



**PRESIDENTIAL
CLIMATE COMMISSION**
TOWARDS A JUST TRANSITION

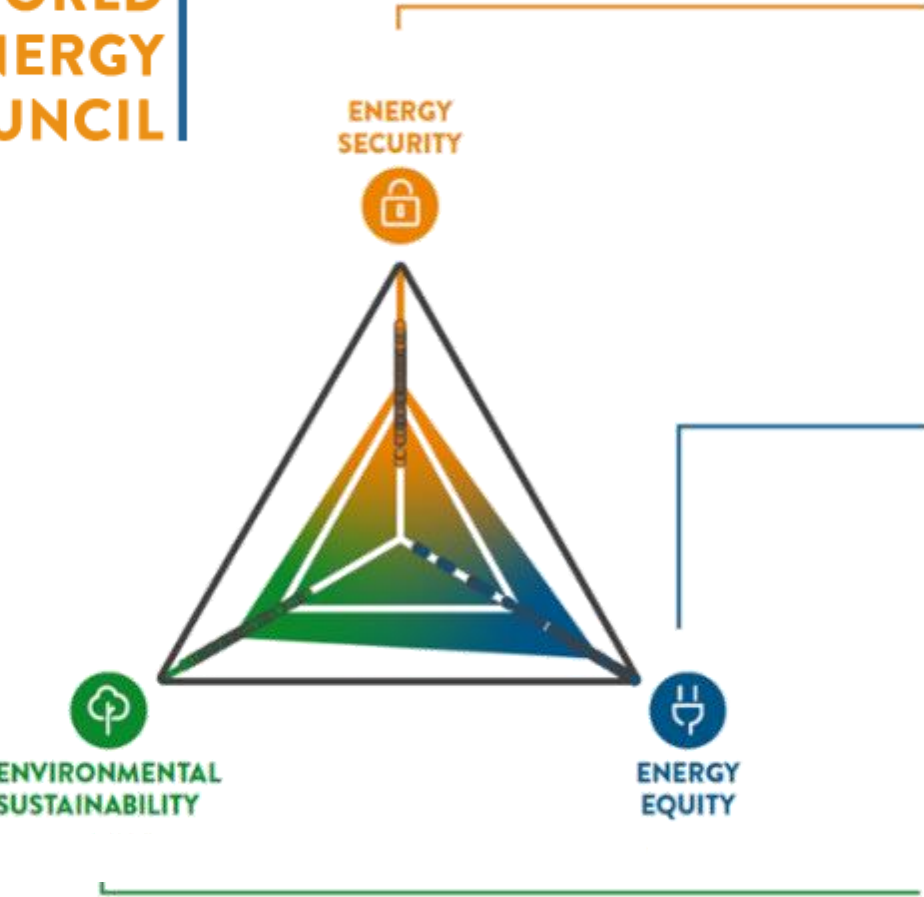
PCC Energy Recommendations and JET-IP

Stakeholder Awareness Sessions – March 2023

**our learning and our preliminary
conclusions, for discussion and
updating**

Evaluation of energy systems must consider energy security, equity and sustainability; as well as just transition elements

WORLD ENERGY COUNCIL



Reflects a nation's capacity to meet current and future energy demand reliably, withstand and bounce back swiftly from system shocks with minimal disruption to supplies.

Reliability and stability

Assesses a country's ability to provide universal access to affordable, fairly priced and abundant energy for domestic and commercial use.

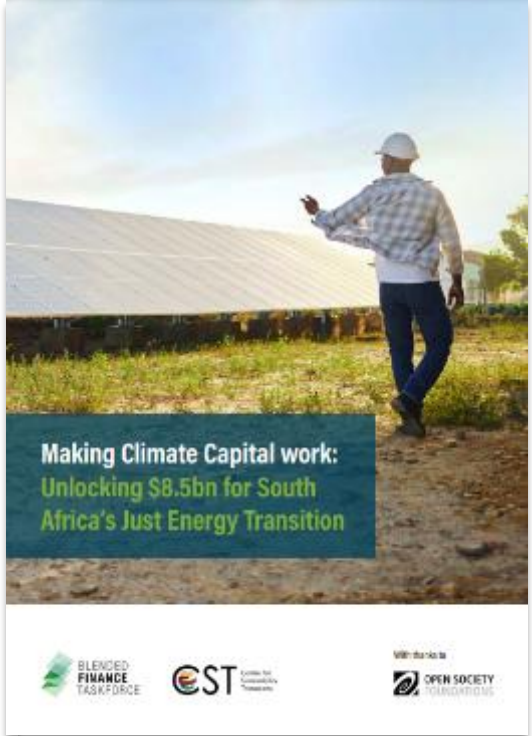
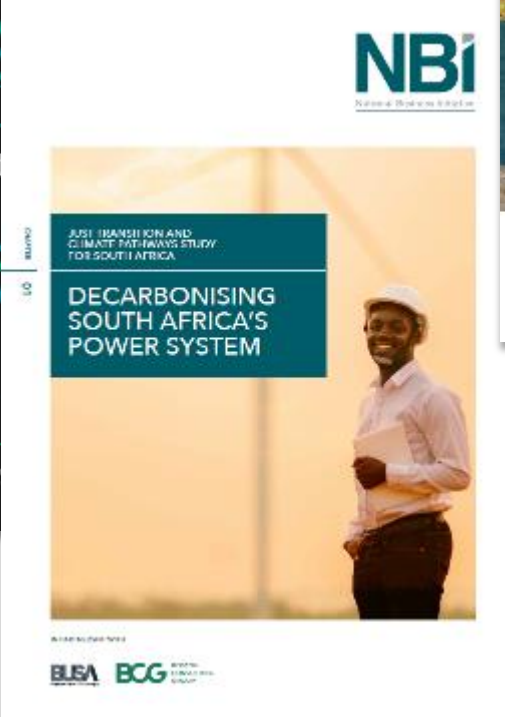
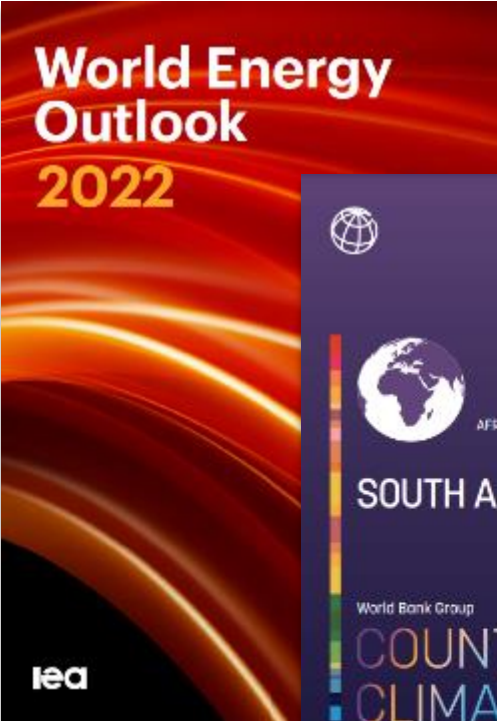
Access, affordability, fair distribution of benefits and costs

Represents the transition of a country's energy system towards mitigating and avoiding potential environmental harm and climate change impacts.

Climate change, water, and health



There are several local and international, consultative studies that we can draw on



All of which consider the trilemma and conclude similarly, least cost systems are drive by renewables, battery storage and peaking gas

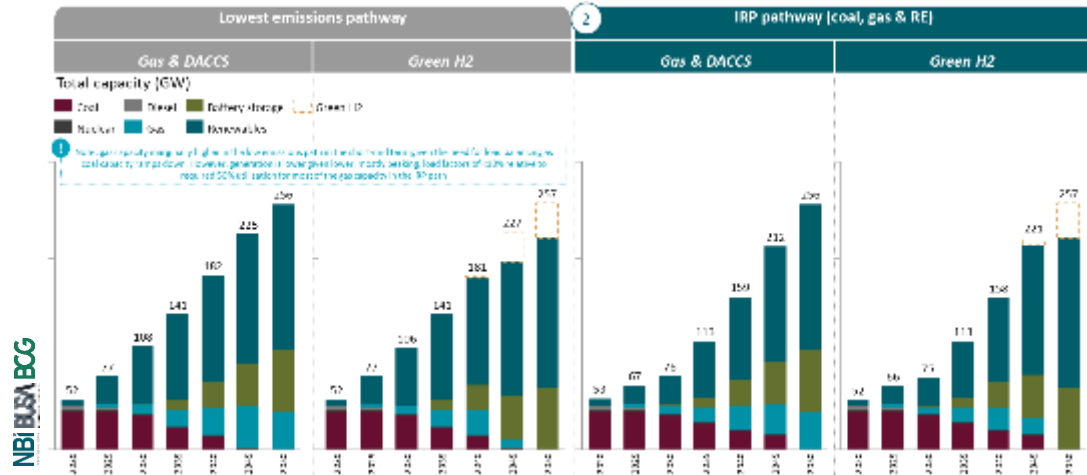
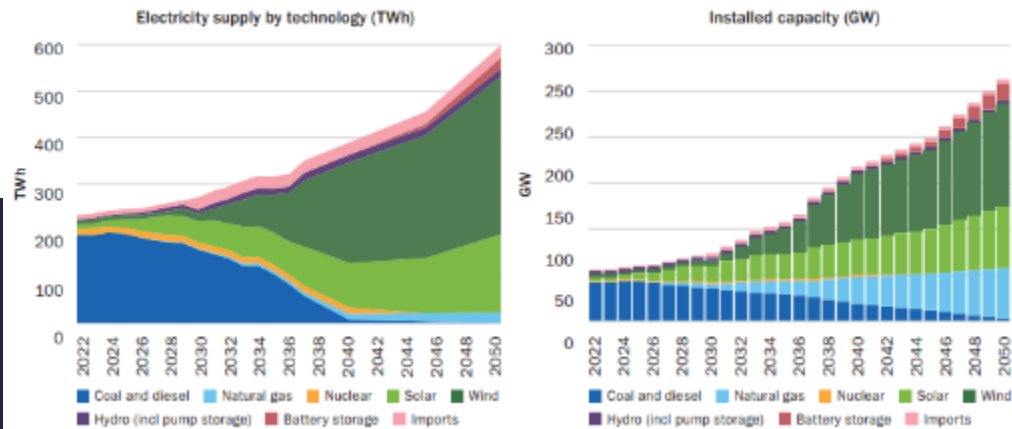


Figure 6: Net-zero reference scenario: Power sector generation and installed capacity by technology



Source: SATIM

- Massive, urgent investment in renewables
- Urgent investment in the grid
- No new coal or nuclear
- Limited role for gas for peaking
- Investment in storage
- The need to manage inertia and frequency
- Energy efficiency is critical
- Cost is driven by the rate of coal closure
- We should watch technologies like SMR and CCS but they are not yet mature



Across the trilemma categories renewable systems are considered better, or even



	Variable RE Systems	Traditional Systems
Climate Change	✓	✗
Water	✓	✗
Air Quality and Health	✓	✗



Access	✓	✗
Affordability	✓	✗
Fair distribution of benefits and costs	?	?



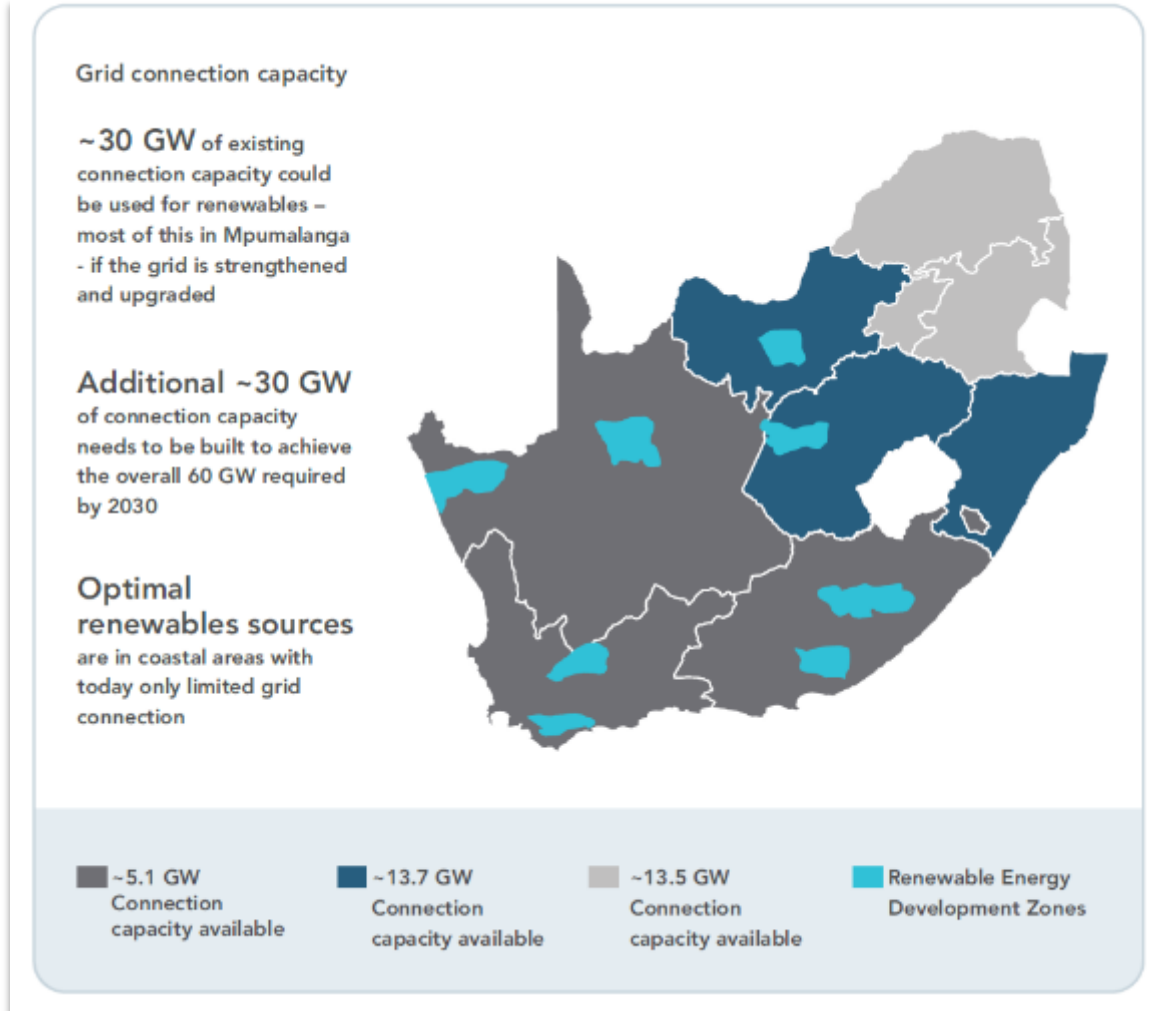
Reliability	✓	✓
Stability	✓	✓



There is however a short-term energy crisis that needs to be urgently addressed; short term energy solutions will also be renewables based



The constraint to short-term solutions is grid availability. We need to stimulate renewable investment where grid access is available.



- The efficiency of non-optimal locations in South Africa are still better than that of renewable energy deployment in Europe
- Collocated renewables and storage can maximise the energy output in the short term
- This will require governance reform including transparency on queuing for grid connections
- The advantage of a regional renewable development approach are twofold:
 - Distribution of renewable jobs
 - The ability to create very detailed spatial plans
- Batteries co-located with renewables can flatten congestion on the grid; and batteries in cities and homes can flatten peaking demand



Long term and short-term solutions must both have the Just Transition at their heart

Short Term (2028 to 2030):

- Pricing and social support measures for those most impacted by load shedding and who do not have access to or cannot afford electricity
- Re-skilling and re-training of vulnerable workers
- Provide job opportunities and training for the youth
- Resolving the skills and jobs planning ecosystem challenges
- Build the capacity of local government to support changes in generation and billing
- Job creation through infrastructure investment, including in regions in transition
- Inclusion of black owned business in infrastructure investment and in value chain opportunities
- Repurposing the coal fleet inline with decommissioning schedules



Long Term (post 2030):

- Localisation of manufacturing
- Job Creation outside of power (economic diversification)
- Finding ownership solutions that reduce inequality
- Long term land rehabilitation and re-use



Every effort is needed, we must continue to implement known solutions



Improve EAF as much as possible

- coal contract delivery to spec and remove poor quality coal from system,
- reduce crime and corruption,
- keep to maintenance schedules, enhance quality of maintenance teams
- Consider pilot O&M contract for coal fired power station

Continue work on a Just Transition

- Continue work on Just Transition and build capacity in JT office
- Decommissioning & repurposing of Komati with economic diversification and RE training centre (with SAROTEC)
- Collaboration with Mpumalanga province around economic and industrial development strategy to create a green energy hub
- Work with Mpumalanga stakeholders on economic diversification and jobs planning

Set up independent transmission company and invest in grid expansion

Work with public and private stakeholders to drive Energy Efficiency

Get us much new generation on the grid as possible

- Feed-in tariffs and wheeling
- Private sector generation
- Enable black owned PPAs to develop their opportunities,
- Continue to use available Eskom land
- Collocate batteries with generation to maximize grid utilisation
- Aggregate consumer systems in cities to drive additional generation and storage



Specific Draft Recommendations

The PCC believe that the priority interventions, with the deepest systemic impact, and that are aligned with climate positive outcomes and meet the criteria of the energy trilemma are:

- Develop a short-term spatial plan that maximises grid usage. This should be done in a transparent and public manner providing realistic information to the public about impacts on load shedding.
- Large scale governance reform, including:
 - The establishment of an independent grid operator (ITSMO), responsible for energy planning and adequately capitalise it
 - Making queuing systems for grid access transparent
 - Adjusting the pricing system to be cost reflective and unbundled (separate prices for energy services and power purchased)
 - Set-up day ahead market
- A huge drive on energy efficiency, storage (batteries) and demand side management
- Invest in grid upgrades to support the continuing addition of renewable generation
- Support public, private and household renewable energy generation and storage, including through tariff structures and entrenching the role of cities. This will require policy reform and significant support to municipalities to both implement and to ensure revenue security.
- Ensure measures are implemented to support those most impacted by load shedding and who cannot afford electricity, especially SMMEs. This would include disbursing and improving free basic electricity.
- Support the Just Transition with economic diversification efforts in regions in transition (including accelerating the adoption and implementation of SAREM)





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Thank you and Questions