

International Trade Policies and the Implications and Opportunities for the Heavy Manufacturing Sector

Climate Pathways and a Just
Transition for South Africa

Business Action for Sustainable Growth

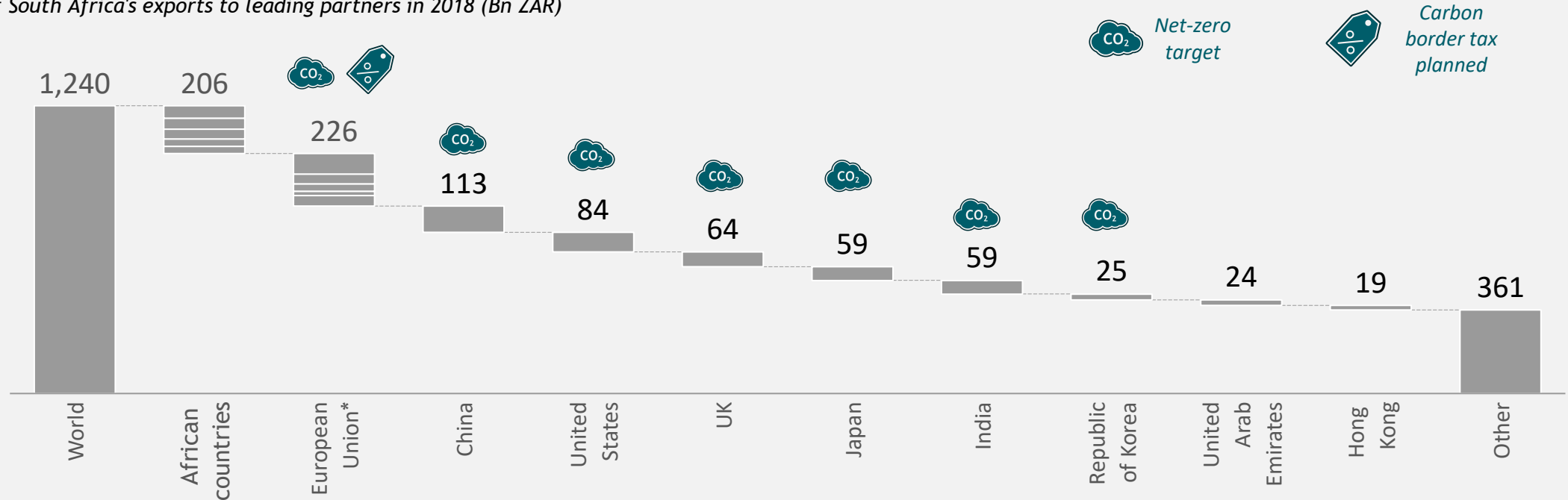
23 May 2023

Context and Background

The cost of inaction is high up to ~20% of exports at risk

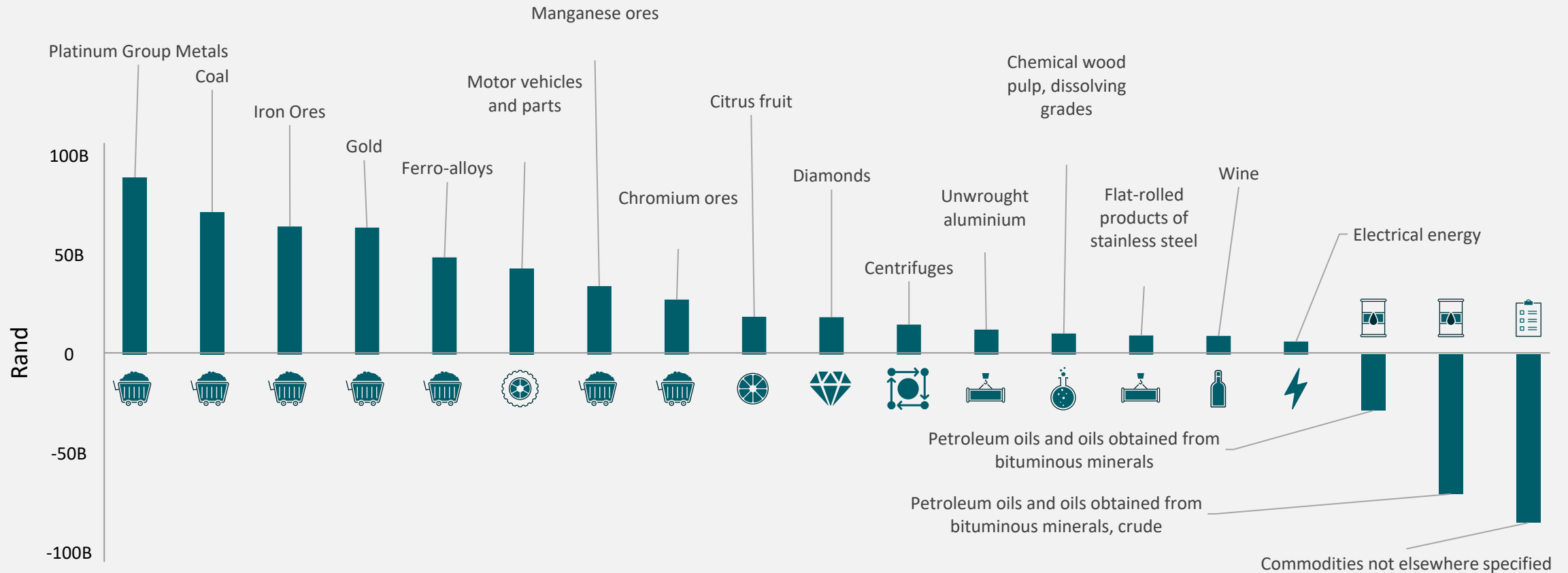
Top export partners outside Africa have recently announced commitments to net-zero, putting SA exports at risk if carbon import taxes are implemented as planned in the EU -Border Tax adjustments are currently within WTO rules

Volumes of South Africa's exports to leading partners in 2018 (Bn ZAR)

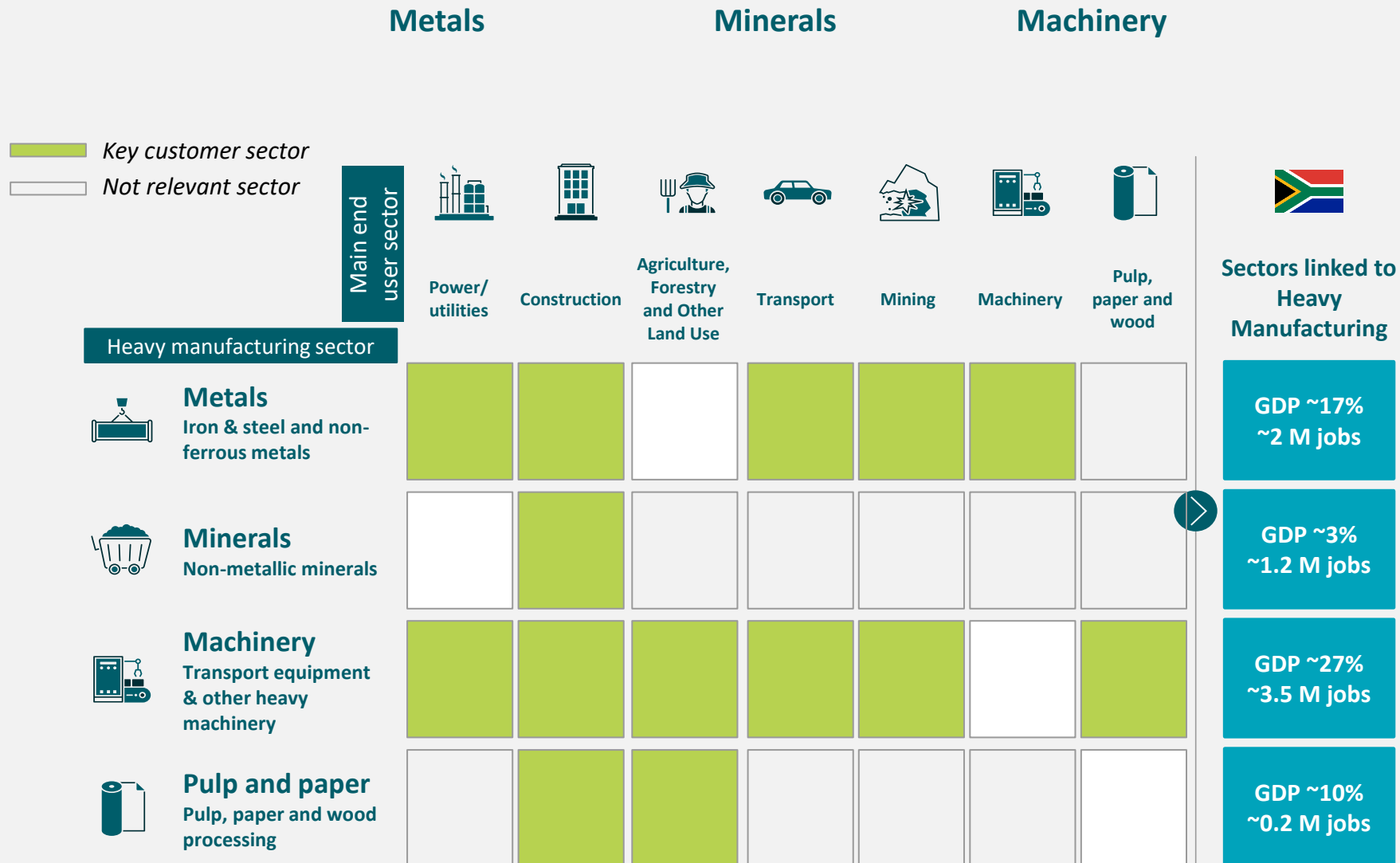


* Top 4 trade partners within EU are Germany, Netherlands & Belgium, and among those with most aggressive targets. Note: Exchange rate based in 2018 average = R 13:24/US\$ | Source: World Integrated Trade Solution 2018; Press research

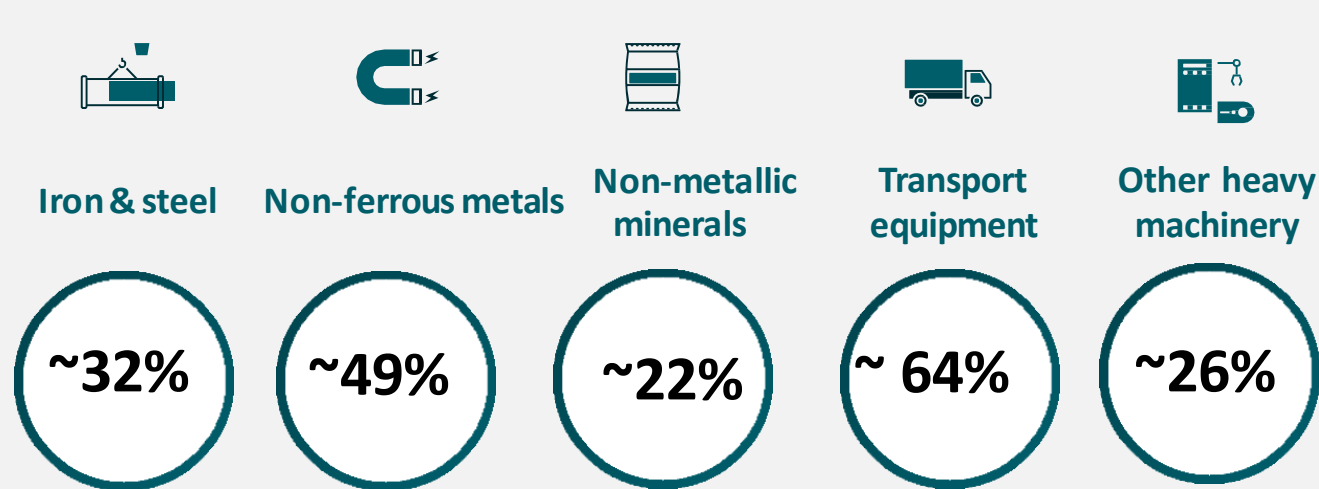
South Africa's trade vulnerability is particularly acute, commodity trade balance open to transition risk



South Africa's heavy manufacturing sector drives ~523k direct jobs and, on average, ~15% of national GDP



If the Heavy Manufacturing sector does not decarbonise, it risks losing ~50% or ~ZAR 170bn of its export value



Jobs linked to exports at risk

~350k

1 Including multiplier effect 2. Includes formal and informal direct jobs
Source: Quantec EasyData 2022; NBI-BCG project team

Just Transition and Climate Pathways: Key Findings for Heavy Manufacturing

Just transition & Climate pathways

30+

CEO champions from multiple sectors

2+

Years of analysis and intensive engagement

450+

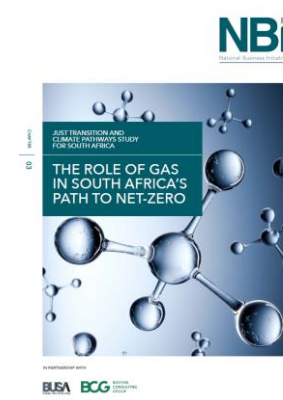
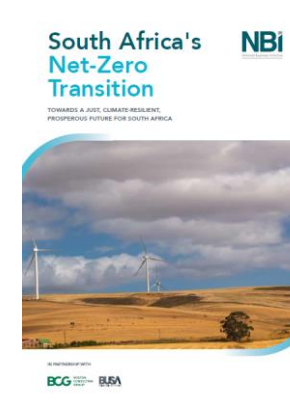
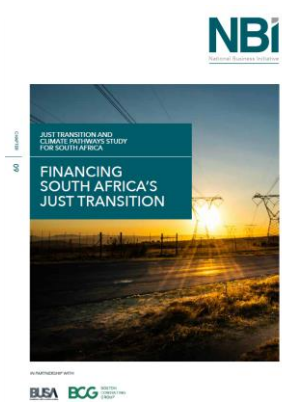
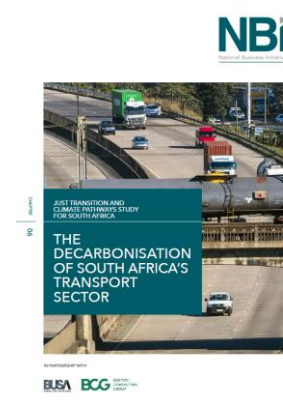
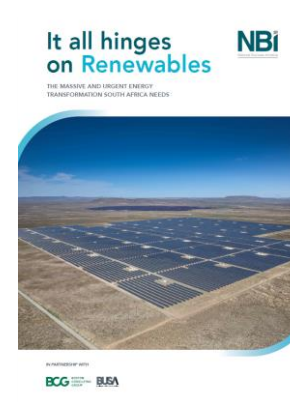
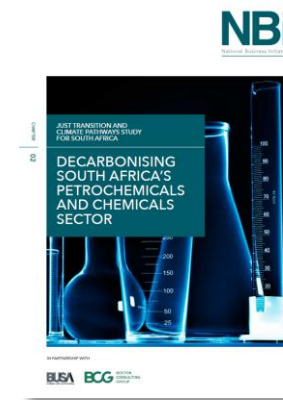
Stakeholders from business, government, civil society and labour

250+

Hours of technical workshops

11

Individual sector pathway reports



Towards a net-zero, job-rich Heavy Manufacturing sector in South Africa

As part of its Just Transition to net-zero, South Africa needs to **decarbonise and further grow** its heavy manufacturing sector, to drive **job creation, economic growth**, and ensure **supply security** for critical manufacturing goods.

By **overcoming the existing structural challenges** and benefitting from its **high-quality renewable energy resources, critical raw materials**, local manufacturing capabilities, and young, growing population, South Africa is well-positioned to become a future **leading green manufacturing hub for energy-intensive goods**.



Key findings of the HM sector analysis

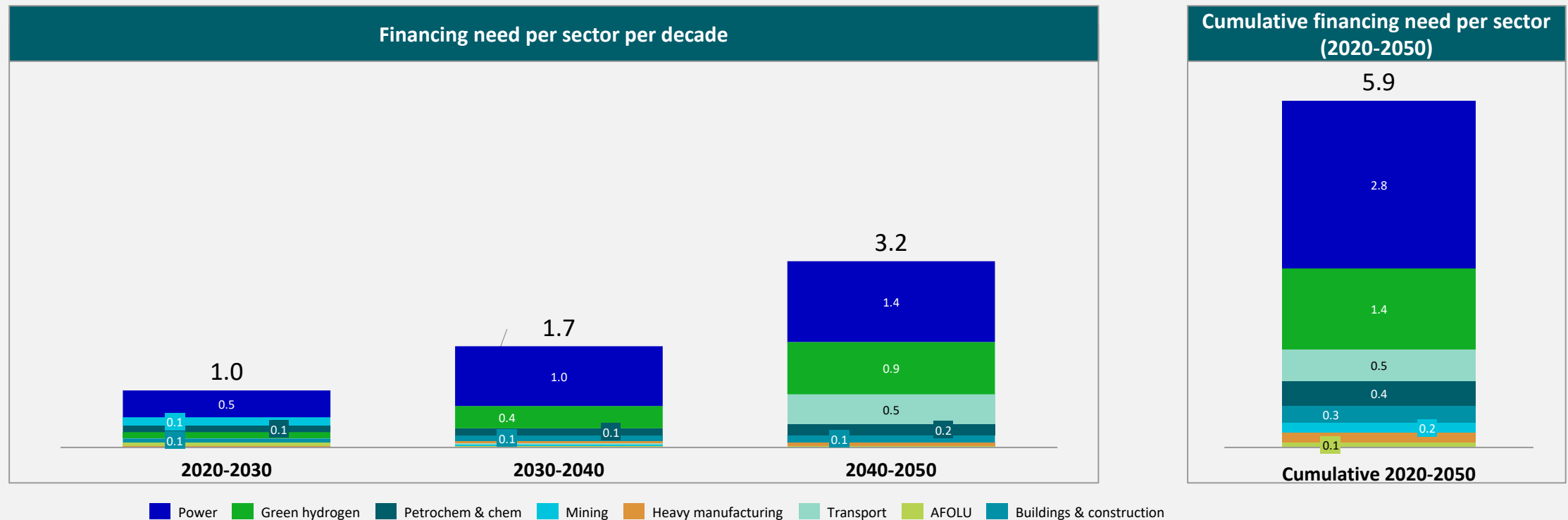
- 1 Local demand for South African Heavy Manufacturing goods is expected to increase. This would result from growth across other sectors – such as expansion and net-zero transition of the energy and transportation sectors. **South African local steel, cement, and aluminium demand could increase by more than +270%, +70% and +240%, respectively by 2050.**
- 2 By strategically decarbonising and diversifying the heavy manufacturing sector, **South Africa can further grow the sector and create up to ~740k jobs**, primarily linked to the production of metals, transport equipment, and machinery, and spearhead South Africa's industrial and socio-economic development –hence, supporting a Just Transition through sustainable job creation.
- 3 **Mature technologies**, like process and energy efficiency improvement, fuel and feedstock switching and material substitution **can reduce ~40% of the overall Heavy Manufacturing Scope 1 and Scope 2 emissions. The remaining ~60% requires disruptive technologies** like green H₂ for steel and not yet proven carbon removals (CCUS) for cement.
- 4 Access to renewable power and green H₂ at scale is critical for decarbonising Heavy Manufacturing. **Renewable power and green H₂ help reduce ~50% of the sector's emissions.** By 2050, the sector could require ~80 TWh of renewable power p.a. (>33% of national demand) and ~0.3 Mt of green H₂ for steel decarbonisation.
- 5 Affordable green power and globally competitive local green H₂ production can be a source of competitive advantage for South Africa's Heavy Manufacturing sector – **but it will require extensive investment (R150+ bn)** to upgrade Heavy Manufacturing plants to incorporate green processes and technology.

Net-zero transition to 2050 could cost over ~ZAR 5.9 tn, mostly in the power sector¹ and in green hydrogen production²

Net-zero transition to 2050 could cost over ~ZAR 5.9 tn, mostly in the power sector and in green H2 production

CapEx to 2050 by sector (cumulative per decade in ZAR tn)

Note: Focus on mitigation investments across sectors. Social and adaptation financing need not quantitatively assessed



Note: Data expresses total CapEx requirements based on NBI Climate Pathways work on mitigation spend per sector which is required to align SA to a 1.5C pathway | 1. Power includes both generation and grid expansion costs 2.Green Hydrogen here assumes ~3.7 Mt p.a. local demand and includes ~4 Mt p.a. H2 for export but does not include green H2 to convert existing synfuels assets to green assets, which is incorporated the in petrochemicals figure (assumed as an additional ~1.5 Mt p.a. of hydrogen by 2050) 3. Petrochem includes additional costs for gas infrastructure | Source: NBI-BCG project team

Ensuring a Just Transition is non-negotiable, all key building blocks must be in place

Procedural justice

Key aspects to be considered:

- Voice
- Dignity and respect
- Neutrality, impartiality and Transparency
- Trustworthiness

Distributive justice

Key policies and tools that support the implementation of distributive justice

- Labour market policies
- Industry policy
- Social protection policies and mechanisms

Restorative Justice

Key concepts to be included based on challenges that need to be addressed:

- Socio-economic empowerment
- Socio-cultural restoration
- Environmental restoration



We propose taking a principles-based approach to ensure the incorporation of procedural justice



Job creation
& decent
work



Training,
capacitation
& skilling



Infra.
planning &
roll-out



Managing
geo. &
cultural
dislocation



Social
Protection



Service
delivery and
access to
infra. &
markets



Economic
inclusion &
participation



Ownership



Ecological
restoration



Education

Cross cutting



Funding



Policy & governance

Thank you!

