

# Creating employment and reducing emissions: Options for South Africa

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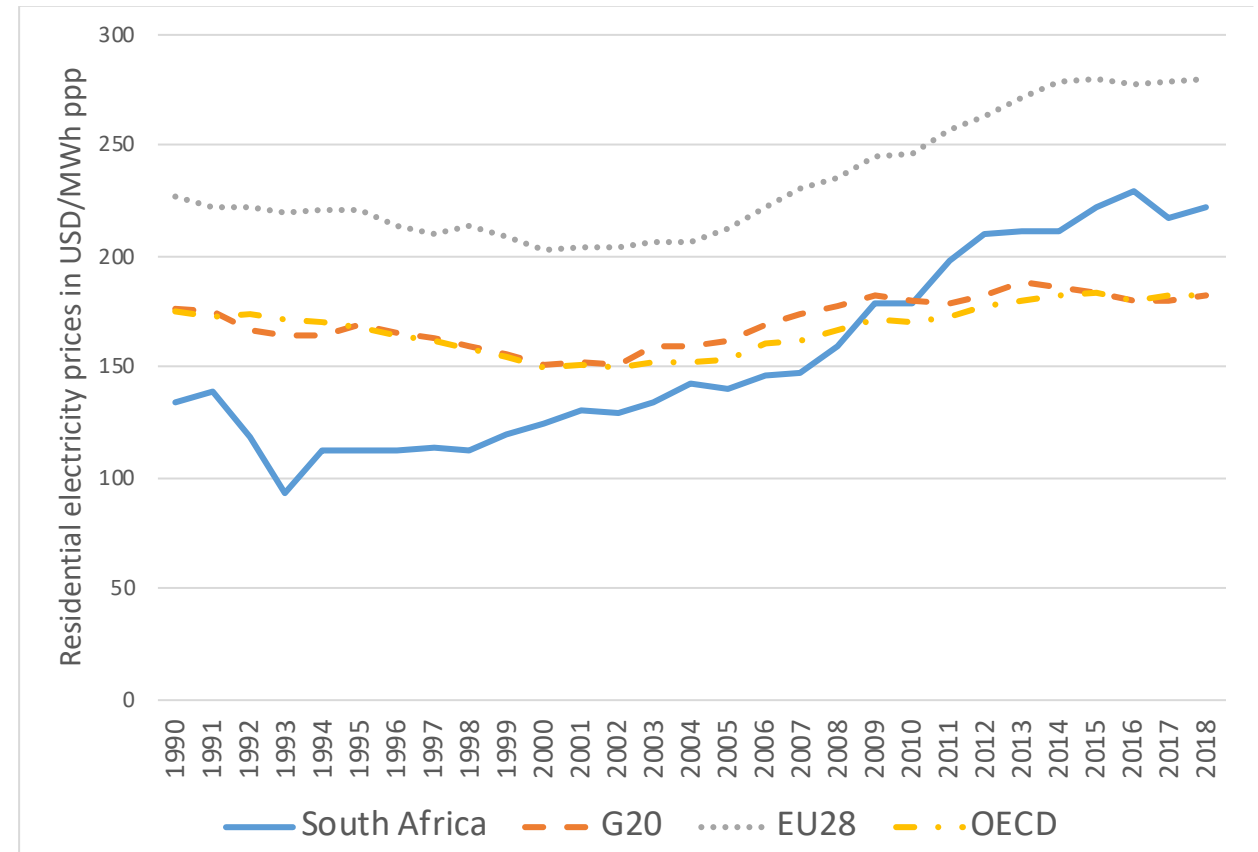
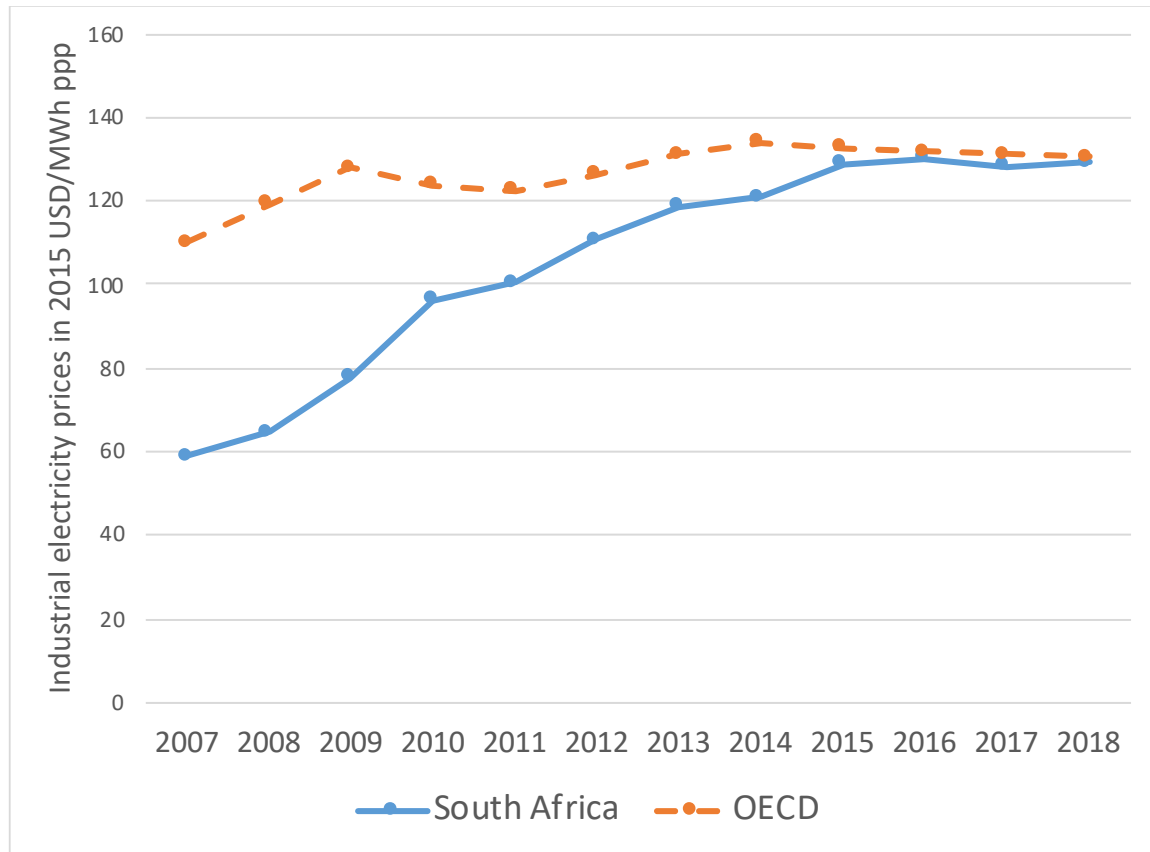
# Development path has led to low employment and high emissions

- Historical development of 'minerals-energy complex' (MEC) – locked SA into distorted growth path
- Based on low cost (subsidised) coal-based energy - led to heavy industry development
- Highly capital- and energy-intensive
  - Low employment, high emissions
- Other forms of state support for heavy industry
  - Export incentives, tax allowances, subsidies for strategic projects and dedicated infrastructure
- Policy continued after democratic transition
  - Introduction of Developmental Electricity Pricing Programme (DEPP), Critical Infrastructure Programme (CIP) etc.

# Comparative international electricity prices: Industry and households

Electricity prices for industry: were much lower than OECD in 2007, but had risen to close to OECD levels by 2018

Electricity prices for residential: Households were paying less than in OECD 1990 to ca 2010, but are now paying more



Source: Winkler & Black (2021), Fig 1

# MEC has begun to unwind...

- Historical growth model no longer viable
  - Rising electricity prices, infrastructure constraints (esp. electricity but also rail and ports), poor regulation
- High adjustment costs
  - Slowdown in heavy industry and plant closures
  - Contraction in mining
- Manufacturing employment falls sharply
  - 1.79 m (1981); 1.22m (2019)
  - Compounded by collapse of ultra labour-intensive industries

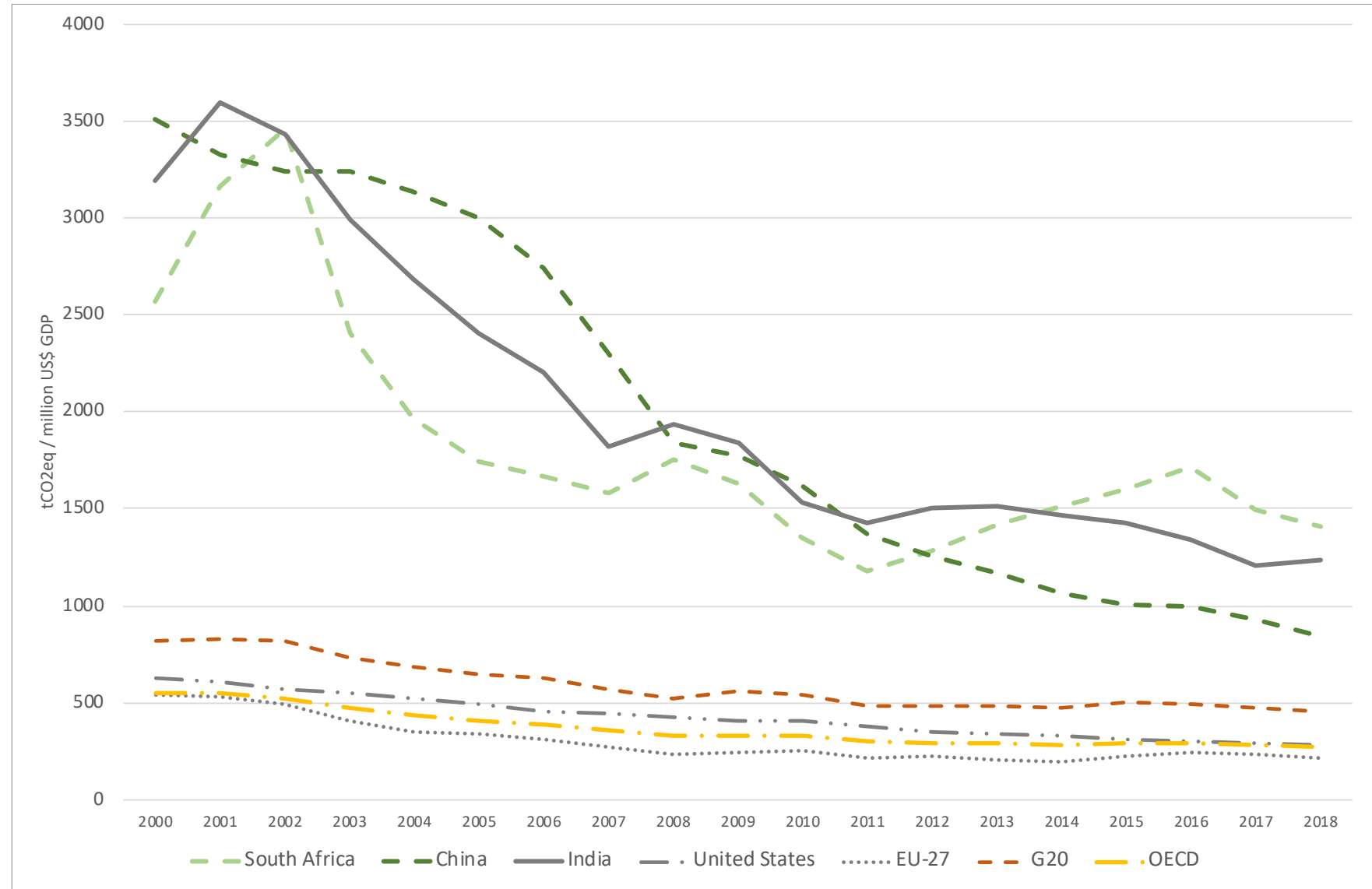
# SA's GHG emissions intensity 2.5 times global average

SA, China and India emit more GHG per unit of economic output than developed countries

SA's development path led to high greenhouse gas (GHG) emissions. Four-fifths due to energy supply and use.

Integrating low emissions into energy policy and electricity plan essential for climate mitigation

Global trends to decarbonisation focus on electricity supply, e-mobility, end uses



Source: Winkler & Black (2021)

Fig 2: South Africa's emissions intensity compared to selected countries and regions (tons of CO<sub>2</sub>-eq, all Kyoto greenhouse gases, per million US\$ of GDP ppp)

# Energy economy based on subsidised, coal-based energy led to high emissions

- Huge, long-term investments in coal and coal to liquid fuel
- 120,000 workers in coal value chain (Makgetla et al, 2020) but employment has been declining since the early 1980s
- Energy policy since 1998 aimed at diversifying away from coal and to manage environmental and health impacts
- Only with climate policy (2011) prompted REI4P
- ... but electricity supply industry remains in crisis
- Political economy constraints
  - Coal lobby
  - Energy Intensive Users Group (EIUG); accounts for 40% of electricity demand

# Policy instruments for employment-intensive and low emissions growth

- Shift incentives
- Industrial policy with objective of employment-intensity
- Synergies across policies – industrial, energy and climate

# Change incentive structure

- Support employment and income by shifting subsidies away from high-emitting activities
  - Reducing incentives to capital-intensive and high emissions heavy industry
  - Ending direct and indirect support for cheap electricity
  - Removing fossil fuel subsidies
  - Subsidise employment – wage subsidy
  - Provide universal basic income grants (as supplement to existing social grants)
- Shift incentives to employment-intensive and low-emissions activities



# Industrial policy aim: employment

- IP around comparative advantage in more labour-demanding sectors
  - Employment in renewable energy and regional economic development
  - Build competitive advantage in employment-intensive light manufacturing
  - Energy-service companies – SME's implementing energy efficiency and renewables at local scale
  - Agriculture: employment, reduce emissions and enhance sinks of CO<sub>2</sub>
- Understand which sectors are *low* in carbon intensity and *high* in employment-intensity

# Energy development paths in new direction

- Unit costs of wind and solar PV have declined dramatically, globally and in SA
- No longer an incremental cost, but incremental benefit to mitigation (reducing GHG emissions)
- SA in past 'missed' climate finance
- Glasgow offer of \$8.5 billion / ZAR 130 bn creates opportunity that must not be missed,
  - Accelerated decommissioning of coal-fired power
  - Social justice
- Create synergies across industrial, energy and climate policy (far from current reality)

# Just transition

- PCC draft framework on just transition ([here](#))
- COSATU published a blueprint for workers in a just transition ([2022](#))
- National Business Initiative just transition pathways project – with modeling by sectors, e.g. electricity, mining, etc ([2021](#))
- [Climate Justice Charter](#) developed by social movements, calling for – ‘deep just transition’ (2020)

# Conclusion

- Historical development path capital intensive, high *unemployment* and high GHG emissions
- Future development can align employment and mitigation objectives, and manage trade-offs
- Shift incentives to employment-intensive and low-emissions activities
- Industrial policy from capital- to employment-intensive
- Align industrial-energy-climate policy

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