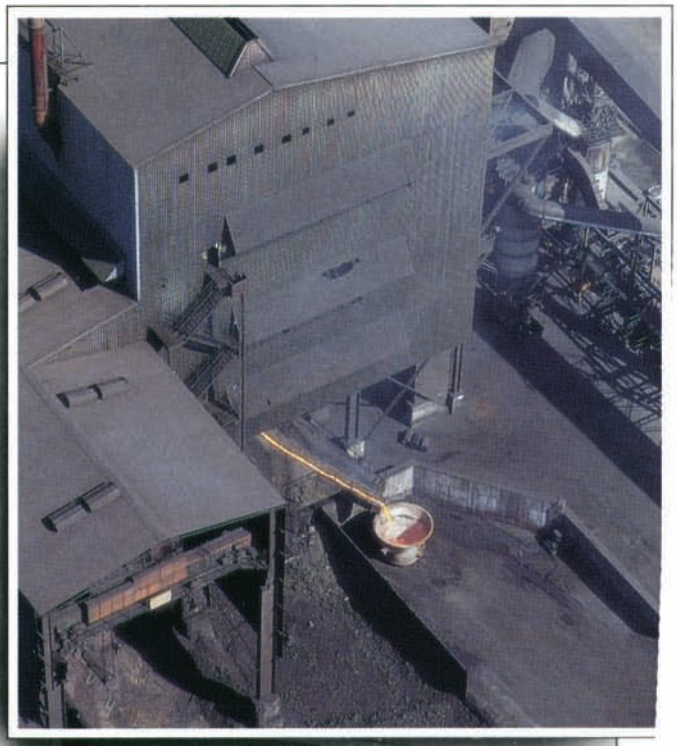
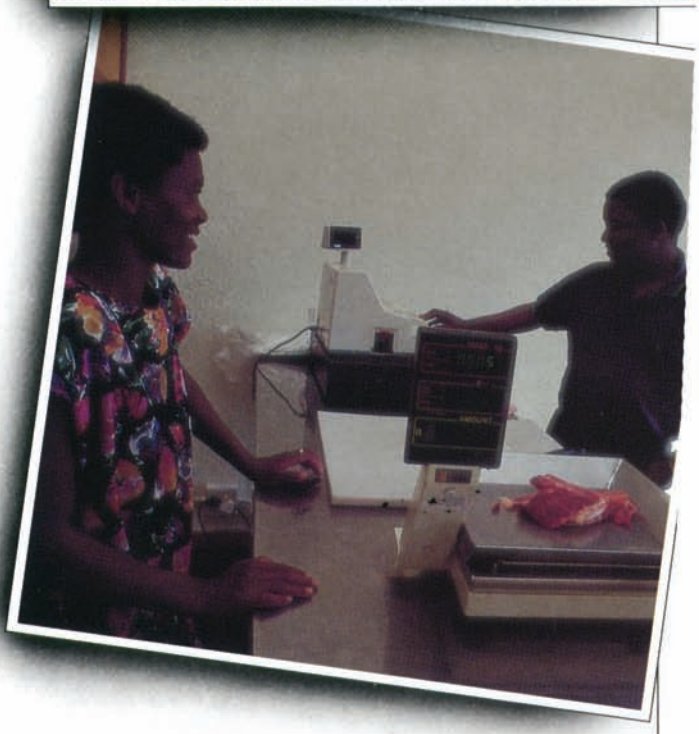
South Africa will have to compete in international markets, not only in commodities and processed raw materials, but also in manufactured goods, because that's where future growth in international trade is going to be. A large number of exporters are in heavy industry which is a large consumer of electricity. It is important that Eskom supplies them with high-quality electricity at a low price.

In the second instance, economic growth depends on strong emerging and small business sectors because this is where substantial job creation takes place. The provision of electricity to more people will stimulate entrepreneurs and create more job opportunities.

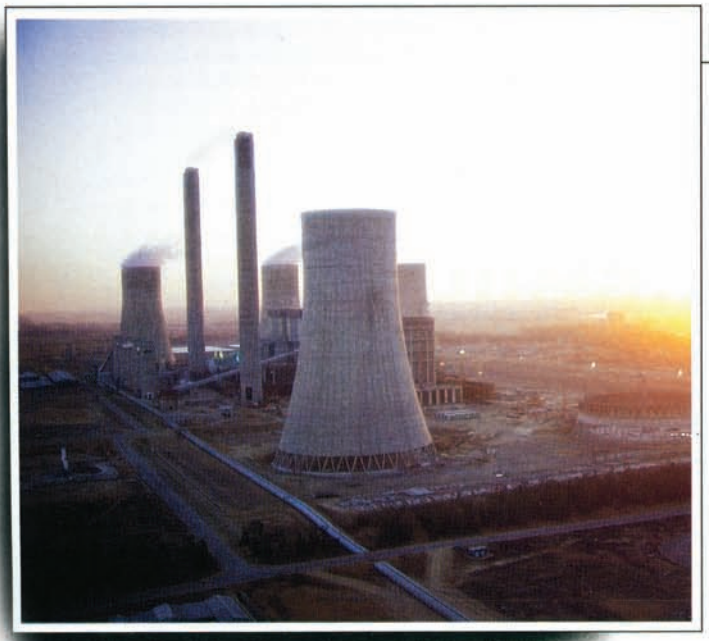
ESKOM





CONTENTS

PROFILE OF ESKOM



Eskom, South Africa's national electricity utility, supplies more than half of the total electricity consumed on the African continent and has grown into one of the largest utilities in the world.

At the end of 1991 Eskom's total assets stood at R40 245 million. Turnover for the year was R11 726 million and operating expenditure, including depreciation, was R7 173 million. Net interest and finance charges before amounts capitalised were R3 832 million. Net income was R988 million for the year. Net capital expenditure, including interest capitalised during the year, amounted to R3 335 million.

Eskom is managed on sound business principles. It is an independent, self-financing undertaking. It has no shareholders and is funded entirely from debt and retained earnings. It is divided into functional groups and business units, which ensures functional and geographic decentralisation.

Eskom operates under the Eskom Act of 1987 and the Electricity Act of 1987. The utility's activities are governed by the Electricity Council, which consists of representatives of consumers' interests and independent experts. The Management Board is the executive body responsible for the day-to-day running of Eskom and is appointed by the Council.

Eskom's 25 power stations have an installed capacity of 38 396 megawatts. It operates the only nuclear power station in Africa and the world's largest dry-cooled power stations. It is also a recognised authority on the use of coal of an extremely low grade for power generation.

The total network comprises 226 817 kilometres of power lines, operating at voltages as high as 765 kilovolts. Electricity is distributed countrywide and is exported to all neighbouring countries. Eskom imports power from Namibia when available.

Industry and business use 54% of the electricity generated in South Africa, mines 26%, households 16% and the railway system 4%. Eskom supplies most mines and many industrial users direct whilst 45% of its electricity is sold to municipalities and neighbouring countries who resell it to end-users.

Eskom's marketing thrust is towards bringing electricity, when appropriate and cost effective, to households and industries which are still using other energy sources. Approximately two thirds of the population do not have electricity at home.

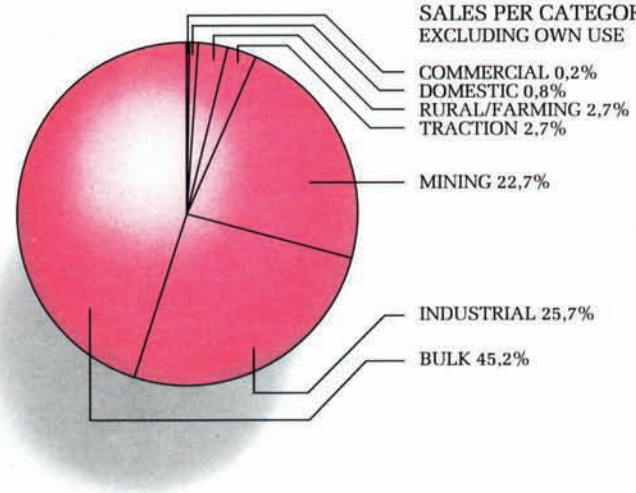
Eskom affords equal opportunities to all its 46 637 employees. Merit is the decisive factor in advancement and remuneration. All employees are encouraged to develop their potential through education, training and empowerment. Extra efforts are employed in uplifting disadvantaged individuals in order to enhance their contribution within the organisation and society at large.

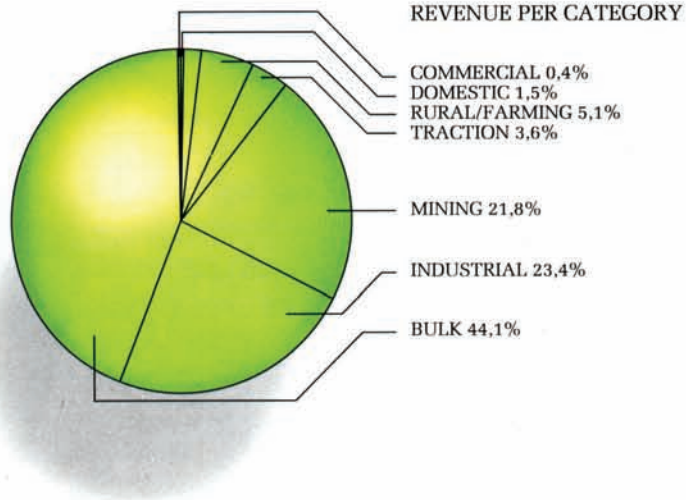
Eskom is committed to being an efficient and effective organisation, so as to be able to make electricity available to its customers at the lowest possible price. It is also committed to making electricity available to all in South Africa who want it and can afford it, and to supporting a regional transmission grid to encourage cooperation and accelerate growth in the subcontinent.

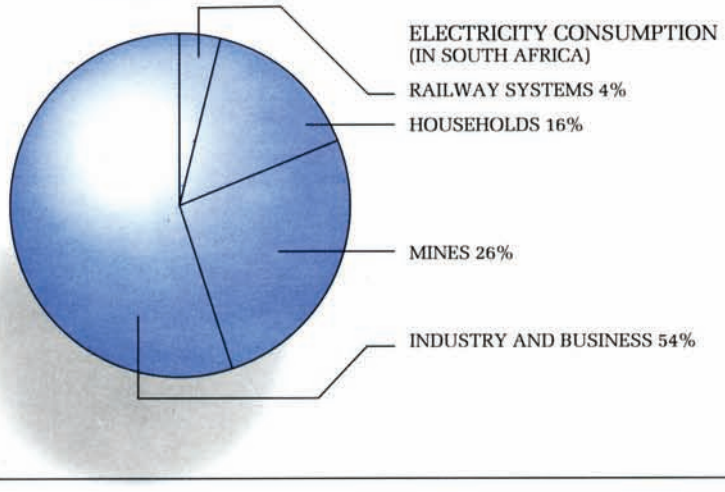
HIGHLIGHTS OF THE YEAR

	1991	1990	% Change 1990–91	% Average yearly change 1987–91
FINANCIAL				
Turnover (R million)	**11 726**	10 736	9,2	14,9
Net income (R million)	**988**	845	16,9	4,8
Fixed assets in commission, at cost (R million)	**39 990**	35 753	11,9	14,4
Works under construction[1] (R million)	**3 668**	5 771	–36,4	–13,9
Net capital expenditure (R million)	**3 335**	3 662	–8,9	–2,3
Net interest-bearing debt (R million)	**27 266**	26 590	2,5	7,0
Average price per kW.h sold (cents)	**8,46**	7,88	7,2	11,2
Average cost of coal burnt (rand per ton)	**25,70**	23,91	7,5	11,6
OPERATIONS				
Electricity sold (GW.h)	**138 687**	136 168	1,8	3,4
Coal burnt in power stations (Mt)	**70,5**	70,9	–0,5	3,7
Water consumed by power stations (Mℓ)	**237 660**	257 000	–7,5	–2,0
Peak demand on integrated system (MW)	**22 342**	21 863	2,2	4,1
	(21.06.91)	(29.06.90)		
ASSETS IN COMMISSION				
at 31 December				
Installed capacity (MW)	**38 396**	35 673	7,6	6,5
Assigned sent-out rating (MW)	**36 228**	33 843	7,0	6,3
Power lines (km)	**226 817**	220 112	3,0	5,9
STAFF EMPLOYED				
at 31 December	**46 637**	50 000	–6,7	–5,2

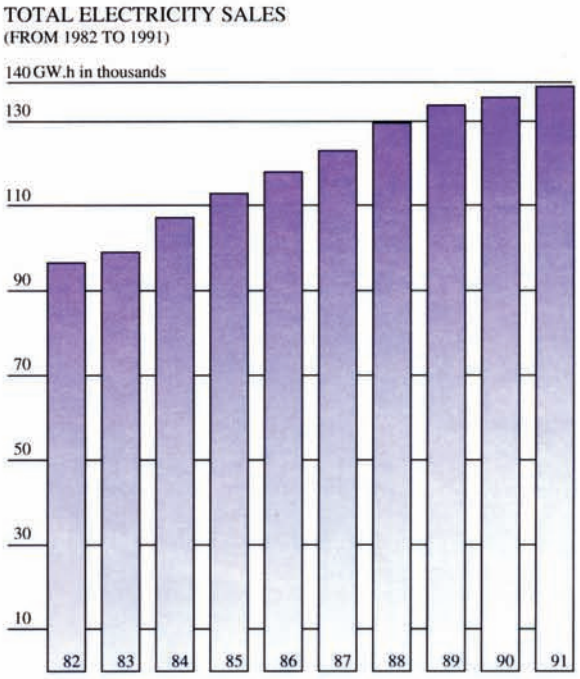
1. Includes construction materials.



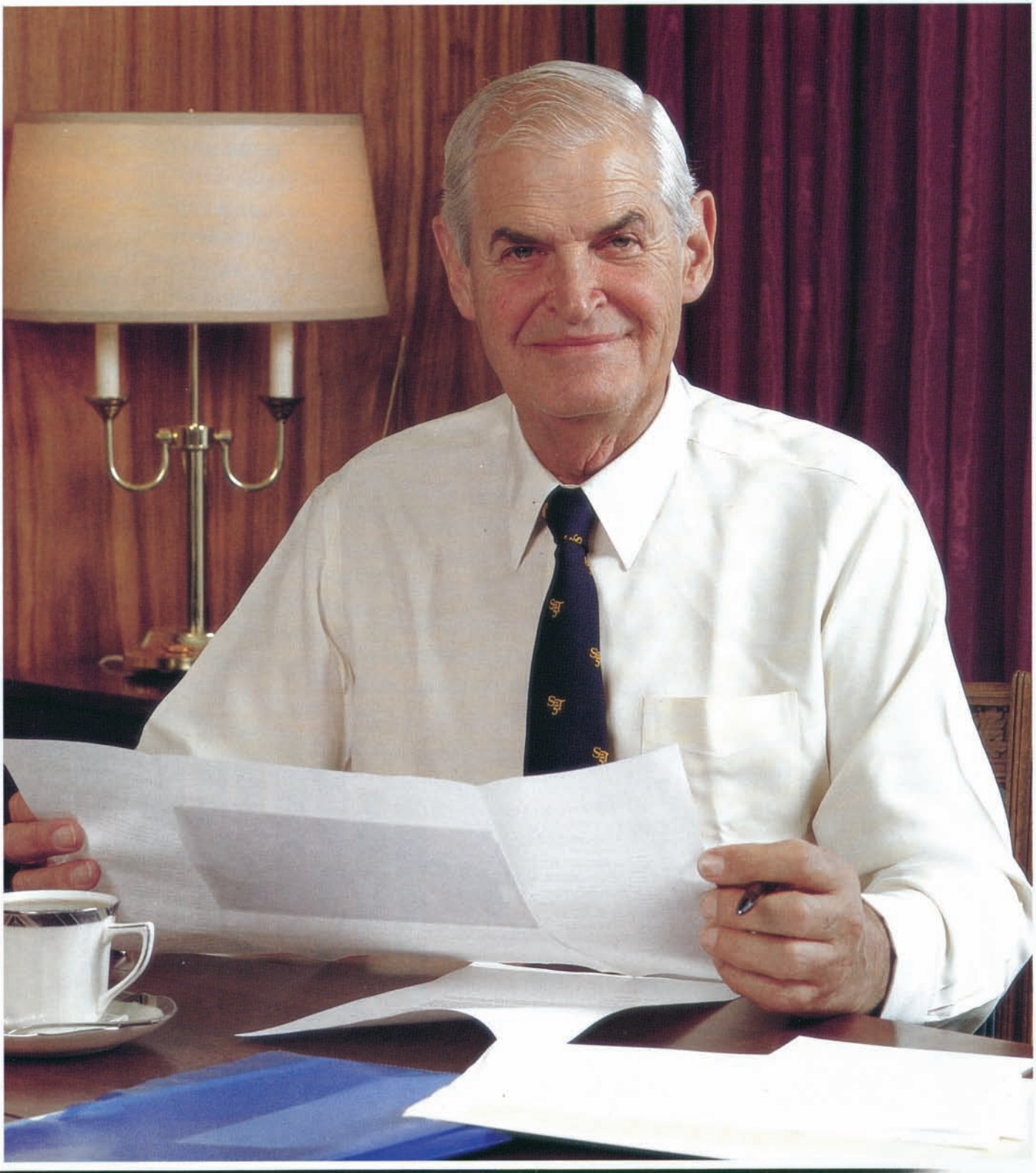




- Debt equity ratio improves from 2,68 to 2,49.
- Increase in price of electricity approximately 7 percentage points below the rate of inflation.
- Eskom commits itself to a 20% reduction in the real price of electrictiy over the next five years.
- Eskom commits itself to directly and indirectly electrifying 3 million households by 1996.
- Sales growth of 1,8% against a planned 0,3% in spite of negative economic growth.
- Improved productivity saves R198 million.
- Plant and system performance improves dramatically. Plant reliability up 35%.



CHAIRMAN'S REVIEW



Dr J. B. Maree
Chairman of the Electricity Council

1991 PERFORMANCE

The past year has been a difficult one for the South African economy, characterised by low growth, high interest rates and continuing high inflation. While the gross domestic product showed a negative growth of approximately 0,6%, electricity sales showed a modest increase of 1,8% which was slightly better than last year's 1,4%. Turnover for the year increased to R11 726 million, and the net income was R988 million compared to R845 million the previous year. The balance sheet strengthened as fixed assets increased by R1 375 million while the debt equity ratio improved to 2,49 from 1990's 2,68.

Eskom satisfied its funding requirements without putting pressure on the South African capital markets. Overseas financial markets started to open and it was possible to borrow modest amounts in Europe.

We decided to increase the price of electricity by 8% for 1991 which turned out to be some 7 percentage points below the rate of inflation (Consumer Price Index) for the year. However, due to tight financial management, productivity improvements and better than expected turnover, we were able to achieve a net income higher than budgeted. Non-payment for the supply of electricity by certain local authorities remained problematical. However, recent progress leaves one hopeful that solutions will be found which will result in normalisation of payments in the not too distant future. Provision has been made for arrears, the recovery of which will be addressed once payments return to normality.

ECONOMIC GROWTH

The developments on the political front are exciting and we are confident that sensible and workable solutions will be arrived at. The political process, however, needs to be supported and accompanied by a fast-growing economy. Economic growth will be based on two main thrusts: South Africa becoming internationally competitive, and stronger emerging and small business sectors.

Reduction in electricity price

In the first instance, South Africa will have to compete in international markets, not only in commodities and processed raw materials, but also in manufactured goods, because future growth in international trade is going to be mainly in manufactured goods. Exports originate in the main from the formal sector of our economy. A large number of exporters are in heavy industry which is a large consumer of electricity. It is important that Eskom supplies them with high-quality electricity at a low price. To this end a 14% reduction in the real price of electricity has already been achieved over the last five years. While South Africa already enjoys very cheap electricity, we clearly need to continue our efforts to run Eskom even more effectively and efficiently and further reduce the real price of electricity. Eskom is sufficiently confident of its future business performance to undertake to its customers that it will reduce the real price of electricity over the next five years by a further 20%. This reduction in the price of electricity will place many of our energy-intensive customers in a much stronger position to compete on international markets and thus stimulate the export of both raw materials and manufactured goods and encourage new investment in energy-intensive industries.

If we are to compete internationally we have to accept that we will all have to work as hard, if not harder, than our main competitors. We will not only have to develop an improved work ethic but a greater loyalty to the organisation for which we

work. Employers and employees need to work together to build strong organisations capable of competing on the world markets. In the process a strong economy will be built from which all can benefit. There are no short-cuts to economic success. Improved standards of living will only be achieved by hard work, and economic growth is dependent on using our management, labour and plant resources more efficiently and productively.

Electrification

In the second instance, economic growth depends on strong emerging and small business sectors because this is where substantial job creation takes place. Here also Eskom has a positive role to play. The development of the emerging business sector will be encouraged by the provision of electricity. Without electricity it is difficult for small business entrepreneurs to be productive, grow and be effective participants in the economy. The provision of electricity to more people will stimulate entrepreneurs and create more job opportunities and, at the same time, substantially improve people's quality of life.

We need to bring the benefits of electricity to as many people as possible. This can only be achieved if it is done on a viable basis. It is therefore absolutely clear that any electrification programme can only be achieved if the community wants it and is prepared to pay for it. It is also clear that communities need to be involved in the planning and provision of electricity to them. Eskom has an important direct and indirect role to play in the electrification process in our country and is actively engaged in all its aspects.

ENVIRONMENT

Environmental issues have emerged as being of critical importance, and Eskom has fully accepted its responsibility in this respect. The challenge we face in Africa is to make the emerging international concept of "sustainable development" an integral part of our business practice.

Pressure for high standards of environmental performance in all areas of business continues to increase. Even if the economy remains depressed, legislative pressures coupled with growing sensitivity to the market place guarantee that environmental issues will continue to affect our activities in the future. We must promote economic development while being mindful of the environmental constraints within which we operate.

RESTRUCTURING

Because we recognised the need to focus more specifically on efficiency and the needs of our customers, an in-depth study of an appropriate structure for our organisation was undertaken. Towards the end of the year a new structure was introduced. We believe that we will now be better able to tackle the tasks that lie ahead and further improve the efficiency of the organisation.

OUTLOOK

As our country's international relations normalise, South Africa will take up its rightful place as the economic power of the region. African countries are looking more to the South and the large organisations are already identifying the various opportunities that will arise as doors open in the rest of Africa. Eskom is actively exploring methods of achieving closer co-operation with the countries of southern Africa.

Regarding the outlook for the coming year, it is anticipated that while the economy will show some

improvement, it will be modest. We are thus planning for a small increase in sales. As a number of capital projects will come to an end we believe that we shall have little difficulty in raising the required funds in the financial markets. Our balance sheet will continue to strengthen.

Eskom will not only continue its efforts to be a good employer but will continue to further the development of our people's potential, especially those previously disadvantaged because of colour or gender. Training will remain a high priority. We believe that we are well equipped to meet the challenges facing all large organisations during the emergence of the new South Africa.

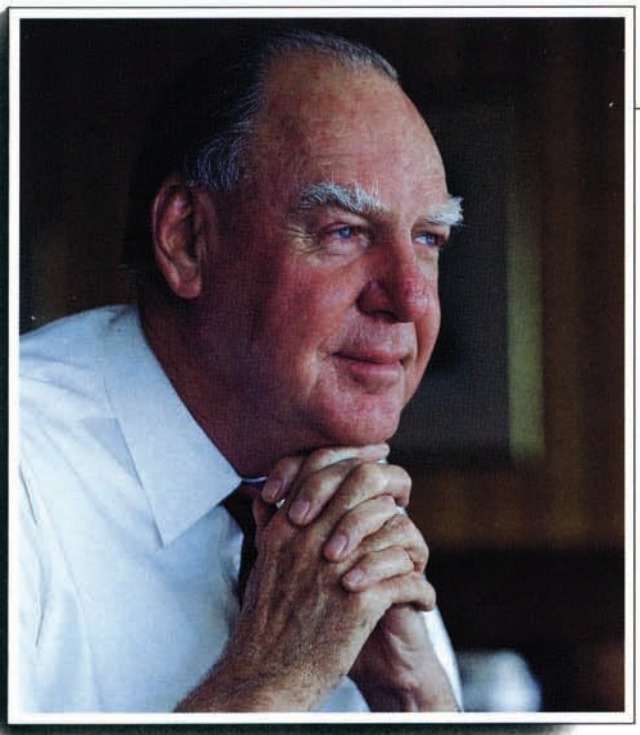
ACKNOWLEDGEMENTS

Our achievements are due to the combined efforts of the Electricity Council, the Management Board under the leadership of Dr Ian McRae, and all our staff. I cannot thank them enough for their loyalty, dedication and hard work. I also wish to thank Minister Dawie de Villiers for his guidance and advice. During the year Mr Jan Haak retired from the Council and I thank him for his contribution during his period of office. I welcome Mr Archie Nkonyeni and look forward to working with him.

We have many excellent people in our organisation and I am confident that with their support, Eskom will not only achieve the goals it has set for itself in 1992, but will also continue to go from strength to strength in the future.

John Maree
5 March 1992

CHIEF EXECUTIVE'S REPORT



Eskom is directing its efforts towards specific goals which are considered essential to its long-term success. These goals are monitored by means of indicators of our business performance.

The restructuring of the organisation announced at the end of 1991 was designed to support the electrification programme, accelerate harmonisation with the country's changed socio-political climate, focus even more sharply on marketing and customer care and generally remove any obstacles standing in the way of achieving our corporate goals to keep pace with the changes taking place in the country. Although the implementation of the revised structure will be spread over a few years, the new impetus should become noticeable immediately.

INCREASED SALES

Eskom's sales for 1991 were 138 687 GW.h which represents a growth of 1,8% against a planned 0,3%. In 1990 sales were 136 168 GW.h, with a growth rate of 1,4%. Part of the success achieved in increasing sales can be attributed to the growth incentives which Eskom has offered to industry and other supply authorities. The past two years' performance is considered to be satisfactory in view of the economy's negative growth in both years.

CUSTOMERS

In 1991 Eskom recorded 38 051 new direct domestic connections, 16 722 more than 1990's 21 329. For 1992 we are planning to connect 164 000 customers, of which the greater part will be households in less developed areas.

The electrification programme is gathering momentum, with 280 projects in hand, involving in excess of 300 000 households. Customer service continues to improve, in particular the Agrelek Advisory Service for farmers.

Eskom's objective over the next five years is to supply an additional 700 000 direct domestic customers. Eskom is also committed to facilitating domestic electrification by other supply authorities which do not fall within the Eskom supply area.

INTERNATIONALLY COMPETITIVE ELECTRICITY PRICE

The average price of electricity increased to 8,46 cents per kilowatt hour, up an effective 7,2% on 1990's price of 7,88 c/kW.h. Against an inflation rate of some 15%, this is a significant reduction in the real price of electricity. The 9% increase for 1992 will continue the trend of reducing the real price of electricity. Over the past five years the price has declined by about 14%. The further 20% decrease in the real price of electricity over the next five years to which Eskom has committed itself will enable industries which are large electricity consumers to place their products competitively on the international markets.

Eskom's price of 8,46 cents per kilowatt hour (approximately 3,06 US cents per kW.h) is rated as one of the lowest in the world.

This boon to the South African economy is made possible among other things by Eskom's steadily increasing productivity, translating to a monetary value of R198 million for 1991. The coal mining industry's exceptional efforts to contain costs and improve productivity also contributed by keeping increases in the price of coal, one of our main expenditure items, well below the rate of inflation.

FINANCIAL HEALTH

The 1991 turnover was R11 726 million, which yielded a net income of R988 million. Accumulated reserves increased to R10 588 million (1990: R9 600 million).

We are achieving the goal of a stronger balance sheet as illustrated by the improving debt equity ratio of 2,49 in 1991 (2,68 in 1990). This can be attributed to improved productivity, better use of resources and contained capital expenditure. This process of strengthening Eskom's financial position will continue into the rest of the 1990s.

Capital project management

Power station construction projects continued to be well managed. This is reflected in the completion of Matimba power station during 1991 with total expenditure within 0,3% of budget.

SUSTAINED HIGH PLANT PERFORMANCE

The past year was very pleasing from the point of view of plant performance. All plant performance indicators have shown a satisfactory trend. Most indicators exceeded the targets for the year. Plant reliability improved by 35% and exceeded target by 1%. Plant availability is somewhat below target due to increased planned maintenance.

Availability rose from 75% to 76% while thermal efficiency improved from 33,7% to 34,3%. Supply interruptions improved by 38% on 1990 from 25 system minutes to 15 system minutes. This improvement is reflected by a 27% reduction in the average severity of the 28 supply interruption incidents which emanated from the transmission system in 1991.

A coordinated programme to improve the performance of transmission lines and power plant at transmission substations is in progress. This includes a comprehensive audit on the current status of the total transmission system to identify potential problems.

The distribution system performance, measured by the supply loss index, showed a 22,1% improvement and the reticulation system performance improved by 30% on 1990. In both cases performance has exceeded targets. The improvements arise from the concern to reduce the inconvenience to our customers.

PRODUCTIVE, HARMONIOUS WORKFORCE

Eskom has to develop an effective workforce drawn from people with diverse backgrounds who have to work harmoniously together. Diversity can cause cultural conflict and hamper overall alignment to corporate goals. The organisation's productivity improvements are proof that Eskom is managing diversity effectively. Although socio-political changes are creating stressful situations and new challenges, a relatively healthy industrial relations climate was maintained during the year

and no serious disputes arose. To a large extent this can be attributed to regular contact and meetings with our own employees and the ten trade unions representing 70% of Eskom's workforce.

A dispute in connection with the surplus staff arising from streamlining exercises as well as the mothballing of three power stations was avoided through lengthy negotiations. A flexible agreement was entered into which, inter alia, provides affected employees with alternative options. Eskom's objective is to retrain and redeploy to avoid forced retrenchment as far as possible.

Our policy of attempting to develop all employees to their full capability has ensured that people are becoming more productive and responsible.

Over the last number of years Eskom has engaged in various efforts and activities to support school education in disadvantaged communities from which we draw our labour force.

To further enhance our technical skills base in the future, some Eskom artisans are being trained in Germany as master craftsmen, so that they can impart their knowledge to others on their return.

RESPONSIBLE CORPORATE CITIZEN

Corporate social investment

Eskom has concentrated its social investments on areas which will benefit education so as to enlarge the skills market and to create economically active and stable communities which will support the expansion of the consumer market. Other areas of investment include support to health education and facilities in areas where our employees reside.

The environment

During the year the recommendations of the 1990 environmental management audit were vigorously pursued. Corporate policies and strategies on environmental management were approved and the application of research and resources was increased to improve management systems and plant performance.

The focus will now move to compliance auditing and the quantification of environmental impacts.

As a co-founding member of the Industrial Environmental Forum (IEF), Eskom played a major role in the arrangements and deliberations of the Southern African International Conference on Environmental Management (SAICEM). SAICEM is the southern African region's preparation for the UNCED (United Nations Conference on Environment and Development) Earth Summit, planned for June 1992 in Brazil. During the year Eskom became a signatory to the Business Charter on Sustainable Development promoted by the International Chamber of Commerce (ICC).

Eskom's second Environmental Scientific Forum was held in October 1991. As a result of the forum's success Eskom was requested to facilitate the creation of a National Environmental Scientific Forum.

During the year substantial progress was made in joint cooperative research projects with a wide variety of technical organisations – local and international.

The Eskom Energy Effective Design Awards for effective and efficient use of energy are now in their fifth year and increasingly instil a sense of responsibility towards energy efficiency on the customer side, while we shoulder our own responsibilities on the supply side.

CAPACITY MANAGEMENT

At the present and foreseeable growth rates and in view of our excess capacity, the current assigned

sent-out capacity of 36 228 MW will be adequate to supply demand up to the year 2000. During 1991, 5 061 MW capacity was in reserve storage or mothballed. If demand grows according to the most optimistic scenario, new plant will probably be required by the winter of 2000.

Work continued during 1991 on assessing potential coal fields within South Africa and the optimising of the plant design and siting of the next coal-fired power station.

A number of studies on obtaining capacity from sources outside South Africa were carried out. A study on interconnecting the Eskom and Zimbabwe Electricity Supply Authority networks showed substantial benefits to the two utilities. If this link becomes a reality, electricity could be exchanged and ultimately obtained from various sources on the Zambesi River and Inga on the Zaire River.

Negotiations on the reconstruction of the Cahora Bassa power lines into South Africa continued during the year. It is hoped that this work can begin in 1992.

Contacts were maintained with Botswana relating to a possible future coal-fired power station in that country with exports to South Africa. Discussions were also held with Namibia on the possibility of importing power from a future power station on the Cunene at Epupa.

REGIONAL COOPERATION

Eskom's engagement in the development of the southern African electricity infrastructure gained momentum during 1991, facilitated by the increasing normalisation of international relationships in the region. The prospect of a southern African power grid is fast becoming a reality.

The continuation of Eskom's traditional close working relationship with SWAWEK will continue with the further exploitation of the hydro-electric potential of the Cunene River in the near future. A study will be launched early in 1992 by the electricity authorities of Zaire, Angola and Namibia and Eskom on the feasibility of linking Societe Nationale d'Electricite's hydro-electric power station at Zaire's Inga Falls to consumers in the south, via a high-voltage transmission line through Angola. The potential exists to link in the Capanda hydro-electric scheme in Angola, provide a north-south backbone for a national power grid in Angola, and include the Botswana power system in the link-up. A new line is to be built between Cahora Bassa and Harare.

Ever closer cooperation is hoped for with the Zimbabwe Electricity Supply Authority, the Zambian Electricity Supply Corporation, Electricidade de Mocambique and Malawi's Electricity Supply Commission during 1992.

ACKNOWLEDGEMENTS

My sincere thanks to the Electricity Council and its Chairman, Dr John Maree, for successfully steering Eskom through another difficult year, and to the management and staff without whose contribution all our efforts would be in vain. I welcome Allen Morgan to the Management Board as Executive Director Marketing and Electrification from January 1992.

Ian McRae
5 March 1992

ELECTRICITY COUNCIL

DR J. B. MAREE OMSG SSAS (67)
Chairman
D.Com. (Honoris causa) (Stell.), B.Com. (Witwatersrand). Chairman of Nedcor, director of Barlow Rand Ltd, Old Mutual and the Development Bank of Southern Africa. Member of the State President's Economic Advisory Board and its Executive Committee. Appointed to the Electricity Council in 1985.

G. P. CROESER (54)
B.Com. (Stell.). Director general of the Department of Finance. Appointed to the Electricity Council in 1989.

DR J. W. L. DE VILLIERS OMSG (62)
Pr. Eng., D.Sc. (Stell.). Chairman of the Atomic Energy Corporation. Appointed to the Electricity Council in 1985.

A. B. DICKMAN (61)
B.Com. (Hons.) (Witwatersrand). FIBSA. Honorary professor of Economics at the Wits Business School and economic consultant. Appointed to the Electricity Council in 1985.

PROF. C. R. M. DLAMINI (40)
LL.D. (UZ) and LL.D. (Pret.). Registrar Academic at the University of Zululand. Appointed to the Electricity Council in 1990.

DR D. KONAR (38)
D.Com. (Unisa). M.A.S. (Illinois, USA), CA (SA). Director of SA Reserve Bank, Board member of the SABC and trustee of The Independent Development Trust. Appointed to the Electricity Council in 1985.

PROF. I. J. LAMBRECHTS (49)
D.Com. (Stell.), M.B.A. (Stell.). Professor of Business Economics at the University of Stellenbosch. Chairman of the Subcommittee for Energy of the Afrikaanse Handelsinstituut. Appointed to the Electricity Council in 1985.

M. LEKOTA (34)
B.Com. (Accounting) (UNIN). M.B.A. (Rutgers, New Jersey, USA). Executive director of the National African Federated Chamber of Commerce. Appointed to the Electricity Council in 1990.

B. J. LESSING (55)
Pr. Eng., B.Sc., B.Eng. (Stell.). FITSA. Chief executive of Spoornet. President of the Institute of Transport in Southern Africa. Appointed to the Electricity Council in 1988.

J. A. LOUBSER (60)
Pr. Eng., B.Sc. (Elec. Eng.) (Stell.). City Electrical Engineer of Benoni. Appointed to the Electricity Council in 1990.

Back row: *F. J. Malan, Prof. C. R. M. Dlamini, Prof. I. J. Lambrechts, Dr J. B. Maree, Dr I. C. McRae, A. B. Dickman, A. S. Nkonyeni, B. J. Lessing, R. C. Webb.*
Front row: *A. A. Sealey, Prof. H. C. Viljoen, Dr J. W. L. de Villiers, Dr D. Konar, Dr D. C. Neethling, Dr V. E. Solomon (alternate member for G. P. Croeser), J. A. Loubser. Absent: M. Lekota, D. B. Mostert, Prof. J. L. Weyers*

F. J. MALAN (63)
M.Sc. (Agric.) (Stell.). Wine farmer. Chairman of the SA Agricultural Union's Electricity Committee. Chairman of the Rural Foundation. Appointed to the Electricity Council in 1985.

DR I. C. McRAE (62)
Pr. Eng., D.Sc. (Honoris causa) (Witwatersrand), B.Sc. (Mech. Eng.) (Witwatersrand). Fellow of the College of Engineers of the SPE. Director of Atomic Energy Corporation. Chief executive of Eskom and chairman of the Management Board. Appointed to the Electricity Council in 1985.

D. B. MOSTERT (54)
B.Sc., B.Eng. (Mech.) (Stell.), M.B.A. (PU vir CHO). Group chief executive of Dorbyl. Appointed to the Electricity Council in 1990.

DR D. C. NEETHLING (58)
Sci. Nat., Ph.D. (Natal), B.Sc. (Hons.) (Pret.), B.Sc. (Stell.). Chief executive of the National Energy Council. Appointed to the Electricity Council in 1985.

A. S. NKONYENI (55)
B.Com. (Cape Town). Executive chairman of NGA Group. Vice-chairman of African Bank Limited. Deputy president of National African Federated Chamber of Commerce. Appointed to the Electricity Council in 1991.

A. A. SEALEY (59)
B.Sc. (Eng.) (Witwatersrand). Deputy chairman of Rand Mines Limited and chairman of the Coal and Base Minerals Division. Executive director of Barlow Rand Limited. Appointed to the Electricity Council in 1988.

DR V. E. SOLOMON (63)
(Alternate member for G. P. Croeser)
Ph.D. (Rhodes), B.Com. (Hons.)(RAU), B.A. (Hons.) (Unisa). Chief director of Monetary Affairs. Appointed to the Electricity Council as alternate member in 1991.

PROF. H. C. VILJOEN (54)
Pr. Eng., Ph.D. (Eng.) (Stell.). Dean of the Faculty of Engineering at the University of Stellenbosch and chairman of the SABC Control Board. Appointed to the Electricity Council in 1986.

R. C. WEBB (61)
Director of companies. Involved with the Small Business Development Corporation. Appointed to the Electricity Council in 1985.

PROF. J. L. WEYERS (61)
D.Litt. et Phil. (Unisa). Vice-principal Planning of Unisa. Appointed to the Electricity Council in 1986.

MANAGEMENT BOARD

As at 31 December 1991

DR I. C. McRAE (62)
Chairman
Pr. Eng., D.Sc. (Honoris causa) (Witwatersrand), B.Sc. (Mech. Eng.) (Witwatersrand). Fellow of the College of Engineers of the SPE. Chief executive of Eskom. Joined Eskom in 1947. Appointed to the Management Board in 1985.

B. T. CROOKES (42)
B.Com. (Hons.) (Unisa), N.Dip.T. (Mech. Eng.). General manager Transmission. Joined Eskom in 1969. Appointed to the Management Board in 1991.

M. L. DAVIS (34)
B.Com. (Hons.) (Rhodes), CA (SA). General manager Finance. Joined Eskom in 1986. Appointed to the Management Board in 1988.

R. A. FORBES (59)
Pr. Eng., M.B.L. (Unisa), B.Sc. (Elec. Eng.) (Witwatersrand). General manager Distribution and Marketing. Joined Eskom in 1949. Appointed to the Management Board in 1985.

A. J. HAM (54)
Pr. Eng., B.Sc. (Mech. Eng.) (Natal). General manager Engineering. Joined Eskom in 1966. Appointed to the Management Board in 1987.

DR G. F. LINDEQUE (50)
D.Phil. (PU vir CHO). General manager Human Resources. Joined Eskom in 1975. Appointed to the Management Board in 1987.

L. J. MESSERSCHMIDT (47)
Pr. Eng., B.Sc. (Mech. Eng.) (Pret.), M.B.L. (Unisa). General manager Chief Executive Office. Joined Eskom in 1967. Appointed to the Management Board in 1990.

P. M. SEMARK (47)
Pr. Eng., B.Sc. (Mech. Eng.) (Cape Town), B.A. (Unisa). General manager Generation. Joined Eskom in 1972. Appointed to the Management Board in 1987.

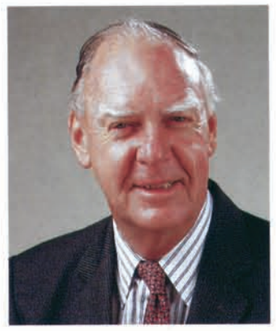
J. P. VAN DEN BERGH (45)
Pr. Eng., B.Sc. (Mech. Eng.) (Pret.). B.Com. (Unisa). General manager Management Services. Joined Eskom in 1970. Appointed to the Management Board in 1988.

New member as from 1 January 1992
A. J. MORGAN (44)
Pr. Eng., B.Sc., B.Eng. (Elec.) (Stell.). Executive director Marketing and Electrification. Joined Eskom in 1971. Appointed to the Management Board in 1992.

ORGANISATIONAL STRUCTURE

As from January 1992

CHIEF EXECUTIVE
DR I. C. McRAE



Executive Director
GENERATION

J. P. VAN DEN BERGH

- Power station operations
- Fuel and water management
- Generation technology
- Accounting
- Human resources
- Project management

Executive Director
TRANSMISSION

B. T. CROOKES

- Transmission operations
- Transmission operating and maintenance
- Power systems planning
- Network technology and projects
- National protection, telecommunications, measurement and control
- Finance
- Human resources

Executive Director
SALES & CUSTOMER SERVICE

R. A. FORBES

- Distributors 1 - 5:
  - Human resources
  - Finance
  - Engineering
  - Sales and customer services
  - Marketing
  - Electrification
- Change management and support systems

Executive Director
MARKETING & ELECTRIFICATION

A. J. MORGAN

- Marketing
  - Strategy
  - Pricing policy
  - Promotions
- Electrification
  - Planning
  - Negotiations
  - Project management
- New business development

Executive Director
CHANGE PROJECT

L. J. MESSERSCHMIDT

Executive Director
FINANCE & SERVICES

M. L. DAVIS

- Investor relations
- Treasury
- Insurance
- Corporate finance
- Financial planning
- Information technology
- Business services
- Finance management
- Commercial
- Consulting services
- Human resource services

Executive Director
CORPORATE AFFAIRS

P. M. SEMARK

- Strategic directorate
- Audit services
- Legal services
- Information management
- Board and Council support
- Rotek
- Communication
- Confidential investigations
- International directorate

Executive Director
HUMAN RESOURCES

G. F. LINDEQUE

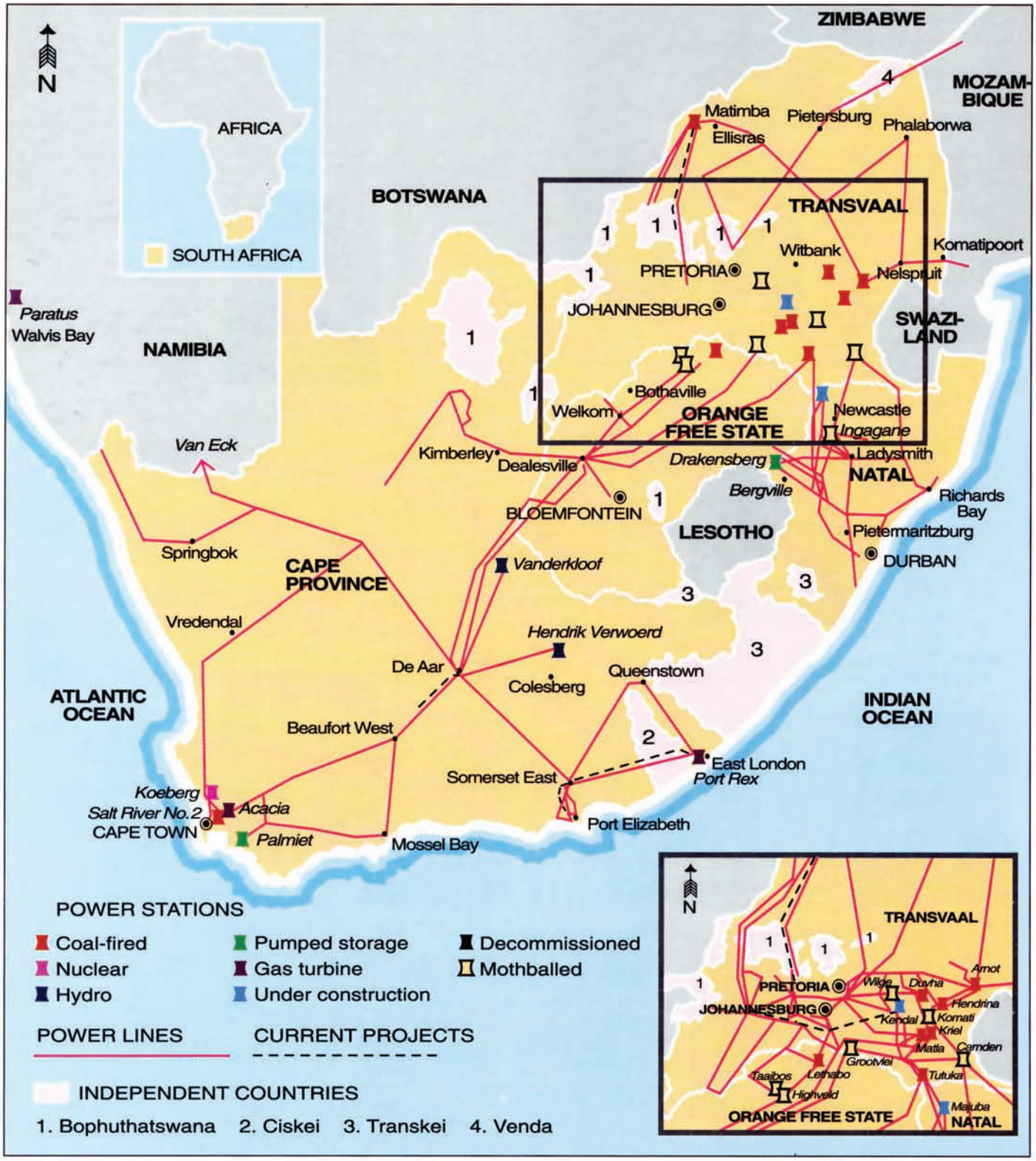
- Strategic positioning of HR management in a new SA
- Staffing
- Industrial relations
- Compensation and benefits
- HR development
- Technical skills development
- Equal opportunities
- Health and medical services

Executive Director
TECHNOLOGY

A. J. HAM

- Technology strategy and policy
- Nuclear safety
- Technology consultants
- Technical audit
- Research and investigations
- Environmental policy and strategy
- Group services

THE NATIONAL GRID



FINANCIAL RESULTS

CONTENTS

FINANCIAL REPORT

FINANCIAL PERFORMANCE

Turnover amounted to R11 726 million for the year (1990: R10 736 million). Operating expenditure was R7 173 million (1990: R6 366 million) and net interest and finance charges were R3 240 million (1990: R3 302 million), leaving a net income of R988 million (1990: R845 million) after abnormal items of R325 million (1990: R223 million). Accumulated reserves stood at R10 588 million at the end of 1991 (1990: R9 600 million).

Year on year revenue increased by 9,2% of which the price increase accounts for approximately 8%. Growth in GW.h sold for the year remained low at 1,8% (1990: 1,4%). Continuing efforts to increase revenue through proactive marketing and electrification activities together with price incentive schemes, combined with the expected economic upturn late in the latter half of 1992, could result in improved growth in 1992.

Total operating expenditure per kW.h sold rose by 10,5% in 1991, from 4,68 cents per kW.h to 5,17 cents per kW.h. Tighter financial control, better asset management and ongoing improvements in the productivity programme have enabled Eskom to offset some of the inflationary pressures on operating costs.

Net interest and finance charges before amounts capitalised were R58 million higher than in 1990, reflecting an increase of 1,5% for the year which is in line with the increase in net interest-bearing debt.

Abnormal items amounted to R325 million for the year (1990: R223 million), of which R291 million (1990: R95 million) relates to the provision for arrear debts.

Net operating income covered net interest and finance charges 1,41 times (1990: 1,32) whilst the net interest-bearing debt equity ratio is 2,49 (1990: 2,68). The long-term financial plan is aimed at improving these ratios.

Net capital expenditure was R3 335 million (1990: R3 662 million). During the year three generating sets at Kendal and one at Matimba were taken into service. The first generating set at Majuba, which is substantially complete, was transferred from works under construction to plant at mothballed power stations. The reduction in net capital expenditure and the decrease in works under construction from R5 615 million to R3 541 million reflect the declining capital expansion programme.

1992 PRICE INCREASE

Eskom's pricing strategy has been to maintain price increases below the ruling inflation rate and ensure stable and predictable price increases. In line with Eskom's commitment to reduce the real price of electricity, the 1992 price increase was kept to 9%. This low increase follows the pattern of previous years' increases which have been below the inflation rate. This has resulted in a reduction of 14% in the real price of electricity over the past five years.

Eskom's role in the economic and social development of the country is encapsulated by its compact with customers in which it has committed itself to reducing the real price of electricity by a further 20% over the next five years. This will be achieved by continuing tight financial control and discipline and improving asset management and productivity.

INSURANCE RISK MANAGEMENT

Eskom continues to pursue a policy of managed risk and self-insurance of selected risks. Costs, benefit and risk information relating to self-insurance is continually updated and reviewed in accordance with the latest assessment of asset values and risk exposures. Certain risks, such as riot and nuclear,

are insured to the extent that cover is available in the commercial insurance market. For construction projects, insurance is arranged which covers Eskom and all its contractors, subcontractors and suppliers on site.

Considerable effort is employed to ensure that the risk of loss or damage is minimised. There is a safety and risk management programme directed at staff and contractors in order to avoid occupational injuries and occupational diseases. This risk management awareness extends beyond the pure brick and mortar approach to assets and includes greater emphasis on environmental awareness. The risk management programme forms an integral part of an ongoing process of identification, appraisal, evaluation and measurement of exposures at risk.

In all instances, assets are valued on a replacement basis for insurance and risk management purposes and management is satisfied that there is no significant unprotected risk exposure.

FINANCIAL RISK MANAGEMENT

The financial risks to which Eskom is exposed have considerable impacts, not only on Eskom and its customers, but also on the financial markets of the South African economy. Eskom has therefore developed a sophisticated philosophy of financial risk management which takes cognisance of the maturity, interest rate profile and currency denomination of its significant debt finance.

An important facet of this risk management approach is the asset and liability committee which was established in 1990. The development of an integrated system to achieve its objectives is progressing satisfactorily.

Eskom actively manages its price, credit and currency risks and interest rate exposures within appropriate risk parameters. The current risk management strategies include the use of a variety of instruments including forward exchange contracts, options, commodity futures, interest rate swaps, interest rate caps and forward rate agreements in both the local and foreign markets within strictly controlled limits. This comprehensive policy has resulted in significant savings in financing costs. With the emergence of credit ratings, it is Eskom's policy to invest only in the highest quality debt instruments which are independently rated. Investments are not made in listed equities.

Funds received from US dollar swap cash inflows and prefunding activities are invested pending their use for repayment of loans and for funding operating and capital expenditure. Thus, the treasury manages funds as a single pool consisting of debt and investments.

To reflect the economic reality of this strategy more clearly, investments of R4 445 million (1990: R4 066 million) have been deducted from borrowings to arrive at net interest-bearing debt on the balance sheet. This net interest-bearing debt amounted to R27 266 million at the end of 1991 (1990: R26 590 million).

Some 79% (1990: 73%) of the borrowings are in fixed rate instruments. Hedging strategies which provide protection against adverse interest rate movements are in place. Some 59% (1990: 61%) of the borrowings are from domestic sources. Foreign borrowings include placings, bonds and project finance. The maturity structure for all borrowings indicates that 34% (1990: 28%) matures within the next three years. The shortening of the maturity period relates to a change in the assumption regarding payment of foreign debt.

The successful management of the financial risks implicit in the debt and the markets is reflected in the reduced sensitivity to a 1% increase in South African interest rates. This sensitivity is approximately R40 million at current borrowing levels for a full calendar year in comparison with R70 million

and R110 million at the borrowing levels in 1990 and 1989 respectively.

1991 FUNDING PLAN

Higher than budgeted sales and lower operating and financing costs, together with reduced capital expenditure, generated a greater than expected net inflow of funds. This was offset to some extent by lower than anticipated swap cash inflows which had the effect that borrowings were R1 027 million lower than planned. This lower borrowing programme is reflected in the table below:

	Rm		
	Planned	Actual	Variance
Local capital market	1 600	1 282	(318)
Money market	309	(643)	(952)
Investments realised	385	479	94
Foreign loans	250	407	157
Foreign project finance	300	292	(8)
	2 844	1 817	(1 027)

Capital market funds were raised in advance of Eskom's requirements as a result of a favourable interest rate scenario.

The easing of the political situation and the resultant improved perception overseas have enabled Eskom to borrow considerably more in the way of foreign loans than anticipated.

The reduced funding requirement for 1991, together with prefunding activities, resulted in a surplus of funds. These funds were used mainly to redeem money market liabilities and invest in money market assets for use in 1992.

1992 FUNDING PLAN

The funding requirement for 1992 is lower than that planned for 1991 as a result of lower capital expenditure offset by increases in repayment of foreign debt. The plan for 1992 is reflected in the table below:

	Rm
Local capital market	730
Money market	172
Investments realised	574
Foreign loans	680
Foreign project finance	284
	2 440

Eskom is in a position of surplus generating capacity and as such will not incur capital expenditure of the magnitude experienced in the past few years. The projected funding requirements during the 1990s indicate that Eskom will move to a relatively low requirement by the middle of this period. It is expected that the capital market offtake in these years will be substantially below that of the past few years and that foreign loans will begin to play a greater role as a source of funds than in recent times. Eskom will, however, continue to support liquidity in the financial markets even in periods when its funding requirement is low.

VALUE CREATED

Value added is the result of acquiring and applying raw materials, products and services in the generation and distribution of electricity.

Value created from the sale of electricity is the excess of the revenue from these sales over the costs of generation and distribution, comprising primary energy, materials, services and abnormal items.

The value added statement shows the sources of value created and how this value is distributed, both to meet obligations and to reward those responsible for Eskom's achievements.

VALUE ADDED STATEMENT

For the year ended 31 December	**1991**		1990	
	Rm	**%**	Rm	%
Value created				
Turnover	**11 726**		10 736	
Less: Cost of primary energy, materials, services and abnormal items	**3 745**		3 228	
	7 981	100	7 508	100
Value distributed				
Employees				
Salaries, wages, benefits and other employee costs	**2 123**	**27**	1 920	26
Providers of loan capital				
Net interest and finance charges	**3 240**	**40**	3 302	44
Reinvested for maintenance and expansion of assets				
Depreciation and retained income	**2 618**	**33**	2 286	30
	7 981	**100**	7 508	100

ANNUAL FINANCIAL STATEMENTS

The annual financial statements for the year ended 31 December 1991, set out on pages 24 to 37, which are the responsibility of the Electricity Council, and which have been recommended by the Management Board, were approved by the Electricity Council and signed on its behalf on 5 March 1992 by

Dr J. B. Marée
Chairman of the Electricity Council

Dr I. C. McRae
Chief Executive of Eskom

REPORT OF THE INDEPENDENT AUDITORS

To the members of the Electricity Council

We have audited the annual financial statements set out on pages 24 to 37.

We conducted our audit in accordance with generally accepted auditing standards. These standards require that we plan and perform the audit to obtain reasonable assurance that, in all material respects, fair presentation is achieved in the financial statements. Our audit included an evaluation of the appropriateness of the accounting policies, an examination on a test basis of evidence that supports the amounts included in the financial statements, an assessment of the reasonableness of significant estimates and a consideration of the appropriateness of the overall financial statement presentation and disclosure. We consider that our audit procedures were appropriate in the circumstances to express our audit opinion presented below.

In our opinion these financial statements fairly present the financial position of Eskom at 31 December 1991 and the results of operations and cash flow information for the year then ended in conformity with generally accepted accounting practice and as required by the Eskom Act of 1987.

KPMG Aiken & Peat

KPMG Aiken & Peat
Chartered Accountants (SA)
Auditors

Deloitte Pim Goldby

Johannesburg
5 March 1992

ACCOUNTING POLICIES

BASIS OF PREPARATION

In terms of the Eskom Act, and as determined by the Electricity Council, the financial statements are prepared in accordance with the applicable requirements of the Companies Act in conformity with generally accepted accounting practice. The financial statements are prepared on the historical cost basis, except for investments held for trading purposes which are stated at market value.

The following principal accounting policies are consistent in all material respects with those applied during the previous year.

INSURANCE RESERVE

The insurance reserve is held to provide for abnormal losses. The reserve is increased annually by any excess of internal premiums, at market-related rates, over claims not covered by external insurance.

DECOMMISSIONING OF GENERATING PLANT

Provision for the estimated costs of de-commissioning nuclear plant over its estimated useful life is charged to operating expenditure.

Provision is not made for the costs of decommissioning other plant unless it is expected that decommissioning costs will exceed the net proceeds from the sale of associated land and the salvage value of the plant.

LOAN DISCOUNT

Discounts and premiums on local registered stock in issue are amortised over the period of such loans using the yield to redemption method.

FOREIGN CURRENCIES

Transactions in foreign currencies are recorded at the spot rates ruling when the initial forward exchange contracts are established or at the spot rates ruling at transaction date.

Assets, liabilities and commitments in foreign currencies are translated to South African rand at the spot rates of the underlying forward exchange contracts or at the rates of exchange ruling at year end.

Forward exchange contract costs are recognised over the periods of the related forward exchange contracts and are included in interest and finance charges. The related liabilities are included in net interest-bearing debt.

Profits and losses on foreign exchange are included in interest and finance charges.

FINANCIAL DERIVATIVE INSTRUMENTS

The premiums received and paid on options designated as hedges are amortised over the lives of the options. Where options are not designated as hedges they are stated at market value and the resultant profits and losses, both realised and unrealised, are included in interest and finance charges.

Profits and losses resulting from interest rate swaps and interest rate caps are recognised over the interest period in interest and finance charges.

INVESTMENTS

Investments are stated at cost which is adjusted for amortised discount on the yield to redemption method where applicable. Profits and losses are recognised on realisation.

Investments held for trading purposes are stated at market value and profits and losses are accounted for on revaluation.

ACCOUNTING POLICIES continued

FIXED ASSETS AND DEPRECIATION

Fixed assets are stated at cost of acquisition or construction, less depreciation thereon.

Land is not depreciated. Rights are fully depreciated on acquisition.

Other fixed assets in commission are depreciated on the straight line basis over their estimated useful lives.

Plant at mothballed power stations is not depreciated.

Works under construction are stated at cost, which includes all costs necessarily incurred to bring plant to the condition and location essential for its intended use. Costs include overheads and net interest which is capitalised at the average cost of capital employed.

Construction materials are stated at weighted average cost.

The cost of renewal and maintenance of assets is expensed as incurred. Where the life of an asset is extended, such costs are capitalised and depreciated over the adjusted useful life of the asset.

LEASED ASSETS

Assets subject to finance lease agreements are capitalised at their cash cost equivalents and the corresponding liabilities are raised. The assets are depreciated on the straight line basis over their estimated useful lives. Lease finance charges are included in interest and finance charges as they become due.

FUTURE FUEL SUPPLIES

Certain long-term supply contracts require advance payments to suppliers of fuel for pre-production costs. These payments, together with interest capitalised thereon, are deferred and amortised on the basis of quantities of fuel purchased.

FUEL AND STORES

Nuclear fuel is valued at cost on the first-in-first-out basis. The charge to operating expenditure is based on estimated fuel consumption.

Other fuel and stores are valued at weighted average cost. Provision for obsolescence is made where appropriate.

TURNOVER

Turnover comprises electricity revenue and excludes value added tax.

Revenue is recognised at the time customers are invoiced.

RESEARCH AND DEVELOPMENT

Research and development costs are charged to operating expenditure when incurred.

TAXATION

In terms of section 24 of the Eskom Act, Eskom is exempt from South African normal taxation on income.

RETIREMENT BENEFITS

The policy of Eskom is to provide retirement benefits for its employees. Contributions to the Eskom Pension and Provident Fund are based on a percentage of salaries and are expensed in the period in which they are incurred. Gratuities paid to retiring employees are expensed in the period in which they are paid.

BALANCE SHEET

At 31 December	Notes	1991	1990
		Rm	Rm
CAPITAL EMPLOYED			
Accumulated reserves		**10 588**	9 600
Other reserves and provisions	1	**377**	331
		10 965	9 931
Net interest-bearing debt	2		
Long term		**24 172**	23 298
Short term		**3 094**	3 292
		27 266	26 590
		38 231	36 521
EMPLOYMENT OF CAPITAL			
Fixed assets	3	**35 405**	34 030
Non-current assets	4	**2 387**	2 501
		37 792	36 531
Current assets			
Fuel and stores	5	**1 433**	1 312
Debtors		**1 020**	874
		2 453	2 186
Total assets		**40 245**	38 717
Interest-free liabilities			
Creditors		**1 547**	1 805
Net interest payable	6	**467**	391
		2 014	2 196
		38 231	36 521

INCOME STATEMENT

For the year ended 31 December	Notes	**1991**	1990
		Rm	Rm
Turnover	7	**11 726**	10 736
Operating expenditure	8	**7 173**	6 366
Net operating income		**4 553**	4 370
Net interest and finance charges	9	**3 240**	3 302
Net income before abnormal items		**1 313**	1 068
Abnormal items	10	**325**	223
Net income		**988**	845
Accumulated reserves at beginning of year		**9 600**	8 755
Accumulated reserves at end of year		**10 588**	9 600

CASH FLOW STATEMENT

For the year ended 31 December	Notes	**1991**	1990
		Rm	Rm
Cash flow from operating and investing activities			
Net cash inflow from operating activities	14.1	**5 825**	5 892
Net financing charges	14.2	**(2 854)**	(2 835)
Cash available from operating activities		**2 971**	3 057
Net capital expenditure	14.3	**(3 335)**	(3 662)
Net cash utilised		**(364)**	(605)
Net cash from funding activities			
Loans and facilities raised	14.4	**2 903**	5 457
Loans and facilities repaid	14.5	**(2 158)**	(3 502)
Net investments and deposits made		**(381)**	(1 350)
Net cash raised		**364**	605

NOTES TO THE FINANCIAL STATEMENTS

For the year ended 31 December	**1991**	1990
	Rm	Rm
1. Other reserves and provisions		
Insurance reserve	**114**	100
Balance at beginning of year	**100**	100
Excess of premiums over claims for the year	**14**	—
Provision for decommissioning costs	**263**	231
	377	331

The insurance reserve has been created to absorb abnormal losses not covered by external insurance policies.

2. Net interest-bearing debt

Eskom's funding is managed in a single pool consisting of debt and investments. Funds received from swap cash flows and prefunding activities are invested pending their use for repayment of loans and for funding of operating and capital expenditure.
The manner in which Eskom's funding is managed is most appropriately disclosed as follows:

Interest-bearing debt	**35 730**	34 519
Loan discount	**(4 019)**	(3 863)
Gross borrowings	**31 711**	30 656
Investments and deposits	**(4 445)**	(4 066)
Net interest-bearing debt	**27 266**	26 590

Net interest-bearing debt consists of:

2.1 Long term		
Eskom local registered stock	**22 517**	20 881
Loan discount	**(4 003)**	(3 852)
	18 514	17 029
Foreign	**7 187**	7 740
Accrued forward exchange contract costs	**588**	387
Other local	**22**	15
	26 311	25 171

For the year ended 31 December		**1991**	1990
		Rm	Rm
2.1	Long term *(continued)*		
	Less: Investments		
	Republic of South Africa, municipal and other stock and deposits – at cost	**2 139**	1 873
	Market value R2 127 million (1990: R1 916 million)		
		24 172	23 298
2.2	Short term		
	Eskom local registered stock	**908**	488
	Loan discount	**(16)**	(11)
		892	477
	Foreign	**1 237**	1 316
	Accrued forward exchange contract costs	**264**	320
	Other local	**3 007**	3 372
		5 400	5 485
	Less: Investments		
	Deposits and other – at market value	**2 306**	2 193
		3 094	3 292
2.3	The authorised nominal value of local registered stock is (Refer Schedule 1.)	**32 933**	31 998
2.4	Foreign debt by major currency, translated at the spot rates of the underlying forward exchange contracts, consists of:		
	US dollars	**4 998**	5 662
	German marks	**2 622**	2 425
	Other	**804**	969
		8 424	9 056
	All significant foreign currency exposures were appropriately hedged at 31 December.		
2.5	Short-term debt includes credits and short-term advances of a revolving nature amounting to	**3 148**	3 534
2.6	The average rate of net interest and finance charges incurred during the year on net interest-bearing debt amounted to 14,5% p.a. (1990: 15,1% p.a.).		

For the year ended 31 December

3. Fixed assets

	Cost	Accumulated depreciation	Book value
	Rm	Rm	Rm
1991			
Land and rights	**342**	**70**	**272**
Buildings and facilities	**2 204**	**673**	**1 531**
Plant – Generation	**26 768**	**5 469**	**21 299**
– Transmission	**4 281**	**1 027**	**3 254**
– Distribution	**5 093**	**1 234**	**3 859**
Test and telecommunication equipment	**314**	**187**	**127**
Equipment and vehicles	**876**	**572**	**304**
Leased equipment	**112**	**97**	**15**
Total in commission	**39 990**	**9 329**	**30 661**
Plant at mothballed power stations	**1 590**	**514**	**1 076**
Works under construction	**3 541**	**—**	**3 541**
Construction materials	**127**	**—**	**127**
	45 248	**9 843**	**35 405**
1990			
Land and rights	317	63	254
Buildings and facilities	2 125	603	1 522
Plant – Generation	24 052	4 408	19 644
– Transmission	3 652	862	2 790
– Distribution	4 464	1 059	3 405
Test and telecommunication equipment	250	151	99
Equipment and vehicles	781	482	299
Leased equipment	112	78	34
Total in commission	35 753	7 706	28 047
Plant at mothballed power stations	780	568	212
Works under construction	5 615	—	5 615
Construction materials	156	—	156
	42 304	8 274	34 030

For the year ended 31 December	**1991**	1990
	Rm	Rm
4. Non-current assets		
Future fuel supplies	**1 775**	1 754
Housing loans to employees	**112**	155
Loan to associate finance company	**426**	521
Debtors for reticulation systems	**63**	62
Unlisted investments – at cost	**11**	9
	2 387	2 501

Housing loans to employees are secured by first mortgages.

5. Fuel and stores		
Fuel	**927**	823
Maintenance and consumable stores	**506**	489
	1 433	1 312
6. Net interest payable		
Interest payable	**567**	475
Interest receivable	**(100)**	(84)
	467	391
7. Turnover		
Bulk	**5 155**	4 511
Industrial	**3 400**	3 128
Mining	**2 570**	2 527
Traction	**420**	412
Domestic and lighting	**181**	158
	11 726	10 736

For the year ended 31 December	**1991**	1990
	Rm	Rm
8. Operating expenditure		
Operating expenditure includes:		
Audit fees	**2**	2
Depreciation		
Buildings and facilities	**60**	53
Plant	**1 439**	1 272
Equipment and vehicles	**112**	97
Leased equipment	**19**	19
Managerial, technical, administrative and secretarial fees	**24**	16
Operating lease charges on equipment	**1**	5
Loss/(profit) on disposal of fixed assets	**7**	(30)
9. Net interest and finance charges		
Interest paid and discount amortised		
Local registered stock	**2 736**	2 357
Foreign	**742**	846
Other local	**580**	586
Forward exchange contract costs	**602**	820
	4 660	4 609
Interest received and discount amortised	**(828)**	(835)
	3 832	3 774
Amounts capitalised	**(592)**	(472)
	3 240	3 302
10. Abnormal items		
10.1 Provision for costs relating to the mothballing of power stations and suspension of operations at associated collieries	**34**	128
10.2 Provision for arrear debts	**291**	95
	325	223

For the year ended 31 December	**1991**	1990
	Rm	Rm
11. Commitments		
11.1 Estimated capital expenditure contracted for, excluding future contract price adjustments and value added tax (1990 – general sales tax)	**4 773**	5 366
This expenditure will be financed from borrowings and internally generated funds and is expected to be incurred as follows:		
within one year	**1 634**	1 822
thereafter	**3 139**	3 544
11.2 Option contracts, commodity futures contracts, interest rate swaps and interest rate caps have been entered into. No material losses are anticipated as a result of these transactions other than those for which provision has been made in the financial statements.		
12. Contingent liabilities		
12.1 Guarantees issued to financial institutions as security for housing loans granted to employees.	**20**	60
12.2 In terms of the shareholders' agreement signed between the members of an associate finance company, Eskom has guaranteed the amounts due by the associate to other members of the company, amounting to	**693**	300
12.3 Eskom has indemnified the Eskom Pension and Provident Fund against any loss resulting from the negligence, dishonesty or fraud of the Fund's officers or trustees.		
13. Retirement benefits		
Eskom employees are members of the Eskom Pension and Provident Fund which is a defined benefit plan governed by the Pension Funds Act.		
The Fund is valued at intervals of not more than three years. Any deficit will be funded by the payment of actuarially determined lump sums or by future contributions.		
The last actuarial valuation was performed at 31 December 1989 when the actuaries reported that the Fund was in a sound financial position. No events have taken place since this valuation which have had a significant effect on the Fund.		

For the year ended 31 December	**1991**	1990
	Rm	Rm
14. Cash flow information		
14.1 Net cash inflow from operating activities		
Net operating income	**4 553**	4 370
Abnormal items	**325**	223
	4 228	4 147
Non-cash items		
Depreciation	**1 630**	1 441
Fuel amortisation	**188**	154
Loss/(profit) on disposal of fixed assets	**7**	(30)
Other	**32**	7
Cash generated by operations	**6 085**	5 719
Cash released from/(applied to) working capital		
Fuel and stores	**35**	(12)
Debtors	**(51)**	(59)
Creditors	**(244)**	244
	(260)	173
	5 825	5 892
14.2 Net financing charges		
Net interest and finance charges	**(3 240)**	(3 302)
Non-cash items		
Forward exchange contract costs	**145**	300
Net discount amortised	**165**	123
Net interest payable	**76**	44
	(2 854)	(2 835)

For the year ended 31 December	**1991**	1990
	Rm	Rm
14. Cash flow information *(continued)*		
14.3 Net capital expenditure		
Expenditure on land, buildings and plant	**(2 939)**	(3 685)
Expenditure on equipment and vehicles	**(122)**	(119)
	(3 061)	(3 804)
Proceeds from disposals	**48**	104
	(3 013)	(3 700)
Expenditure on future fuel supplies	**(365)**	(175)
Housing loans to employees	**43**	213
	(3 335)	(3 662)
14.4 Loans and facilities raised		
Local registered stock	**2 176**	3 407
Foreign	**720**	1 085
Other local	**7**	965
	2 903	5 457
14.5 Loans and facilities repaid		
Local registered stock	**(441)**	(71)
Foreign	**(1 041)**	(2 235)
Other local	**(365)**	(737)
Net swap cash flows on maturity of forward exchange contracts	**(311)**	(459)
	(2 158)	(3 502)

SCHEDULE 1:

LOCAL REGISTERED STOCK

As at 31 December 1991

Loan	Authorised nominal value 31/12/91 Rm	Coupon rate %	Repayment date/s	Issued nominal value **31/12/91 Rm**	Issued nominal value 31/12/90 Rm
58	0	6,5	1989/91	**0**	10
60	0	6,75	1991	**0**	11
61	35	6,875	1992	**22**	26
64	12	6,5	1992	**8**	7
65	37	6,875	1992	**29**	29
70	10	6,5	1993	**8**	8
71	70	6,875	1993	**61**	30
75	22	6,5	1993	**17**	16
76	48	6,875	1993	**41**	44
78	20	6,5	1994	**18**	17
79	30	6,875	1994	**30**	22
81	10	6,5	1994	**10**	9
82	25	6,875	1994	**24**	23
83	18	7,5	1995	**17**	15
84	3	7	1995	**3**	3
85	35	8,75	1995	**29**	32
86	10	8,5	1995	**7**	8
87	45	9,25	1996	**19**	12
88	10	8,75	1996	**7**	5
89	20	9,25	1996	**7**	7
90	30	9,25	1996	**9**	9
91	10	8,75	1996	**1**	3
92	20	9,25	1997	**13**	12
93	22	9,125	1997	**5**	5
94	5	8,75	1997	**2**	2
95	25	8,5	1997	**3**	3
96	28	8,25	1997	**13**	14
97	7	8	1997	**4**	3
98	45	8,25	1997	**34**	35
99	30	8,25	1998	**10**	10
100	20	8,375	1998	**6**	6
101	5	8	1998	**3**	3
103	24	8	1998	**20**	19
104	6	7,625	1998	**5**	3
106	45	8	1998	**13**	7
107	27	9	1999	**22**	24
108	3	8,5	1999	**0**	0
110	30	9,5	1999	**23**	24
111	9	10,75	2000	**4**	4
112	29	10,75	2000	**20**	20
113	40	10,75	2000	**34**	35
114	25	10,75	2000	**18**	19
C/fwd	945			**619**	594

Loan	Authorised nominal value 31/12/91 Rm	Coupon rate %	Repayment date/s	Issued nominal value **31/12/91 Rm**	Issued nominal value 31/12/90 Rm
B/fwd	945			**619**	594
115	5	10,25	2000	**4**	4
116	30	10,75	2000	**24**	24
118	55	11	2000	**53**	53
119	6	10,75	1995	**0**	0
121	40	11,4	2001	**35**	34
122	2	11,1	1986/96	**1**	1
123	40	12,75	1996	**39**	38
126	40	12,5	2001	**39**	38
127	150	12,6	1999	**132**	135
131	250	11,15	2002	**12**	12
132	250	11,75	2002	**70**	70
134	170	10,75	2003	**11**	11
135	270	11,3	2003	**40**	46
138	150	9,7	2003	**9**	10
139	340	10,25	2003	**39**	39
141	130	8,65	2004	**28**	17
142	350	9,15	2004	**85**	61
144	130	9,05	2005	**11**	9
145	270	9,55	2005	**15**	16
147	100	9,05	1992	**42**	44
148	100	9,05	2005	**48**	47
149	230	9,55	2005	**44**	43
151	275	10,95	2004	**9**	9
152	100	12,8	1993	**83**	92
153	400	12,95	2006	**310**	206
154	220	10	2007	**157**	155
155	170	13,2	2007	**162**	144
157	415	14,25	2008	**407**	397
158	1 250	9,25	1994	**1 184**	754
159	325	12	2008	**191**	194
160	350	11	2009	**250**	264
162	0	14,25	1991	**0**	468
163	125	10,5	2004	**101**	105
164	1 000	14	1992	**807**	858
165	1 000	11	1995	**791**	564
166	1 250	11	1993	**797**	729
167	3 000	12	1996	**1 470**	1 035
168	16 000	11	2008	**13 386**	13 123
169	3 000	15	1998	**1 920**	926
	32 933			**23 425**	21 369

SCHEDULE 2:

UNLISTED INVESTMENTS

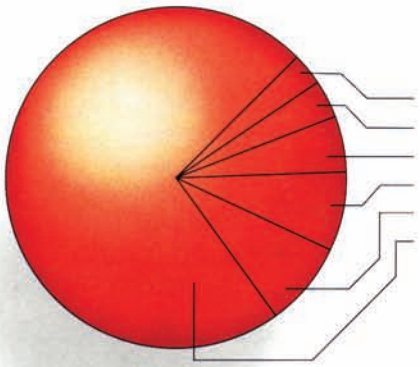
The following unlisted investments are recorded at cost in the financial statements under non-current assets (see Note 4). These investments have not been consolidated or equity accounted since the amounts involved are not material to Eskom's assets and the combined income does not significantly affect Eskom's income.

Name	Issued/ stated capital R	Effective holding % **1991**	1990	Business activity
PRINCIPAL SUBSIDIARY COMPANIES				
Natal Navigational Collieries and Estate Company Ltd	1 542 850	**100**	100	Holding company for surface and mining rights and claims
Rosherville Engineering (Pty) Ltd	1	**100**	100	Management company
Rotek Industries (Pty) Ltd	4 000	**100**	100	Group maintenance and service company
PRINCIPAL ASSOCIATE COMPANIES				
Ash Resources (Pty) Ltd	200	**25**	25	Ash processing company
Clinker Supplies (Pty) Ltd	100 000	**50**	–	Ash processing company
Eskom Finance Company (Pty) Ltd	4 000	**20**	20	Finance company (employee housing loans)
Kescor (Pty) Ltd	5 000	**50**	50	Electricity reticulation company
KwaNobuhle Electricity Supply Company (Pty) Ltd	40 000	**50**	50	Electricity reticulation company

HOW ESKOM PERFORMED IN 1991

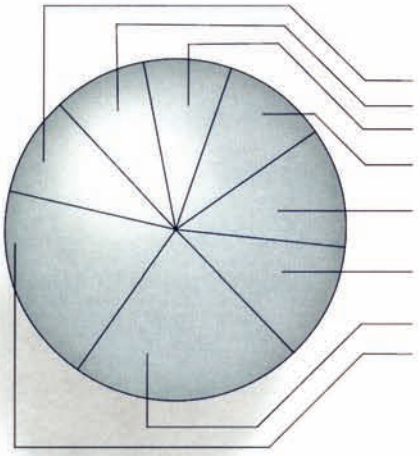
CONTENTS

HOW ESKOM PERFORMED IN 1991



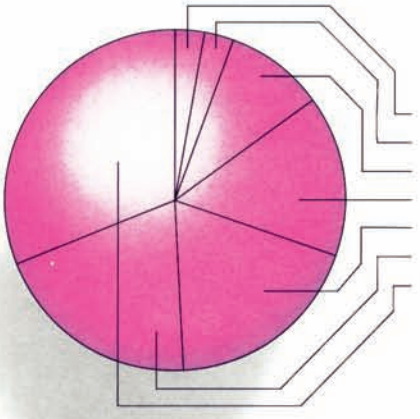
MAJOR MINING SALES

DIAMONDS 3,1%
COPPER 3,8%
MINOR MINING 5,1%
COAL 7,6%
PLATINUM 8,0%
GOLD & URANIUM 72,5%



MINOR MINING SALES

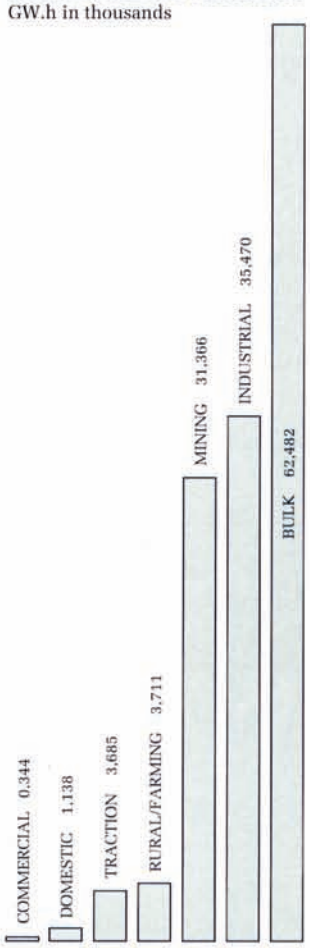
CHROME 9,4%
ASBESTOS 9,0%
MANGANESE 8,2%
OTHER 10,0%
OTHER NON-FERROUS 11,5%
LIMESTONE AND LIMEWORKS 11,0%
PHOSPHATES 21,8%
IRON 19,0%



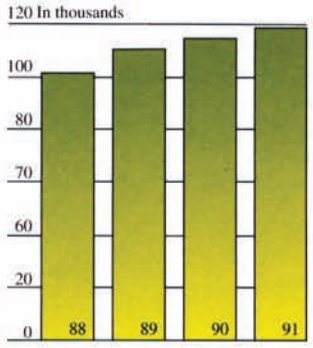
SALES TO INDUSTRY

PAPER ETC. 2,9%
NON-METALLIC 2,7%
AGRICULTURE 9,4%
OTHER 15,4%
CHEMICALS 18,8%
NON-FERROUS 19,7%
IRON & STEEL 31,1%

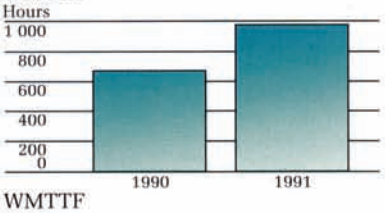
ESKOM SALES BY CATEGORY
GW.h in thousands



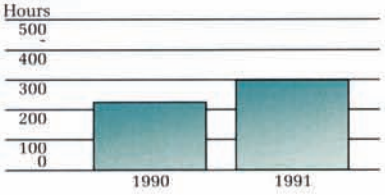
RURAL SUPPLIES
NUMBER OF SUPPLY POINTS AT
31 DECEMBER



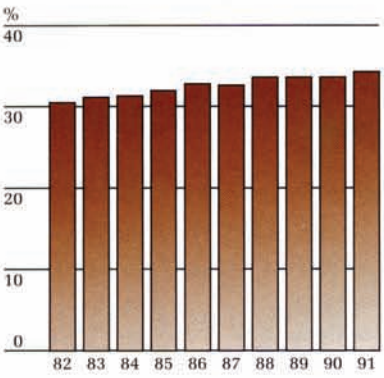
WMTTT



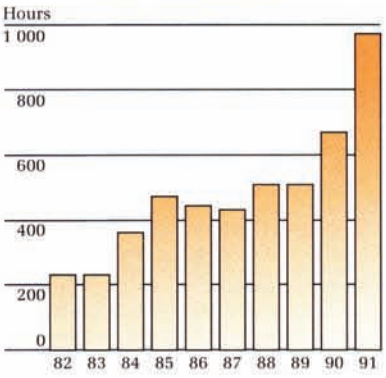
WMTTF



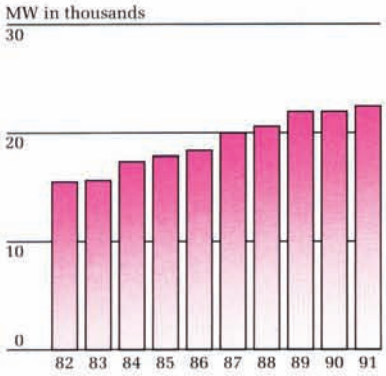
THERMAL EFFICIENCY



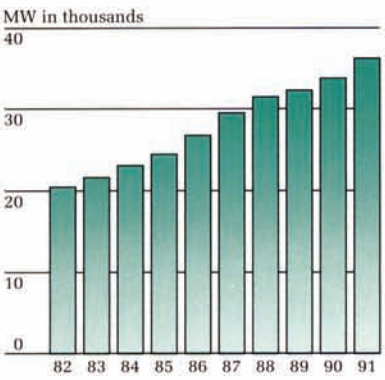
RELIABILITY
WEIGHTED MEAN TIME TO TRIP



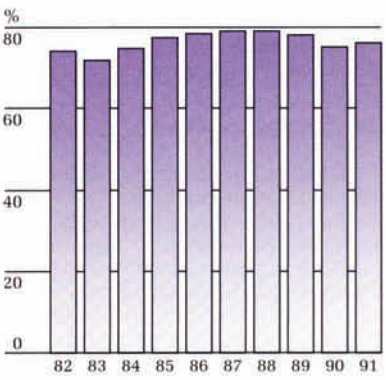
MAXIMUM DEMAND



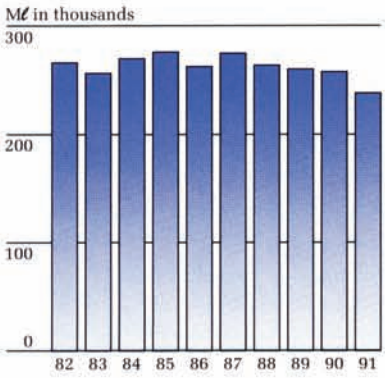
SENT-OUT CAPACITY



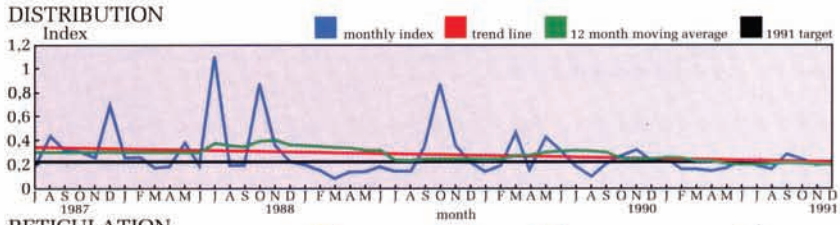
PLANT AVAILABILITY



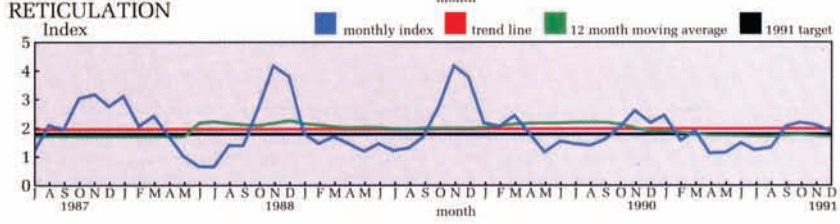
WATER CONSUMPTION



DISTRIBUTION



RETICULATION



1. Statistical overview

	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982
Financial, R million										
Turnover	**11 726**	10 736	9 271	8 159	7 046	5 845	4 625	3 832	3 302	2 695
Net income[1]	**988**	845	728	816	702	781	738	732	744	671
Fixed assets in commission, at cost	**39 990**	35 753	31 997	29 323	25 528	20 387	15 907	12 406	9 514	7 952
Works under construction and construction materials	**3 668**	5 771	6 638	5 512	6 075	7 753	8 552	7 271	6 434	5 198
Net capital expenditure	**3 335**	3 662	3 993	3 969	3 895	3 755	5 250	3 888	3 334	2 873
Net interest-bearing debt	**27 266**	26 590	24 630	22 779	21 475	19 462	17 621	13 861	10 686	8 534
Sales										
Total sold, GW.h[2]	**138 687**	136 168	134 347	129 493	122 524	117 353	112 306	106 904	98 251	96 136
Growth in GW.h sales, percent	**1,8**	1,4	3,7	5,7	4,4	4,5	5,1	8,8	2,2	2,4
Electricity output										
Total electricity sent out in South Africa, GW.h[3]	**148 919**	147 069[8]	146 162	140 802	134 751	130 056	126 206	120 835	112 366	109 536
Eskom electricity sent out as percentage of South African total	**98,0**	97,5[8]	96,7	97,0	96,1	95,1	94,5	94,3	93,8	93,6
Total electricity sent out on Eskom system (Eskom stations and purchased), GW.h[4]	**148 934**	146 320	143 548	139 197	132 774	126 766	122 494	117 086	108 321	104 920
Total sent out from Eskom stations, GW.h	**148 671**	146 047	143 204	138 837	132 507	126 511	121 987	116 581	103 295	102 769
Subtotal from coal-fired stations, GW.h	**135 743**	134 744	128 304	123 777	122 947	114 298	113 941	110 094	100 738	100 217
Subtotal from hydro-electric stations, GW.h	**1 980**	1 010	2 759	3 162	1 617	1 623	624	560	595	1 016
Subtotal from pumped storage stations, GW.h	**1 804**	1 841	1 039	1 403	1 774	1 785	2 107	1 994	1 957	1 519
Subtotal from diesel and gas turbine stations, GW.h	**0**	3	3	2	2	2	0	8	5	17
Subtotal nuclear power station, GW.h	**9 144**	8 449	11 099	10 493	6 167	8 803	5 315	3 925	—	—
Total purchased by Eskom and sent out on Eskom system, GW.h	**263**	273	344	360	267	255	507	505	5 026	2 151
Total consumed by Eskom, GW.h[5]	**2 933**	2 953	2 265	2 567	3 229	3 018	3 265	3 188	2 917	2 404
Total available for distribution, GW.h	**146 001**	143 367	141 283	136 630	129 545	123 748	119 229	113 898	105 404	102 516
Plant performance										
Total power station capacity, installed rating, MW	**38 396**	35 673	34 141	33 176	31 261	28 086	25 716	24 514	22 949	21 749
Total power station capacity, assigned sent-out rating, MW	**36 228**	33 843	32 403	31 465	29 618	26 682	24 359	23 168	21 673	20 523
Peak demand on integrated Eskom system, MW	**22 342**	21 863	21 871	20 589	20 001	18 278	17 852	17 296	15 639	15 532
Average station availability[6]	**76,1**	75,0	78,1	79,1	79,2	78,5	77,5	74,9	71,9	74,3
Station load factor, percent[7] (after excess capacity management)	**49,8 (58,5)**	50,5 (57,3)	51,1	52,3	54,3	55,5	58,0	58,1	55,6	59,3
Integrated Eskom system load factor, percent	**74,6**	74,9	73,7	75,5	73,9	77,3	76,2	75,0	76,9	75,3
Coal burnt, thousands of tons	**70 523,2**	70 861,2	67 529,3	64 489,6	65 787,0	58 915,9	59 488,6	58 703,6	55 010,2	55 198,4
Coal burnt, kg/kW.h sent out	**0,520**	0,526	0,523	0,521	0,535	0,515	0,522	0,533	0,546	0,551
Average heat rate of coal-fired stations, MJ/kW.h sent out	**10,49**	10,66	10,72	10,71	11,00	10,95	11,26	11,45	11,57	11,82
Average heat content of coal (as received), MJ/kg	**20,21**	20,26	20,20	20,44	20,48	21,19	21,52	21,38	21,11	21,39
Overall thermal efficiency, sent-out basis, percent	**34,3**	33,7	33,6	33,6	32,7	32,9	32,0	31,4	31,1	30,5
Average cost of coal burnt, R/ton	**25,70**	23,91[8]	20,9	18,67	17,11	14,87	13,25	12,55	12,44	11,75
Average cost of coal burnt, c/kW.h sent out	**1,3354**	1,2575[8]	1,1023	0,9727	0,9155	0,7665	0,6916	0,6692	0,6793	0,6471
Employees										
Total number at 31 December	**46 637**	50 000	51 554	56 726	56 830	60 800	66 000	64 560	62 420	58 850
GW.h sold per employee	**2,974**	2,723	2,606	2,283	2,156	1,930	1,702	1,656	1,574	1,634
Sales to countries in southern Africa, GW.h										
Bophuthatswana	**3 294,7**	2 972,0	2 453,1	2 295,7	2 124,5	1 805,9	1 750,4	1 490,1	1 242,9	1 181,5
Botswana	**105,8**	84,2	57,8	53,4	77,5	232,3	222,4	185,7	159,7	87,4
Ciskei	**389,3**	369,0	353,8	299,8	250,7	191,4	164,5	133,7	104,4	84,1
Mozambique	**383,3**	321,6	307,1	340,4	329,2	303,8	227,8	283,5	293,2	293,2
Lesotho	**205,7**	192,3	181,9	170,9	156,2	134,6	123,7	116,8	110,9	123,6
Swaziland	**356,6**	409,5	274,0	290,3	253,5	277,1	227,2	250,2	333,4	308,9
Namibia	**822,7**	586,3	556,6	452,9	613,6	411,1	223,8	186,9	422,2	160,1
Transkei	**254,2**	191,0	109,7	126,9	110,6	84,9	99,8	138,7	160,2	120,8
Venda	**107,6**	107,6	92,7	73,8	59,8	54,0	45,0	35,0	27,1	24,1
Zimbabwe	**6,2**	13,2	14,6	16,5	16,5	15,6	11,5	12,5	13,1	13,2
	5 926,1	5 246,7	4 401,1	4 120,6	3 992,0	3 510,7	3 096,1	2 833,0	2 867,1	2 396,9

1. Certain adjustments were made to make figures comparable with current figures, which are presented in terms of the Eskom Act of 1987. 2. Difference between electricity available for distribution and electricity sold is due to transmission losses. 3. Electricity sent out by Eskom, and by some industries and municipalities which generate all or part of their electricity requirements. 4. Includes Eskom electricity sent out to neighbouring countries.

5. In respect of pumped storage facilties and synchronous condenser mode of operation. See Table 2, Note 6. 6. Capacity hours available x 100/ total capacity hours in year. 7. kW.h sent out x 100/(average assigned sent-out rating x hours in year). 8. Revised figures.

2. Power stations in commission at 31 December 1991

Name of station	Location	Number and rating of generator sets, MW	Total installed rating MW	Total assigned sent-out rating, MW[1]	Generators in reserve storage Number	Generators in reserve storage Total rating MW
Coal-fired stations						
Arnot[2]	Middelburg, Tvl	6 x 350	2 100	1 955	—	—
Camden[3]	Ermelo	8 x 200	1 600	1 520	8	1 520
Duvha[2]	Witbank	6 x 600	3 600	3 450	—	—
Grootvlei[3]	Balfour	6 x 200	1 200	1 130	6	1 130
Hendrina[2]	Hendrina	10 x 200	2 000	1 900	—	—
Highveld[3]	Sasolburg	8 x 60	480	412	8	412
Ingagane[3]	Newcastle	5 x 100	500	465	5	465
Kendal[2, 7]	Witbank	4 x 686	2 744	2 560	—	—
Komati[3]	Middelburg, Tvl	5 x 100; 4 x 125	1 000	891	9	891
Kriel[2]	Bethal	6 x 500	3 000	2 700	—	—
Lethabo[2]	Sasolburg	6 x 618	3 708	3 558	—	—
Matimba[2, 7]	Ellisras	6 x 665	3 990	3 690	—	—
Matla[2]	Bethal	6 x 600	3 600	3 450	—	—
Salt River[4]	Cape Town	4 x 30; 2 x 60	240	228	4	114
Taaibos[3]	Sasolburg	8 x 60	480	440	8	440
Tutuka[2]	Standerton	6 x 609	3 654	3 510	—	—
Wilge[4]	Witbank	2 x 30; 3 x 60	240	199	3	89
Subtotal coal-fired stations (17)			34 136	32 058	51	5 061
Gas turbine and diesel stations[4]						
Acacia	Cape Town	3 x 57	171	171	—	—
Port Rex	East London	3 x 57	171	171	—	—
Paratus	Walvis Bay	1 x 22,4	22,4	22,4	—	—
		4 x 6,4	25,6	25,6	—	—
Subtotal gas turbine and diesel stations (3)			390	390	—	—
Hydro-electric stations[5]						
Hendrik Verwoerd	Norvalspont	4 x 80	320	320	—	—
Vanderkloof	Petrusville	2 x 110	220	220	—	—
Subtotal hydro-electric stations (2)			540	540	—	—
Pumped storage stations[6]						
Drakensberg	Bergville	4 x 250	1 000	1 000	—	—
Palmiet	Grabouw	2 x 200	400	400	—	—
Subtotal pumped storage stations (2)			1 400	1 400	—	—
Nuclear station						
Koeberg	Cape Town	2 x 965	1 930	1 840	—	—
Total in service, 25 Eskom stations			38 396	36 228	51	5 061

1. Difference between installed capacity and sent-out rating reflects auxilliary power consumption and reduced capacity caused by age of plant and/or low coal quality. 2. Base-load station. 3. Mothballed. 4. Stations used for peaking or emergency supplies. 5. Use restricted to peaking and emergencies and availability of water in Hendrik Verwoerd and P.K. le Roux dams. 6. Pumped storage facilities are net users of electricity and are used for peaking. Water is pumped during off-peak periods to generate electricity during peak periods. 7. Dry-cooled unit specifications are based on design back-pressure and ambient air temperature.

3. Generating sets taken into service during 1991

	Total installed rating MW	Total sent-out rating MW
Kendal, set 2	686	640
Kendal, set 3	686	640
Kendal, set 4	686	640
Matimba, set 6	665	615
Total	2 723	2 535

4. Generating sets on order at 31 December 1991

Name, type and location of power station	No. and installed rating of set MW	Sent-out rating of set MW	Total installed rating of station MW	Total sent-out rating of station MW	No. of sets in service (on order)	Total installed rating of sets on order	Total sent-out rating of sets on order	Year of completion first (last) set
Kendal, coal fired								
Kendal	6 x 686	640	4 116	3 840	4 (2)	1 372	1 280	1988 (1993)
Majuba, coal fired	3 x 657	3 x 612						
Volksrust	3 x 711	3 x 667	4 104	3 837	0 (6)	4 104	3 837	1996 (2001)
Total generating sets on order						5 476	5 117	

Dates on which sets on order will be taken into commercial service may change, depending on growth in electricity demand.

5. Transmission and distribution equipment in service at 31 December

		1991	1990
Main transmission system, km	765 kV[1]	**871**	871
	533 kV DC	**1 030**	1 030
	400 kV[2]	**13 187**	12 344
	275 kV	**6 992**	6 994
	220 kV	**1 239**	1 239
Distribution lines, km	165 – 132 kV	**17 011**	16 358
	88 – 33 kV	**21 063**	20 996
Reticulation lines, km	22 kV and lower	**165 424**	160 280
Total all lines, km		**226 817**	220 112
Cables, km	165 – 132 kV	**67**	67
	88 – 33 kV	**330**	341
	22 kV and lower	**4 126**	4 371
Total all cables, km		**4 523**	4 779
Transformers	Capacity MVA	**148 438**	146 697
	Number	**135 316**	129 394

1. One of the two 765 kV lines between Alpha and Beta substations is being temporarily run at 400 kV. 2. A further 283 km of 765 kV line is being temporarily run at 400 kV.

6. Sales of electricity to categories of customers

Category	Number of customers	GW.h sold **1991**	GW.h sold 1990	Increase % 90-91	Average yearly % increase 87-91	Average price c/kW.h sold **1991**	Average price c/kW.h sold 1990
Bulk	704	**62 482**	59 076	5,8	9,0	**8,255**	7,636
Domestic and street lighting	142 746	**1 138**	1 081	5,3	-1,9	**15,882**	14,600
Commercial	12 416	**344**	340	1,0	-*	**14,284**	12,797
Industrial	2 718	**35 470**	34 152	3,9	-*	**7,724**	7,364
Mining	585	**31 366**	33 363	-6,0	-0,3	**8,119**	7,575
Rural/farming	118 572	**3 711**	3 641	1,9	-*	**15,940**	14,465
Traction	32	**3 685**	3 958	-6,9	-3,9	**11,406**	10,414
Own usage	260	**491**	557	-11,8	-*	**8,365**	7,594
	278 033	**138 687**	136 168	1,8	3,4	**8,455**	7,884

** Basis of sales to the industrial category has changed, which distorts comparisons. Usage on Eskom distribution premises, internal sales to other BUs and also sales to rural and commercial customers previously included under industrial sales, are now also listed separately.*

7. Analysis of registered holders of Eskom local registered stock at 31 December 1991

	% of issued nominal value
Insurance companies, pension and provident funds	20
Corporate bodies	9
Nominee companies	49
Private individuals	22
	100