21 February 2020

POSITION ON ESKOM'S REGULATORY CLEARING ACCOUNT ADJUSTMENT APPLICATION

2018/2019

MINERALS COUNCIL
SOUTH AFRICA

Anglo American Platinum – Polokwane Smelter

MINING MATTERS TO SOUTH AFRICA

South Africa's economy is a primary commodity intensive economy, producing a number of key minerals including PGMs, gold, coal, iron ore, diamonds, manganese, chrome and titanium. Almost one fifth of the economy is dependent on the mining sector.

Notwithstanding the manifold challenges the industry is facing, mining continued to make a major contribution to the South African economy. In 2019, the mining industry:

- Contributed R360.9 billion to GDP
- Contributed R94.7 billion to fixed investment
- Sold R538.9 billion of primary minerals
- Exported R348.2 billion of its products
- Paid R8.6 billion in royalties
- Paid R24.3 billion in taxes
- Paid R32.9 billion in value added tax in terms of net outflow
- Paid R16 million in transfer duties
- Employed 454,861 people
- Paid employees R135.9 billion
- Contributed R22.7 billion to PAYE on behalf of employees

THE SOUTH AFRICAN ECONOMY IS IN CRISIS

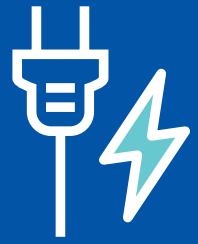
The South African economy is in an unprecedented economic crisis, and in the longest economic downswing since 1945. The nature of this crisis is reflected in the following facts:

- Government debt ballooned from 26% in 2008 to 56% of GDP in 2019, and is probably going to rise further.
- Unemployment has risen to 29.1% (10 million people are unemployed).
- State-owned enterprises are a significant source of the fiscal and economic woes, particularly Eskom and SAA.
- In 2018, fixed investment fell by 1.4% to 17.9% of GDP (compared with a global average of 26.3%).

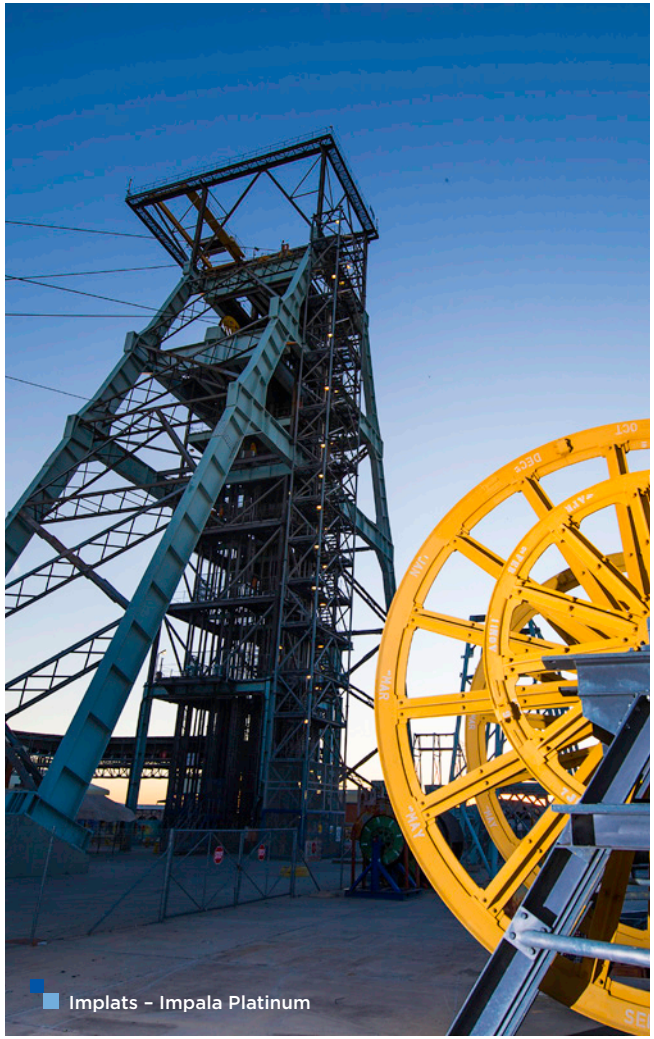
MINING NEEDS AFFORDABLE AND RELIABLE ELECTRICITY

Electricity is key to sustaining mining operations and the processing of minerals in South Africa. The mining industry needs an affordable and reliable supply of electricity to operate deep-level and technologically complex mines and to support the continued beneficiation of the country's mineral resources.

The sector is both a supplier of primary energy to generate electricity (>90%) and a large consumer of electricity, consuming more than 30% of total electricity supply if smelters and refineries are taken into account.



In 2019, the mining sector spent around R30 billion on electricity



Implats – Impala Platinum

In 2019, 418.5 hours, the equivalent of 30 days were lost due to load shedding/ curtailment amounting to estimated production losses of between R7 billion – R12 billion

ANALYSING ESKOM'S RCA 2018/2019 APPLICATION

Eskom has applied for another Regulatory Clearing Account (RCA) adjustment for the 2018/2019 financial year. This is in addition to the annual electricity tariff increases and the Regulatory Clearing Account (related to the MYPD3) increase granted to Eskom by the National Energy Regulator of South Africa (NERSA) in March 2019, which will increase the electricity by accumulative R655.2 billion (29.5%) by 2021/2022.

The new application, if granted, will effectively increase already high electricity tariffs by R27.3 billion or a further 15% on average.

The major increased costs Eskom has applied for in its RCA 2019 application are:

R5.5 billion — **in respect of a revenue variance (between planned and actual)**

R14.1 billion — **in respect of coal (R12.4billion) and coal related costs (R1.6billion)**

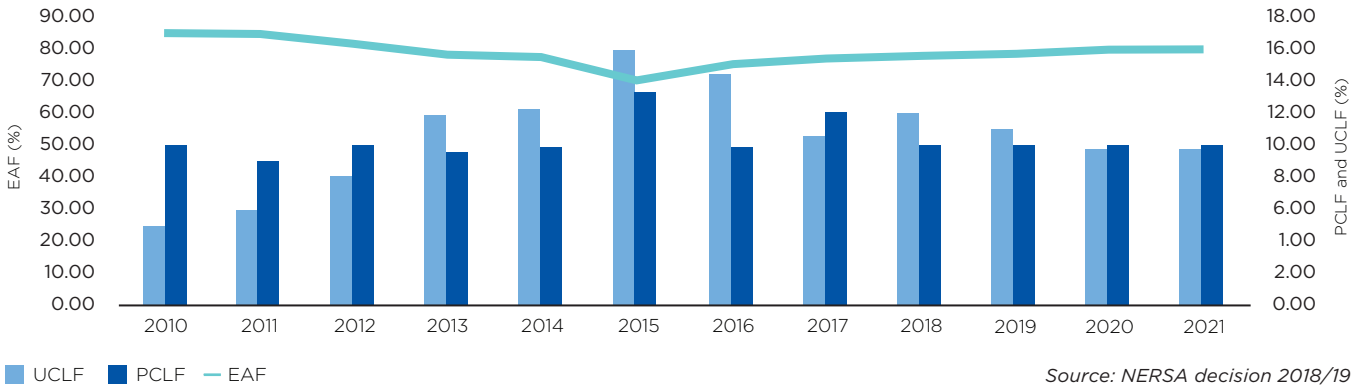
R3.3 billion — **in respect of operating costs**

R3.4 billion — **in respect of open-cycle gas turbines (OCGTs)**

ESKOM'S PERFORMANCE, UNAFFORDABLE TARIFF INCREASES AND THE CONSEQUENCES

Historical, and projected plant performance of the Eskom fleet

Eskom fleet plant availability



Source: NERSA decision 2018/19

Definitions:

Energy Availability Factor (EAF) – *the percentage of maximum energy generation that a unit is capable of supplying to the electrical grid, limited only by planned and unplanned outages.*

Unplanned Capacity Load Factor (UCLF) – *measures the lost energy due to unplanned energy losses resulting from equipment failures and other plant conditions.*

Planned Capability Loss Factor (PCLF) – *measures energy loss during the period because of planned shutdowns.*

Historically, Eskom's EAF (the maximum amount of energy Eskom's fleet can produce) was at levels above 85%. The EAF has been in decline since 2011 to levels of 77.3% in 2016/2017, improving to 78% in 2017/2018. This progress reversed into a massive regression lately.

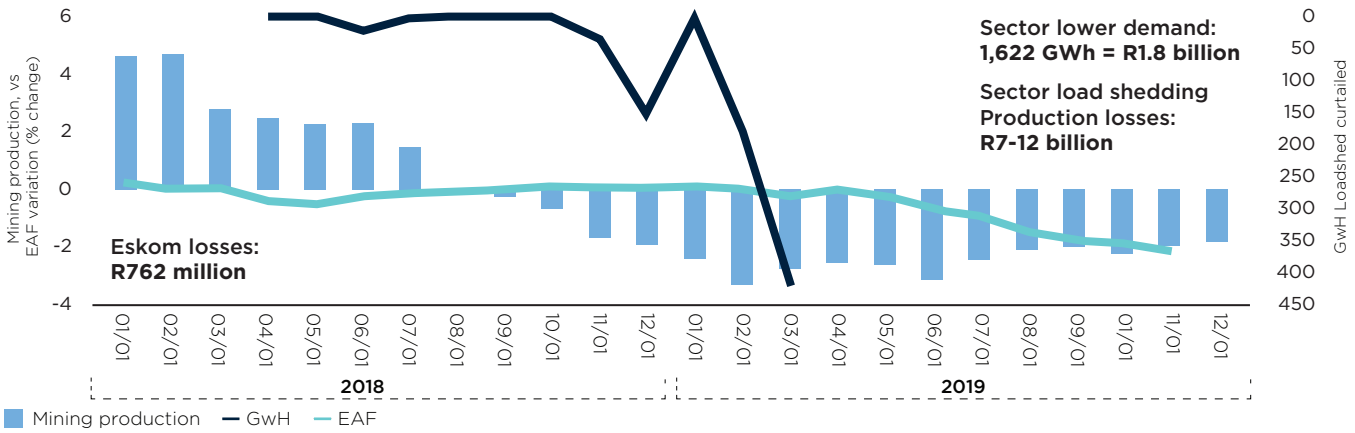
In its MYPD 4 application, Eskom projected further improvements in its performance levels to 80% EAF, 10% UCLF (unplanned outages) and 10% PCLF (planned outages) in 2018/2019. However, Eskom only achieved performance levels of 69.95% EAF, 18.31% UCLF (unplanned outages), 10.18% PCLF (planned outages).

Some of the reasons for the poor EAF performance includes:

- Lack of and poor planning of maintenance procedures by Eskom.
- Poor procurement practices and delays in procurement (of coal and spare parts) due to additional controls put in place to reduce fraud.
- Lack of long-term maintenance on units that are more than 20 years old.
- Failure of Medupi/Kusile and Ingula Power Stations to reach their nameplate 800MW and 333MW unit production levels respectively, due to design deficiencies.

In its RCA application, Eskom indicates that the country experienced load shedding of 418.5 hours or 30 days during its financial year. The utility estimates that it lost R762 million in revenue. The Minerals Council estimates that due to the 30 days of load shedding, the mining industry suffered production losses of between R7 billion – R12 billion.

Mining production, EAF & load shedding since 2018

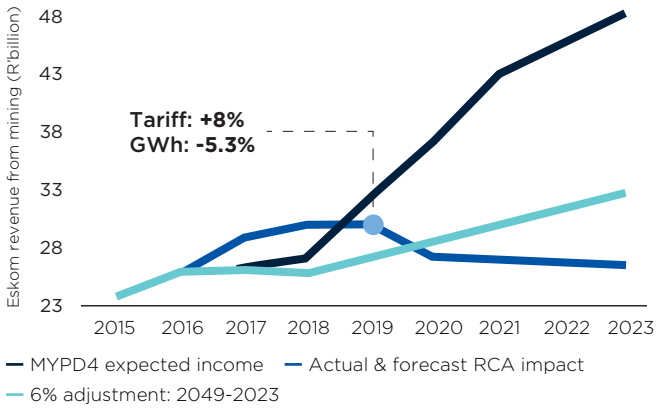


Sources: Statistics South Africa, Dept of Mineral Resources & Energy, Eskom, Minerals Council South Africa

Eskom did not factor in the consequences of its poor performance on its sales.

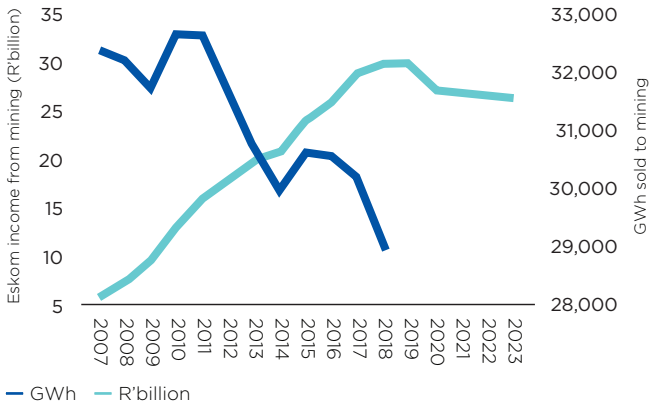
Steep electricity tariff increases have resulted in demand from the mining industry for electricity decreasing by 1,622GWh as well, resulting in Eskom losing a further estimated amount of R1.8 billion during the 2018/2019 financial year. This was due to loss making mines closing shafts and streamlining operations.

Eskom & mining at an Inflection Point

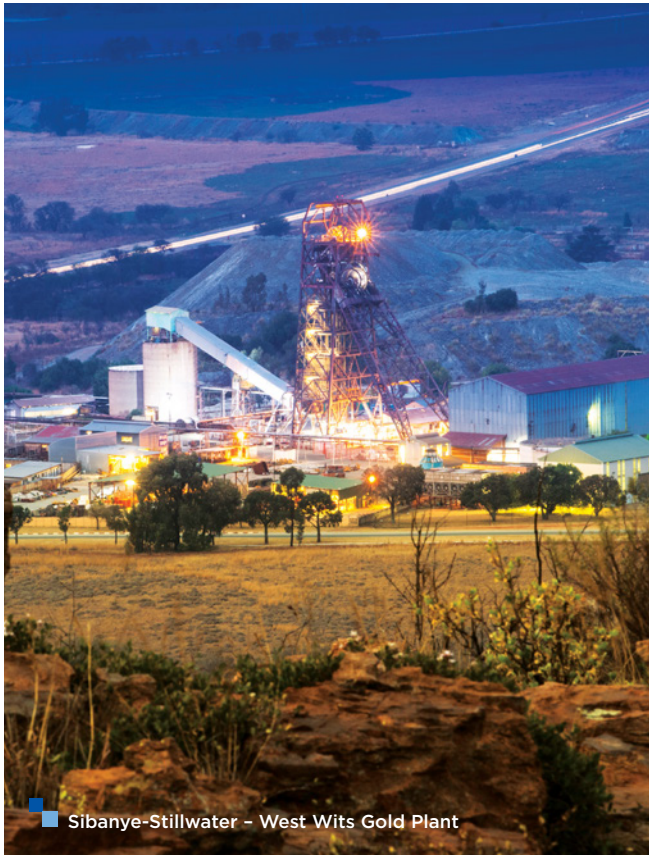


Sources: Eskom, Minerals Council South Africa

Eskom income from mining at an Inflection Point



Sources: Eskom, Minerals Council South Africa


Sibanye-Stillwater – West Wits Gold Plant

As predicted by the Minerals Council in its comments on the MYPD 4 application, the combination of unaffordable and unreliable electricity from Eskom, and the decrease in consumption from customers have resulted in an inflection point where higher tariff increases will no longer result in higher income for the utility, but will only serve to accelerate its own 'death spiral'.

REVENUE VARIANCE

Eskom RCA application	**Eskom is seeking a revenue variance of R5.450 billion**

Electricity generation	
Nersa determination:	**212,701GWh**
Actual achieved by Eskom:	**208,779GWh**
Difference:	⚠ **3,925GWh**
Sales	
Nersa determination:	**188,082GWh**
Actual achieved by Eskom:	**185,930GWh**
Difference:	⚠ **2,152GWh**
Exports to SADC countries	
Nersa determination:	**13,634GWh**
Actual achieved by Eskom:	**12,367GWh**
Difference:	⚠ **1,267GWh**

Underlying causes: Eskom's revenue shortfalls are due to unavailability of electricity, a function of years of mismanagement and neglect of plant maintenance.

Seriti – Kriel Colliery

COAL AND COAL RELATED COSTS

Eskom RCA application	**Eskom is seeking to recover R14.1 billion in respect of coal (R12.4 billion) and coal related costs (R1.6 billion)**

The cost of coal	
Nersa determination:	**R39.3 billion**
Actual expenditure by Eskom:	**R49.9 billion**
RCA adjustment:	**R1.7 billion**
Difference:	⚠ **R12.4 billion**

Underlying causes: The excessive coal costs, is entirely due to Eskom opting to sign expensive short- and medium-term coal contracts and to reduce investment in and neglect of the more cost-effective cost-plus mines and the even cheaper fixed-price long term coal contracts, over the years. The latter category mines also had to revert to more costly short- and medium-term supplementary sources of coal, as the lack of new investment curtailed their production.

Anglo American Coal – Greenside

Coal purchases by Eskom during FY2019

	Cost plus contracts	Long term contracts	Short- and medium-term contracts
Nersa assumed share of total volumes	38%	32%	30%
Actual share of total volumes	33%	25%	42%
Actual coal burnt	38.2Mt	28.9Mt	48.6Mt
Actual coal burnt expenditure	R17.2bn	R7.4bn	R26.5bn
Average price per tonne	R452/tonne	R257/tonne	R555/tonne
Characteristics	Export prices has little direct impact	Export price has no impact **(Cheapest source of coal)**	Eskom argues that suppliers use export prices as reference during contract negotiations **(Most expensive source of coal)**

Sources: Eskom, Minerals Council South Africa

Cost plus contracts

The better performing power stations are supplied by one source of coal with a known grade and quality, in many instances from cost plus mines.

Due to oversupply from some cost plus mines in the past and under investment to replace production, cost plus mines were not able to supply the required amounts of coal themselves. Mines are designed to supply a certain amount of coal tonnages per year. Once the amount of coal produced decreases, economies of scale decline, resulting in higher unit costs for coal. In order to supplement the shortages, short- and medium-term contracts are used to meet Eskom's requirements.

Cost plus mines supplied 38.2Mt of coal, which was 7Mt less than assumed in the Eskom application, at 15% higher-than-forecasted rand per tonne prices.

Long term fixed price contracts

Long term fixed price contracts offer the lowest cost option at R261 per tonne and should be the coal of choice. Minerals Council members have reported that they offered fixed term price contracts to Eskom, but that these offers were declined.

Eskom only procured 25% of its coal from these suppliers compared to the NERSA determination of 32%. Fixed price contracts supplied 28.9Mt of coal, which is 8Mt less than planned.

The decline in coal supply from cost plus mines can be attributed to a lack of investment by Eskom into the development of new mines due to limited funds. Consequently, Eskom has increasingly relied on other, more expensive sources of coal.

Eskom blocked investment into new equipment and the opening up of new mining areas at existing mines, which directly impacted coal production costs at cost plus collieries. At the Exxaro Arnot mine, Eskom refused to allocate capital to develop a new and cheaper mining area resulting in the closure of the Arnot colliery and the loss of 1,500 jobs.

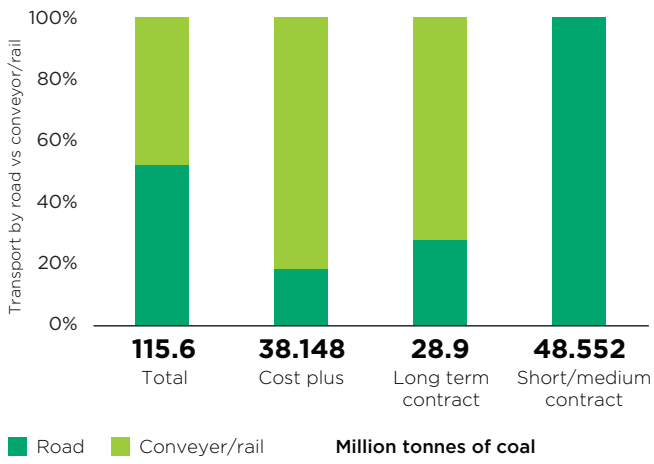
Short- and medium-term pricing contracts

NERSA determined that Eskom would source around 30% of its required coal volumes from short- and medium-term contracts. However, Eskom procured 48.552Mt which represents around 42% of its coal from these contracts.

At R555 per tonne of coal, the cost per tonne of coal procured by way of short- and medium-term contracts is R205 per tonne more expensive than the R350 per tonne allowed by NERSA.

The higher cost of coal from this source can be attributed to contractors referencing export coal prices; the inability of small producers to provide volumes; a higher probability of middlemen involved in the supply chain; poor quality of coal and the cost of cleaning the coal to the appropriate quality; and transport costs.

Percentage of coal transported on road vs. conveyor belt/rail



Sources: Eskom, NERSA, Minerals Council South Africa

OPERATING COSTS

Operating expenditure includes all costs incurred in the day-to-day running of the business. These include manpower costs, maintenance costs, other costs, arrears debt and corporate overheads.

Eskom RCA application	**Eskom is seeking R3.3 billion in respect of operating costs**
Employee benefits	
Nersa determination:	**R24.314 billion**
Actual expenditure by Eskom:	**R27.522 billion**
Difference:	⚠ **R3.208 billion**
Number of employees	
Nersa determination:	**32,954 employees**
Actual Eskom:	**39,292 employees**
Difference:	⚠ **6,323 employees**
Maintenance	
Nersa determination:	**R15.2 billion**
Actual expenditure by Eskom:	**R14.1 billion**
Difference:	⚠ **Eskom underspent by R1.1 billion**

Underlying causes: The overrun in operating costs is a consequence of a bloated workforce. A 43% increase in the size of the workforce since 2007 is responsible for a mere 3.5% additional production capacity. The average cost to company of an Eskom employee amounts to R700,000 per annum. This far exceeds all other industries. Probably the most exasperating portion of the RCA is that Eskom did not use its full maintenance budget allocation. It is no wonder that Eskom's EAF has fallen from 87.5% to 69.95% over the same period, causing efficiency to deteriorated drastically.

OPEN-CYCLE GAS TURBINES

Eskom RCA application	**Eskom applying for R3.423 billion**
OCGT	
Nersa determination:	**R325 million**
Actual expenditure by Eskom:	**R3.768 billion**
Difference:	**R3.443 billion**
Price per unit of electricity	
Nersa determination:	**93c/kWh**
Actual expenditure by Eskom:	**R3.14/kWh**
Difference:	**R2.21/kWh**

Underlying causes: High and costly OCGT usage was a direct consequence of poor EAF, itself a consequence of the long period of mismanagement.

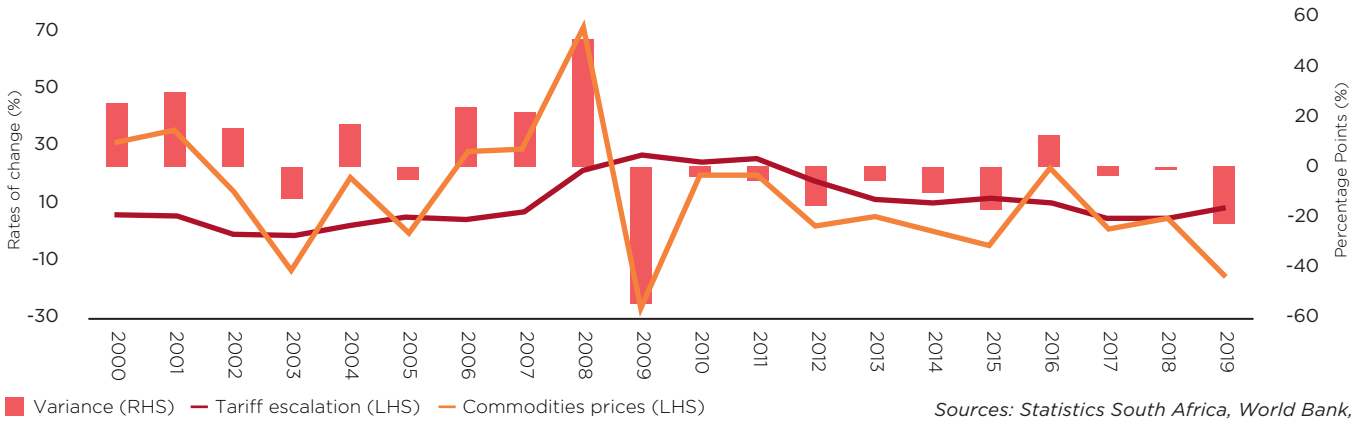

Rand Refinery


Petra Diamonds – Finsch Mine

IMPACT ON THE MINING INDUSTRY

Given that the mining sector is a price taker, rising electricity prices are a critical concern to the South African mining industry. The stepwise increases in electricity tariffs have been higher than commodity price movements by 12 percentage points since 2009.

Electricity tariff trend vs commodity price changes



Sources: Statistics South Africa, World Bank, SA Reserve Bank, Minerals Council South Africa

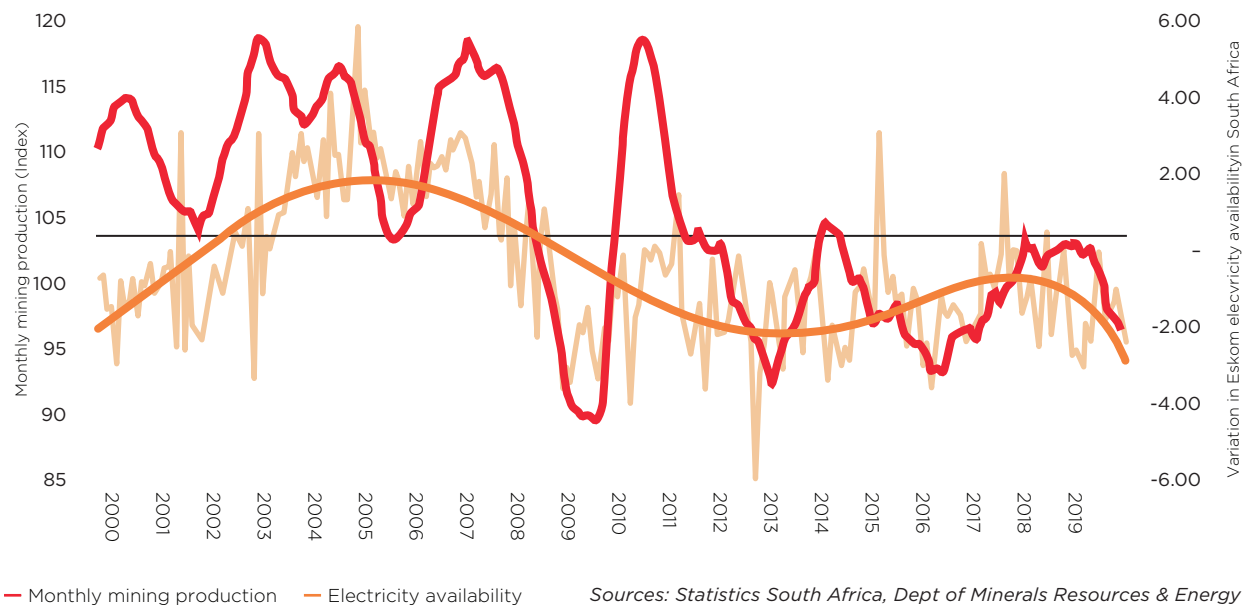
The mining sector's electricity bill, has increased to around R30 billion in 2019.

The total additional increase in the electricity bill for the mining sector, if the 2019 RCA application were to be granted, would amount to R14.45 billion assuming that no companies will go under. If the RCA application were granted, the cost of electricity as a percentage of production costs would increase from 24.7% to 30.1% across the gold industry, from 22.4% to 26.7% in iron ore, and from 13.1% to 15.9% in PGM mining.

Should the RCA application be granted, more than 8,200 jobs would be at risk across the mining industry.

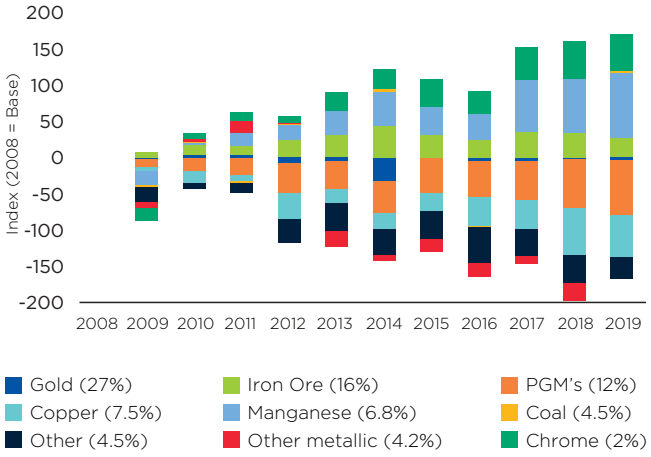
Eskom is contributing to the inability of mining to reach its full potential. Electricity supply is erratic and tariffs are continuing to rise at an unsustainable rate, causing losses in production, and cost structures of the sector to shift towards greater dependency on electricity.

Mining production vs Electricity Availability Factor



Sources: Statistics South Africa, Dept of Minerals Resources & Energy

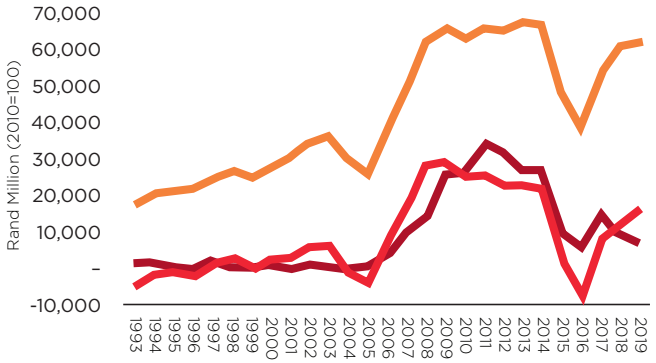
Mining production variation since 2008



Sources: Statistics South Africa, Dept of Mineral Resources & Energy, Minerals Council South Africa

Fixed Investment in new mines have been deteriorating since 2011, and coincided with the realisation that electricity was not assured into the future, after the shocks of the 2007/8 load shedding and the double digit tariff increases after that.

Gross & net fixed investment snapshot



Sources: Quarterly Financial Survey; StatsSA, p0044, Quantec