JT Learning Event
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Coal Value Chain NEVA update

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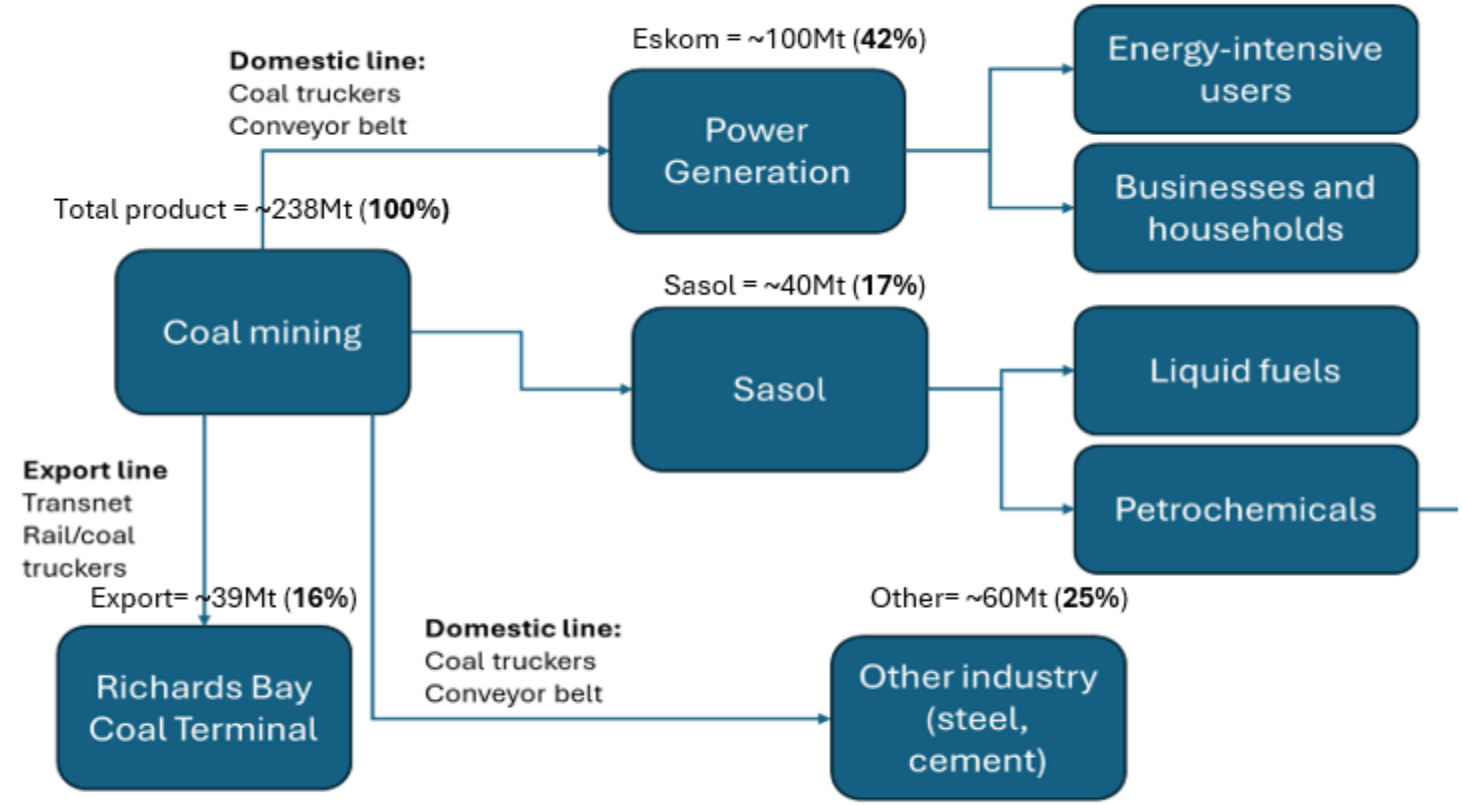
Introduction

- Conducted an update of the 2019/20 analysis
  - sectoral trends with a vulnerability lens across mining, transport/logistics, Eskom generation, and Sasol/chemicals, with a geographic focus on the core coal municipalities in Mpumalanga.
- Assessing employment impacts from CC is rooted in policy – NCCR White Paper (2011)
- Vulnerability assessment is the first stage with the policy proposals (SJRPs) following
- Coal has always been a central VC of study in the JT

Value Chain

Graph 1. The coal value chain



Source: Author, based on (Eskom, 2024a; Quantec, 2025b; Sasol, 2025a)

Notes: 1. Customer splits are based on coal volumes. 2. Coal flow volumes were derived by reconciling national coal sales data (Quantec, 2025b), with consumption figures from Eskom and Sasol's integrated reports. Once Eskom and Sasol's coal use were accounted for, the balance of ~60 Mt was calculated as the residual of total domestic sales, representing other industrial users.

Trends

- In 2024, coal mining alone employed nearly 100 000 employees, with about 86% in Mpumalanga.
- Directly linked employment along the VC
  - Eskom had over 12 000 workers (generation)
  - Sasol around 13 000 (linked to Petrochem & mining)
- In terms of taxes, the coal mines contributed close to R4 billion in mineral royalties in 2023/24. Sasol contributed another R4.3 billion in 2024.
- Geographically, coal activities are highly concentrated in Mpumalanga, where four municipalities host the majority of coal mines, Eskom power stations and Sasol facilities. Additionally, Metsimaholo (Sasolburg) is assessed given the linkages to Sasol.
- The clustering of economic activity around coal has entrenched wider regional dependence, affecting retail, food services and accommodation in these areas

Impacts

Demand

- Strong coal sales until now, but sharp decline from 2030.
- Domestic: Eskom plants retire (2030–2045); Sasol & PPC shift away from coal.
- Global: India/China demand offsets phaseouts until 2030; steep global decline after 2035 (30–90% drop by 2040s).

Policy Responses

- SA: Climate Change Act, Carbon Tax Phase 2 (2026) → tighter coal use.
- International: EU/UK CBAMs raise costs for coal-based exports.
- Finance: DFIs exit coal, fund renewables instead.
- Companies: Move to renewables, gas, hydrogen; big miners divested (Anglo, South32).
- Market: Now dominated by Exxaro, Seriti, Sasol, Thungela, Glencore → ~65% of output; juniors & BEE firms hold ~80% of volume.

Impacts

- Downstream coal refineries can mitigate the impact of measures to reduce emissions – alternative feedstocks (renewables, green hydrogen, gas) or developing new product lines.
- Likely to be some job losses amongst ~25 000 workers who work most directly in coal refining at Eskom and Sasol.
- Sasol appears more vulnerable because of the technical difficulties involved in moving away from coal.
- The biggest challenge arises for the coal miners and their communities, since the mines have little scope for redirecting their core business.
- Starting in the 2030s, they are likely to see some downsizing, reversing the modest improvement in their fortunes from 2020 to 2025.

Municipalities

- Four municipalities in Mpumalanga have an extraordinarily high orientation towards coal mining and refining: eMalahleni (Witbank), Steve Tshwete (Middelburg), Govan Mbeki and Msukaligwa (Ermelo) through GVA and employment

- Metsimahola, formerly Sasolburg, is also added in the update because of the growing pressure on Sasol to decarbonise.

- The share of the coal mining value chain, including electricity and coal-based petrochemicals, ranged from 37% to 51% in 2024 in these munics.

- The share of coal mining had increased compared to a decade ago, mostly because of higher coal prices rather than growth in output. For comparison, in South Africa as a whole the coal value chain accounted for well under 10% of GDP.

Dimension of vulnerability

Physical Capital

- Small businesses rely on retail/workshop sites, equipment & housing.
- High formal home ownership, but values mostly <R500k with weak housing markets → poor collateral.
- Race/class patterns remain visible: almost no non-Africans in informal housing.

Financial Capital

- Coal value chain workers earn higher median wages (R10k+ in mining vs. R6k in economy).
- Stronger benefits: >60% in retirement funds (80% in mining/electricity) & >75% contribute to UIF.
- Women earn less & are underrepresented (~20%).
- Communities face high poverty rates despite above-average employment.

Human Capital

- Workers often have only matric, yet earn ~2.5× more than peers with similar qualifications.
- Coal towns: few post-secondary graduates, limiting transition prospects.

Social Capital

- Very high unionisation (70%+ in mining, ~70% in electricity, lower in petrochemicals).
- Coal towns generally enjoy above-average municipal income & infrastructure (piped water, refuse removal, electricity access).
- Msukaligwa is an exception, with below-average municipal income.

Conclusion

- Transition impacts will be gradual post-2030, driven by policies & global demand shifts.
- Eskom may adapt with new feedstocks; Sasol faces greater technical hurdles.
- Downsizing of mines is likely, timing depends on SA & global climate policies.
- Communities begin with financial resources & infrastructure, but limited skills & entrenched inequality heighten vulnerability.
- Targeted responses needed for workers and coal-dependent towns to build resilience before transition accelerates.

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