, so to speak. And he almost stayed for tea.

Joseph is 55 and Dorothy 40. They have three children, the oldest 14 and the youngest nine months. They live 20 minutes' taxi ride away from one of the most technologically sophisticated cities in the world, Pretoria. But they have never had electricity.

To iron her husband's clothes and her children's school uniforms, not to mention her own Sunday-best dress which she wore for Mandela, Dorothy has to heat her iron over the open flame of a primus stove.

The Matlalas are no poverty-stricken shanty dwellers, even if they do live in a corrugated tin shack which does not have a bathroom, running water or lavatory. With Joseph's pay as a full-time mechanic in Pretoria, they have bought a hi-fi set, television and deep freeze that wouldn't look out of place in the wealthy suburbs.

But before they can listen to the radio, Joseph must connect it to a car battery. For the television they use a generator in the bedroom, which makes such a racket that baby Sampson can't sleep and they can barely hear their favourite programmes.

Noise is not the only reason they keep their viewing to a minimum. Petrol for the generator costs R30 a week.

To conserve gas, which costs R75 a canister each month, they switch off the freezer at night.

To see after dark they use candles, eight packs of six a month at R3 a pack. Every time Sampson needs a feed or a nappy change the candles must be lit so Dorothy doesn't stick a safety pin into him. But when the wind howls through the gaps in the sheets of tin, the candles go out. And fire is a constant threat. With three children it is a dread that has become part of the Matlalas' lives.

Besides the inconvenience and danger, not having electricity has cost the Matlalas R259 a month. Now their neighbour, Jacob Khune, who works for the company that installed the units, has told them a card costing R100 will give them power for up to three months.

Joseph built the shack himself when they moved five years ago from the Winterveld. It is kept meticulously clean, and on Tuesday boasted a coat of sparkling silver paint in honour of Mandela's visit. So excited were the Matlalas that they painted the few metres of fence running in front of it as well.

For the first time in their lives their home was an object of envy. And it will remain so until 24 000 other houses in the area, all of them proudly maintained like the Matlalas', are connected to the electricity source over the next few months.

When Mandela threw the switch, there was a collective sigh of appreciation and renewed hope, as if the multicoloured lights of a huge Christmas tree had come on instead of just a single globe.

"I was more excited than for Christmas," said Joseph after Mandela had left.

"I had everything ready for him to have tea here," said Dorothy, who had been feverishly busy since being told last month to expect the President. "He explained he didn't have time, but he said next time he would. And he gave us an iron and a kettle."

If another presidential visit means enduring the same media circus again then it is one promise the Matlalas would not mind him breaking. The taking of photographs and questioning had left her "very tired", Dorothy admitted afterwards. "Very, very tired.

"Anyone for tea," she asked, flicking a switch. A huge smile creased her face, and suddenly she didn't seem so tired any more.

Opec move unlikely to benefit SA

BD 8/12/97 (50)

Helmo Preuss

SA CONSUMERS were unlikely to see the full benefit of the recent decline in oil prices following the decision by the Organisation of Petroleum Exporting Countries to raise its production limit 10% last week, analysts said on Friday.

Joachim Hartleb, minerals economist at Gencor, said quota cheating by Opec members meant the 10% nominal increase translated into an actual increase closer to 3%. "The oil industry had anticipated an Opec quota increase, so a fall in prices was already factored in even before last week's Jakarta meeting. There may be a short-term break below \$16 a barrel on the Dubai oil price, but this is not sustainable.

"I think Dubai will trade between \$16 and \$19 a barrel during the northern hemisphere winter months," Hartleb said.

The Dubai price declined to \$16,53 a barrel on Tuesday from a monthly average of \$18,18 in November and \$19,02 in October and \$21,76 in January.

This resulted in a 2,96c/*l* over-recovery in the retail petrol price last week despite the recent depreciation in the rand. If recent trends were sustained, there could be a 3c/*l* cut in the retail price in January.

But industry sources said this was unlikely as there were various players, who "needed" more, despite a 6c/*l* allocation to non-oil levies in November.

"We would love to have more, as our members are being bled dry and every day another retailer ends belly up," said Johann Scholtz, Fuel Retailers' Association director.

A recent study by the Potchefstroom University jointly with the association and government estimated that there had been a 4,3c/*l* under-recovery at retailers' level in the year to February. As retailers got only a 2c/*l* interim increase in November, the latest estimate is that retailers need at least another 3c/*l* increase to break even.

"Nobody undertakes a business just to break even. Some of the oil companies have increased their rentals by as much as 12%," Scholtz said. Wage negotiations, currently under way, will squeeze margins further. "If there is not going to be wholesale blood-letting in this industry, we need that 3c/*l* and we need it soon," Scholtz said.

In November retailers were given 2c/*l*, wholesalers 2c/*l* and the Road Accident Fund 2c/*l* out of the retail price of petrol. The total amounts going to these parties as a percentage of the December retail petrol price in Gauteng was 8,9%, 7,1% and 5,5% respectively, while government got 35,7%.

Martie Grobler, a Deputy Director at the Central Statistical Services said the decline in the international oil price would be reflected in the producer price index, as that measured oil prices once the oil was in SA, while the consumer price index would reflect change at retail level. — I-Net.

Atomic corporation denies any spillage at plant

BD 8/12/97 (57)

Deborah Fine

RESIDENTS in the Hartbeespoort Dam/Broederstroom area are concerned that recent telephonic surveys conducted by the Atomic Energy Corporation (AEC) could mean the spillage of radioactive or dangerous chemical waste had occurred at its Pelindaba site near Pretoria.

AEC chief public relations officer Lola Patrick said yesterday that there had been no such spillage.

She said AEC had been forced to undertake the telephonic surveys after only 147 households of 357 within 5km of the site had failed to complete written questionnaires designed to provide vital demographic information which could be used to assess danger levels in the unlikely event of a large radioactive leak.

Residents said yesterday they had been telephoned by AEC employees who wanted to know how many people lived on the premises, whether they grew vegetables or kept cattle and if they had access to underground water supplies on their properties.

The residents claimed AEC had not provided a proper explanation as to the reason for the questions.

AEC was forced to undertake clean-up operations last year following a spill of radioactive waste when metal drums containing medical waste, natural uranium traces and contaminated equipment were broken during excavations at the Pelindaba site.

The site in question is used for research projects as well as for the manufacturing of radioactive and chemically based products.

Commenting further on the surveys, Patrick said the AEC was obliged by the Council for Nuclear Safety to maintain and regularly update a database on the population surrounding the site and use the information to plan emergency and preventative strategies in the event of a radioactive or chemical release.

The information enabled AEC to forecast how many people could be affected by such a release, and the environmental implications, she said.

In the unlikely event of a catastrophe, AEC needed to know how many people would have to be evacuated from the area.

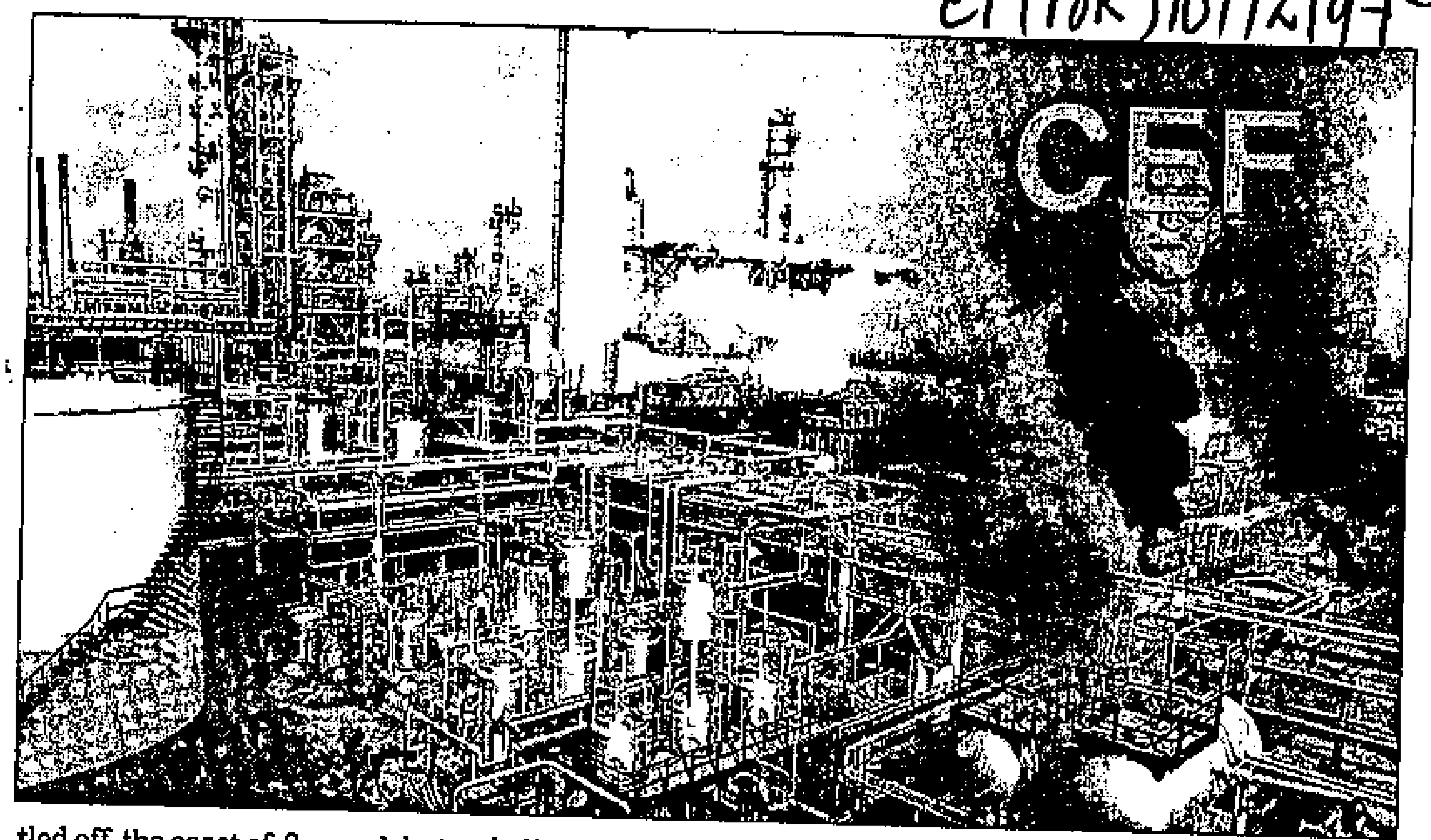
"We are obliged to demonstrate to the council that in an emergency we will be able to embark on effective, protective action," she said.

CENTRAL ENERGY FUND

Past mysteries, present shenanigans

ET (MR) 10/12/97 (55)

Jonathan Rosenthal



Step into the tastelessly decorated offices of the Central Energy Fund (CEF) on the first floor of a small building in Sandton, and there is nothing to indicate that this was the nerve centre of a shadow-trading empire oiling the wheels of apartheid.

There are no autographed photographs of the Shah of Iran or gift scimitars from his successor, the Ayatollah Khomeini, South Africa's two great oil suppliers throughout the embargo years.

There is not even a bouquet of plastic roses with a thank-you note from Marino Chiavelli, South Africa's now-deceased oil baron, who, according to the Shipping Research Bureau, earned $7,5 million a month for brokering a secret deal to import oil from Saudi Arabia in 1980.

The Dutch-based organisation, which tracked oil flows to South Africa, went so far as to claim that none of the income was ever declared or brought into South Africa.

Almost any premium was worth paying, and in the aftermath of the fall of the Shah, when it was uncertain what the attitude of the new Iranian government would be towards South Africa, almost any risk was worth taking to keep the oil flowing.

In the 1979 Salem oil scam, a ship picked up $56,5 million worth of Shell's oil. The ship, on being renamed, was then sent to South Africa where it unloaded and sold the oil to the Strategic Fuel Fund (SFF), the CEF's oil trading and stockpile subsidiary. The ship was latter scuttled off the coast of Senegal, but its secrets did not sink with it and the SFF ended up having to compensate Shell for its loss.

Traders at SFF are believed to have been equally happy in the arms trade as the oil trade.

A US federal indictment against Armscor and Fuchs, which charged these companies with exporting US weapons to Iraq, alleged that South Africa was to be paid for weapons in crude oil, a deal that could have threatened the embargo-busting supply of Iranian crude to South Africa during the Iran-Iraq Gulf War.

Oil traders, working for several of the multinational oil companies in South Africa, claim that most of the deals involved middlemen of some description and that premiums and commissions were routine.

Perhaps the most famous of the middlemen was Marc Rich, the owner of a Swiss-based oil trading company, who is believed to have become South Africa's largest oil supplier.

With millions of rands changing hands each day, in a market characterised by oil price fluctuations throughout the day, a couple of cents on a barrel could easily go missing, claim some traders.

When the oil embargo was lifted in 1993 and oil companies could legally import oil into South Africa, the SFF and all its minions found themselves without job security. Yet the move into the world economy has still left in place a range of vested interests, and almost none of them are willing to give up their source of easy money.

When Penuell Maduna took over the mineral and energy ministry, he is reliably believed to have been approached and offered a substantial amount of cash if he didn't rock the boat. He is also reliably believed to have refused the offer and launched a series of investigations.

The source claims the investigations were hampered by the mysterious disappearance of computers, packed with information, just before Maduna took office.

Within months Maduna had brought in outside investigators and suspended the general manager of the CEF on the basis of a preliminary auditor's report, cancelled the payment of commissions on a large Egyptian oil contract and accused the auditor-general of having covered up missing millions in the SFF.

Seemingly, his investigations have floundered on a lack of evidence pointing to either the culpability of Kobus van Zyl, the general manager of the CEF, who was suspended on the suspicion of having been party to alleged overpayments on an Egyptian oil contract, or where the allegedly missing millions have gone.

But while Maduna's office claims to have a strong case against Van Zyl, it has so far failed to press any internal disciplinary charges against him.

That there is something fishy in the state of the CEF is almost without question. Yet when Maduna is presented with his first hard proof of irregularities in the award of a R3 million consultancy contract to Emmanuel Shaw, he does nothing.

Shaw, a former Liberian finance minister, was appointed by Don Mkhwanazi, the chairman of the CEF, without a tender process. He has reportedly been associated with fraudulent insurance claims in Liberia and said to have solicited bribes from Fakhry Abdelnour, a Geneva-based oil trader under investigation by Maduna's ministry in connection with the Egyptian contracts.

That Abdelnour, who oil industry insiders characterise as extremely well connected and successful, would tell the Mail & Guardian that he had paid $10 000 to Shaw, is unusual in an industry characterised by secrecy. But, say insiders, it indicates that Shaw has lost credibility with the industry to have warranted such censure from a fellow trader.

As the revelations of Shaw's activities mount, the links between the mysteries of the past and the shenanigans of the present deepen.

The time for a full, public and independent inquiry is nigh. Anything less will leave the CEF paralysed by the ghosts of the past and Maduna immobilised and defensive in the face of increasing public and union outrage.

Greens query oil terminal plan

Site off Robben Island wanted for tanker facility

ARG 11/12/97 (55)

JOSEPH ARANES
STAFF REPORTER

Plans for a mooring facility for oil tankers off Robben Island and an underwater pipeline in Table Bay linking the site to the Milnerton tank farm have been received cautiously by environmental organisations.

The Strategic Fuel Fund, a subsidiary of the Government's Central Energy Fund, proposes commercialising its fuel storage facilities at the tank farm and using its full capacity.

As part of the project, a ship-loading and discharge facility in Table Bay is proposed where fuel products are discharged from tankers and transferred by pipeline to the tank farm.

Lynn Jackson of the the Sea Fisheries Research Institute said although a single-point mooring facility tended generally to create a safer environment for the transfer of fuels, the proposals needed to be looked at against broader developments taking place on the coast.

A similar project was mooted for Saldanha Bay harbour and it seemed as if the authorities were looking at these initiatives individually.

"While it is agreed that single-point mooring facilities tend to be generally safe for the environment and there are less risks involved than with some other options, my concern is that we need to approach the situation in a holistic manner."

Peter Willis of the Environmental Monitoring Group said he did not wish to comment on the proposal as he was not aware of its full implications.

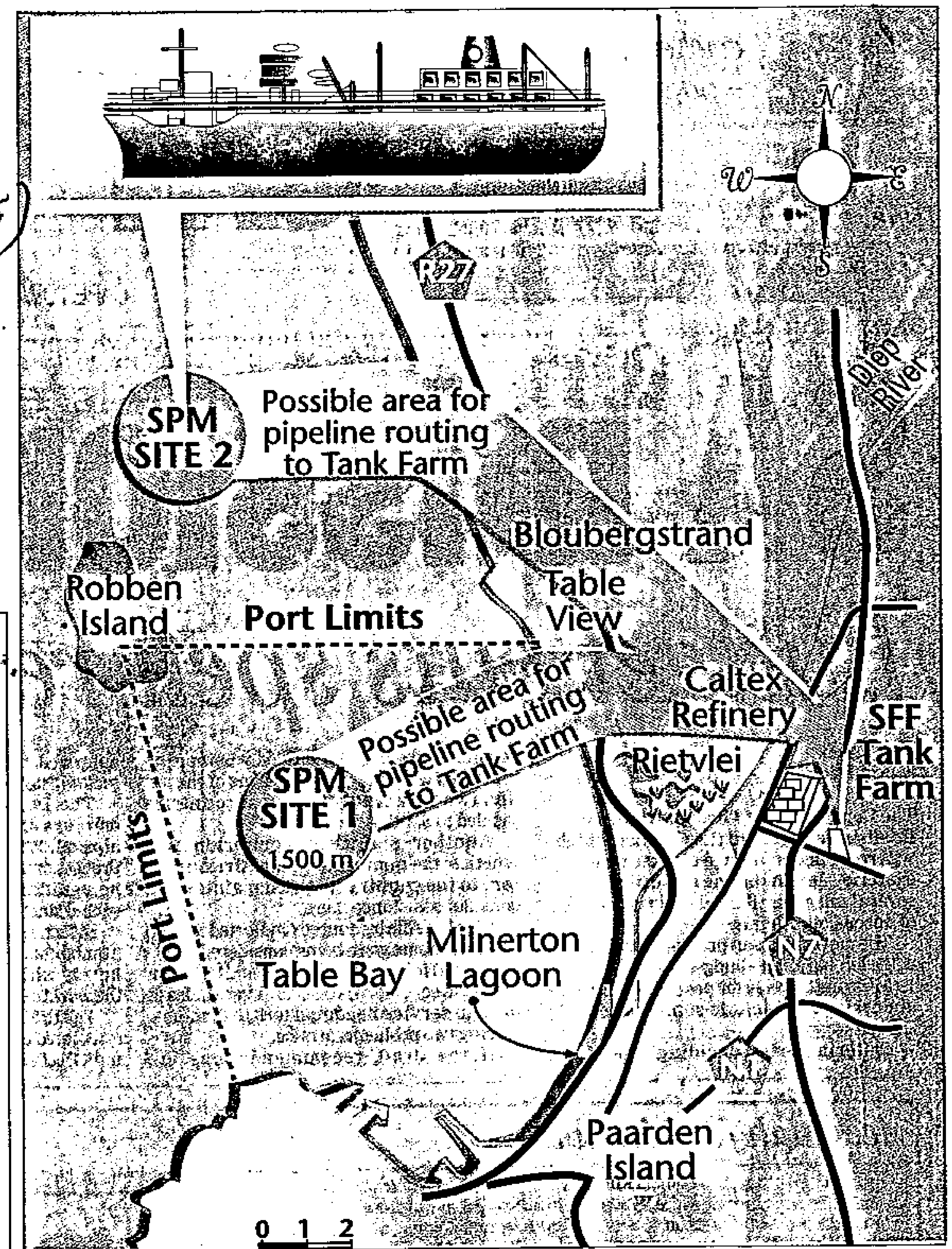
"But it is important that people are made aware of what is being planned.

"I don't know enough about oil handling and the accompanying technologies but what is being proposed will add to the risk factor for the management of Table Bay," Mr Willis said.

A consultant for the fuel fund, Jonathan Crowther, said an environmental impact study would be done by the Council for Scientific and Industrial Research to assess the project.

"The fuel fund is investigating various opportunities for the storage of white fuels – diesel, petrol and niche market crude oils – utilising the available storage capacity provided by the tank farm. We believe the project, if approved, will have positive economic benefits for the Western Cape, which will be achieved through the wholesale supply of products to retail outlets."

In terms of the proposal a single point mooring facility, at least 3km in length, will be built a few nautical miles north or south of Robben Island.



Fund to streamline Cape operations

(55)

Linda Ensor

BD 11/12/97

CAPE TOWN — The Strategic Fuel Fund planned to commercialise its storage facilities at the Milnerton tank farm and was investigating storing and trading in white fuel products like petrol, diesel and niche market crude oils.

Fund GM Piet Coetzee said yesterday that for the project to be viable, a R350m dedicated ship loading and offloading facility would be required to accommodate tankers of up to 150 000 tons because the existing berthing facilities were too small.

The fund proposed to establish a single point mooring facility in Table Bay as part of the project, which was expected to generate a "normal commercial return on investment".

He said the R350m would be funded as part of the overall funding required for the restructuring of the Central Energy Fund group, of which the Strategic Fuel Fund is a part.

Imported crude oil and white fuel products would be off loaded from tankers anchored at the facility and transferred by an existing pipeline to the Milnerton tank farm from where it would be distributed to retailers.

The 39 tanks at the facility — with a total capacity of 7,8-million barrels — were used in the past to store strategic crude oil, but as government began to reduce its strategic oil reserves the tank farm has been systematically emptied. Already some tanks had been rented out to third parties.

"The under utilisation of the Milnerton facility presents an opportunity in terms of commercialisation options for the fund," a document on the proposal said. "It will provide the opportunity for emerging companies to compete in the existing fuel market sector; and could have positive economic benefits for Cape Town and the Western Cape as a whole." The document on the proposed project was compiled by consultants Crowther, Campbell and Associates, commissioned , together with the CSIR, to undertake an environmental impact assessment. Presently there was virtually no excess crude oil refining capacity available in SA.

FM 12/12/97

CENTRAL ENERGY FUND SCANDAL

Pressure still on Mkhwanazi

~~183~~ (55)

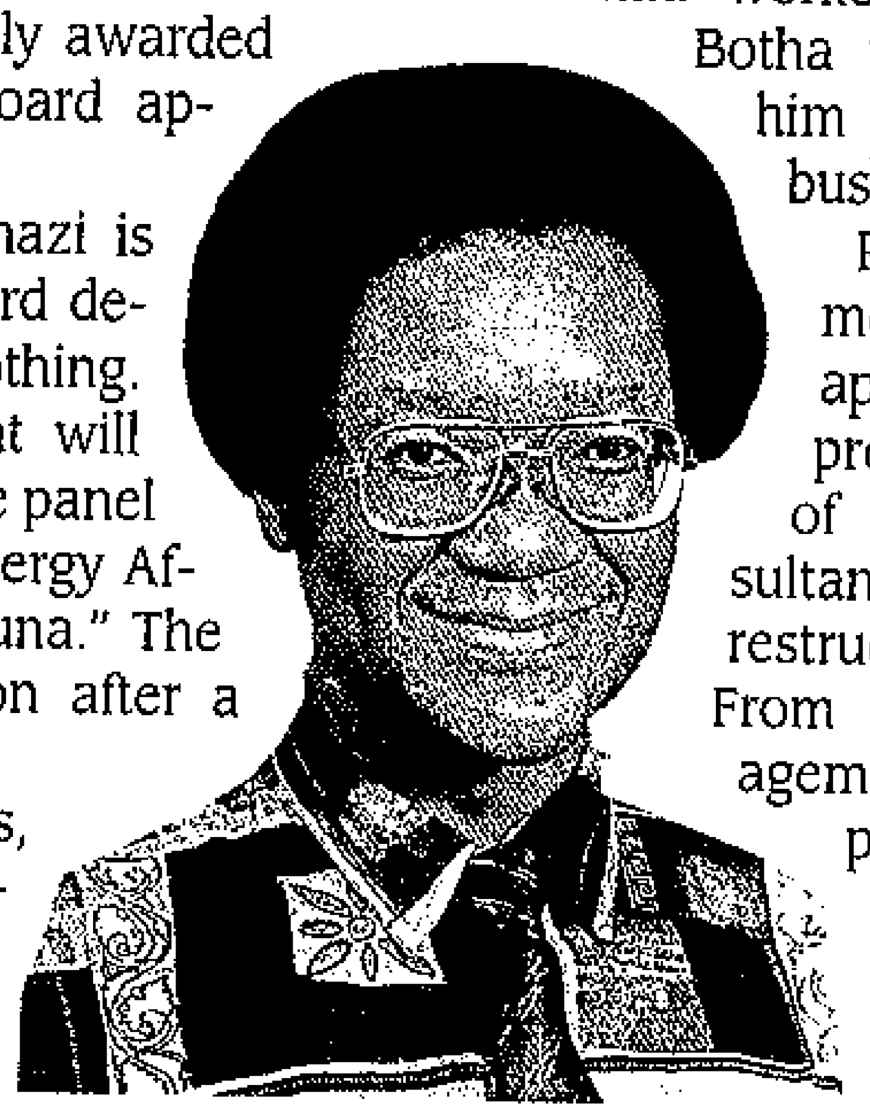
Questions remain why CEF hired shady oil consultant

Mineral & Energy Affairs deputy director-general Gordon Sibiya is maintaining his terrier-like criticism of his former boss, Central Energy Fund (CEF) chairman Don Mkhwanazi, for the awarding of a R5m contract to shady Liberian businessman Emmanuel Shaw without board approval.

Sibiya resigned in disgust from the CEF board over the issue last week. The board subsequently decided that CEF GM Howard Roberts and his management team — not Mkhwanazi — were responsible for giving Shaw the contract. The board maintained that the CEF had previously awarded such contracts without board approval.

But Sibiya says Mkhwanazi is not off the hook. "The board decision means absolutely nothing. It is inconsequential. What will matter is the decision of the panel appointed by Mineral & Energy Affairs Minister Penuell Maduna." The panel will make a decision after a meeting on December 17.

"The previous contracts, awarded without board approval, happened before the current board took over in March," Sibiya insists. "If mistakes were made during apartheid days, or under Pik Botha (the previous Minister), it does not mean that we should repeat them."



Gordon Sibiya

Sibiya appears to have high-level support in the department, even if it is less strident. "Roberts merely carried out instructions from Mkhwanazi," says Maduna's adviser Thulani Gcabashe. "Ask Roberts if he knew anything about Shaw and what made him choose him as a preferred supplier."

CEF board member Khaya Ngqula is said to also support Sibiya's stand and to have strongly berated the board for absolving Mkhwanazi. The energy fund boss has been widely criticised for maintaining business and social relationships with Shaw, who has been involved for years in questionable oil deals and shady activities in West Africa.

Over the past month, Sibiya has led what appeared at times to be a one-man crusade against Mkhwanazi, but Maduna has remained strangely silent on the matter. His adviser, Gcabashe, prefers not to be quoted, though he blew the whistle on Mkhwanazi.

The decision to award the contract was "unprocedural", Sibiya says. "Mkhwanazi had no powers to award a contract (relating to the restructuring of State assets) without consulting the board or the Minister.

"The restructuring of State assets is a serious matter that involves all stakeholders. The information we have is that Mkhwanazi instructed Roberts to award the contract to Shaw. Roberts wrote a letter saying that he had been instructed to award the contract."

However, CEF board member Seth Phalatse says Mkhwanazi merely recommended Shaw's company, International Advisory Services (IAS), to Roberts. In a letter, Mkhwanazi asked Roberts to investigate IAS's capabilities.

CEF management chose Shaw because he had worked for the company when Botha was Minister. "They chose him because he understood the business," Phalatse says.

Phalatse says CEF management was within its powers to appoint IAS. "The board had previously approved a figure of R5m to be used for consultancy services relating to the restructuring of State assets. From there, it was up to management to decide who to appoint."

Why has only Sibiya objected publicly to Mkhwanazi's action? Is he an honest civil servant or a naive scientist causing a storm in a teacup? His detractors say he is a "lone ranger" who does not understand the politics of public service.

But Sibiya says he is driven by a desire to serve the country with his skills. He returned to SA in 1986 with a masters degree in electrical engineering and a doctorate in nuclear reactor physics.

Because he could not use his doctorate — the Atomic Energy Corporation (AEC) would not even have him on its premises — he spent the next 11 years working as an electrical consulting engineer.

Earlier this year, he closed his consulting business and opted for the lesser paid security of public service.

He insists his position in the department has not been undermined: "I volunteered my services to Maduna. This is a CEF matter. It has nothing to do with the department or the Minister." **Duma Gqubule**

Sparks fly over atomic energy deal with Chinese

(55)

Jacob Dlamini

BD 15/12/97

THE Atomic Energy Corporation (AEC) has come under attack following reports that it had failed to inform the foreign affairs department about 40 Chinese scientists working secretly in Pretoria to dismantle SA's nuclear technology.

Foreign affairs spokesman Pieter Swanepoel said his department had not been informed of the scientists' presence or asked to prepare the relevant documents for them.

The Sunday Independent reported the Chinese were involved in dismantling an important part of SA's nuclear material for shipment to China. This follows the sale of the AEC's high-technology plant for making zirconium tubing, described by a scientist as good for holding nuclear material in a reactor.

The paper said the scientists were in SA under false pretences as they had entered on business visas and not work permits. Swanepoel said under normal circumstances people travelling on official or diplomatic passports, as the scientists appear to have done, had to notify the foreign affairs department of this upon entering SA. The AEC and Chinese government had not done this.

But Swanepoel played down suggestions of a diplomatic tussle between SA and the Chinese government. He said foreign affairs had not been approached by the Chinese government or SA Police Services, which found the scientists after a tip-off about illegal immigrants at AEC's Pretoria plant led them to search it.

Minerals and energy deputy director-general Gordon Sibiya accused the AEC of a "serious omission".

He said when the Chinese tender application for the plant had been approved it had been assumed the AEC would organise the correct documentation for the Chinese. This had clearly not been done.

Democratic Party spokesman James Selfe said: "This is typical of the complete confusion we find in our foreign policy."

Decisions were taken without consulting the foreign affairs department.

Nuclear plant 'had not been in use for years'

(55)

Sowetan 16/12/97

A PLANT at the Pelindaba nuclear facility which was recently sold to the People's Republic of China had been redundant for a number of years, the Atomic Energy Corporation said yesterday.

The high-technology plant was used for making the zirconium tubing that sheaths the fuel for nuclear reactors.

"It became politically possible and cheaper to source the product from abroad," the AEC said in a statement.

The sale was approved on July 18 this year following an international tendering process. Clearance was received from the South African Council for the Non-proliferation of Weapons of Mass Destruction.

"Apart from three items for which no clearance has yet been received, the sale of the plant has been approved to Pacific Development Services, who will in turn on-sell to the China Nuclear Energy Industry Corporation of Beijing," the statement said.

Pacific Development Services had arranged a team of engineers, scientists and technicians to dismantle the plant and erect it again in China.

This team was not employed by the AEC but was subjected to its safety and environmental rules.

The AEC said the sale of the plant did not include the transfer of any technology to any party.

The Conservative Party said the sale was a further step towards turning South Africa into a Third World country. The plant had cost about R200 million to build and was being sold for about R20 million.

"This will result in a huge loss of job opportunities," CP spokesman Pieter Aucamp said.

He said it was ironic that South Africa, a country which had always opposed communism, had now sold such a strategic asset to communists.

"The true colours of the African National Congress are coming out in the open. The crown jewels are being sold piece by piece. Of this once proud country nothing will remain but a typical African state," Aucamp said. – *Sapa.*

Pelindaba deal purely commercial — govt

Josey Ballenger

BD 17/12/97 (56)

THE foreign affairs department has defended the Atomic Energy Corporation (AEC) sale of its Pelindaba zircalloy tube plant, saying the deal was not secret and did not violate international anti-nuclear proliferation treaties.

"The transaction was purely commercial; the implication was that it was a secret deal with political implications," foreign affairs spokesman Marco Boni said on Monday. "The fact that it was an international tender means it was not a secret deal. Allegations that SA is selling (nuclear) technology are devoid of truth."

After a tender calling for invitations from 17 parties in SA, the US, the UK and Sweden, the AEC awarded the tender in July to British company Pacific Development Services, which then sold the plant to Baoji, Xian-based China Nuclear Energy Industry Corporation.

Boni said the AEC had adhered "scrupulously" to internationally recognised nuclear export regimes, and the sale was not a violation of the 1968 Treaty on the Non-Proliferation of Nuclear Weapons.

However, Boni said, there "may be debate" over whether the SA foreign affairs office in Beijing should have issued work permits, rather than business visas, to the 40 Chinese engineers, scientists and technicians who have been dismantling the plant since October.

AEC executive GM Lawrence Hyslop said the sale did not include the transfer of technology, nor did the AEC strike a deal with the Chinese to build and operate a titanium tube plant in SA. Furthermore, the sale had been approved by the SA Council for the Non-Proliferation of Weapons of Mass Destruction, except for three plant parts which were awaiting clearance.

"The (plant) had been standing idle for four to five years, and it was time to get cash for it."

Govt gives go-ahead for Eskom's outsourcing plan

55 BD 18/12/97

Robyn Chalmers

GOVERNMENT has agreed to allow Eskom to outsource some of its information technology services, after almost a year of negotiation, in what will be one of SA's largest such outsourcing contracts.

The decision was originally opposed by some stakeholders as it was seen as "creeping privatisation". After lengthy negotiations Eskom's restructuring and transformation committee approved the move which was endorsed by the public enterprises ministry.

Eskom spokesman Peter Adams said yesterday that Eskom had one of the largest information technology departments in the southern hemisphere, and the outsourcing contract would run to hundreds of millions of rands a year for about seven years.

"This will be the biggest contract that Eskom will award in at least a decade — the last power station contract (for Majuba) was awarded in the 1980s — and no other contract of this size is likely to be forthcoming until 2004 or 2005," he said.

Adams said that globally, information technology was progressing so rapidly that Eskom could not keep up. A decision was taken last year to begin outsourcing some functions to specialist organisations while retaining others.

Applications management, facilities management and supporting infrastructure would be outsourced, while, for example, information management and the design of information technology architecture would be retained.

Adams said Eskom approached a number of service providers last year, calling for proposals on what should be outsourced and how this should be done. Three of SA's biggest providers were short-listed to tender for the contract.

However, stakeholder opposition to the outsourcing move last year meant it was put on hold. Eskom was re-examining the proposals to see whether they were still valid and a decision was likely to be taken within six to 18 months after due consultation, he said.

Adams said it was possible that some employees within Eskom's information technology department could be absorbed by the designated service provider.

Should this be agreed upon by the parties involved, employees were likely to remain at Eskom's headquarters in Megawatt Park but would be paid and trained by the specialist provider.

The engagement would be flexible enough to accommodate any future government positions on technology strategy. "We will ensure that the process is transparent and address the transfer of skills, capacity building and black economic empowerment. Prior to concluding the outsourcing agreement, it will be subject to review by the (public enterprises) minister's office," he said.

Govt gives go-ahead for Eskom's outsourcing plan

55 BD 18/12/97

Robyn Chalmers

GOVERNMENT has agreed to allow Eskom to outsource some of its information technology services, after almost a year of negotiation, in what will be one of SA's largest such outsourcing contracts.

The decision was originally opposed by some stakeholders as it was seen as "creeping privatisation". After lengthy negotiations Eskom's restructuring and transformation committee approved the move which was endorsed by the public enterprises ministry.

Eskom spokesman Peter Adams said yesterday that Eskom had one of the largest information technology departments in the southern hemisphere, and the outsourcing contract would run to hundreds of millions of rands a year for about seven years.

"This will be the biggest contract that Eskom will award in at least a decade — the last power station contract (for Majuba) was awarded in the 1980s — and no other contract of this size is likely to be forthcoming until 2004 or 2005," he said.

Adams said that globally, information technology was progressing so rapidly that Eskom could not keep up. A decision was taken last year to begin outsourcing some functions to specialist organisations while retaining others.

Applications management, facilities management and supporting infrastructure would be outsourced, while, for example, information management and the design of information technology architecture would be retained.

Adams said Eskom approached a number of service providers last year, calling for proposals on what should be outsourced and how this should be done. Three of SA's biggest providers were short-listed to tender for the contract.

However, stakeholder opposition to the outsourcing move last year meant it was put on hold. Eskom was re-examining the proposals to see whether they were still valid and a decision was likely to be taken within six to 18 months after due consultation, he said.

Adams said it was possible that some employees within Eskom's information technology department could be absorbed by the designated service provider.

Should this be agreed upon by the parties involved, employees were likely to remain at Eskom's headquarters in Megawatt Park but would be paid and trained by the specialist provider.

The engagement would be flexible enough to accommodate any future government positions on technology strategy. "We will ensure that the process is transparent and address the transfer of skills, capacity building and black economic empowerment. Prior to concluding the outsourcing agreement, it will be subject to review by the (public enterprises) minister's office," he said.

Ministers slowly opening doors to private sector power distributors

(55) BD 31/12/97

Robyn Chalmers

TWO cabinet ministers have held out the prospect of private sector competition in the R25bn electricity distribution industry.

However, Minerals and Energy Minister Penuell Maduna and Provincial Affairs and Constitutional Development Minister Valli Moosa have indicated Eskom and municipalities will retain control for several years, until the turmoil in the sector is resolved.

The National Electricity Regulator and international electricity distributors, many of them the product of foreign privatisation, have called repeatedly for greater private sector involvement in the struggling sector.

The cabinet has voiced support for a restructuring of the industry. Once implemented, the industry would be consolidated into an as-yet-undecided number of regional electricity distributors, cost-effective tariffs would be introduced along with an electrification levy, and a capped tax implemented.

As part of the restructuring, Maduna said recently that independent power producers might be allowed to enter the electricity supply sector.

"We are grappling with the crises in the industry, but over time we will have to address the issue (of private sector involvement)," he said.

In a speech read on his behalf at a recent electricity conference, Moosa said there was much uncertainty about the restructuring process. He made it clear that the electricity supply industry would remain under public ownership for the time being, with municipalities and Eskom as equal partners. The situation would be reviewed later.

"Any changes should take place within the framework of government's policy on the restructuring of state assets," he said, referring to the National Framework Agreement, government and labour's blueprint for privatisation and restructuring.

Moosa said restructuring would not result in forced retrenchments and municipalities would continue to play a key role in the industry.

One concern for municipalities is the loss of electricity revenue which makes up more than 41% of local governments' total income. Moosa said they would still be able to contribute to the funding of other municipal services from surplus electricity revenue.

Association of Municipal Electricity Undertakings president Jan Malan called for regional electricity distributors to be floated and fully established by July 1 next year. All employees should hold shares and customers should ultimately also have access to shares in distributors.