

68TH AMEU CONVENTION 2022

Durban International Convention Centre

2 – 5 October 2022

A JUST ENERGY TRANSITION (“JET”) FOR SOUTH AFRICA

**Incorporating the fundamentals of Just Energy Transition into
Renewables and Energy Efficiency initiatives by
municipalities**

Presented by

Nqobile Ngcobo (Data Analyst) & Unarine Mudau (Project Manager)

South African National Energy Development Institute (SANEDI)

Hosted by



OUTLINE

- Who is SANEDI?
- Impact of Climate Change
- South Africa's commitment to reducing CO₂
- The Balancing Act by Municipalities
- Municipalities Embracing Change
- SANEDI & DMRE Initiatives
- Energy Performance Certificates
- Modern Electricity Distribution Structure
- Smart Grids as a Key Enabler for JET
- Municipalities Transition Benefits
- Recommendations

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The South African National Energy Development Institute



The National Energy Act, 2008 (Act No. 34 of 2008), provides for SANEDI to direct, monitor and conduct energy research and development as well as undertake measures to promote energy efficiency throughout the economy.



Applied Energy Research

- ✓ Data and Knowledge Management
- ✓ Renewable Energy
- ✓ Smart Grids
- ✓ Cleaner Mobility
- ✓ DSI Energy Secretariat



Energy Efficiency

- ✓ Standards & Labelling
- ✓ Energy Performance Certificates
- ✓ Cool Surfaces
- ✓ ESCo Market Development
- ✓ 12L Tax Incentives and M&V
- ✓ Data and Knowledge Management
- ✓ Renewable Energy

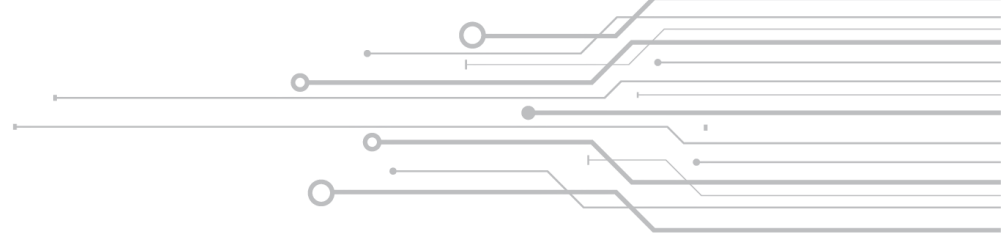
State Owned Entity – Schedule 3A

An entity of
the Department of Mineral
Resources and Energy

Supporting National
Departments &
Municipalities



Impact of Climate Change



Source: www.iol.co.za



Climate change – the long-term shifts in the Earth’s temperatures and weather patterns caused mainly by human activities

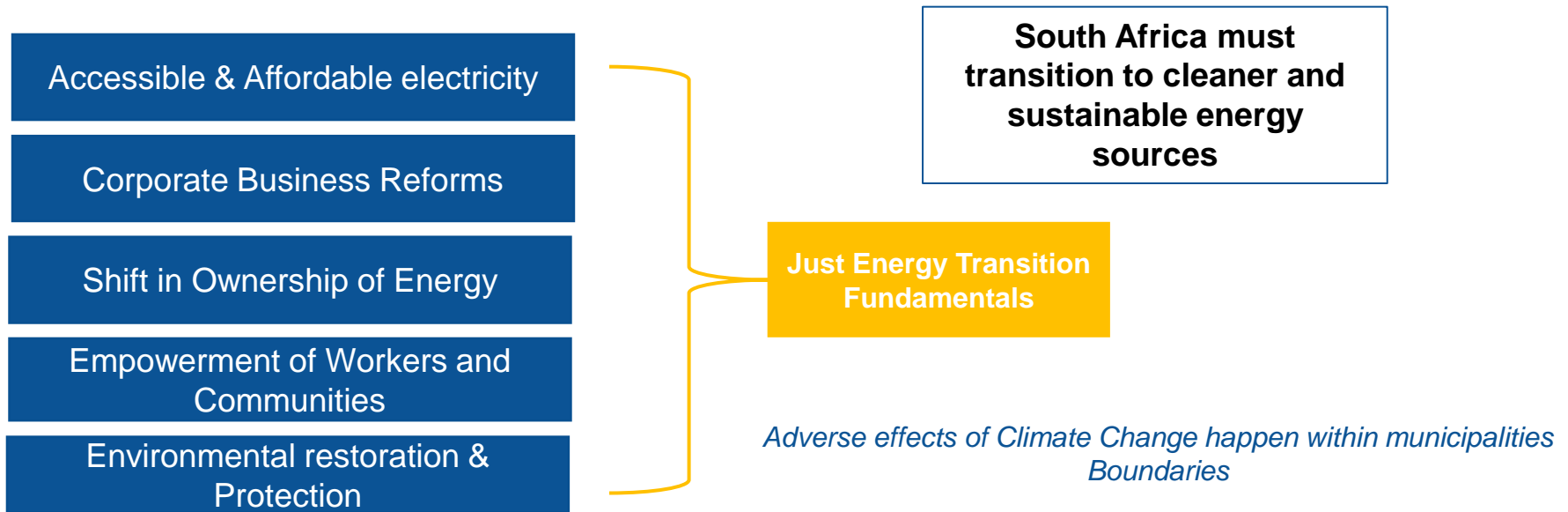
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South Africa is committed to reducing CO₂ emissions

- Climate change poses significant social, environmental economic risks and challenges for South Africa and globally.
- 80% of South Africa's electricity is generated from coal powered stations.
- Communities and economic activities are built around our coal mines.



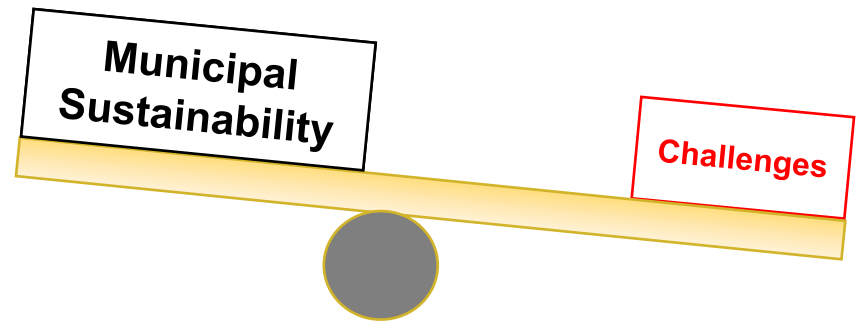
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The Balancing Act by Municipalities

- Financial Distress (Revenue)
- High Maintenance Cost
- Aging Infrastructure
- High Investment Cost
- Operational Inefficiency
- Customer Dissatisfaction
- High Electricity Tariffs
- Skills shortage (Capacity building)



The municipality is the closest government to citizens, thus where the impact of government is felt first

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Municipalities Embracing Change

- The municipal operating model is changing, so is its customer base.
- Demand Side Management (DSM), Energy Efficiency (EE), Distributed Generation (DG) and the digitisation of electricity grid is going to be the new normal within municipalities.
- Municipal **strategic planning and investment compacts, by-laws**, systems and processes need to **realign** to incorporate all of these technologies

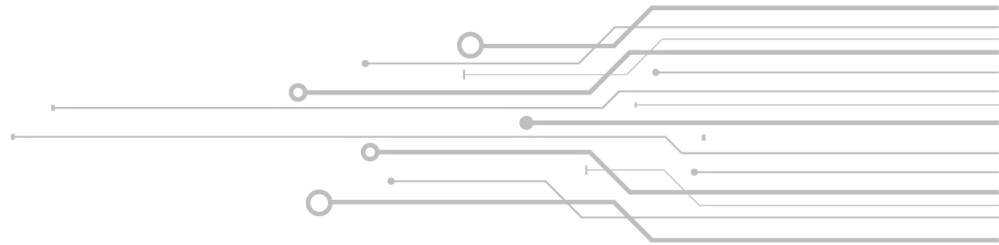


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SANEDI & DMRE Initiatives



Energy Efficiency in Public Buildings and Infrastructure Programme

Sub-Programme: Municipal WWTP

- Cogeneration/CHP
- Embedded Generation
- Energy Management Systems
- Efficient Motors
- LED Lights

Sub-Programmes: Municipal/SoE/Provincial Buildings

- SWH Systems
- Embedded Generation
- Building Energy Management Systems
- Energy Performance Certificates
- Efficient HVAC system
- LED Lights

Sub-Programme: Public Lighting

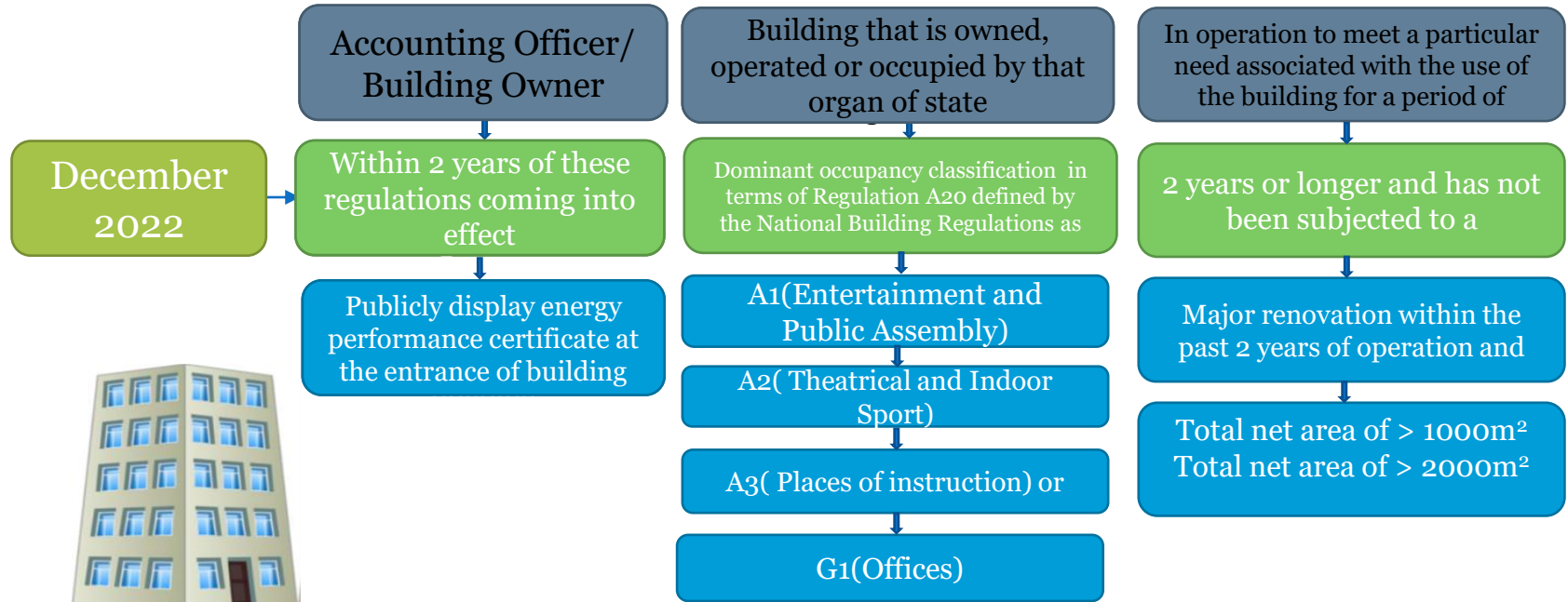
- Small Scale PV Systems
- Energy Management System/Smart Meters
- LED Lights

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Energy Performance Certificates (EPCs)



DMRE Regulation

Existing buildings

EE indicator for building

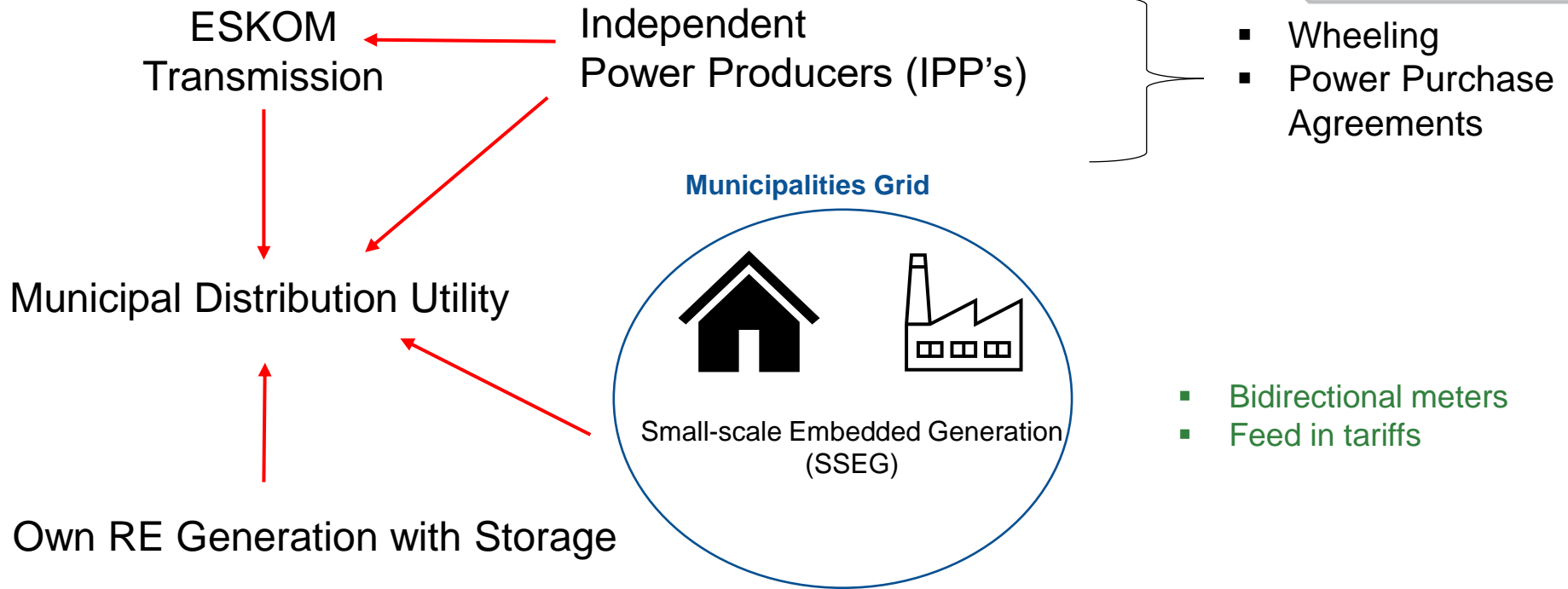
Data for decision making

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Modern Electricity Distribution Structure



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Smart Grids as a Key Enabler for JET

“ A Smart Grid is an electricity network that is **intelligent** and integrate the actions of all users connected to it – generators, customers and those that do both – in order to efficiently deliver sustainable, economic and secure electricity supplies.”



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Municipalities Transition Benefits

- Reduced green house gases
- Affordable electricity tariffs
- Sustainable clean energy
- Zero Notified Maximum Demand
- Security and Reliable services
- RE & EE capacity development
- Job creation
- Local economic development



“ Change is the law of life, and those who look only to the past , are certain to miss the future”

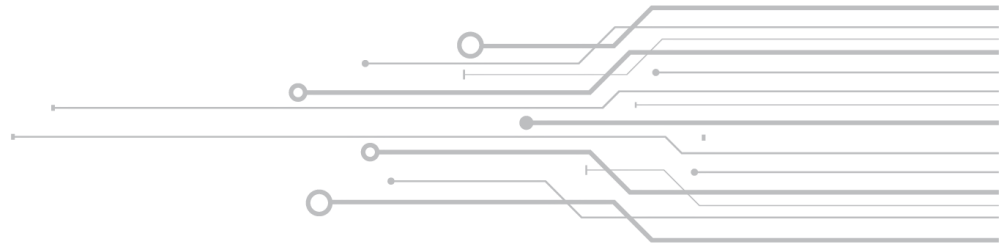
John F. Kennedy

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Recommendations



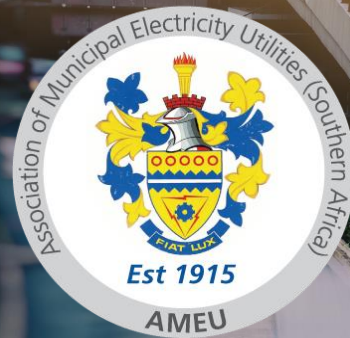
- Municipalities needs to **adapt** to the **changes** brought by Just Energy Transition
- Municipalities needs to **deploy smart grids technologies**, as an enabler to realise the benefits of the JET interventions in a **sustainable manner**.
- Municipalities need to develop a Just Energy Transition (JET) **framework** and **strategy**.
- Develop **targets, policies** to **monitor** and **evaluate** progress with the implementation of service delivery mandates that speak to the changing times.
- Embrace the **district development model** – an integrated approach by working with other spheres of government

There is no silver bullet to addressing climate change or challenges faced by municipalities, an integrated approach, committed individuals and entities are crucial building blocks

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Thank you

Authors' Contacts

Nqobile Ngcobo Nqobile@sanedi.org.za

Unarine Mudau UnarineM@sanedi.org.za

Roseline Sandamela RoselineS@sanedi.org.za

