

31: MINERALS AND ENERGY

AIM

The aim of the Department of Minerals and Energy is to formulate and implement an overall mineral and energy policy in order to ensure the optimum utilisation of mineral and energy resources.

EXPENDITURE ESTIMATES

Table 31.1 Expenditure by programme

R million	Expenditure outcomes			Preliminary outcome	Medium term expenditure estimates		
	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
Administration	26,7	29,7	32,9	38,5	36,2	39,2	42,7
Promotion of mine safety and health	27,3	35,2	44,7	60,3	60,0	65,9	70,3
Mineral development	17,7	29,0	38,1	52,0	55,9	62,1	77,0
Energy management	15,7	86,3	35,3	46,0	28,8	30,9	32,2
Associated services	638,5	554,1	674,2	479,2	434,5	374,1	369,6
RDP projects	17,5	—	—	—	—	—	—
Total	743,4	734,3	825,2	676,0	615,4	572,2	591,8

The Department's activities are organised into the following programmes:

- ◆ *Administration* comprises financial management, personnel and provisioning administration, legal and other office support services and the formulation of policy by the management of the Department.
- ◆ *Promotion of mine safety and health* ensures the safe mining of minerals under healthy working conditions.
- ◆ *Mineral development* promotes the orderly and continuous mining and utilisation of mineral resources.
- ◆ *Energy management* develops energy resources and promotes the optimum use thereof.
- ◆ *Associated services* renders support services to the Department.

Table 31.2 Economic classification of expenditure

R million	Expenditure outcomes			Preliminary outcome 1998/99	Medium term expenditure estimates		
	1995/96	1996/97	1997/98		1999/00	2000/01	2001/02
Current							
Personnel expenditure	48,6	60,5	76,8	96,7	100,0	106,6	112,6
Other current expenditure	52,6	109,6	66,7	91,5	73,6	84,0	101,3
Transfer payments	486,3	512,3	471,2	407,3	392,4	352,8	349,5
Capital							
Transfer payments	151,8	47,1	204,7	73,8	45,6	24,7	23,5
Acquisition of capital assets	4,1	4,8	5,8	6,7	3,8	4,1	4,9
Total	743,4	734,3	825,2	676,0	615,4	572,2	591,8

POLICY DEVELOPMENTS AND EXPENDITURE IMPLICATIONS

White Paper on Energy Policy

The White Paper on Energy Policy was published in December 1998. Main themes of the paper are the restructuring of the electricity distribution industry, the funding and planning of the national electrification system, and an improved liquid fuels policy, to ensure reasonable prices and a fair dispensation for producers, marketers and users of liquid fuels.

Restructuring of the electricity distribution sector

The policy of restructuring the electricity distribution sector into a small number of regional electricity distributors, as approved by Cabinet in April 1997, will lead to increased efficiency and reduced costs.

The increase in the efficiency of energy production and use will lead to reduced input costs to industry, mining, commerce, transport and households, thereby stimulating economic growth.

The policies of energy efficiency and increased use of renewable energy will lead to the creation of jobs and opportunities for small companies, many in rural areas.

The installation of solar home systems and the better use of biomass should increase energy supply in rural areas, improve the distribution of income and reduce energy costs.

The low-smoke coal programme is aimed at reducing medical problems associated with smoke pollution in urban townships.

Infrastructure programme

The policy on the development of a new national electrification funding and planning system, aims to increase the efficiency of electricity distribution.

Mine Health and Safety Act

The Leon Commission identified shortcomings in the mine health and safety issues regulated by the Minerals Act. The Mine Health and Safety

Act of 1996 provides for the protection of the health and safety of employees and other persons at mines.

Tripartite institutions

The development of certain tripartite structures was a result of the implementation of the Mine Health and Safety Act. The State, employers and labour are represented on these bodies.

Mine Health and Safety Council

The Mine Health and Safety Council (MHSC) advises the Minister of Minerals and Energy on health and safety on mines, liaises with the Mining Qualifications Authority, and arranges a tripartite summit to review the state of health and safety at mines at least once every two years.

Mining Regulation Advisory Committee

The Mining Regulation Advisory Committee (MRAC) advises the MHSC on proposed changes to legislation on health and safety on mines. The MRAC also advises on standards approved by the South African Bureau of Standards.

Mining Occupational Health Advisory Committee

The Mining Occupational Health Advisory Committee (MOHAC) must advise the MHSC on policy relating to health, standards, systems and procedures for assessing, avoiding, eliminating, controlling and minimising health risks. It also gives advice on health research in the mining industry.

Mining Qualifications Authority

The Mining Qualifications Authority (MQA) proposes education and training standards and qualifications to bodies registered in terms of the South African Qualifications Act. It also sets educational and training standards or qualifications in the mining industry, and monitors and audits achievements in terms of those standards and qualifications.

Safety in Mines Research Advisory Committee

The Safety in Mines Research Advisory Committee (SIMRAC) advises the MHSC on criteria for determining the funding and priorities of projects, and the feasibility and execution of health and safety research.

Legislation in process

Bills on Nuclear Energy, Nuclear Safety and Gas have been submitted to Cabinet and are currently with the State Attorney. It is envisaged that the policy stipulated in the White Paper on Energy Policy will result in the drafting of an Energy Bill.

Other policy developments include:

- ◆ Rationalising minerals legislation in the former Transkei, Bophuthatswana, Venda and Ciskei (TBVC) and transferring functions and staff to the Department.
- ◆ Restructuring of the Mineral Development Branch to emphasise minerals promotion and environmental management, including the accelerated rehabilitation of abandoned asbestos dumps, and the improved monitoring of mine rehabilitation.
- ◆ Participation in the mining sector programmes of the South African Development Community and increasing international co-operation.

DISCUSSION OF PROGRAMMES

Programme 1: Administration

	Budget estimate	Adjusted appropriation	Preliminary outcome	Medium term expenditure estimates		
R million		1998/99		1999/00	2000/01	2001/02
1998 Budget	34,2	38,6	38,5	36,0	38,9	–
1999 Budget	–	–	–	36,2	39,2	42,7

Programme 2: Promotion of mine safety and health

	Budget estimate	Adjusted appropriation	Preliminary outcome	Medium term expenditure estimates		
R million		1998/99		1999/00	2000/01	2001/02
1998 Budget	57,9	60,6	60,4	62,5	67,3	–
1999 Budget	–	–	–	60,0	65,9	70,3

Mining support and internal control

This activity administers policy supporting investigations/projects and renders an auxiliary secretarial and administrative service. Receiving, verifying and processing of information assists the Department in distributing statistics and information to stakeholders.

An estimated 3 000 applications for examinations for mine managers, mine overseers, mine engineers, mine surveyors and winding engine drivers will be processed during the 1998/99 financial year.

Mine safety

Establishing of mine safety standards relies on research projects and advice on developments and trends at mining operations. Collecting, analysing and interpreting this information from frequent inspections and previous mining accidents, assists this activity.

Occupational medicine

This programme is also responsible for monitoring and enforcing the Mine Health and Safety Act. Policy is developed and applied for the establishment of occupational medicine at mining operations.

Occupational hygiene

To ensure occupational hygiene, the exposure of individual employees in the mining industry to chemical, physical and biological agents is monitored in approximately 36 000 mining concerns.

Other activities relating to occupational hygiene are the drafting of regulations and guidelines, the applicable training and auditing of regional occupational hygiene inspectors and participation on committees and working groups.

Each regional occupational hygiene inspector spends substantial time on training, attending committee meetings and workshops and regional matters such as the provision of information, instrumentation and advice.

Mine equipment

Equipment to collect, analyse and interpret information for the establishment of mine safety standards, is funded under this programme.

Mining rights

It is estimated that about 200 applications for prospecting and mineral rights will be processed by this Department during the 1999/00 financial year.

Mine surveying

This programme is also responsible for mine surveys and surface plan inspections, the optimal exploitation of minerals, the safe use of the land surface and the drawing and maintenance of mine plans.

During the 1999/00 financial year:

- ◆ Between 1 500 and 1 800 applications for the utilisation of land will be processed.
- ◆ Mine surveying will be carried out at 75 per cent of all opencast and underground mines.
- ◆ 20 per cent of the plans of defunct mines will be scanned.

Mine safety and health - regions

To ensure that health and safety standards are adhered to, inspections are carried out at all underground mines, quarries, brickworks and digging operations within the borders of the different regions.

Programme 3: Mineral development

R million	Budget estimate	Adjusted appropriation 1998/99	Preliminary outcome	Medium term expenditure estimates		
				1999/00	2000/01	2001/02
1998 Budget	52,9	52,2	52,0	59,8	66,0	–
1999 Budget	–	–	–	55,9	62,1	77,0

Mineral regulation

Mineral regulation entails the development of mine environment standards and managing the allocation of prospecting and mining rights. A uniform application of policy and legislation is adhered to. The programme also sees to the registration of mine deeds and the rendering of information services.

Mineral promotion

To promote the utilisation of mineral resources the Department provides:

- ◆ Advice on and co-ordination of state assistance to mines.
- ◆ Assistance in respect of small scale mining activities.
- ◆ Advice on mineral occurrence and the value of mines.

The Department also promotes mineral exploitation and refinement.

Mineral Economics

The activities of the Mineral Economics directorate include:

- ◆ Collecting national statistics regarding employment in the mining industry and sales of South Africa's minerals.
- ◆ Collecting local and international mineral economic information from published sources and liaising with other sectors of Government, industry, and world-wide organisations concerned with mineral resources, production, trade and consumption.
- ◆ Informing and advising government on developments in the national and international mineral industries.
- ◆ Monitoring and analysing local and international mineral economic trends.

To give effect to this activity:

- ◆ An estimated 750 mining returns are processed each month.
- ◆ Approximately 10 000 copies of publications are distributed locally and overseas each year.
- ◆ 2 000 enquiries per year (personal, telephonic, electronic and written) are dealt with.

Mine rehabilitation

The Research Institute for Reclamation Ecology of Potchefstroom University has been appointed as the Department's consultant and contractor for the rehabilitation of derelict and ownerless asbestos mine dumps.

Contractors will be appointed through tender procedures for the rehabilitation of other derelict and ownerless mines. These mines pose a threat to human health and safety as well as to the environment.

Mineral development regions

The effective administration of the Minerals Act of 1991 includes the issuing of prospecting permits, mining authorisations and the evaluation and consideration of environmental management programmes.

The increase in the number of applications for prospecting permits, mining authorisations, permissions, exemptions and environmental management programmes is the result of endeavours to legalise mining activities of formerly disadvantaged small-scale mining entrepreneurs.

Regional mineral development

To control mineral development on a regional basis, an auxiliary administrative service is rendered.

Programme 4: Energy management

	Budget estimate	Adjusted appropriation	Preliminary outcome	Medium term expenditure estimates		
R million		1998/99		1999/00	2000/01	2001/02
1998 Budget	29,3	46,2	46,0	30,7	32,6	–
1999 Budget	–	–	–	28,8	30,9	32,2

An effective and efficient electricity industry in South Africa is important for the economy and for the social development of the population. To this end, clean gas and coal technologies, the environmental impact of coal and gas use, and the supply of low-smoke fuel as a replacement for coal in households, will all be evaluated.

Energy planning

Approximately 50 - 100 projects each year, with a value of about R20 million, are co-ordinated, subject to the State Tender Board delegation as detailed in the "Procedures for Energy Projects 1994".

Energy supply

This programme develops and implements policies with regard to the supply of conventional forms of electricity. Provision is made for sustainable and affordable electricity for South Africa in order to enhance the quality of life, stimulate economic growth and minimise the effect of environmental pollution.

Energy database	<p>This programme is also responsible for compiling an annual energy database and energy balances in accordance with the International Energy Agency (IEA) format.</p>
Demand and non-grid electrification	<p>This programme is responsible for implementing policies with regard to the demand for energy in households and the promotion and effective utilisation of renewable energy.</p> <p>Governance of the energy sector includes the application of the Energy White Paper guidelines and standards, monitoring the activities of the energy sector and addressing the backlogs in energy service provision to communities and the domestic sector.</p> <p>The programme is also concerned with the delivery of essential energy infrastructure, namely:</p> <ul style="list-style-type: none">◆ The implementation of solar energy for schools and clinics and water pumping for community use.◆ Solar home systems, stoves and passive solar heating for the domestic sector. <p>Support offered consists of setting standards, training and education, and running demonstration centres.</p>
Fossil fuel	<p>A fossil fuel policy and strategies with regard to coal and gas are developed to ensure equitable, adequate and reliable supply to all markets.</p> <p>The development of energy efficiency policies and programmes are developed so that the effective use of energy, based on economic principles, is ensured.</p>
Liquid fuels	<p>Regulating and administering the liquid fuels policy, and facilitating the restructuring process of the State's liquid fuel assets, constitute the activities of this programme.</p> <p>Increased awareness and application of fuel efficiency measures are promoted. Fuel and vehicle standards are set, in order to preserve air quality, while due consideration is given to technical and economic factors. An awareness of alternative modes of transport is promoted.</p>
Nuclear activities	<p>Nuclear activities that are undertaken in accordance with international treaties include:</p> <ul style="list-style-type: none">◆ Administration of the Nuclear Safety Act and the Nuclear Energy Act.◆ Facilitation of the movement of nuclear material and the management of nuclear waste.◆ Administration of the nuclear non-proliferation treaty, the spent fuel convention and the International Atomic Energy Association international safeguards.◆ The preparation of a radioactive waste management policy.

Benefits of electrification

Electrification of houses brings many benefits. Electricity can be used for both income-earning and domestic purposes. It saves time and energy and enables people to perform their tasks more efficiently. In particular, it saves women many hours fetching fuel-wood. It promotes health and well-being.

By December 1997, an estimated 59 per cent of South African houses were connected to the electricity grid, an increase of five percentage points from December 1996. Eastern Cape had the lowest overall rate of electrification, at 39 per cent. Western Cape had the highest, at 84 per cent. The proportion of houses electrified was 82 per cent in urban areas and 32 per cent in rural areas. This rural-urban disparity is evident in all provinces, but is particularly stark in KwaZulu-Natal, where 84 per cent of urban, but only 20 per cent of rural houses, were connected.

Programme 5: Associated services

R million	Budget estimate	Adjusted appropriation 1998/99	Preliminary outcome	Medium term expenditure estimates		
				1999/00	2000/01	2001/02
1998 Budget	473,5	481,0	479,2	449,0	394,0	–
1999 Budget	–	–	–	434,5	374,1	369,6

Assistance to mines

Assistance is given to marginal mines with the cost of pumping extraneous water and with the cost of water settling facilities. East Rand Proprietary Mines Limited and Grootvlei Property Mines Limited receive assistance with the cost of extraneous water. In addition, Grootvlei was assisted with its treatment costs of water being released into the Blesbockspruit. The conditions of assistance and the amounts concerned are set by an Inter-Departmental Committee and approved by the Minister or Cabinet.

Council for Mineral Technology Research

The Council for Mineral Technology Research (Mintek) was established in terms of Act 30 of 1989.

Mintek aims to serve the country through high-calibre research, development and technology transfer that promotes mineral technology and fosters the establishment of small, medium and large industries in the field of minerals and products derived therefrom.

Mintek achieves these objects through the transfer of technology to industry, the promotion of the optimal supply and utilisation of mineral resources and ensuring that its expertise and technology is world class and internationally competitive.

Council for Geoscience

The Council for Geoscience was established in terms of Act 100 of 1993. The main functions of the Council include:

- ◆ The systematic documentation of the geology of the earth's surface and crust within the territorial boundaries of South Africa.
- ◆ Compiling the geological, geophysical, geochemical and other earth-science information as well as the publication of this information in the form of public domain maps and documents.

- ◆ Basic geoscientific research on the geological material found in South Africa, and the publication of this information nationally and internationally.

Council for Nuclear Safety

- ◆ The Council for Nuclear Safety (CNS) was established in terms of the Nuclear Energy Act of 1993 to regulate, license and exercise control over nuclear installations and other activities involving radioactive materials. This includes situations where radioactive material is incidental to the main business of the licensee.

The *Associated services* programme, makes various contributions as set out in Table 31.5.

Table 31.5 Detail of major payments made under programme 5

R million	Expenditure outcomes			Preliminary outcome 1998/99	Medium term expenditure estimates		
	1995/96	1996/97	1997/98		1999/00	2000/01	2001/02
Mineral Technology research							
Council for Mineral Technology (MINTEK)	62,8	73,0	83,0	83,1	81,8	84,0	84,9
Nuclear energy							
Atomic Energy Corporation (AEC)	273,2	245,4	220,8	200,0	183,5	142,2	129,1
Closing – Z plant	38,0	29,4	21,7	36,5	–		
Strategic loans	178,0	81,3	231,2	48,5	62,0	38,0	35,0
International Atomic Energy Agency (IAEA) Membership	–	–	–	–	4,2	4,9	5,6
Nuclear Safety							
Council for Nuclear Safety	5,4	5,3	5,4	5,8	6,1	6,8	7,0
Geoscience							
Council for Geoscience	46,0	59,7	64,6	65,8	63,8	65,3	66,3
Assistance to mines							
Pumping out water	23,9	24,7	27,5	30,0	29,5	29,5	38,0
Energy provision							
Cahora Bassa audit fees	0,1	0,1	0,2	0,2	0,2	0,2	0,3

NON-DEPARTMENTAL AGENCIES AND ACCOUNTS

Atomic Energy Corporation (AEC)

The AEC is committed to be a leading organisation that creates national wealth through development, industrialisation and commercialisation of nuclear and related technology.

Mission	The mission of the AEC is to develop and provide nuclear and technology-based products, processes and services, derived from the AEC's core competencies, in order to satisfy its stakeholders while taking care of the environment.
Group Structure of the AEC and its Subsidiaries	The AEC has the following subsidiaries: HTP Marketing and Manufacturing (Pty) Ltd, and Aeroflo. Furthermore, HTP Marketing wholly owns five subsidiaries.
Key financial information	The total assets of the AEC Group amounted to R519 million in 1998. The long-term liabilities decreased from R481 million in 1995 to R285 million in 1998. The gross revenue/turnover of R610 million in 1997 was stable over the period 1995 to 1997, but decreased to R507 million in 1998. The net profit/income of the AEC was R140 million in 1998, from a net loss of R111 million in 1995.