



**PRESIDENTIAL
CLIMATE COMMISSION**
TOWARDS A JUST TRANSITION

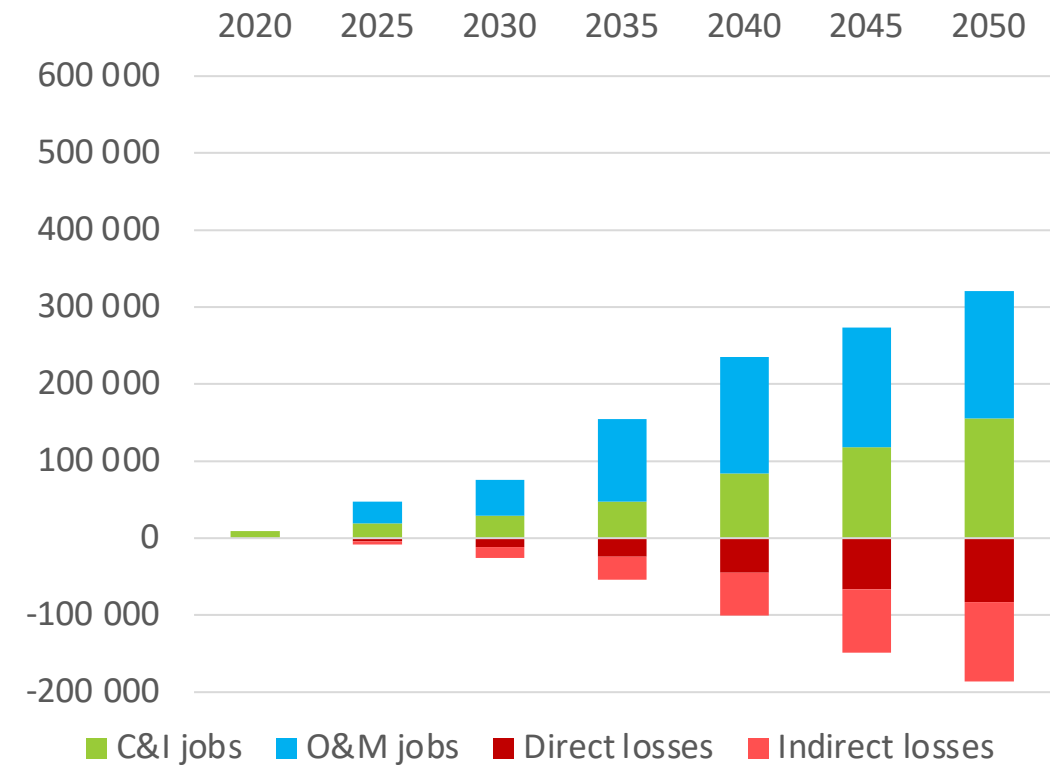
Employment and South Africa's Just Energy Transition

October 2022

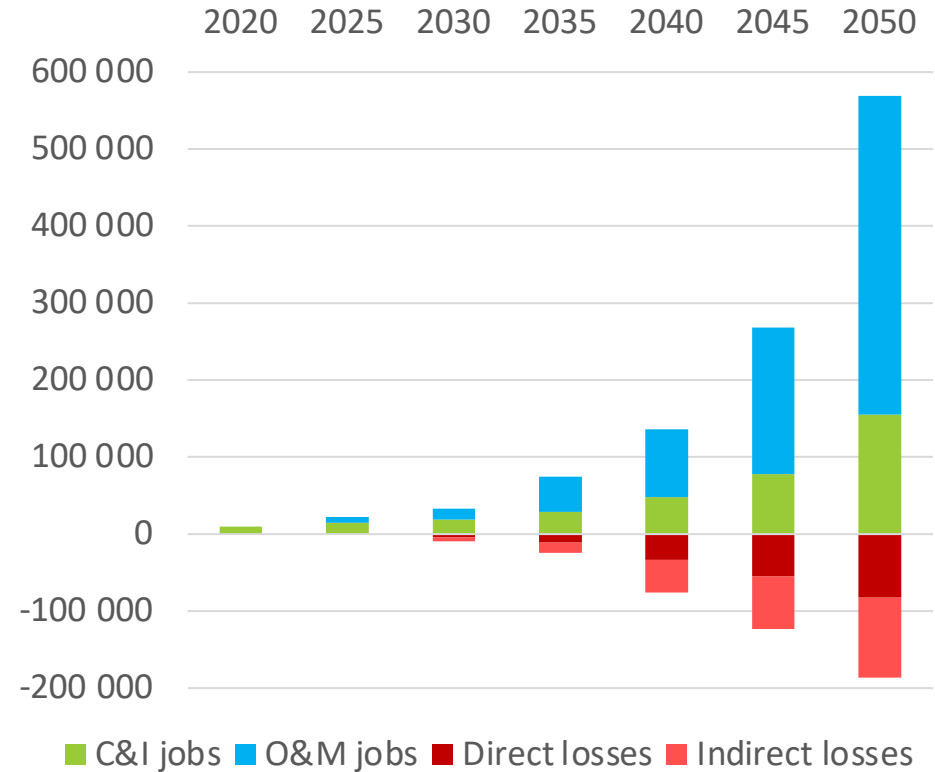
There is an opportunity to increase jobs in our energy transition

NBI estimates 0.6 to 1.4 mn net jobs created

Employment shifts (emissions optimised pathway)



Employment shifts (IRP aligned pathway)

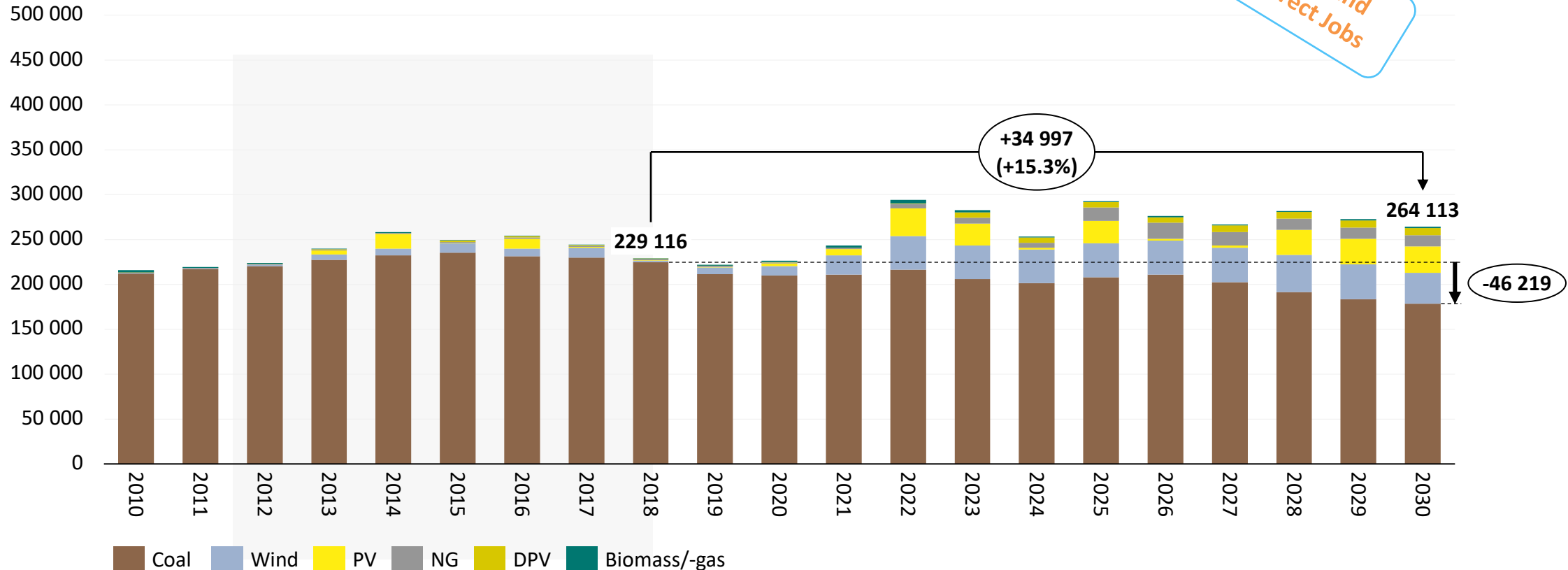


Source: NBI Just Transition Pathways.



National shifts in employment linked to IRP are marginally positive

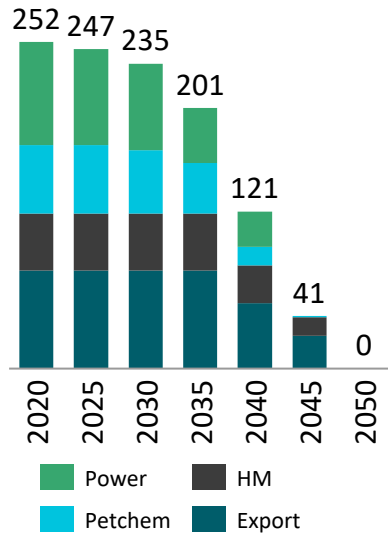
Estimated annual employment opportunities expected
(IRP 2019)



At a national level net jobs are positive after coal decommissioning and implementation of planned RE projects in the IRP2019. However, how much of these can be built in Mpumalanga?

However, there are negative impacts on specific sectors and regions: Coal demand is down in net-zero by 2050 scenarios

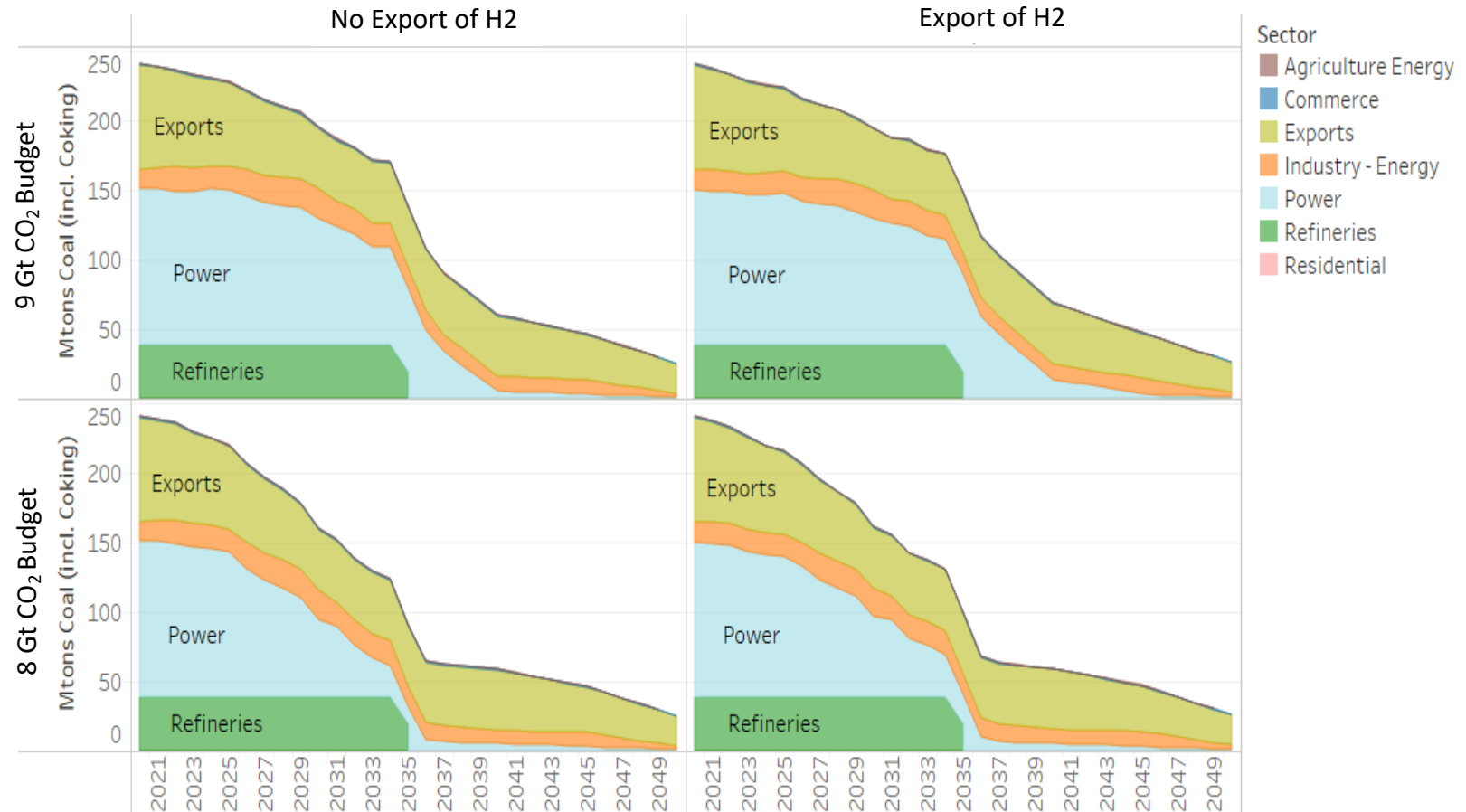
10 Gt CO₂ Budget
Coal consumption (mtpa)



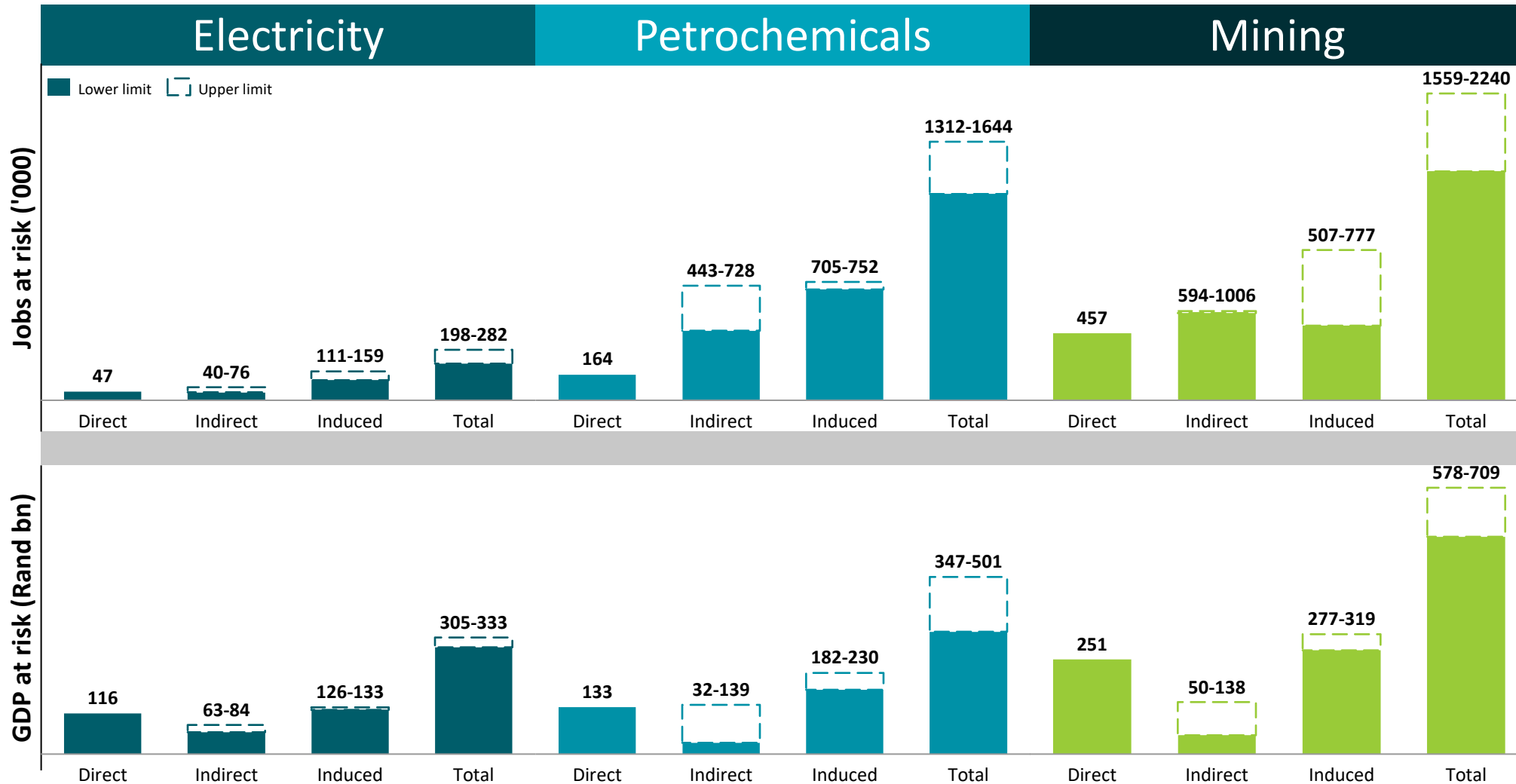
Drivers of change

- Uptake of low carbon fuel sources
- Power sector decarbonisation
- Petrochemical and industrial feedstock and fuel shift

CoalUseinTons (bySector)



This risk is not limited to coal mining



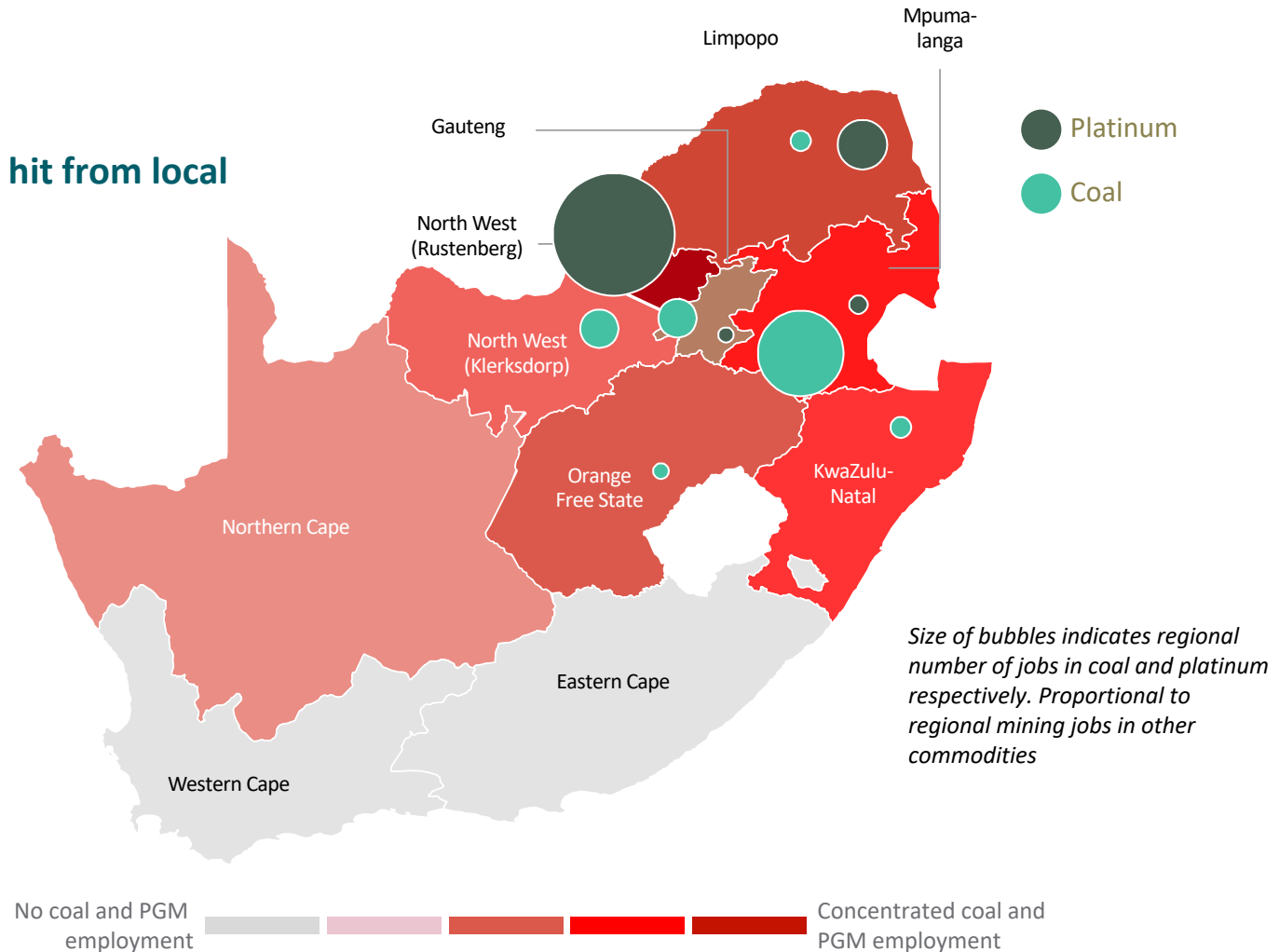
Source: NBI, 2021; QES 2017; OECD SA Social Accounting Matrix, NBI-BCG Project Team; Energy Emissions Input-output Analysis In South Africa, Moodley 2006

Mining changes also have very specific location impacts

Coal mining regions at risk to be hardest hit from local and global decarbonisation

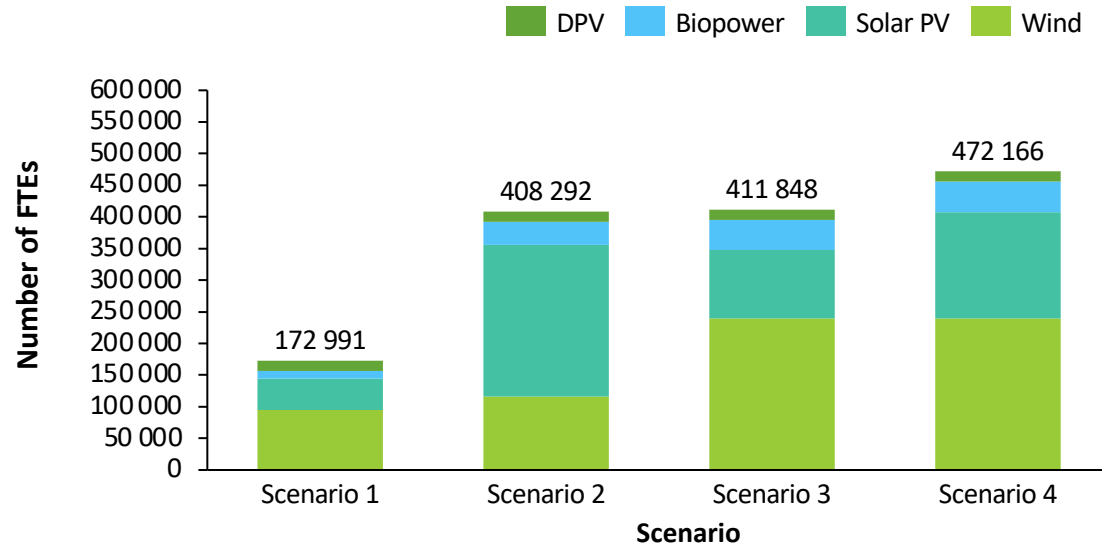
~60% of today's mining workforce in South Africa at risk

But risk even higher: On average, mine workers has ~5-10 dependants, supporting 2 million – 4 million livelihoods

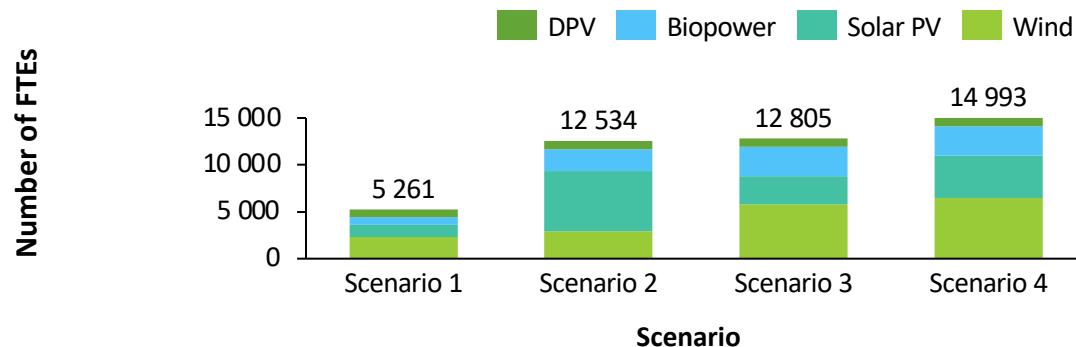


CSIR Co-Benefits Study Preliminary findings - Employment effects

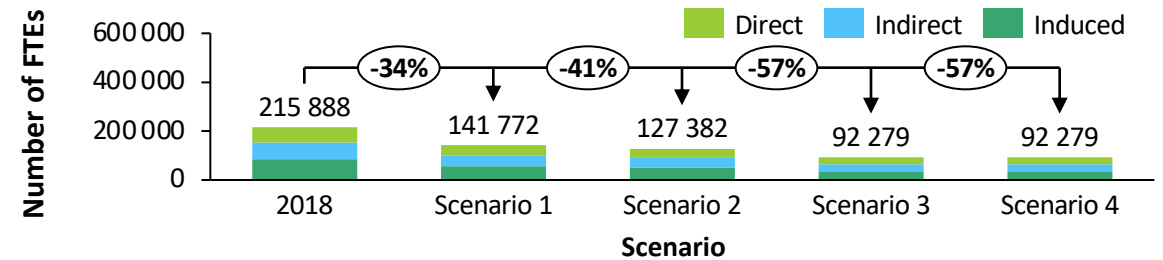
Construction total FTE jobs in Mpumalanga, 2019-2030



O&M cumulative FTE jobs in Mpumalanga, 2019-2030



Cumulative O&M FTE job losses per scenario in Mpumalanga, # of FTEs



Additional insights

Potential job losses:

Direct job losses related to Eskom power stations: 6,537 in scenario 1 to 10,903 in scenario 3&4

Direct job losses related to coal mining: 4,826 in scenario 1 to 8,049 in scenario 3&4

Potential job gains:

Biomass creates the most jobs on a per/MW basis

Battery storage: Based on US estimations there is potential employment of 95-118 thousand jobs for scenario 1 to 162-216 thousand jobs under scenario 4

Net employment:

Net annual employment in Mpumalanga is positive due to high construction numbers, permanent O&M jobs are limited

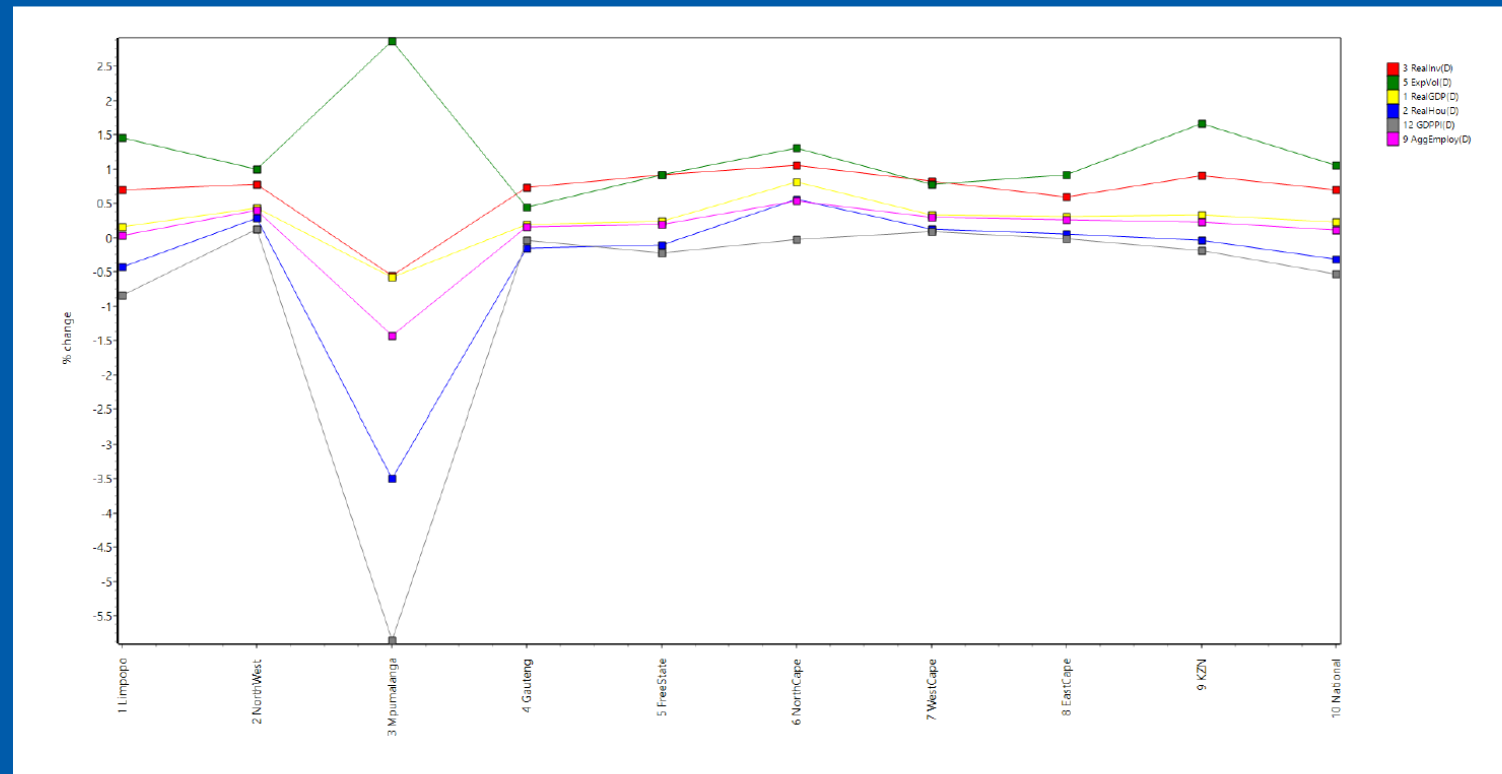
At a national level, the job losses in the coal value chain by 2030 can be adequately replaced by renewable energy. However, the decommissioning results in net job losses in Mpumalanga by 2030

Battery storage and increased RE for H₂ presents an opportunity to increase the net employment in the province

Again multiple studies show that this specific impact is most pronounced in Mpumalanga

UPGEM Simulation Results

Scenario S4: Regional Macros (Long Run)



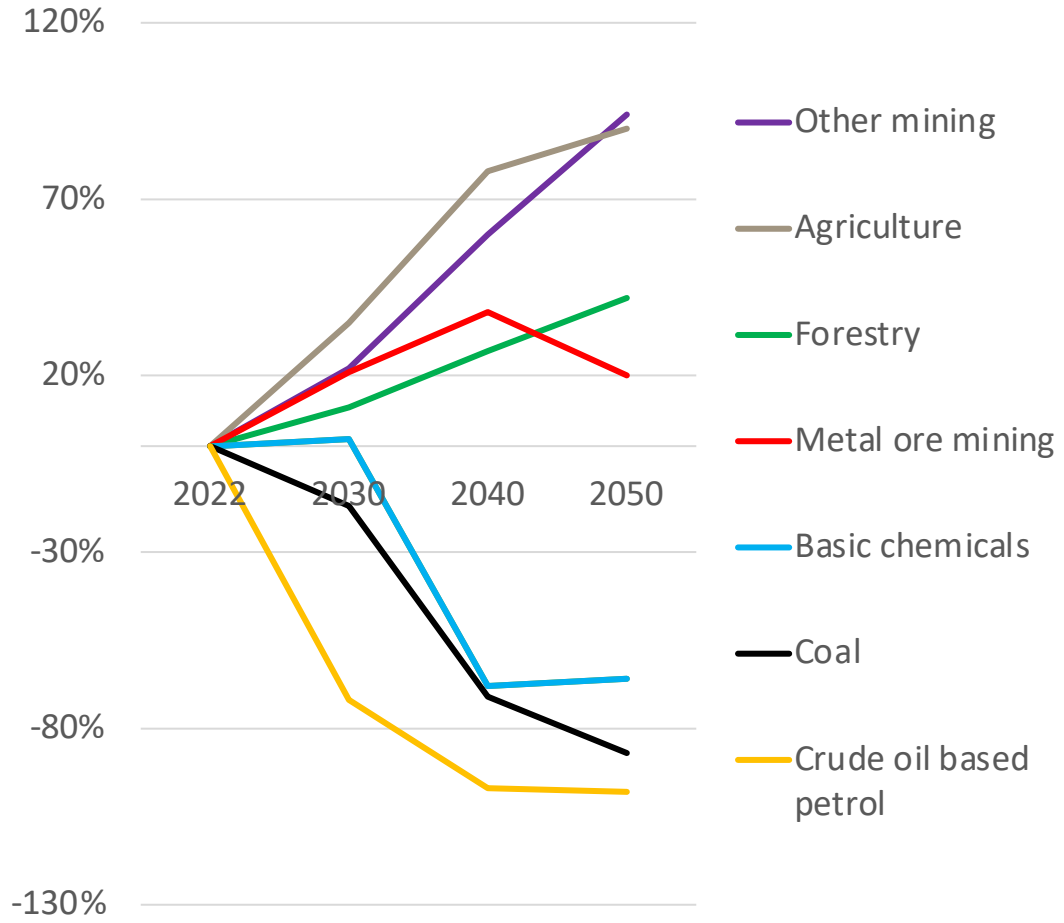
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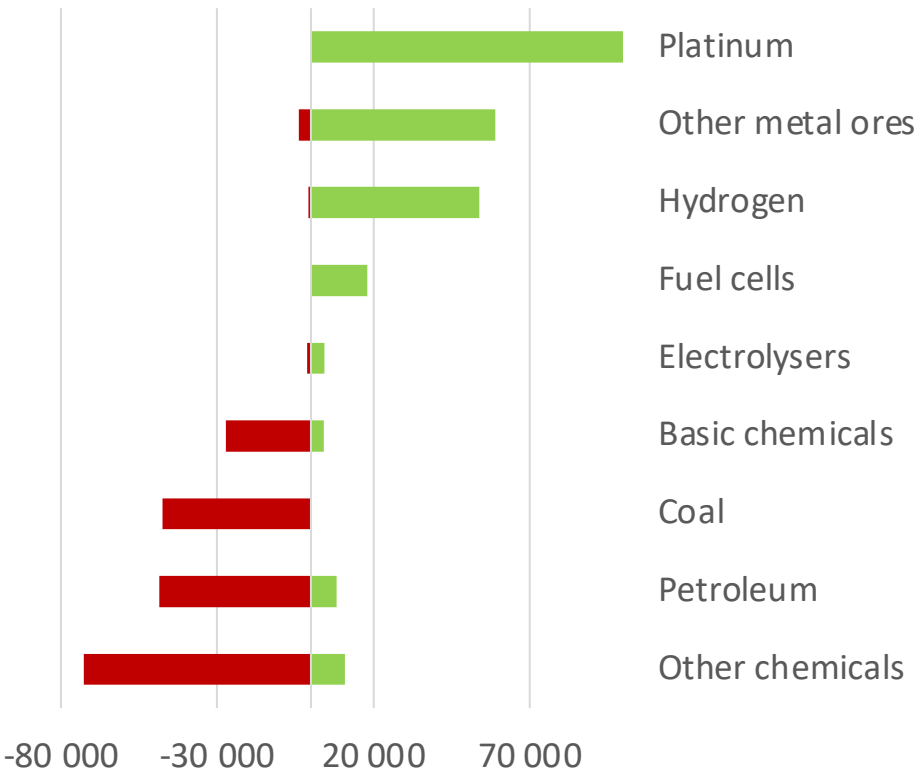
Employment shifts will occur across most sectors

Significant growth in PGMs, metal ore, green hydrogen, as well agriculture & forestry

Changes in GDP components (9GT budget)



Employment shifts (9GT budget)



Source: World Bank Staff SAGE and microsim models.



We need to undertake detailed planning for skills pipeline and job placement programmes



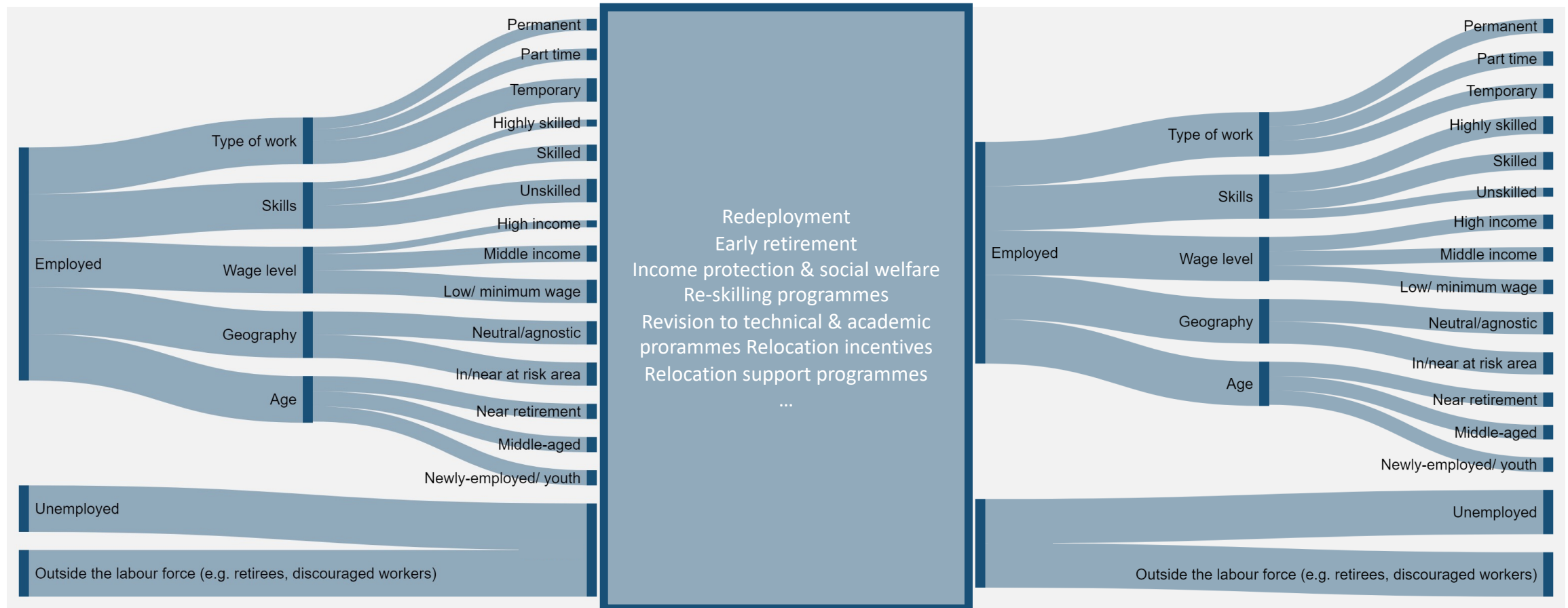
Starting point: Labour force of today



Key enablers



2050: Future labour force



Just Transition Framework



A PRESIDENTIAL CLIMATE COMMISSION REPORT

A Framework for a Just Transition in South Africa

- Seeks an **equitable distribution of risks and responsibilities** in context of historical liability for climate catastrophe
- An **inclusive approach** to transition that involves those most affected in decision making and taps the creative energies of all social partners
- **Active support to workers and communities** affected by mitigation-induced economic shifts and physical impacts of climate change
- Use opportunities created by transition to **structurally change economy** and put assets and resources in the hands of previously disadvantaged



Principles for a just transition

Distributive justice

- Equitable distribution of risks and responsibilities addressing direct impacts of transition

Restorative justice

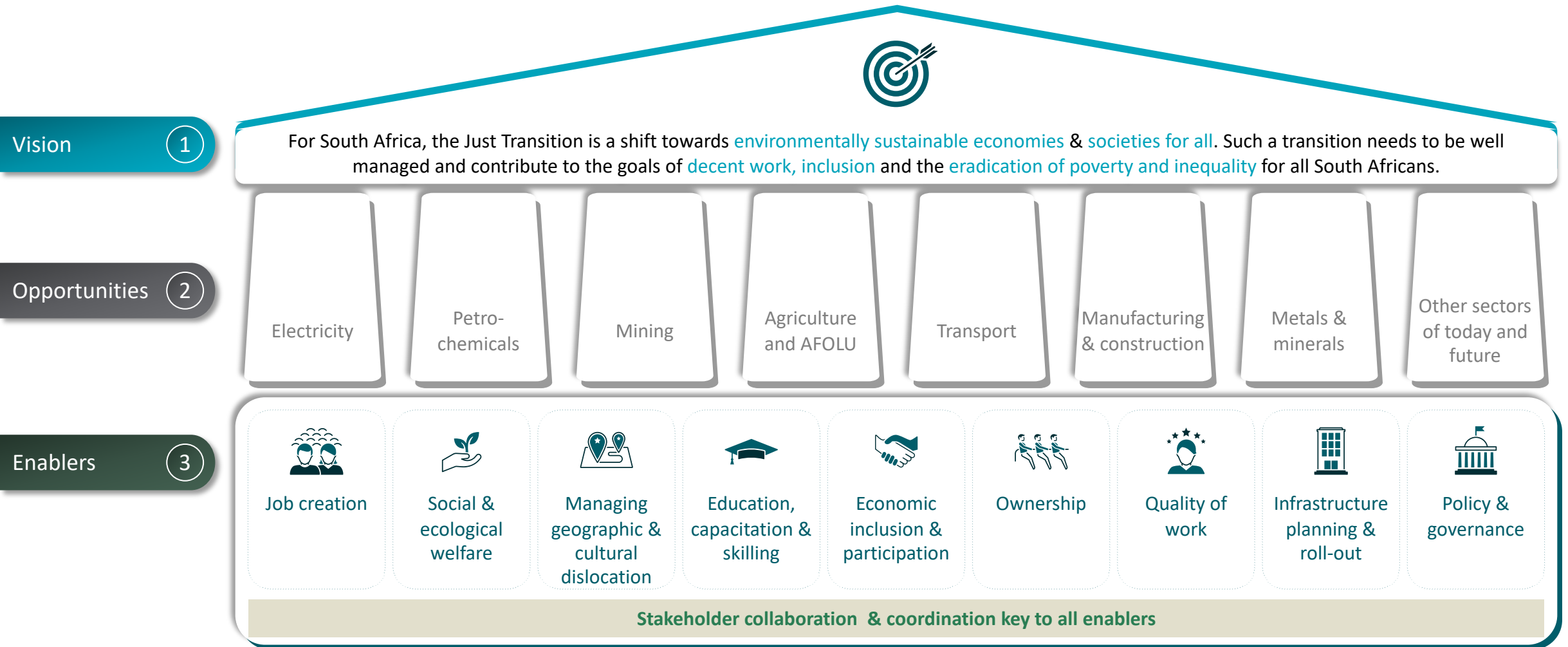
- Redress of historical damages in order to rectify or ameliorate situations

Procedural justice

- Empowering workers, communities, and small businesses so that they can define their own development and shape how decision makers respond



Green industrialisation and transition opportunities should move beyond jobs and reskilling to genuine transformation



MESSAGES FROM COMMUNITY ENGAGEMENTS

Emalahleni community engagement

Mpumalanga leading the way in thinking about the Just Transition

- Community ownership of power supply systems
- Education & awareness
- Skills development
- Create opportunities for youth
- Engage with communities to understand development needs & wants
- Women play a key role in adaptation & the Just Transition
- Mines & industries need to engage meaningfully with communities
- Demonstrate economic viability of alternative solutions & ensure job creation will meet demand

Lephalale community engagement

What does life look like after coal?

- Understand the economy-wide impacts of the Just Transition
- Use demonstration cases to examine feasibility of alternatives
- Use available technology to reduce impacts of mines & power stations
- Safeguard existing value chains
- Prioritise skills development for youth
- Urgently address basic service delivery issues
- Use district model to implement the Just Transition dialogue
- Make space for indigenous knowledge and related life systems
- Invest in agriculture & safeguard arable land

Durban South Basin community engagement

A community surrounded

- Community ownership of decentralised power supply systems
- Use available technology to reduce impacts refineries & other industry
- Integrate reparation mechanisms into policy
- Government to engage meaningfully with community
- Redevelop existing infrastructure & balance environmental goals
- Make use of skills base available within community
- Industry to be held accountable to fence-line communities
- Industry to engage with communities regarding refinery closure, rehabilitation & compensation

Xholobeni community engagement

A community divided

- Invest time in understanding community dynamics, conflicting plans for future development
- Engage meaningfully with traditional leadership
- Bring district & local governance to the table
- Demonstrate tangible steps & benefits of Just Transition to build trust

Gqeberha community engagement

Nothing for us, without us

- Community ownership of power supply systems
- Grey water recycling
- Additional engagement with CCBOs, NOPs & communities
- Education & awareness
- Skills development
- Improved WASH & waste management services
- Increased visibility, engagement & response from governance bodies
- Create opportunities for youth
- Leverage indigenous knowledge systems
- Honesty & transparency in financial tracking & reporting

Northern Cape community engagement

Build understanding & cooperation

- Invest time & resources into building understanding of Just Transition process among stakeholders
- Expand the area of engagement to include dispersed community
- Examine implications for job losses under the Just Transition
- Improve cooperation among renewable energy sector & communities
- Use available technology to reduce impacts of mines
- Capture voices of women & youth in the Just Transition Framework
- Critically examine inclusivity
- Increase engagement of governance with communities

Carolina community engagement

Rehabilitating a ghost town

- Well-functioning municipality with good leadership
- Clear vision for the Just Transition
- But lack of alignment between all levels of government
- Social & economic challenges related to mining & trucking
- Little or no accountability for mines
- Involve communities in rehabilitation efforts
- Back-to-basics agriculture to safeguard food security
- Build collaboration & consensus between mining, farming & tourism sectors to develop way forward
- Opportunities & skills development for youth

Secunda community engagement

Asking for honesty from business & government

- Community ownership of decentralised power supply systems
- Quantify the potential impact of the Just Transition process & communicate transparently
- Utilise existing skillsets from communities
- Revitalise manufacturing sector
- Identify Just Transition ambassadors following community engagements
- Revitalise public transport systems
- Remove corrupt officials from power
- Create job opportunities for youth
- Address existing inequalities & leave no one behind





- Skills development, apprenticeships & reskilling for future labour force
- Align basic and higher education with future economy
- Employment incentives, job placement and EPWP

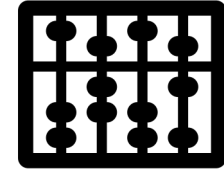


- Build local RE & battery manufacturing industry
- Infrastructure and incentives to support EVs green H2 & minerals
- Use public procurement to accelerate change
- Support small business and localization



- Access to basic services, health care and sustainable human settlements
- Building community resilience & livelihoods
- Income support for displaced workers and early retirement provisions

Governance



Inclusion

- Actively involve affected workers & communities
- Leverage capacity of social partners

Integration

- Coordinated approach to just transition within government
- Modernise energy system governance

Corporate responsibility

- Work with corporates to deliver on ESG & JT obligations
- Implement social & labour plans & rehabilitate mines

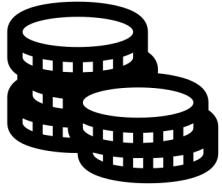
Regional development

- Support MP Green Cluster Agency
- Coordinate economic development initiatives

Accountability

- Hold agencies accountable for delivery
- Measure and assess progress

Mobilising finance for a just transition



Domestic savings

- Provide incentives to households & businesses
- Market-based instruments, de-risking tools and new ways to share risk

Financial integration

- Integrate just transition into taxonomy & disclosure rules
- Remove bottlenecks

Public funding

- Integrate just transition into fiscal framework
- Establish just transition financing mechanism
- Recycle revenue from carbon tax

Development partners

- Mobilising resources from multilateral and bilateral partners
- Tap into FDI inflows and capital from institutional investors

Philanthropic capital

- Invest in skills pipeline
- Build institutional capacity
- Support bottom-up processes & community led initiatives



Co-benefits report 'high impact' actions to make Mpumalanga a green energy hub

- Implement policies enabling renewable development in Mpumalanga to avoid net job losses.
- Regional procurement with annual build targets to create sustained employment and continuous transfer of skills.
- Developing and expanding the transmission grid to facilitate renewable energy investments in Mpumalanga and elsewhere.
- A coordinated approach for localisation and value creation from renewable energies, to develop a green provincial economy.
- Diversification of local content to components where South Africa can play on its manufacturing strengths.
- Dedicate Special Economic Zones (SEZs) for the manufacturing of key components, to push the clean energy industry in the province.
- Renewable energy skill-development programmes through TVET colleges, to facilitate career opportunities for many.
- Childcare facilities nearby training centres, to reconcile parenting responsibilities and career development
- Entrepreneurial development for women, to open access to markets and networks.



We have the opportunity to extrapolate our pathways knowledge to understand jobs potential and skills development and social policy needs

Pathways

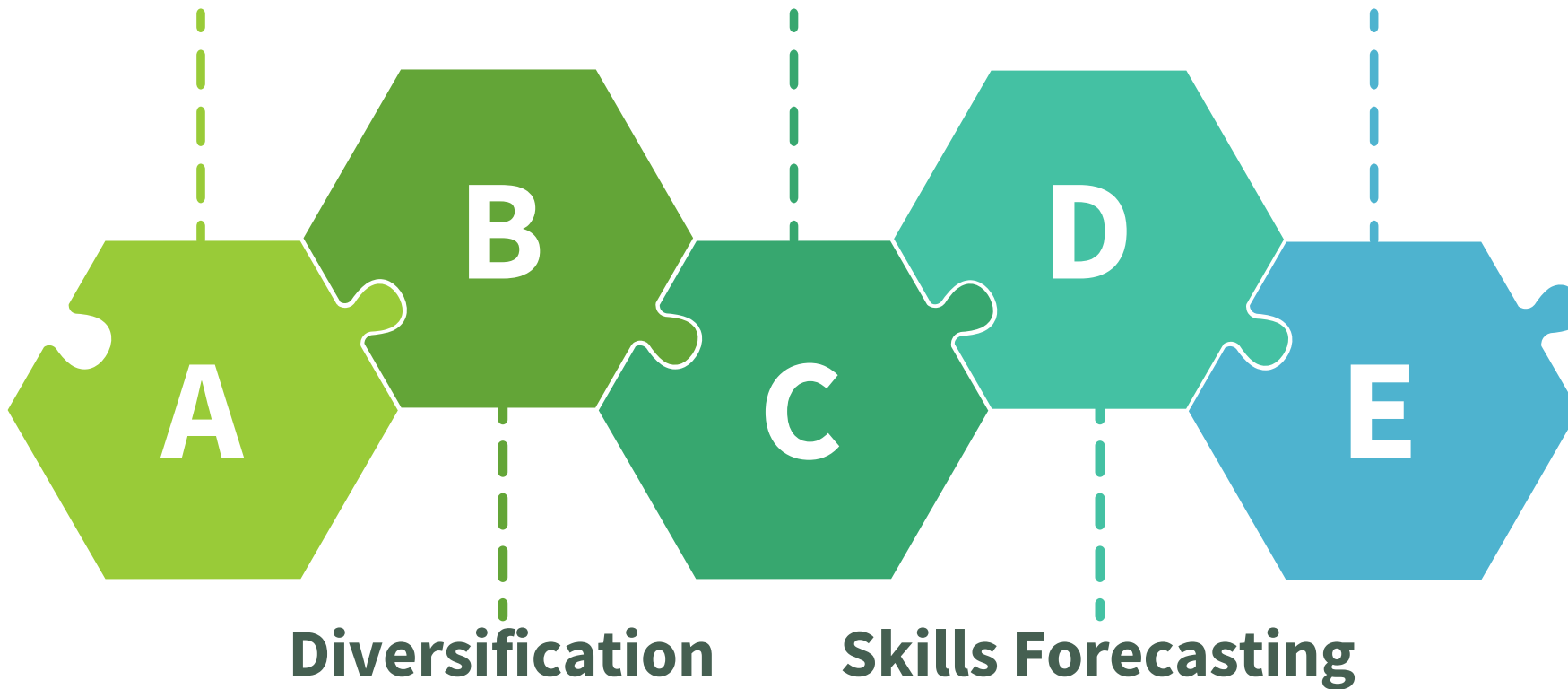
Use net-zero pathways to understand known changes and their timing

Data Gathering

Work with companies to establish more granular jobs data at more regional scales.

Social Policy

A better assessment of jobs potential and training needs in a region allows a better assessment of social support needs.



Using place-based bottom-up strengths assessments determine diversification opportunities

Better jobs data, combined with timing of changes, allows a more granular skills demand forecasting, and integration into training institutions.





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Thank you

Contact us:

Email: Crispian@climatecommission.org.za

Website: climatecommission.org.za