TOWARDS A JUST ENERGY TRANSITION FRAMEWORK IN THE MINERALS AND ENERGY SECTORS

VIRTUAL AMEU/SAIEE WEBINAR
FRIDAY, 12 AUGUST 2022, 10H00 – 13H30

For discussion only

mineral resources & energy
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Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

2030 NDP

Outline

- Objectives and Legislative, Regulatory and Policy Measures
- Context of the Transition
- Structural Approach to Energy Transition
- Towards a JET Framework (Activities and Timeframes)
- Current and Future Activities

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The objectives of Energy Transition Framework

- Ensure that the JET **contribute to mitigation efforts** on climate change while **maintaining security of supply**, while contributing to a **decent growth rate, creation of more jobs** and making efforts to **alleviate poverty and eradication of inequality and unemployment through socio-economic reforms**
- Build on the **existing platform for** cooperation and alignment in order to **Lead the coordination of the vast bodies of work** in the mining and energy sectors
- **Clear communication lines on the objectives** of the JET framework to the public
- **Ensure that the people's voices are heard** on the type of transition they want
- **Scientific based evidence** and **balanced approach** that **takes into consideration all the minerals and energy sources at the country's disposal**
- To bridge the gap where there are disagreements and advance progress where there are common goals

Legislative, Regulatory and Policy Measures

South Africa is committed to reducing emissions in line with its NDC with the goal of limiting global warming to well-below 2°C and pursuing efforts towards 1.5°C as per the UNFCCC and its Paris Agreement. **Decision 4 of the IRP 2019 provides for the implementation of the transition**. The JET Framework seeks to support the socio-economic impact of these and future energy planning policy decisions.

ITS ROLE IS NOT TO DICTATE BUT TO MANAGE THE TYPE, PACE OR SCALE OF DECARBONIZATION

"A just transition is the principle of easing the burden decarbonization poses to those who depend on high-carbon industries."

Eisenberg, A. (2018). Just Transitions. *Southern California Law Review*

Policy / Regulation	Custodian
National Development Plan & MTSF	GoRSA
Just Transition and 2050 National Pathways	PCC
IEP, **IRP**, GUMP, **NEES,** SAREM	DMRE
NDC, Climate Change Bill, Air Quality Act, Water etc	DFFE
Green Transport Strategy	DoT
Green Industries and SAREM	DTIC
Hydrogen masterplan and jobs for the future	DSI
Reskilling, retraining	DoL, DSI
Eskom Roadmap, Retiring and Repurposing Plans, JET Office	DPE and Eskom

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Lessons from International Experience

- Germany, Poland, Greece, Spain, India and the USA still use coal. Phase out process takes time to implement.
- Other G20 countries that used other technologies such as nuclear to transition
- A Coal phase-down time schedule supported by policy certainty is key.
- This is a clear confirmation of unique experience and positions of transition – **each context differs**, **with varied starting points.**
- Common thread is that clear messaging to, and **consultations and engagement with all affected and impacted parties is crucial**
- The transition needs to be **guided by a well coordinate governance policy**, and that it must be **adequately resourced with the highest level of political support.**
- **Recent COP 26 decision and the current international energy crisis that pushed the use of fossil fuels**

A need for strong government policy position on JUST ENERGY TRANSITION

The current Financial realities and technology advances are transforming the power sector, even if not supported by appropriate energy policy. Ultimately leading to the real possibility of stranded fossil fuel assets and ghost towns.

% use of coal in 2020	Reason of interest
Germany (39%) Poland (80%) USA (18%)	Combination of extensive use of coal for generation with a significant history of coal mining – aided by national policy, subsidies or both
Spain (<5%) Greece (22%)	Negotiated coal phase out and transition settlement
India (74%)	Major export market for SA coal
Canada, France , Italy, United Kingdom	G20 Countries with Paris-Agreement compliant JET plans

Status Quo of JET in South Africa

PCC:
Just Framework and 2050 net zero pathways (part of which **include energy**)

DFFE and TIPS:
work on SJRP (coal mining value chain) & Vulnerability Assessment Study, SETs etc

Other stakeholders:
(COSATU, CSIR, TIPS, BUSA, NBI, GreenCape, UCT's ESRG, Meridian, etc) Academic and research papers on JT/JET

ESKOM:
JET office, consulted with communities in eMalahleni, developed a retirement plan for Komati (and others), and initiated a **Just Energy Transition Transaction** facility (now Just Energy Transition Partnership with GoSA)

Opportunities for DMRE to consider on ET (work done in Mpumalanga and other provinces)

- ✓ Energy**:** **Repowering/repurposing** existing stations as per **IRP2019** and deployment of **RE technologies, battery storage, gas** and long-term exploration of **nuclear technology** (including SMR) and **green hydrogen**
- ✓ Mining: skills audit, direct transfer to other mines**,** **reskilling** on future critical minerals, fly ash management etc
- ✓ Diversification: beneficiation of other minerals, alternatives in agriculture, tourism, biomass

DMRE needs to lead and coordinate energy transition initiatives in a non-fragmented approach

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Just Energy Transition

Reality of the transition

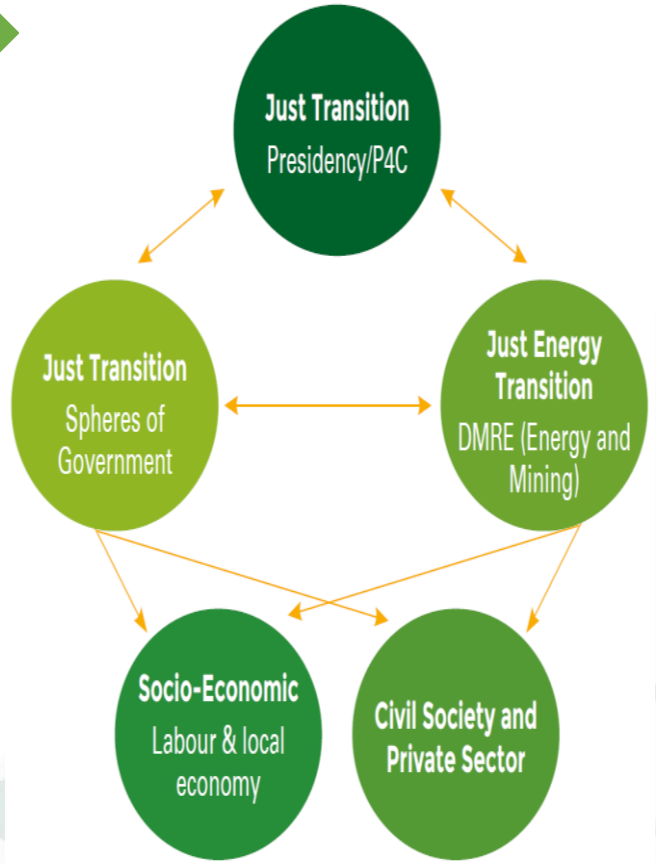
- The global push for phase down of coal by the west
  But transition will happen at different scale and pace
- The transition will be disruptive – needs to be carefully managed and coordinated.
- Banks and financers dis-investing in coal

Our reality

- SA's development deeply rooted in the Minerals Energy Complex trap.
  Not easy to exit but must carefully navigated
- Coal accounts for ~75% of primary energy production – concentrated in Mpumalanga
- The transition must be managed to maximise the socio-economic benefits and avoid exacerbation of the triple challenge (poverty, inequality and unemployment)

Our responsibility

- **DMRE must be visible with its JET vision / objectives -** DMRE together with other spheres of government, business, labour and civil society must drive JET
- Create a **developmental transition** that puts **economic reforms** at the forefront
- **DMRE to take advantage of new innovations and refocus its mining strategy to new minerals with high value added**
- DMRE and Government must **enforce its regulations – DMRE specific on mine closures and rehabilitation, etc.**
- DMRE and Government (notably dtic & DSI**) utilize levers such as localization to manage the transition**



DMRE's primary role is to develop a planned and coordinated process to decarbonize the mining and energy sectors, whose success will be determined by consensus amongst all the stakeholders to achieve a JET which delivers social justice, and protects the long-term interests of local economies, civil society, SoEs and the private sector.

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Towards a JET Framework

That **manages the decarbonization** of the mining and energy sectors in a **socially acceptable and non-disruptive manner** while contributing to **economic development**

Planning **Implementation** **M & E**

Just Energy Transition Framework - DMRE

Just Transition Framework – Presidential Climate Commission

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Pillar #1 – JET Planning

Builds on energy planning work developed at DMRE

Collaborative and building on existing initiatives (Gov, PCC, Eskom, TIPS, CSIR, NBI, Academia)

Informed by the socio-economic value and impact relating to IRP, NEES, SAREM, GUMP and HMP

Focused on the impact on the coal value chain and mitigation measures

- **Link the IRP2019 review with the SETs and the PCC 2050 pathway/targets**
- Build on the Sector Jobs Resilient Plans to Define appropriate skills packages, especially for the youth in line with the future jobs and the 4IR
- **Detailed analysis/Assess of the viability/feasibility of small modular reactors as part of retro-fitting coal plants**
- **Put measures in place to support local government especially cities on the mechanisms to cope with Rural/Urban migration**
- **Exploration of other minerals beyond coal** in supporting emerging industries and maximise socio-economic value - priority minerals, green hydrogen, battery storage, etc.
- **Promotion of industrialisation of Coal Regions through the revised localization and ownership strategy (dtic).**
- **Coal mining and minerals exploration assessment** (Scenario Analysis of mine lifetime, economic viability and impacts on miners
- **Mineral audits**: identification of mining activities that support sustainable economic development (the role of other minerals in the transition)
- **Universal energy access** to affordable modern energy services in line with the SDG7 (demand side)
- **Skills audit of coal workers**: e.g age and skills profile of current coal workers in order to identify opportunities for alternative energy technologies and new mining products
- **New industries and jobs of the future**

Impact evaluation to inform future policy interventions and design

Pillar #2 – Implementation

JET implementation can only succeed if it is supported by all the mechanisms available to government.

Enhancing and harnessing the environmental and socio-economic value of:

Demand side (NEES measures)
Supply side (IRP, SAREM, GUMP,HMP)
Mining (Priority Minerals, Reskilling and Retraining)

Approach

- **Demand Side Management** through NEES and IRP measures with a high socio-economic value
  - REEIPP and Municipal IPP
  - Embedded Generation
  - Energy Efficiency Programmes
- Implement mitigation and social inclusion programmes to support emerging industries
- Direct funding towards supporting mitigation and social inclusion programmes across the energy and minerals value chains

Priority activities

- Accelerate and scale up the energy efficiency projects and piloting of RE targets in affected areas
- Support the efficiency work led by DPWI and the DMRE EEDMS to create a facility for EE to scale up DSM interventions and small-scale embedded generation
- Explore repurposing with Gas and other technologies in the energy mix such as CCUS, SMR etc.
- Implement programmes for Mine rehabilitation and repurposing of derelict and ownerless mines
- Support Eskom's decommission and repurposing plans
- Demonstration Projects - Mpumalanga and Limpopo

Pillar #3 – Monitoring and Evaluation

Based on a set of **Key Performance Indicators** that guide the implementation and review of the plans:

- Socio-economic indicators
- Environmental indicators
- Jobs and workforce related indicators
- Demand and Supply side indicators

Socio-economic indicators

- JET Communication plan
- Coal mining audit & analysis
- Mineral's audit
- Coal worker skills audit, salaries etc
- New industries & jobs of the future

Supply-side indicators

- Energy Transition Index
- Electricity affordability
- Air pollution and reduction in public health costs
- Carbon intensity
- Carbon emissions
- Energy transition investment
- Diversification of the Energy mix

Demand-side Indicators

- Energy policy coverage
- Electricity affordability
- Electrification rate
- Energy intensity
- Uptake of energy efficiency measures in line NEES sectoral targets
- Uptake of small-scale embedded generation

Implementation Activities and timeframes

DMRE ROAD TO JET FRAMEWORK

Social Side
- Advocacy
- Retain/reskill workers, incl. youth and gender-balanced
- Social protection packages/incentives, health

Key Performance Indicators on JET

Supply Side
- Energy mix
- Air pollution
- Carbon intensity
- Carbon emissions
- Energy transition investment

Demand Side
- Energy intensity
- Electrification rate
- NEES sectoral targets
- Energy policy coverage
- Electricity affordability

Develop a governance model
- Establish a DMRE JET structure
- Conduct social dialogues
- Stakeholder engagement strategy aligned with the PCC

Foundation Actions
- Identify demand side interventions
- Audit coal mine opportunities
- Audit Mineral exploration potential
- Develop a socio economic baseline to inform future Energy planning
- Inter-departmental collaboration
- develop Social compact
- Establish communication strategy

Supporting Activities
- Training and re-skilling
- End residential coal use
- International finance and technical support
- Technology support etc

Scale up Demonstration Projects

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Current Activities

- Setting up internal structure for the coordination of the JET actives across the sector.
- Developing a socio-economic baseline assessment

✓ Analysis of the current stakeholders' fears, concerns, interests and influence amongst others

✓ Developing a monitoring tool to monitor and evaluate key indicators such as jobs, health, alternative employment, education and other socio-economic aspects such as GBV, Crime etc

- Planning Ministerial dialogues starting with the Nkangala District Municipality. Other districts include Chris Hani District (EC), Sedibeng District (GP) and Gert Sibande District (MP) - (i) to solicit the communities' views on the design and type of transition they want and (ii) to identify projects for implementation especially the energy demand-side projects
- Planning stage to develop a just energy transition roadmap in partnership with the IEA
- Currently undertaking the review of the IRP 2019 in consultation with the PCC

Future Activities

- Coal mining and minerals exploration assessment (Scenario Analysis of mine lifetime, economic viability and impacts on miners
- Mineral audits: identification of mining activities that support sustainable economic development (the role of other minerals in the transition)
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- Skills audit of coal workers: e.g age and skills profile of current coal workers in order to identify opportunities for alternative energy technologies and new mining products
- New industries and jobs of the future

Thank you

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