



Improving Energy Security

Implementation of IRP 2019

Presentation to EU – SA Webinar

25 June 2020



mineral resources
& energy

Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA



Purpose

To share the Department's response to the energy security challenges and to clarify some of the information / questions potential investors may have.

Key Decisions - IRP2019

- **Key observations**

- Inadequate capacity reserves in the event of plant breakdowns;
- Shutting down Koeberg in 2024 in line with its 40-year end of design life of plant will also worsen the situation; and
- This risk plus the associated energy shortages gets worse when considering possible units shutdown if Eskom fails to comply with air quality minimum emissions standards.

- **Key Decisions**

- **D1:** Undertake an urgent power purchase programme;
- **D2:** Extend Koeberg power plant design;
- **D3:** Support Eskom to comply with MES over time;
- **D4:** Consolidate into a single team the various initiatives being undertaken on just transition;
- **D5:** Retain the current annual build limits on renewables (wind and PV) pending the finalisation of a just transition plan;
- **D6:** New coal power projects must be based on high efficiency, low emission technologies and other cleaner coal technologies;
- **D7:** To support the development of gas infrastructure, convert existing diesel-fired power plants (Peakers) to gas;
- **D8:** Commence preparations for a nuclear build programme to the extent of 2 500 MW at a pace and scale that the country can afford because it is a no-regret option in the long term; and
- **D9:** For regional integration, participate in strategic power projects that enable the development of cross-border infrastructure needed for the regional energy trading.

Capacity Allocations – IRP2019

	Coal	Coal (Decommissioning)	Nuclear	Hydro	Storage	PV	Wind	CSP	Gas & Diesel	Other (Distributed Generation, CoGen, Biomass, Landfill)
Current Base	37 149		1 860	2 100	2 912	1 474	1 980	300	3 830	499
2019	2 155	-2373					244	300		Allocation to the extent of the short term capacity and energy gap.
2020	1 433	-557				114	300			
2021	1 433	-1403				300	818			
2022	711	-844			513	400	1000	1600		
2023	750	-555				1000	1600	1600		500
2024			1860				1600		1000	500
2025						1000	1600			500
2026		-1219					1600			500
2027	750	-847					1 600		2000	500
2028		-475				1000	1 600			500
2029		-1694			1575	1000	1 600			500
2030		-1050		2 500		1 000	1 600			500
TOTAL INSTALLED CAPACITY by 2030 (MW)		33364	1860	4600	5000	8288	17742	600	6380	
% Total Installed Capacity (% of MW)		43	2.36	5.84	6.35	10.52	22.53	0.76	8.1	
% Annual Energy Contribution (% of MWh)		58.8	4.5	8.4	1.2*	6.3	17.8	0.6	1.3	

- Installed Capacity
- Committed / Already Contracted Capacity
- Capacity Decommissioned
- New Additional Capacity
- Extension of Koeberg Plant Design Life
- Includes Distributed Generation Capacity for own use

- 2030 Coal Installed Capacity is less capacity decommissioned between years 2020 and 2030
- Koeberg power station rated / installed capacity will revert to 1926 MW (original design capacity) following design life extension work.
- Other / Distributed generation includes all generation facilities in circumstances in which the facility is operated solely to supply electricity to an end-use customer within the same property with the facility
- Short term capacity gap is estimated at 2000 MW

Implementation - IRP 2019

- **Generation for Own Use**

- 1. Below 1 MW – Published Corrected Schedule 2**

- i. 130 applications approved to date with total capacity of 59 MW

- 2. Above 1 MW – Included in the IRP2019**

- i. 5 applications approved to date with total capacity of 25 MW

- **Emergency Procurement Programme**

- 1. Enabled Eskom to procure Short Term Project (550 MW)**

- i. STPPP Request For Proposal Issued to market by Eskom (closed 30 April 2020)
 - ii. WEPS Request For Proposal issued to the market by Eskom (closed 10 May 2020)

Bids being processed. This additional power expected not later than December 2020

- 2. Enabled procurement of available power from existing Renewable Energy IPPs (128 MW)**

- i. IPP Office is in process of negotiating additional power from existing renewable IPPs. Total available capacity estimated at 128 MW.
 - ii. This capacity is expected on line not later than December 2020

- 3. Enabled procurement of projects that connect within 12 months from Notice to Proceed (2000 MW)**

- i. Issued Section 34 Determination for 2000 MW with concurrence from NERSA
 - ii. Eskom has confirmed its role as the buyer
 - iii. Department is in the process of developing Request for Proposal to be issued in July 2020
 - iv. Programme will not be technology specific
 - v. Cost and alignment to long IRP will be a key consideration

Implementation - IRP 2019

- **Implementation of the IRP 2019**

- i. Issued Section 34 Determination to NERSA for concurrence (14413 MW)
- ii. This Section Determination will enable Bid Window 5 for Renewables and Bid Windows for other technologies such as Coal and Gas
- iii. Discussions are ongoing regarding continued role of Eskom as buyer as well as Eskom developing additional capacity.

- **Enable Municipal Generation**

- i. Amendment to new generation capacity regulations have been developed and published for comment;
- ii. Public inputs being currently under consideration; and
- iii. Publication of final amendments to New Generation Capacity Regulations planned for July 2020

THANK YOU