69TH AMEU CONVENTION

1 – 4 October 2023

CSIR International Convention Centre

Confronting South Africa's Electricity Crisis in the context of a 'Balanced Just Energy Transition' (BJET) and the need for a reliable and resilient national electricity grid

# So what it is a Just Energy Transition?


**Presented by Prof Wikus van Niekerk,**

**Dean of Engineering**

**Stellenbosch University**

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# Just Energy Transition (JET) through Innovation

## Main points to consider in the Just Energy Transition:

Technical Components:

- Where will the energy come from, ***Renewable*** vs ***Nuclear*** Energy?
- How will we distribute the energy, the ***New (Smart) Grid***?

Financial Arrangements:

- Who will ***pay*** for the additional cost of the transition?
- Who will ***win*** and who will ***lose***?

Social Dimension:

- Who will be ***directly affected***, coal mine and power stations workers, local communities, incl. extended families, etc.?
- Who will be ***indirectly affected***, present and future generations?

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# Just Energy Transition (JET) through Innovation

## Where will the Energy come from?

SA relies heavily on coal, 85% to generate electricity, less on nuclear (5%) and some renewables – Note the 85% generated by coal needs to be replaced!

## How will we distribute the Energy?

SA has a National Grid with ***long transmission lines***

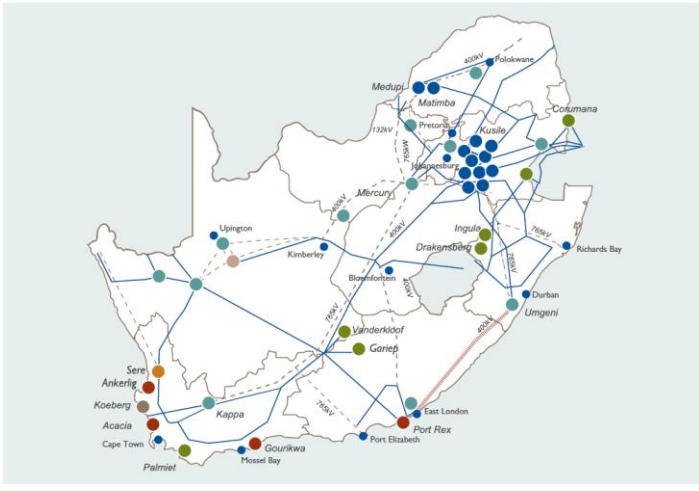
***Grid Stability*** – Frequency and Voltage control

***Loss of Inertia***

Required ***storage*** to manage variable renewables

Gas power stations for ***dispatchable power***

SA has ***limited interconnections*** to neighbours with limited additional generation available in support

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# But what does "Just" imply in the Energy Transition

## Justness: "the quality of being fair or morally correct"

## Where do we draw the boundaries?

- **Around the coal mine and the adjacent coal-fired power station?**

  *Workers will lose employment and hence their means to earn a livelihood*

- **Around the local community**

  *Families and others dependent on the economy will be at risk, BUT*

  *They will also have a healthier environment to live in, less harmful emissions*

- **Around the entire country of South Africa?**

  *Population could benefit from less expensive and more reliable supply of electricity*

  *Mitigation of climate change (reduced CO2 emissions) reducing impact of Climate Change*

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# Thank you!

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