



**MINERAL
RESOURCES
AND ENERGY**

**OFFICIAL GUIDE TO
SOUTH AFRICA**

2022/23



Mineral Resources and Energy

The Department of Mineral Resources and Energy (DMRE) is mandated to ensure the transparent and efficient regulation of South Africa's mineral resources and minerals industry, and the secure and sustainable provision of energy in support of socio-economic development.

Several Acts regulate the mining, minerals and energy sectors. Key among these are the:

- Petroleum Products Act of 1977, which regulates the petroleum industry at the manufacturing, wholesale and retail levels;
- Mine Health and Safety Act of 1996, which governs mine health and safety;
- Mineral and Petroleum Resources Development Act of 2002, which provides the regulatory framework for equitable access to and the sustainable development of mineral resources and related matters;
- Electricity Regulation Act of 2006, which establishes a national regulatory framework for the electricity supply industry, including registration and licensing; and
- National Energy Act of 2008, which empowers the minister to plan for and ensure the security of supply for the energy sector.

The 1998 *White Paper on Energy Policy*, alongside the 2003 *White Paper on Renewable Energy*, sets out government's overarching position on the supply and consumption of energy.

Other applicable policies include the National Development Plan: Vision 2030; Integrated Energy Plan; Integrated Resource Plan (IRP); Electricity Pricing Policy, the Paris Agreement on Climate Change, the National Environmental Management: Air Quality Act of 2004 and the National Energy Act of 2008.

Over the medium term, the department planned to continue focusing on regulating the petroleum sector; ensuring mine health, safety and equity; rehabilitating mines and the environment; extending access to electricity; enhancing energy efficiency; and managing nuclear energy in accordance with international commitments.

This is intended to ensure that South Africa has an adequate supply of electricity and liquid fuels to maintain economic activity and prevent disruptions, and to give effect to a mining sector that prioritises the welfare of its human resources and the environment.

The DMRE's regulatory and oversight work requires inspections to ensure that mining companies and petroleum licence holders comply with legislative requirements and that electricity connections are verified through the integrated national electrification programme.

Regulating the petroleum sector

The department will continue to enforce compliance with regulatory standards and transformation objectives in the petroleum sector. It planned to inspect 4 500 petroleum retail sites and issue mining rights or permits to 600 historically disadvantaged South Africans over the period ahead. In improving the quality

and security of petroleum fuels, the department planned to sample fuel and test petroleum products at 3 240 petroleum retail sites over the medium-term period to ensure that fuel meets quality standards.

Ensuring mine health, safety and equity

The Mine Health and Safety Inspectorate programme promotes mine health and safety, and aims to contribute to skills development and transformation. The inspectorate engages with mine management and executives, and analyses the outcomes of inspection and audits. The DMRE was expected to conduct 24 000 mine inspections over the medium term.

To accelerate transformation in the mining sector, the department aims to monitor and enforce compliance with the mining charter by conducting 636 social and labour plan verification inspections and 1 500 mine economic verification inspections over the medium-term period.

Small-scale mining projects facilitate and develop the artisanal and small-scale mining sector, and provide an opportunity for previously disadvantaged communities to enter and participate in mining.

To help realise the potential of this sector, the department aims to provide financial and non-financial support to 12 new artisanal and small-scale mining companies over the medium term at a projected cost of R27 million per year.

Rehabilitating mines and the environment

To promote the health and safety of mine employees and surrounding communities, the department will intensify its efforts to rehabilitate dangerous, derelict and ownerless mining sites. With the Council for Mineral Technology and Research (Mintek) as the implementing agent, the department planned to rehabilitate nine mines and seal 360 shafts or holings over the medium term.

Extending access to electricity

Government's policy to extend access to electricity to all South Africans is carried out primarily through the integrated national electrification programme, through which an additional 660 000 households are expected to be connected to the electricity grid over the medium term. This will require six new substations to be built and nine substations to be upgraded over the next three years.

A further 15 000 households in each year over the medium-term period were expected to be provided with non-grid electricity connections. The bulk of these connections are in sparsely populated rural areas (mostly in Eastern Cape, KwaZulu-Natal and Limpopo) and high-density informal settlements. .

Coupled with the intention to create a competitive supply and demand electricity market, government has created the green economy. Through the Risk Mitigation Independent Power Producer Procurement Programme and the Renewable Energy Independent Power Producer Procurement Programme, government had by mid-2023 procured a total of 7 786 megawatts (MW) through Bid Windows 4,5 and 6.

A total of 2 130 MW were connected to the grid and and 150 MW) and 784 MW were envisaged to be operationalised in November 2023 and August 2024, respectively.

Enhancing energy efficiency

To realise a target of 1.5 terawatt-hours of energy savings over the medium term, allocations to the energy efficiency and demand-side management grant are expected to increase at an average annual rate of 4.3%, from R223.2 million in 2022/23 to R253.4 million in 2025/26. This will enable municipalities to undertake initiatives to upgrade municipal infrastructure that is not energy efficient, such as replacing old street and traffic lights with greener technology.

Managing nuclear energy

The South African Nuclear Energy Corporation was expected to continue with the decontamination and decommissioning of old nuclear facilities. By mid-2023, preparatory work was underway to procure a multipurpose reactor to replace the 58-year-old SAFARI-1 research reactor, which is approaching the end of its useful life. The reactor is used for research and development, and to manufacture medical isotopes.

Role players:

- **Mine Health and Safety Council:** The Mine Health and Safety Council was established in terms of the Mine Health and Safety Act of 1996. It is mandated to advise the Minister of Mineral Resources and Energy on occupational health and safety at mines, develop legislation, conduct research and liaise with other statutory bodies.

The council operates through a partnership between organised labour, employers and the DMRE. The council continues to focus on conducting research to provide solutions to occupational health and safety challenges. This entails developing technology to reduce noise in machines, and developing drone technology with a focus on wireless communication systems, surveying, mapping and navigation, health, safety and security, and integration for smart mining.

- **Mintek:** Its mandate, as set out in the Mineral Technology Act of 1989, is to maximise the value derived from South Africa's mineral resources through, among other things, research and development, technology transfer, and the creation of an enabling environment for the establishment and expansion of mineral industries.

To this end, Mintek develops appropriate, innovative technology for transfer to the industry, and provides test work, consultancy, analytical and mineralogical services to clients around the world. Skilled personnel are

key to the execution of meaningful research. Mintek will also continue with programmes to increase the academic qualifications of researchers and provide the necessary platforms to increase experience levels.

- **Council for Geoscience (CGS):** The CGS was established in terms of the Geoscience Act of 1993 to promote the search for and exploitation of minerals in South Africa. Its mandate is to generate, compile, curate and publish world-class geoscience knowledge products, provide geoscience-related services to the South African public and industry, and render advisory services related to geohazards and geo-environmental pollution. The data generated by the council enables key activities such as the assessment of environmental impacts from mining, geohazards and shale gas development.
- **South African State Diamond and Precious Minerals Regulator (SADPMR):** The SADPMR was established to administer the Diamonds Act of 1986 (as amended) and the Precious Metals Act of 2005. The Diamond Exchange and Export Centre (DEEC) was established by the SADPMR in terms of Section 59(b) of the Diamonds Second Amendment Act of 2005 and started operating on 14 January 2008.

One of the core functions of the SADPMR is to facilitate the buying, selling, exporting and importing of diamonds through its DEEC, which is a secure and controlled environment where goods are offered to other licensees. It plays a vital role in ensuring that unpolished diamond tenders are facilitated fairly to the local market.

- **State Diamond Trader (SDT):** The mandate of the SDT, as defined in the Diamonds Amendment Act of 2005, is to buy and sell rough diamonds, and to promote equitable access to and beneficiation of the country's diamond resources. It is listed as a schedule 3B public entity in terms of the PFMA of 1999.

The trader is mandated to conduct research, develop a client base, contribute to the growth of the local diamond beneficiation industry, and develop efficient means of marketing diamonds not suitable for local beneficiation. Over the medium term, the trader aimed to continue growing the local diamond beneficiation industry and increase the sale of rough diamonds to historically disadvantaged South Africans. The trader generates revenue from the sale of rough diamonds.

- **Sasol:** The international integrated chemicals and energy company develops and commercialises technologies, and builds and operates world-scale facilities to produce a range of high-value product streams, including liquid fuels, chemicals and low-carbon electricity.

- **Eskom:** It generates about 95% of the electricity used in South Africa and about 45% of the electricity used in Africa. It generates, transmits and distributes electricity to industrial, mining, commercial, agricultural and residential customers.
- **South African Gas Development Company (iGas):** It is the official state agency for the development of the hydrocarbon gas industry in southern Africa.
- **Petroleum Agency South Africa (PASA):** It promotes exploration for onshore and offshore oil and gas resources, and their optimal development. It regulates exploration and production activities, and acts as the custodian of the national petroleum exploration and production database.
- **Petronet:** It owns, operates, manages and maintains a network of 3 000 km of high-pressure petroleum and gas pipelines, on behalf of government.
- **National Energy Regulator of South Africa (NERSA):** It is the regulatory authority for electricity, piped gas and petroleum pipelines.
- **National Nuclear Regulator (NNR):** It derives its mandate from the NNR Act of 1999, which requires it to regulate safety standards for nuclear activities in South Africa. This includes establishing safety standards and regulatory practices, ensuring nuclear installations are safe by enforcing regulatory control, granting nuclear authorisations, conducting compliance inspections, and ensuring that provisions are in place for nuclear emergency planning.
- **Nuclear Energy Corporation of South Africa:** It is responsible for undertaking and promoting research and development in the field of nuclear energy and radiation sciences. It is also responsible for processing source material, including uranium enrichment, and cooperating with other institutions, locally and abroad, on nuclear and related matters.
- **South African National Energy Development Institute:** It was established in terms of the National Energy Act of 2008. It is mandated to direct, monitor and conduct applied energy research and development, and demonstrate and deploy specific measures to promote the uptake of green energy and energy efficiency in South Africa.
- **Central Energy Fund (CEF):** It is listed in schedule 2 of the Public Finance Management Act of 1999, and is governed by the CEF Act of 1977 and the Companies Act of 2008. Its mandate is to research, finance, develop and exploit appropriate energy solutions to contribute to South Africa's security of energy supply.

Through its subsidiaries, the fund is also mandated to finance and promote the acquisition of coal; exploit coal deposits; manufacture liquid fuel, oil and other products from coal; market these products; and acquire, generate, manufacture, market, distribute or research any other form of energy.

By mid-2023, the fund's subsidiaries are the Petroleum Oil and Gas Corporation of South Africa (PetroSA), the iGas, PASA, Oil Pollution Control South Africa, the Strategic Fuel Fund (SFF), the African Exploration Mining and Finance Corporation, ETA Energy Solutions and CCE Solutions.

Following the tabling of the Upstream Petroleum Resources Development Bill in Parliament, Cabinet approved the merger of iGas, PetroSA, and the SFF to form the South African National Petroleum Company (SANPC). The establishment of the SANPC is expected to give effect to the provisions enshrined in the said Bill, for the State to participate meaningfully in oil and gas developments.

- **PetroSA:** It is a wholly state-owned company of the Government of South Africa and registered as a commercial entity under the South African law. It is a subsidiary of the CEF.
- **National Radioactive Waste Disposal Institute (NRWDI):** It was established in terms of the NRWDI Act of 2008 to manage the disposal of radioactive waste at the national level. The institute is responsible for the long-term care and disposal of radioactive waste in a safe, technically sound, socially acceptable, environmentally responsible and economically feasible manner.
- **Mining Qualifications Authority (MQA):** It is a statutory body established in terms of the Mine Health and Safety Act of 1996 and is a registered Sector Education and Training Authority for the mining and minerals sector in terms of the Skills Development Act of 1998, as amended.

It supports the objectives of the National Skills Development Plan 2020-2030, as guided by the Department of Higher Education and Training, and also supports the objectives of the Mining Charter in terms of the Minerals and Petroleum Resources Development Act of 1996. The MQA is responsible for administering a number of skills development initiatives.

Skills programmes and learnerships aim to develop a skilled and educated workforce whose skills are recognised and valued in terms of the National Qualifications Framework. This is to ensure that the mining and minerals sector has sufficient competent people who will improve health and safety, employment equity and increase productivity.

Mining

The mining industry contributes meaningfully to the Gross Domestic Product (GDP). Whilst production declined, the value of production registered R1.18 trillion in 2022, up from R1.1 trillion in 2021 on the back of strong global demand. The sector created 23 552 jobs between December 2021 and December 2022, resulting in the overall employment of 472 088 workers.

According to the South African Revenue Service, the mining sector contributed R89 billion in corporate tax in the 2021/22 financial year. A further contribution of mining to the country's revenue through royalties stood at R28.45 billion in the same period, keeping its percentage contribution to the GDP at 7.53%. This is a clear indication that mining remains a strong pillar of South Africa's economy.

As highlighted in the latest Fraser Institute Survey that placed South Africa in the worst position in recent memory, mining would contribute even better to the economy if the binding constraints in electricity, rail and port systems were urgently resolved. According to the survey, South Africa is in the bottom quartile on the investment attractiveness index.

One of the indices highlighted in the Fraser Institute survey is the transparency of licensing systems. To this end, the DMRE, in collaboration with the State Information Technology Agency, initiated a procurement process for a licensing system with integrity.

Mining and energy have also seen some tail winds with sizeable investments. By mid-2013, the department was following on the implementation of 56 investment commitments that were pledged into mining and energy sectors, at the annual investment conferences, amounting to a total of R397 billion. Among them are:

- R16.5 billion of De Beers for Venetia Mine;
- R6 billion of Exxaro in Grootegeluk;
- R636 million of Impala Platinum at the Two Rivers operation; and
- R175 million in the Steelpoortdrift Vanadium Project.

Mining is regarded as a sunrise industry ready to bolster South Africa's economy for years to come.

Energy

On the energy sector, the lifting of the threshold on embedded generation has unleashed green shoots such as the:

- Goldfields investment in a 50 MW photovoltaic plant at their South Deep Mine with an investment of R715 million. This power plant can supply the mine and the potential excess power ready to be sold to the grid, thus creating the prosumer market that will help close the supply and demand gap in the electricity market.
- The Seriti-Green R4 billion commitment of a 155-MW wind energy facility, which is a clear demonstration that the DMRE's targeted interventions are beginning to deliver green shoots in addressing the electricity challenges that the country faces.