Just Energy Transition Investment Plan and Electricity Planning

9 June 2023

Reflections on PCC's JETIP recommendations

	Issue	Reflection
1	Alignment with Just Transition	Key issues identified by PCC are all supported. Project-specific implementation plans will address them. Pilot projects will test social ownership models, for scaling on success.
2	On Adaptation and Resilience	A new Investment Plan will need to be developed for this critical work, additional to the JETIP.
3	Skills development	Specific plans will now be formulated, costed, resourced, and implemented. The skills plan will need to be at a larger scale than suggested in the JETIP
4	Electricity	Unlocking grid infrastructure investment is priority. Financing solutions are receiving urgent attention.
5	Electric Vehicles	Policy needs to be resolved urgently to avert a sector crisis and unlock investment. Incentivising public transport conversion must be part of the policy.
6	Green Hydrogen	PCC recommendations supported. PCC is requested to organize a series of workshops that can educate and build consensus on this.

Reflections on PCC's JETIP recommendations (2)

	Issue	Reflection
7	Financing terms	PCC recommendations supported. Work is in progress with National Treasury on the budgetary issues.
8	Timeframe for JETIP	We must expedite within the 5-year period with available funds. A further 5-year plan will be needed.
9	Institutional arrangements and capacity	PCC recommendations supported. The Implementation Plan will explicitly identify policy blockages, dependencies and risks to delivery. The JETIP M&E framework is in development, integral to the planning. Municipal capacity is a specific area of focus.
10	From Investment Plan to Implementation Plan	PCC recommendations supported. In particular: "There are many no regret actions – let us hasten the implementation of these"

PCC's JETIP recommendations: next steps

The Presidency welcomes the thorough work done by the PCC in engaging stakeholders, recording their contributions, and consolidating constructive proposals for the implementation of the JETIP. The issues reflected in the PCC's reports will be addressed in the Implementation Plan.

Next steps are as follows:

- The JETIP Projects Management Unit (JETIP PMU) in the Presidency will publish a draft JETIP Implementation Plan Framework in July 2023.
- The following Focus Groups will be convened during July and August 2023 to define the JETIP Implementation Plan's specific outcomes, outputs, activities and inputs:

  - Electricity infrastructure

  - Mpumalanga Just Transition

  - Electricity sector Just Transition

  - New Energy Vehicles

  - Green Hydrogen

  - Skills

  - Municipalities
- The JETIP Implementation Plan will be finalised thereafter and recommended for approval by the JETIP Inter-Ministerial Committee in October 2023.

Energy Action Plan

Energy Action Plan

In July 2022, President Ramaphosa announced a range of measures to tackle the energy crisis in five areas:

1. Fix Eskom and **improve the availability of existing supply**
2. Enable and **accelerate private investment** in generation capacity
3. **Accelerate procurement of new capacity** from renewables, gas and battery storage
4. Unleash businesses and households to invest in **rooftop solar**
5. Fundamentally **transform the electricity sec**tor to achieve long-term energy security

- Progress has been made in several areas, which **will result in new capacity** over the next 12-18 months. However, new generation capacity will take time to connect to the grid at a sufficient scale to close the shortfall in supply. **Improving the performance of the existing fleet is therefore crucial in the short term**.
- These actions are being taken alongside a **fundamental restructuring of the electricity sector**, which will establish an independent transmission company, introduce competition in generation, and ensure energy security in the long term.

Update on Progress of the EAP and Energy Reforms

The National Energy Crisis Committee (NECOM) is working towards full implementation of the Energy Action Plan announced by President Ramaphosa in July 2022.

Key milestones include:

- **Amending Schedule 2 of the Electricity Regulation Act to remove the licensing requirement for generation projects of any size.** More than 100 projects are now in development, representing over 10 000 MW of new generation capacity and R200 billion of private sector investment.
- **Publishing a new Ministerial determination for the procurement of over 14000 MW of new generation capacity from wind, solar PV and battery storage.** This determination, which has received concurrence from Nersa, will enable further bid windows to be released for wind, solar PV and battery storage.
- **Releasing the Request for Proposals for battery storage.** A further RFP was published in March 2023 to procure 513 MW of battery storage, with bid submissions due in July 2023.
- **Driving progress on the unbundling of Eskom into separate entities for generation, transmission and distribution.** Significant progress has been made in establishing the National Transmission Company of South Africa. A decision from NERSA on its license application is expected shortly, and a board will be appointed by 30 June 2023.
- **Addressing Eskom's debt burden.** The 2023 Budget introduced R254 billion in debt relief to Eskom, subject to strict conditions. This will relieve pressure on the utility's balance sheet, enabling it to conduct necessary maintenance and supporting the restructuring of the electricity market.

Update on Progress of the EAP

- **Tax incentives** announced to accelerate the deployment of rooftop solar by businesses and households, as well as **adjustments to the bounce-back scheme** to provide financing to SMMEs
- Eskom is finalizing contracting for a total of 393 MW through the **standard offer and emergency generation programmes**, having received all the required approvals for these programmes to proceed.
- **Two additional hybrid projects from the Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP) have been approved by the Eskom board and will now proceed to legal close**. These projects are expected to reach close by the end of June 2023, and will add 274 MW to the grid.
- **Revised Grid Capacity Allocation Principles** provided to key industry stakeholders for comment to enable implementation, with the aim of allocating available capacity to projects that are ready to proceed.
- **A funding plan has been developed to procure 750 MW through the Load Shedding Reduction Programme,** which will be presented to the next meeting of the Eskom Board. This will help to replace capacity that may not materialize from the original RMIPPPP target through short-term power purchases.
- The **Distribution Demand Management Programme (DDMP)** was launched by Eskom on 13 April 2023.
- **NERSA has published a consultation paper on the Net Billing Framework,** which outlines the proposed tariff methodology and export credit rates for net billing. This is a key step to accelerate the deployment of SSEG, building on the tax incentives which came into effect on 1 March 2023
- **The private sector, through Business for South Africa, has mobilized technical skills and capacity to support Eskom's Generation Recovery Plan.** Support teams are being assembled and will be deployed at Matla, Kriel, Majuba and Kendal. Technical support will also be provided diesel supply chain optimisation to increase the load factor of OCGTs, and has been deployed on 5 June 2023.

Impact of Energy Reforms

The **lifting of the licensing threshold for embedded generation projects** from 1 MW to 100 MW in August 2021, and the subsequent removal of the licensing threshold as a key intervention of the Energy Action Plan in December 2022, has resulted in **a massive surge of private investment in electricity generation** which continues to outstrip expectations.

Figure 1: Projects registered with NERSA

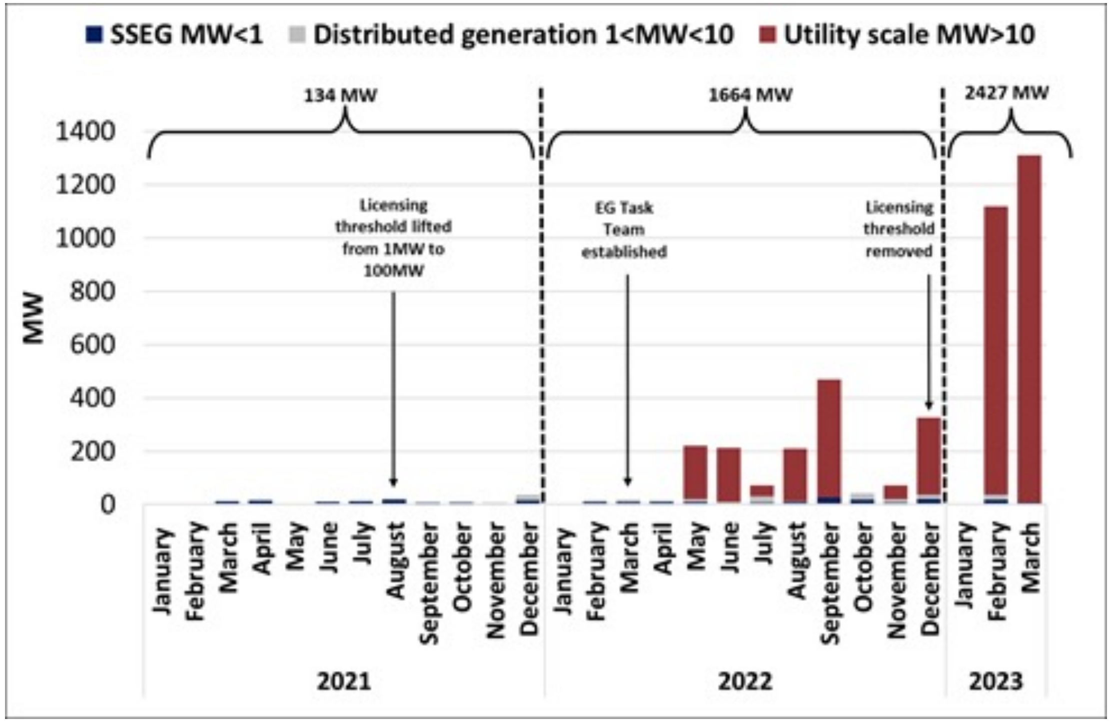
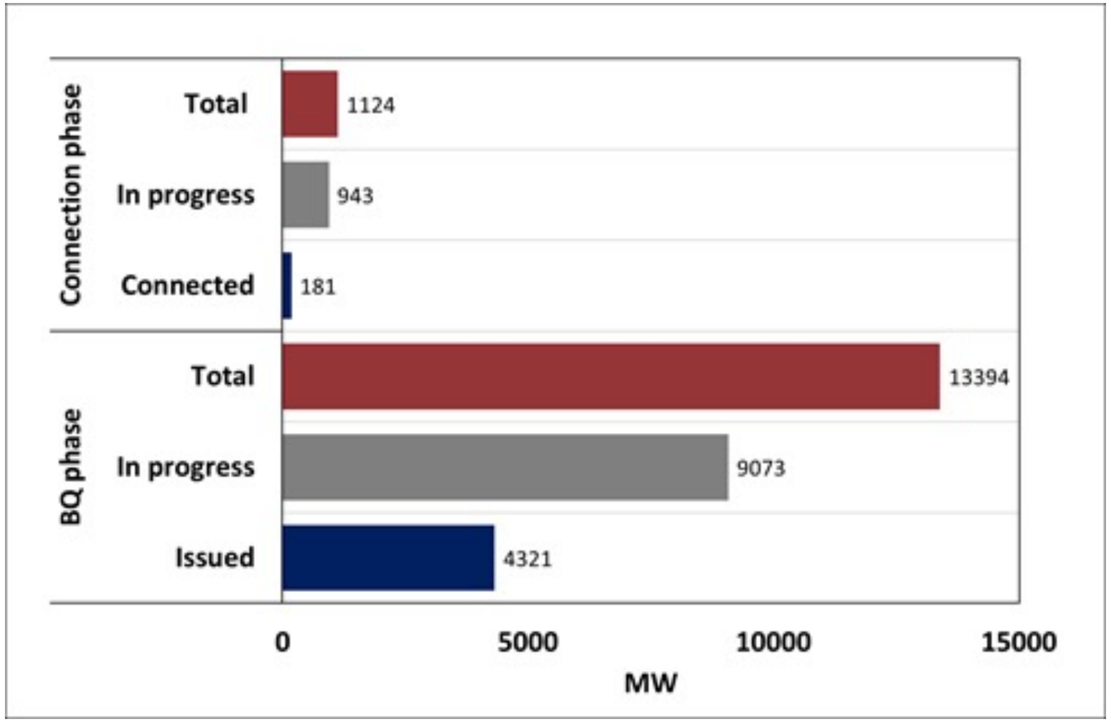


Figure 2: Projects in the Eskom BQ process



Updating the decommissioning schedule to take into account supply deficit

A careful and thorough process is being undertaken to determine whether the current decommissioning schedule needs to be updated, taking into account our immediate energy needs as well as our climate commitments.

- A revised decommissioning schedule will be informed by three key inputs:
  - Technical assessment of the **feasibility and cost of refurbishing and/or repowering each power station** (currently underway by consortium of international experts commissioned by National Treasury)
  - Modelling exercise to **estimate projected future capacity from various sources** compared to existing capacity and projected growth in demand (being undertaken by NECOM)
  - Modelling of **impact on decarbonisation trajectory**, taking into account reduced utilization of existing fleet and updated decommissioning schedule (to be undertaken by JET-IP PMU and/or PCC)
- This **exercise is expected to be completed by July 2023**, with the outcome presented to Cabinet for approval.
- In the interim, **no units are scheduled to be decommissioned** until technical work is completed.
- The **cost of refurbishing older coal-fired power stations should be compared to the cost of investing in other sources of replacement capacity**, including gas and battery storage.
- Cabinet has reaffirmed that **South Africa remains committed to our Nationally Determined Contribution and net-zero targets**. However, care will be taken to ensure that the manner in which these commitments are achieved **does not compromise energy security or the immediate priority of reducing load shedding**.

Challenges to be addressed

Key risks to implementation of the plan:

- **The performance of Eskom's existing power stations continues to deteriorate.** The declining EAF reflects the cumulative impact of historical underinvestment in maintenance and assets, which is now resulting in a high level of breakdowns. In addition, the loss of talent and skills within Eskom over the past decade has resulted in poor execution of maintenance and delays in returning units from outages.
- **In addition, security issues (including sabotage of power stations and criminal syndicates operating in the coal supply chain) are causing significant volatility**. Law enforcement agencies have been directed to ramp up efforts to address theft and sabotage of electricity infrastructure, but have not made significant arrests.
- **Several large generating units remain offline.** The system will remain under pressure over the next six months as over 4500 MW remains offline from Medupi Unit 4, Kusile Units 1,2,3 and 5, and Koeberg Unit 1.
- **Grid capacity is posing a severe constraint, especially in the Cape provinces.** Only 1000 MW could be awarded for Bid Window 6 due to the lack of available grid capacity. However, substantial grid capacity remains available in Mpumalanga, North West, Limpopo and other provinces.
- Delays in procurement remain
- **Red tape is resulting in long lead times for project development and execution.** A typical utility-scale solar PV plant takes 24-36 months to receive the necessary approvals, and a further 12-18 months in construction.

Where to for the Electricity Sector?

Looking ahead: electricity market reforms

A number of policy and legislative processes are underway that will have a fundamental impact on the electricity sector:

- South Africa’s energy sector is undergoing a **fundamental transformation, with the unbundling of Eskom** – historically a vertically integrated monopoly utility – and the introduction of a competitive market for electricity. This represents a significant reform of the sector, aimed at enabling investment and achieving greater energy security.
- The Electricity Regulation Amendment Bill provides for the **establishment of an independent transmission company** which will act as the system and market operator. This legislative reform, which supports the ongoing restructuring of Eskom, will enable the emergence of a **competitive electricity market**. Over time, this will allow multiple generators to sell power in a day-ahead market in addition to long-term agreements, as well as to participate in markets for balancing and ancillary services. The rules of a future market will be determined by a market code. While Eskom will continue to generate electricity itself, these reforms will introduce competition from private generators.
- Ensuring the **financial sustainability of Eskom is key to the success of the reform process**. In this regard, National Treasury has announced a debt relief package for Eskom totalling R254 billion, which will enable Eskom to undertake the necessary investment in maintenance and transmission strengthening.
- The **Energy Security Bill (or “Omnibus Bill”)** will provide for measures to accelerate the expansion of renewable energy sources, including through streamlining regulatory processes for wind, solar PV and battery storage projects and for the rollout of transmission infrastructure. This will reduce the timeframes for new capacity to be added to the grid, building on progress made to date.
- The **IRP 2019 is being reviewed**, with a draft for consultation to be completed by the end of June 2023, to update assumptions regarding energy availability and technological changes.
- Appointment of an i**ndependent board for the National Transmission Company** and approval of licenses to advance the unbundling of Eskom will be completed soon.

Conclusion

- Significant alignment between the work of NECOM, supported through Operation Vulindlela, and the PCC report on South Africa’s Electricity System.
- Energy Action Plan and our electricity reforms support a Just Energy Transition that promotes energy security, energy access, and environmental and social sustainability.
- Provide regular updates to the PCC on the Energy Action Plan and the electricity reform programme.
- Alignment and support of the PCC in the implementation of the JET IP.