

# Standing Committee on Appropriations

## Eskom Sustainability



**10 September 2019**

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# Contents

- Introduction
- Problem Statement
  - ✓ Financial;
  - ✓ Technical; and
  - ✓ Structural
- Contributing factors
- Interventions
- Risks

# The Challenge

- State capture
- New build : Medupi and Kusile
  - The schedule and cost overruns
  - poor performance from new units
  - Latent defects
- Quote President – “too big to fail”
- Energy security vital for economy to grow and for citizen welfare
- 90% ? Energy provided by Eskom
- Quote MoF : why Eskom being funded by fiscus
  - 23b / year
  - Special appropriation bill

## **Government Approach to Eskom Challenges**

1. Governance
2. Generation : 9 point plan implementation
3. Financial: liquidity, service debt; cost cutting; CRO dealing with debt
4. Recommendation of Presidential Sustainability Task Team :  
announcement by president : restructuring of Eskom
5. Special Paper on Eskom roadmap to be published

## Recognise Progress and Successes

- An amount of R69 billion has been allocated to Eskom for three years.
- Further amount of R59 billion has been allocated to Eskom for 2019/20 FY and 2020/21 FY.
- Chief Restructuring Officer (CRO) has been appointed to deal with Eskom debt.
- Eskom is in the process of shifting employees within the three divisions.
- The Special Paper on Eskom is in the process of been finalised.

# The Crisis?

<b>PROBLEM STATEMENT</b>	<b>ESKOM IS FACING LIQUIDITY CHALLENGES</b> <ul style="list-style-type: none"> <li>• High levels of debt currently at R440 – 15% of the sovereign debt. Default risk threatening the economy</li> <li>• Cash generated does not cover operating and debt servicing costs</li> <li>• Sales declining, tariffs rising – “Utility death spiral”</li> <li>• Escalation of municipality and Soweto debt (R38 billion)</li> </ul>
	<b>ESKOM IS STRUGGLING TO MAINTAIN OPERATIONAL SUSTAINABILITY</b> <ul style="list-style-type: none"> <li>• Ageing generation fleet - about 37 years on average</li> <li>• Essential mid-life refurbishments not implemented</li> <li>• Poor quality of maintenance due to poor workmanship – 40% of plant breakdowns are due to human error</li> <li>• Ongoing coal shortages due to poor management and lack of investments in cost plus mines</li> <li>• Delays in environmental compliance investment</li> <li>• Significant loss of critical skills and low staff morale</li> </ul>
	<b>COST OVERRUNS AND POOR PERFORMANCE FROM THE BUILD PROGRAM</b> <ul style="list-style-type: none"> <li>• Medupi and Kusile have suffered massive delays and cost overruns due to poor planning, poor engineering designs, poor procurement practices / poor contracting and corruption</li> <li>• The costs for the plants have escalated significantly to over R300bn (Medupi from R24.9 billion to R145 billion and Kusile from R80.7 billion to R161.4 billion)</li> <li>• Poor post commissioning , reliability at ~ 40%</li> </ul>
	<b>GOVERNANCE</b> <ul style="list-style-type: none"> <li>• Systemic corruption, malfeasance, fraud and the state capture project has compromised the credibility of the organization and eroded investor confidence</li> <li>• The resultant effect of these corrupt transaction is the pass through to consumer and the shareholder</li> </ul>

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## How did ESKOM get here?

R'bn	2007	2019
Total Installed Capacity (MW)	42 618	44 127
Electricity Sales (GWh)	218 120	208 319
Revenue (R'bn)	39,4	179,9
Average selling price (c/kWh)	18	90,01
Coal Purchases (Mt)	117,4	118,3
Coal Costs (R'bn)	10	58,5
Employee Costs (R'bn)	9,5	33.3
Employee Numbers	32 674	46 665
Debt Securities and Borrowings (R'bn)	40,5	440 610

- Capacity grew slightly over the period
- Sales declined
- Revenue : 4x
- Coal Purchases – volumes flat over the 10 year period
- Coal costs grew significantly for same volume
- Employee costs increased 3x driven by employee benefits

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## Financial Ratios

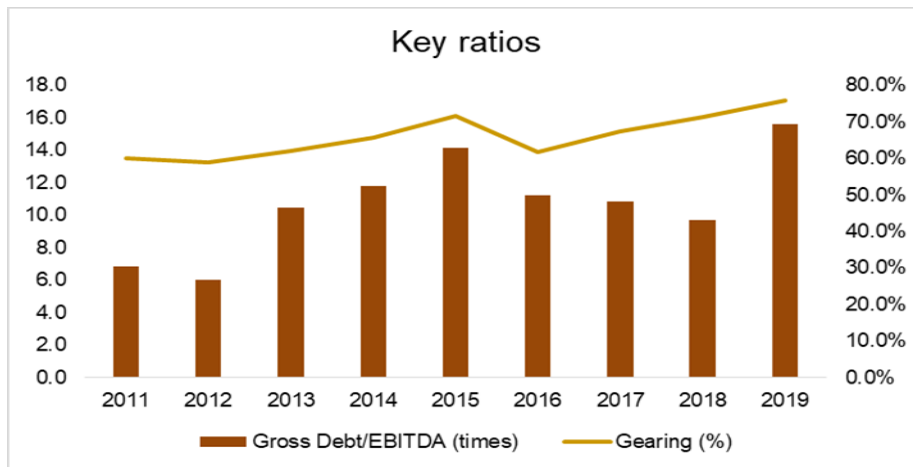
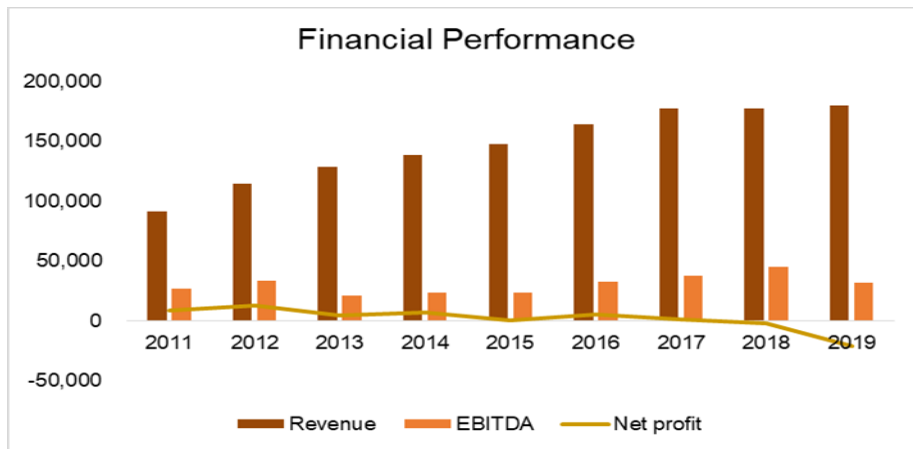
2014/15 FY	2015/16 FY	2016/17 FY	2017/18 FY	2018/19 FY
EBITDA margin (%)	20	21	26	18
Gearing (%)	62	68	71	75
Debt service cover ratio	1.07	1.42	0.91	0.48
Cash interest cover ratio	1.94	1.83	1.23	0.93

- Solvency ratio has been declining due to insufficient cash generations from operations to meet short and long term obligations.
- Gearing worsened due to high level debt and low profitability.

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# Deteriorating Financial Performance



- The increase in revenue is underpinned by the increase in tariffs
- Although the cash from operations (EBITDA) IS increasing, not sufficient to cover increasing costs
- The value of the shareholder (equity) of R153 billion has been eroded by increasing debt
- The business is not generating returns for the shareholder

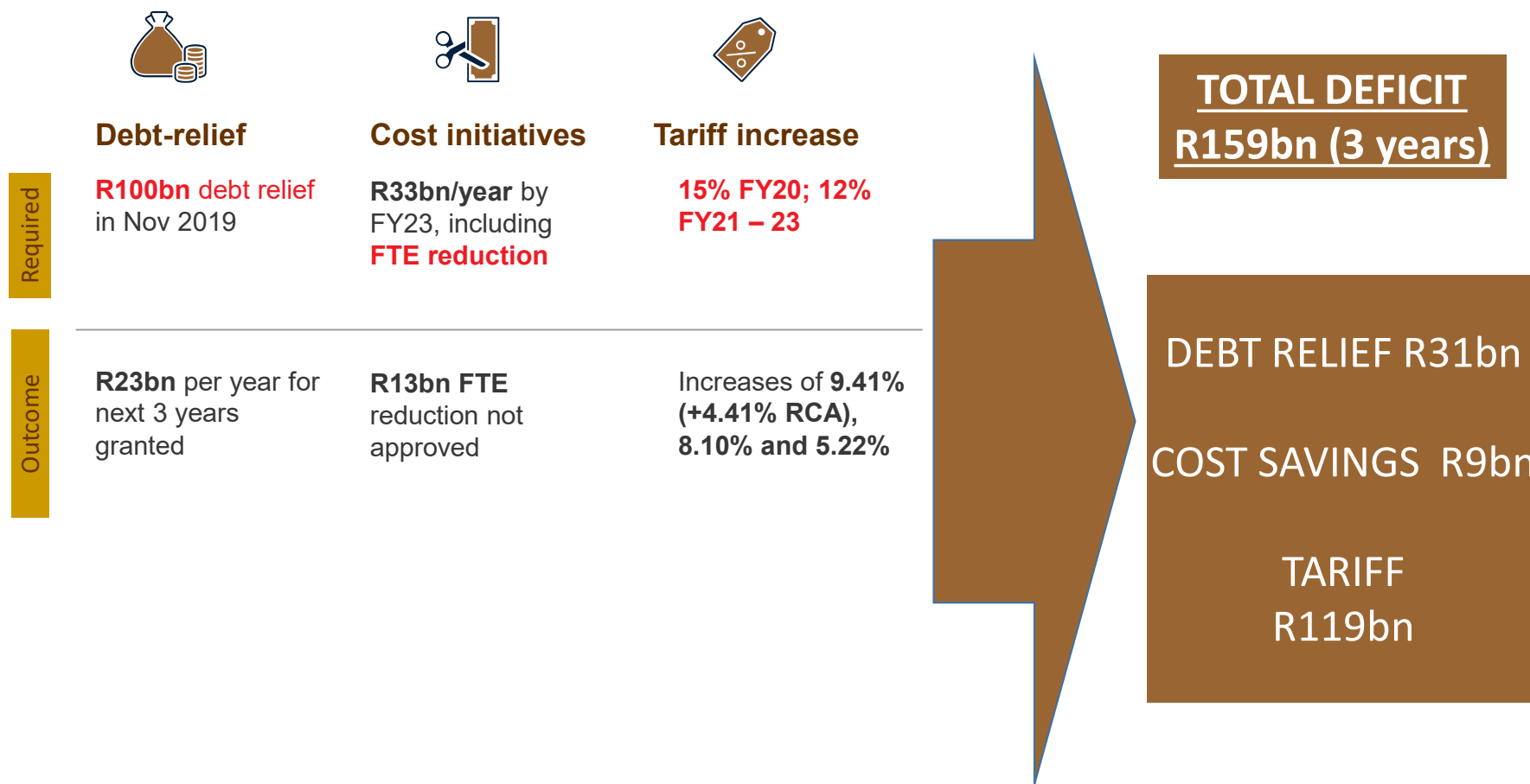
## How does ESKOM spend money?

R'bn	2007	2019
Revenue generated	40,1	179,9
Other income	0,5	2,2
Minus Primary energy cost	13,0	99,5
Minus Employee cost	9,5	33,3
Minus other expenses - Maintenance	6,3	18,2
Equals EBITDA	11,8	31,1
Minus interest payment	1,8	35,9
Minus Investment requirement	14,1	34,1
Surplus (Shortfall)	(4,1)	(38,9)

- Since 2007, revenue grew more than 4 times mainly driven by massive tariff increases
- Expenses (primary energy and employees cost) increased faster than revenue growth
- EBITDA (proxy for free cash cash-flow) insufficient to cover interest costs and capex (investment)
- Shortfall was covered through borrowing (debt).

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# Eskom Turnaround in November 2018

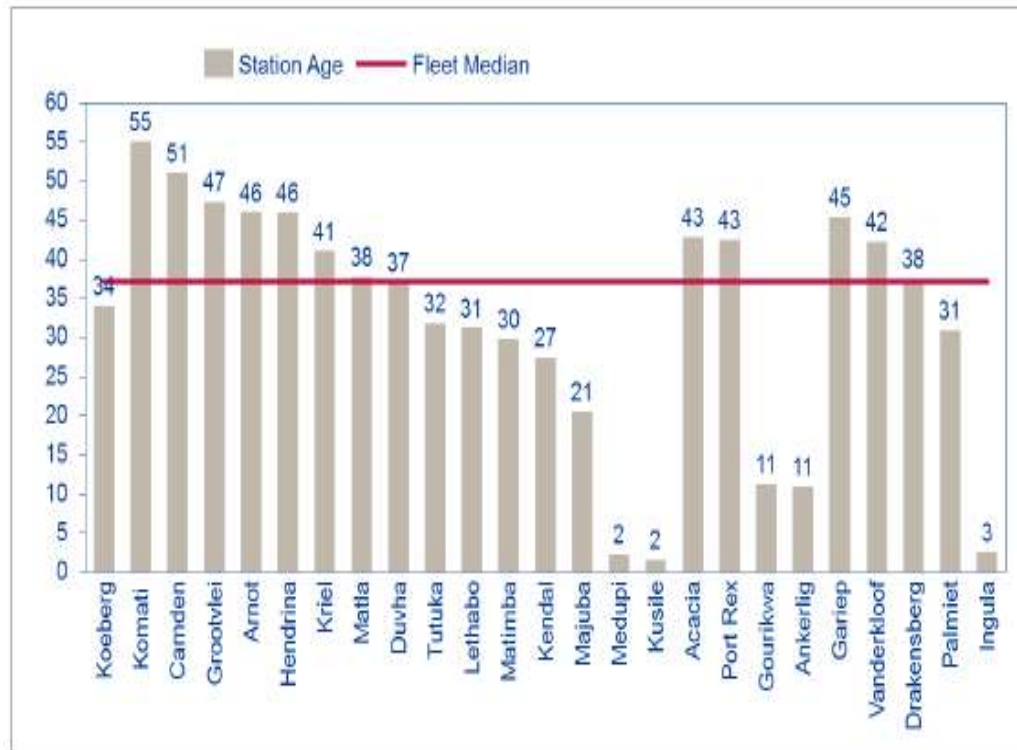


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## Progress to date

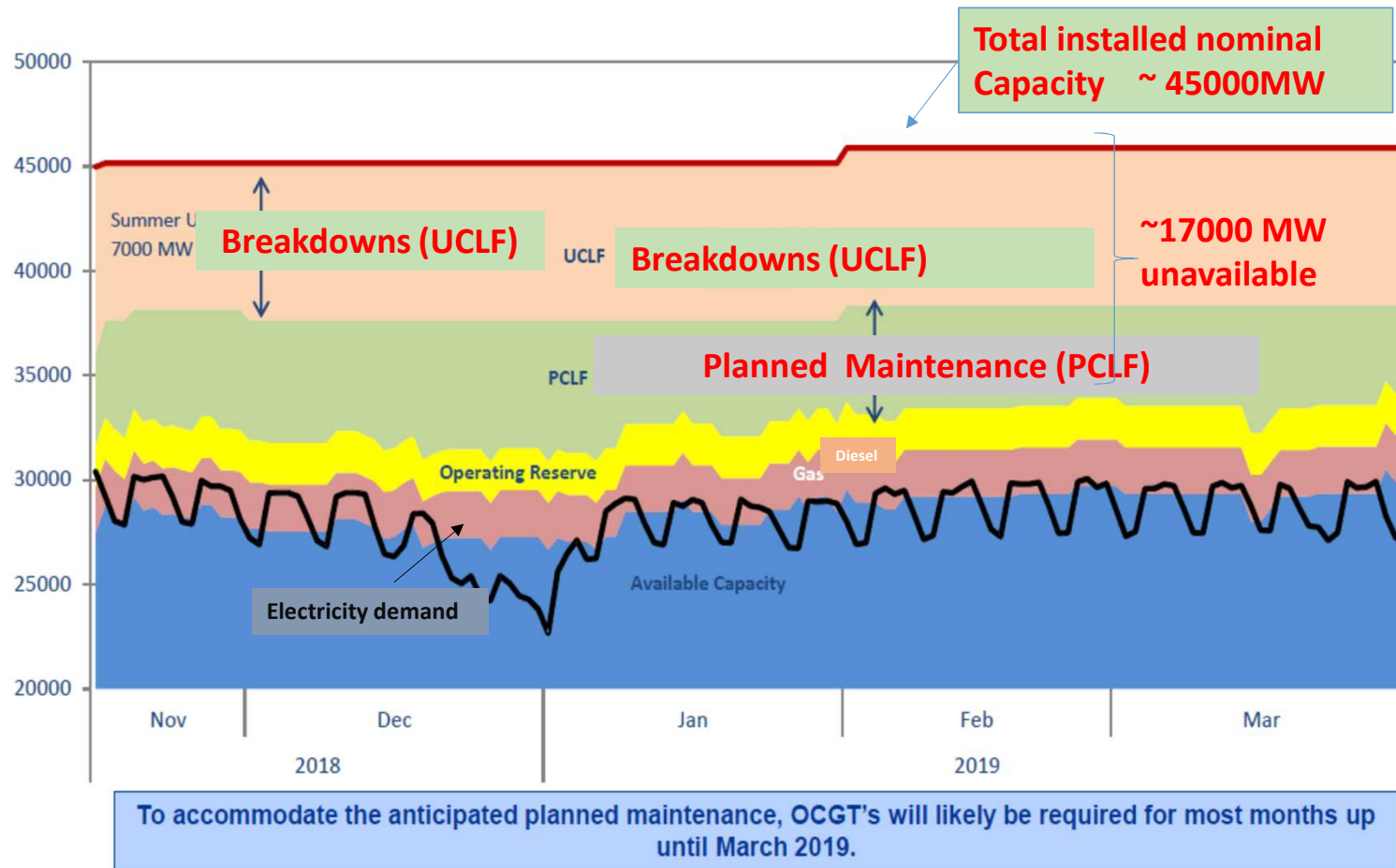
- Minister of Finance announced the support package of R 23 billion for 10 years in his budget speech
- Following SONA and budget speech, Eskom faced serious challenges raising further debt or drawing down on existing facilities
- Section 16 of the PFMA had to be evoked to provide Eskom with urgent funding
- Minister of Finance has tabled the Special Appropriation Bill in Parliament to address Eskom's liquidity challenges and going concern status.
- A support package of R23 billion and a further R26 billion was approved for 2019/20 financial year, R23 billion and an additional R33 billion for FY 2020/21
- Government (National Treasury and Department of Public Enterprises) developed proposals to address Eskom balance sheet challenges
- The Chief Restructuring Officer is appointed to interrogate Eskom's debt and various proposals to address Eskom's long term financial challenges.
- The office of the CRO will consider the proposals and make recommendations to both the Minister of Finance and Public Enterprises.
- Financial bailout alone will not sustain Eskom

## Eskom Generation fleet are aging



- More than half of Eskom's generation is more than 37 years old.
- Major midlife refurbishment is required and has not been implemented due to financial constraints and requisite space.

# Capacity outlook based on planned and unplanned outages



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# Eskom's 9 point plan for Generation turnaround

Initiative	Objective
1. Fixing new plant (Medupi, Kusile and Ingula)	Addressing known design errors through an expert team to guide the recovery and application of contractual remedies
2. Fixing Full load losses and trips	Improve planning, execution and effectiveness of maintenance (including training) and optimise procurement processes to enable swifter purchases when required
3. Fixing units on long-term forced outages	Fixing units on long-term forced outages to reduce impact of major incidents on breakdowns - UCLF (Unplanned Capability Loss Factor)
4. Partial Losses and boiler tube leaks	Reduce partial load losses by addressing major contributors per plant and system and re-energise the tube leak reduction programme
5. Fixing outage duration and slips	Planned Maintenance - PCLF (Planned Capability Loss Factor) improvement through improved outage planning and execution
6. Fixing human capital	Make appointments in critical positions, train key staff and relink centralised support functions to the stations
7. Prepare for increased OCGT (Open Cycle Gas Turbine) usage	To ensure that OCGT plant is able to run when required. Contracts to be put in place with suppliers for diesel, and logistical challenges to be addressed
8. Environmental Compliance	Ensure stations comply with MES
9. Fixing coal stock piles	Recover coal stockpiles to appropriate levels

## Enablers:

- Additional capacity is required to all **'SPACE'** for maintenance
- Realignment of the organizational structure
- Filling of critical positions
- Expedite procurement for key areas

## Progress on intervention to stabilise electricity supply at Eskom

- Implementing 9 Point Plan
- Winter plan Successfully implemented – 4 months no load shedding
- Successful return of major units as per winter plan (Matla 1, Duvha 4)
- Medupi 3 commercial operation
- Medupi unit 1 first synchronisation achieved
- The System remains at risk
- Environmental challenges could further worsen capacity outlook
- While Generation picture is understood, the country has no view of Distribution / Municipal supply



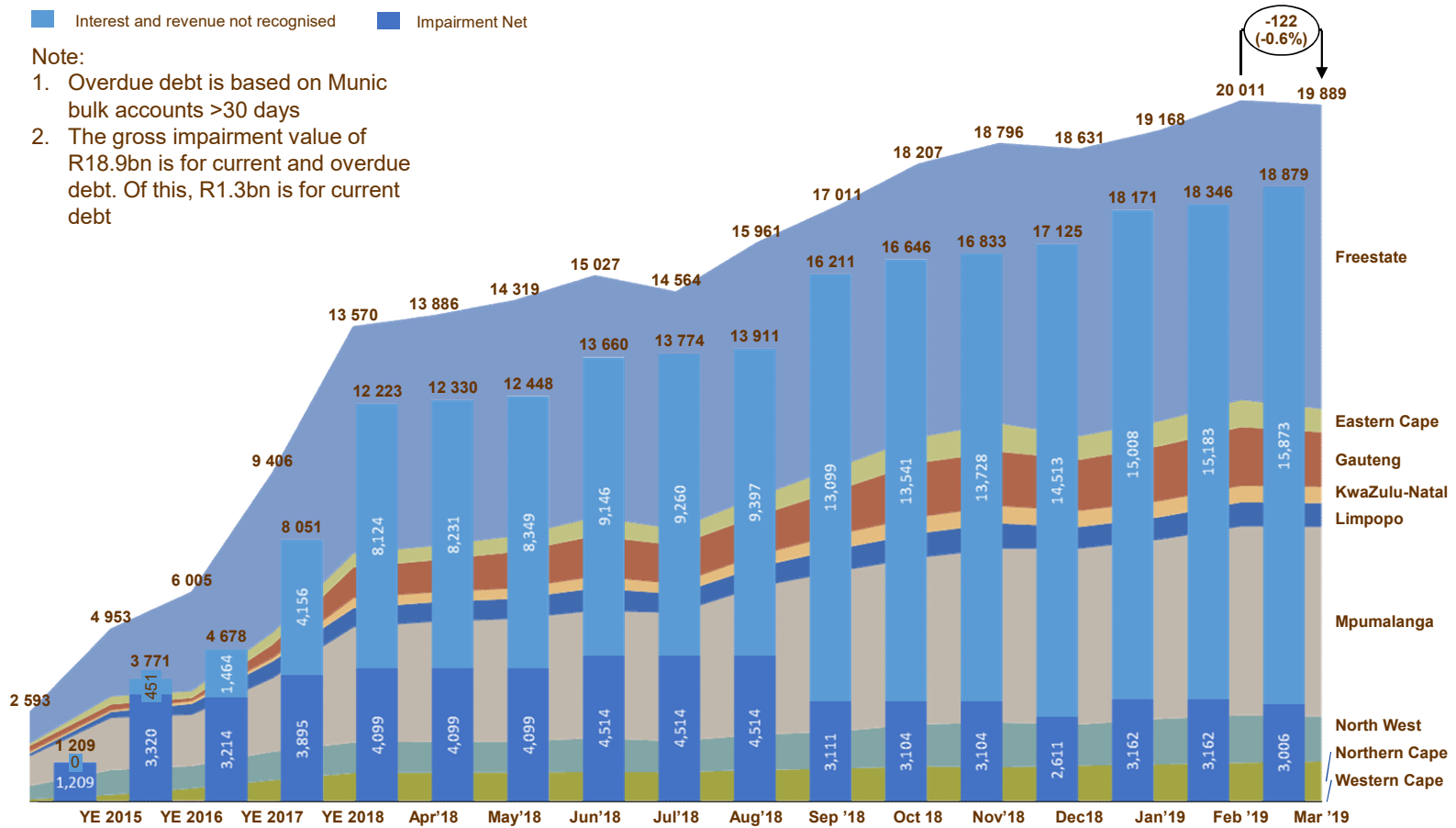
## Contributing Factors

# Municipal revenue collection is rapidly deteriorating

Interest and revenue not recognised    Impairment Net

Note:

1. Overdue debt is based on Munic bulk accounts >30 days
2. The gross impairment value of R18.9bn is for current and overdue debt. Of this, R1.3bn is for current debt

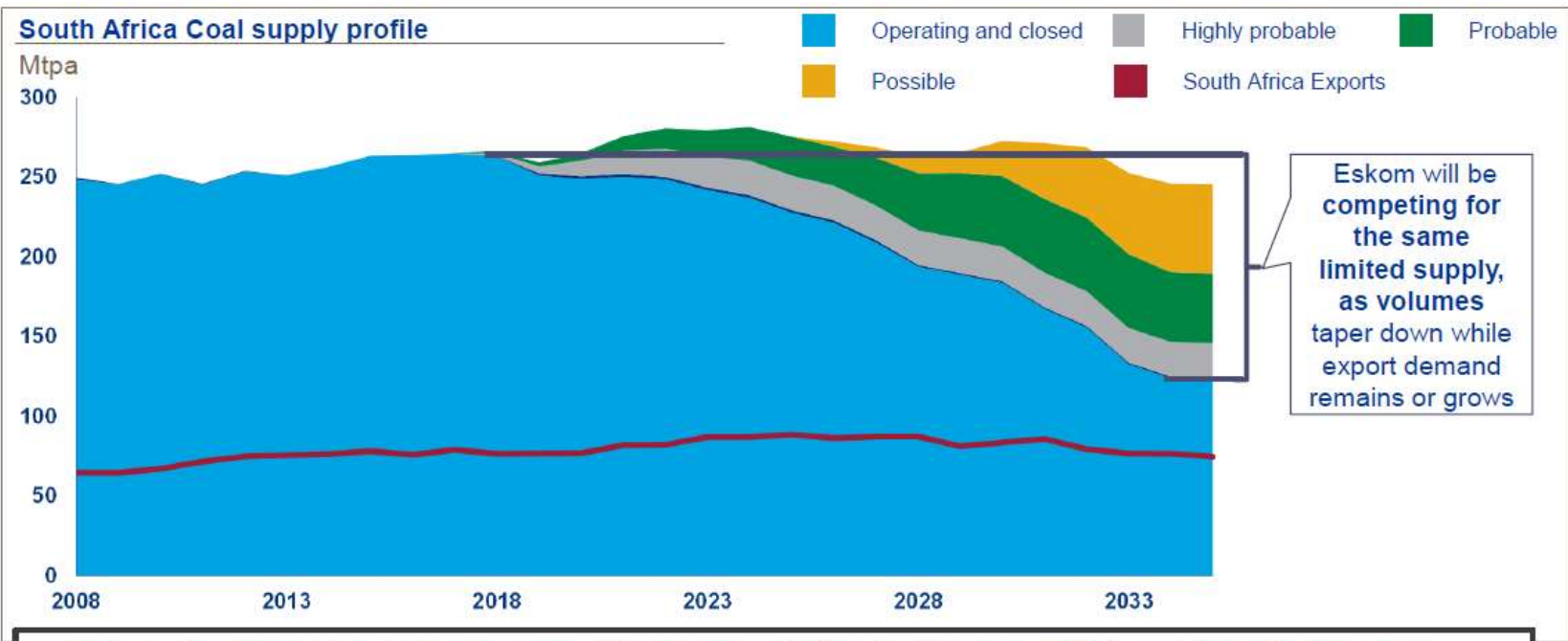


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# Eskom's Position in South Africa Supply Profile



- Coal exports will **remain constant** in contrast the Chamber of Mine Coal Strategy 2018 forecasts that **India's coal demand will continue to increase** in the foreseeable future, best case will be that exports remain constant
- Investment capital may also not be available in the future, as financing for coal based energy is reducing, thus coal mining investment is uncertain which will further constrain coal supply as **Eskom will be competing against the export market** for this limited supply
- Eskom must guard itself in this limited supply environment by signing long term coal supply agreements which will ensure security of coal supply and **hedge against price fluctuations**

# Structural Challenges

## Case for Reforming Eskom (1/2)

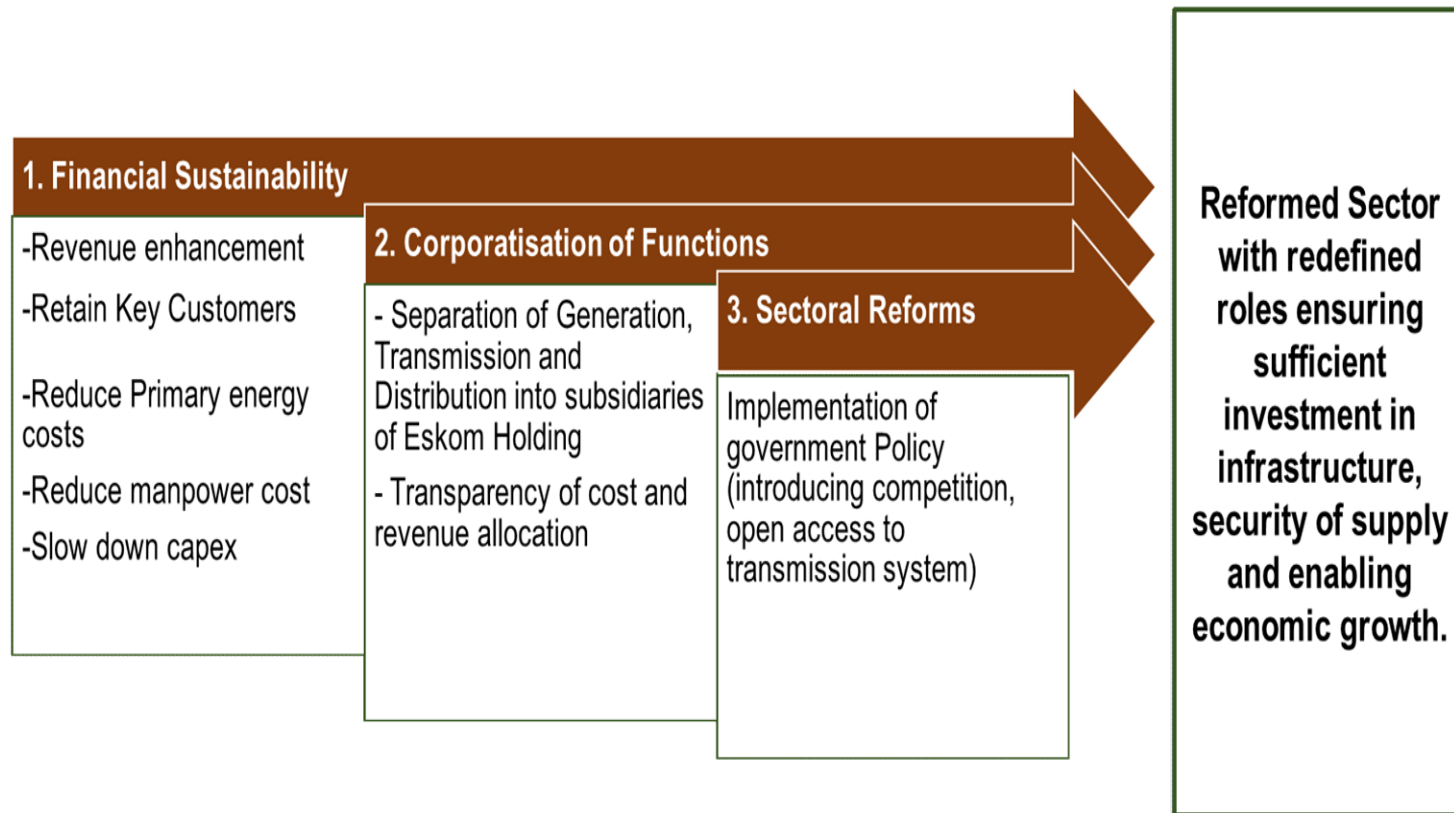
- Eskom's business model is that of a vertically integrated monopoly characterised by lack of transparency, lack of agility, lack of operational excellence, and wide spread inefficiencies due to lack of accountability and consequence management.
- The lack of transparency on cost and allocation of resources, makes it difficult for Eskom to understand its own competitive advantages.
- It has become very difficult to steer the organisation into a long-term healthy path.
- The lack of transparency and accountability present a fertile ground for corruption, rent seeking and fraud
- This is further exacerbated by weak oversight from government.
- Eskom's operating business model is outdated and based on the era of excess supply energy and captive customers to which global trends have shifted to a more decentralised electricity markets.

## Case for Reforming (2/2)

- As the “sole” provider of electricity in South Africa and with the size of its Eskom balance sheet, Eskom is too systemic and critical important to the South African economy to be allowed to fail. This puts government in a perpetual cycle of granting bailout in order to avoid a collapse of the entity and therefore the economy without benefiting from any internal reforms in the company.
- Eskom supplies 95% of electricity in South Africa and the last 3 major energy crises have highlighted that the structural risks of relying on one supplier of electricity. In all the crises, government have been left with limited option to ensure security of supply.
- With declining demand, Eskom is facing a utility death spiral and the separation of the utility into 3 companies would allow government to address generation, transmission and distribution challenges a more separately and effectively.
- With increase in competition in generation, the conflicting functions vested in Eskom will increasingly become challenging to manage and balance. Eskom is currently both single buyer and supplier of energy which will create potential conflict for competitors.
- Splitting Eskom into separate companies responsible for the different functions – starting with the creation of an independent transmission entity, combined with the system operator – will set the electricity sector on a new path. This proposed restructuring is in line with the 1998 Energy Policy White Paper, which intended that Eskom be restructured into separate generation and transmission companies and that independent distributors would be established.

# Restructuring Roadmap

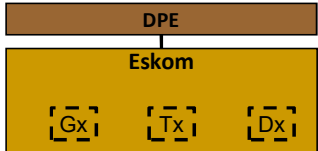
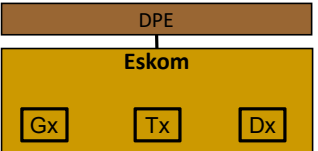
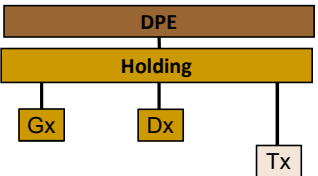
# Eskom Reform Roadmap



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# Reforms required to Support Sustainability

	Phase 0: Eskom Today	Phase 1: Functional Separation	Phase 2: Legal Separation	
				Transmission subsidiary created under Eskom Holdings
<b>What is the legal entity?</b>	Eskom	Eskom	Holding, Gx, Tx, Dx	
<b>Where does the P&amp;L reside?</b>	Eskom	Eskom, Gx, Tx, Dx	Holding, Gx, Tx, Dx	
<b>Who employs the FTEs?</b>	Eskom	Eskom	Holding, Gx, Tx, Dx	
<b>Where does the debt reside?</b>	Eskom	Eskom	Holding, Gx, Tx, Dx	
<b>How long to implement from today?</b>	N/A	12-18 months	Tx co ?24 months	
Source: Eskom				

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# Eskom Restructuring Pillars

## Financial

- CRO debt solution
- Revenue Enhancement
- Improve revenue collection from Municipalities
- Retain Key Customers
- Coal costs
- IPPs costs
- Reduce Manpower benefits
- Optimise the Capital Investment costs

## Operational

- Implementation of Generation 9- point recovery plan
- Filling in critical vacancies and assign proper delegation to Power station managers
- Procurement reforms
- Gx long term sustainability

## Structural

- Creation of Transmission System Operator SOC Ltd (TSO)
- Generation, and Distribution to be decided later

## People

- No retrenchments
- Relinking of people to operations
- Head count reduction through natural attrition and voluntary separation
- Deploying excess skilled personnel (engineers and finance) to Municipalities
- Review outsourcing of work practice to contractors

## Just Transition

- Re-skilling of workers
- Provide alternative opportunities
- Comprehensive stakeholder consultation

## Risks And Mitigation Plans

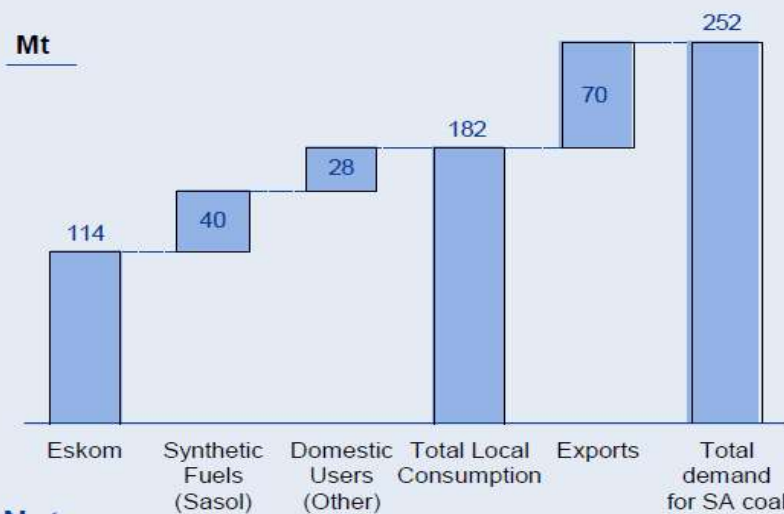
RISKS	MITIGATION PLANS
Further financial deterioration	<ul style="list-style-type: none"> <li>• Execution of identified levers including cost saving</li> </ul>
Further deterioration in plant performance Production disruption compromising security of supply	<ul style="list-style-type: none"> <li>• Appoint Generation Executive, Power Station Managers, Filling of critical vacancies</li> <li>• Give full delegation of authority to Power station manager</li> <li>• Focus on dealing with problems on the New Build are 70% maintenance related and 30% design</li> </ul>
Lack of clear message in public	<ul style="list-style-type: none"> <li>• Clear, regular and concise communication</li> <li>• Communication of facts / rebuttal of “alternative news and facts</li> </ul>

## Key Take Away

- ESKOM in deep financial trouble that requires immediate govt intervention
- Risk of load shedding remains in the short term
- Govt must intervene on munic and Soweto debt
- Execution of Eskom turnaround (incl govt support) is critical
- Govt has set a vision for the industry, but it will take time
- The Integrated Resources Plan will lay out future energy mix
- Special Paper will outline key steps and milestones to achieve the unbundling project

## Back Up Slides

# Eskom is the dominant consumer of domestic coal



**Total Local consumption**



## Notes

- Volume and prices for production, export and saleable coal is provided by the Department of Mineral Resources (DMR) South Africa and updated six months retrospective, available from 2008.
- 'Total local consumption' and 'Total demand for SA coal' is extracted from the DMR databases. 'Synthetic Fuels' is an estimate and the 'Domestic Users (Other)' is calculated.
- In 2017, Eskom purchased 115.9 Mt of coal and burned 114.3 Mt.