



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

November 2021

Presentation for discussion only



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Outline

- Legislative, Regulatory and Policy Measures
- Context of the Transition
- Structural Approach to Energy Transition
- Towards a JET Framework
- Resources for the JET



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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. The process was initiated by the IRP 2019. 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-out 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 developed governance framework, which is adequately resourced with the highest level of political support.

Lack of government policy does not stop the ET

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




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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 ESG, 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)

Learnings opportunities for DMRE on ET (work done in Mpumalanga and other)

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

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



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Structural Approach to the Energy Transition

Reality of the transition

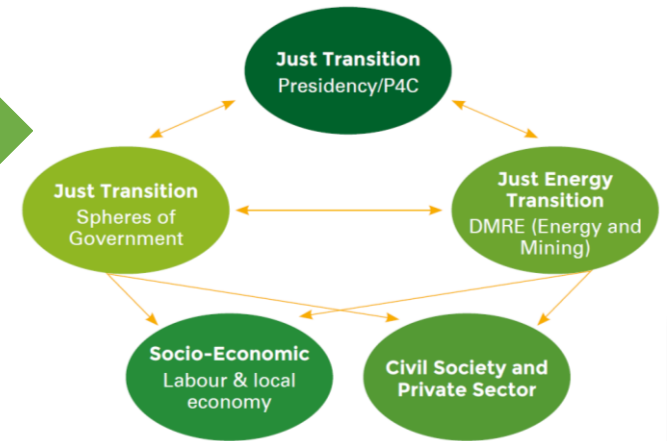
- The global phase out of coal has started and will happen at different scale and pace
- The transition will be disruptive – needs to be carefully managed and coordinated.
- Banks and financiers dis-investing in coal

Our reality

- SA's development deeply rooted in the Minerals Energy Complex trap which socializes costs and privatizes profits. 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
- 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.



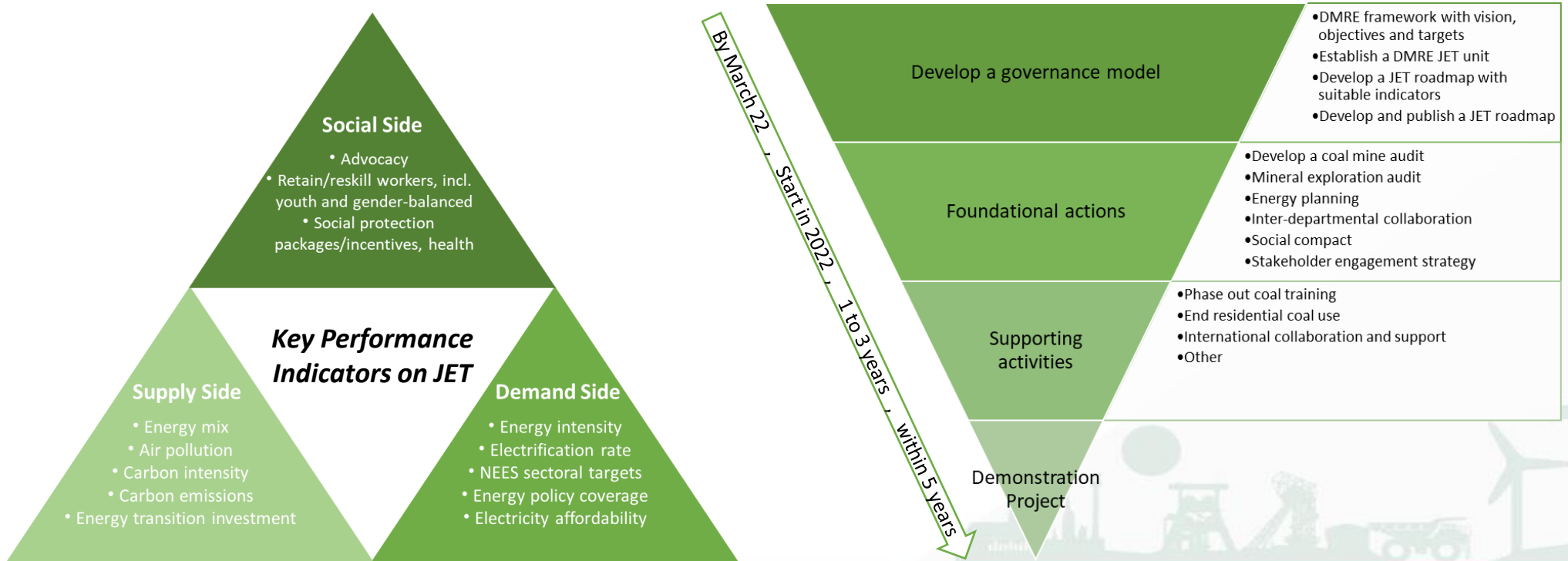
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JET Roadmap, Activities and Indicators

DMRE ROAD TO JET FRAMEWORK

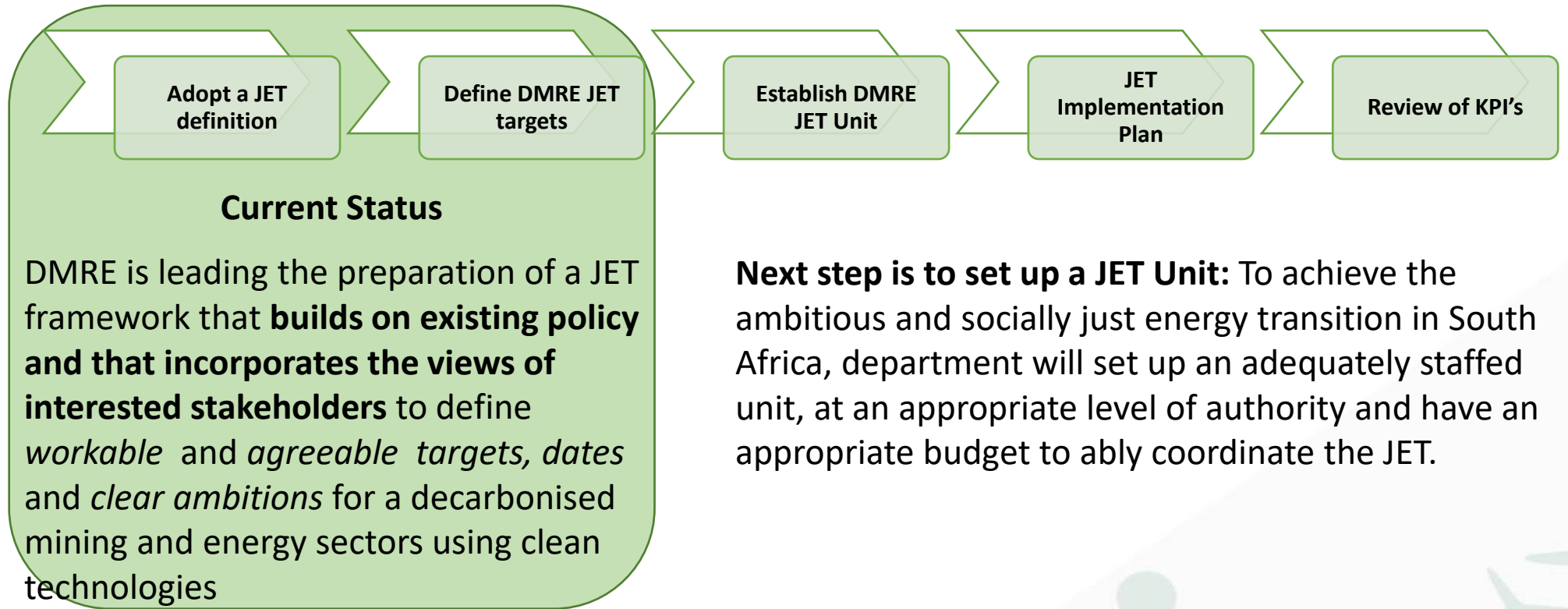


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Current Activities



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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)

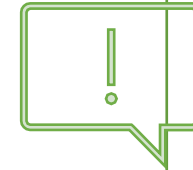
Informed by the socio-economic value and impact relating to IRP, NEES, SAREM, GUMP and HMP

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



People Centred – Batho Pele

- Coordinate and align the DMRE's JET framework with the PCC JT Framework and Pathways
- Ensure that energy transition work builds on the collaborative/cooperative stakeholder/coordination forum that have already been establishment
- Build on and ensure alignment and complementarity with existing/fragmented initiatives
- Ensure visibility and access to information through innovative communication platforms
- Ensure that a plan for Energy poverty and residential coal usage - Mpumalanga Province is a priority
- Facilitate research clusters with Academic and research institutions to inform policy



Priority activities

- Build on LEDS and SETs to define 2050 pathway/targets
- Assess the viability/feasibility of retro-fitting coal plants with nuclear reactors.
- Assess the capacity of long-term sustainable jobs created through technologies such as wind and solar, as well as nuclear amongst others to determine the job quality and skills levels.
- Assess the national energy balance exposure to social risks
- Feasibility of supporting local government especially cities on the mechanisms to cope with Rural/Urban migration
- Define appropriate skills packages, especially for the youth in line with the future jobs and the 4IR
- Exploration of other minerals beyond coal in supporting emerging industries and maximise socio-economic value - priority minerals, green hydrogen, battery storage, etc.
- Worker Livelihood Protection Policy and Fund. Promotion of industrialisation of Coal Regions (dtic). Coal Pact between labour, Eskom, Coal companies and Govt.



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Pillar #2 - Implementation

Measures and Programmes

Category	Sub-category	Explanation	Measures
Regulatory Measures	Legislation, plans, strategies and standards	Measures developed to implement the Constitution or national policy (NDP) & objectives and compliance with international climate commitments (NDC). They will ensure inter-governmental cohesion and collaboration through clear and enforceable directives	Supply side (IRP, IEP, SAREM, GUMP etc) Demand Side (National Energy Efficiency Strategy) Mining Mineral exploration audit, coal mine assessment, mine rehabilitation funds
Economic Measures	Tax, allowances, subsidies, offsets, concessional finance	These measures provide economic incentives or disincentives to drive decarbonization	Carbon Tax, 12L tax rebates, carbon credits, tax incentives, mine rehabilitation
Direct Government Actions	Government procurement infrastructure investments	Government prioritises decarbonization and creates investment opportunities (in addition to supportive policy) with targeted investment infrastructure and offtake projects	Green hydrogen, REIPPPP, transition fuels, carbon capture and utilisation/storage. National Treasury policy directives for procurement (EE). Municipal IPP and REIPPPP in Mpumalanga Province
Support measures	Voluntary actions, support for research and development	Anchored in stakeholder consultation, and with labour at the centre, this refers to a wide range of actions related to education, capacity, research development and deployment or government support for voluntary actions	Upskilling, training & education to support workers to transition into new economic opportunities for all but focused on towns & labour affected by decarbonization. Data collection e.g. databases of mines and social labour plans
Social inclusion Programmes		Awareness raising programmes explaining why a JET and how labour is at the centre	Public stakeholder engagement, press, social media etc. Knowledge exchanges




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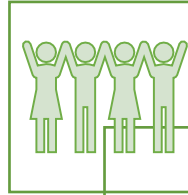
Pillar #2 – Implementation



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

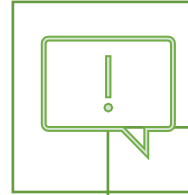
Enhancing and harnessing the environmental and socio-economic value of:

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



Harnessing the socio-impact value

- Enhance and accelerate 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
- Accelerate research and development of other technologies in the energy mix such as CCUS, Nuclear etc
- Priorities initiatives beyond coal mining to rejuvenate economies in affected areas (e.g. exploration of other minerals such as platinum and development of programmes)
- Mine rehabilitation and repurposing programmes
- Eskom's decommission and repurposing plans
- Demonstration Projects - Mpumalanga and Limpopo



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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
- Carbon intensity
- Carbon emissions
- Energy transition investment
- Energy mix



Demand-side Indicators

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



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Pillar #3 – Monitoring and Evaluation

Foundational Indicators	Objective
Socio Economic Indicators	
JET Communication plan	Develop an official portal which is regularly updated. Identify (beyond online) communication channels & relevant languages to ensure inclusivity
Coal mining audit & analysis	To be used for scenario analyses of mine lifetimes & economic viability
Mineral's audit	Identify minerals of the future
Coal worker skills audit, salaries etc	Detailed skills partnership audit in partnership with coal mine, salaries, incentives etc
New industries & jobs of the future	<ul style="list-style-type: none"> • New industries study to complement skills study (3g) to identify appropriate economic activities for Mpumalanga • Maintain a database of new initiatives being considered by other ministries, state owned agencies & private sector • Engage with DSI & Basic Education Ministries about reviewing / redirecting curriculum's based on net zero emissions & energy transition mandates
Review KPI's	Assess JET progress. Assess and expand activities supported by appropriate KPI's
Energy Transition Indicators (Supply Side)	
Energy Transition Index	International energy transition readiness ranking
Electricity affordability	Average household electricity tariff (c/kWh)
Air pollution	Average air pollution levels in most affected towns in MP & Province as a whole
Carbon intensity	CO2 intensity (kg/GJ TPES)
Carbon emissions	CO2 emissions (total) CO2 emissions (tonnes/capita)
Energy transition investment	RE buildout (% of total)
Energy mix	Share of electricity from RE (%) Share of electricity from coal (%)
Energy Transition Indicators (Demand Side)	
Energy policy coverage	~ % share of total final energy use subject to mandatory policies & regulations
Electricity affordability	~ household electricity tariff (c/kWh)
Electrification rate	~ % electrification of end use sectors (not just residential)
Energy intensity	Energy intensity (MJ/ GDP)
NEES sectoral targets	% Energy saving per NEES sectoral targets (compared to base year)



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What is need for JET to succeed

- A need to find a common approach on public policy and finance that is oriented toward addressing the historical injustice and the new risks associated with potential high number of jobs loses in coal mining and coal-powered energy sectors.
- **Clear guidance and agreement on the concessions around available climate funds** to quickly support immediate full implementation of the **current energy mix in the IRP 2019**, the NEES targets, **the ESKOM's decommissioning plans** and other measures such as green transport strategy to achieve both the transition and the NDC goals.
- **Mobilise donor funding and grants** for other i) **mitigation programmes** ii) **adaptation** and iii) **interventions to manage the socio-economic consequences of transition** (social inclusion programmes)
- In the minerals value chain, funding needs may also require to consider worker transition related funding (**focused training especially the youth**, retraining, reskilling, relocation allowances, retirement packages), social protection (notably access to affordable energy), economic diversification, mining rehabilitation and social closure processes, and social dialogue.



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Points for discussions

- Lead the coordination of the the vast bodies of work in the mining and energy sectors
- Clearly communicate objectives of the JET framework to the public
- Ensure that the JET is people centric and is based on fact based scientific evidence
- A balanced view that takes into consideration all the minerals and energy sources at the country's disposal
- Build on the existing platform for cooperation and alignment on the current JET activities to facilitate the objectives of the DMRE's led JET Framework
- To bridge the gap where we disagree and advance where there are common goals
- Ensure that the JET contribute to mitigation efforts on climate change while maintaining security of supply in contributing to a decent growth rate, and creating more jobs and making efforts to alleviate poverty and eradication of in equality.
- Take your seat where you see your space this framework!
- Is the proposed framework complementary?
- What is missing and what would you like to see in the framework?



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Thank you



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