THE FINANCIAL SECTOR, COAL AND CLIMATE CHANGE: RISKS AND OPPORTUNITIES

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Introduction & Background

Key issues facing the banking sector

The transition away from fossil fuels has two important elements for banks:

1. Structural change within the banks’ markets
   – traditional industries are being significantly transformed
   – new industries are emerging
   – geographically, regional markets are experiencing differential effects
2. The Regulatory framework is being updated
   – customers have to adapt to new regulations
   – banks themselves being more closely regulated

International agencies are grappling with the future

Banking issues are part of a broader global focus

noteworthy recent work includes

- the **IMF's** latest *World Economic Outlook* focused on macroeconomics issues associated with climate change
- the **IEA** now stresses policy change scenarios
- the **Financial Stability Board** has highlighted climate change risks for the financial sector

Global focus follows the Paris conference

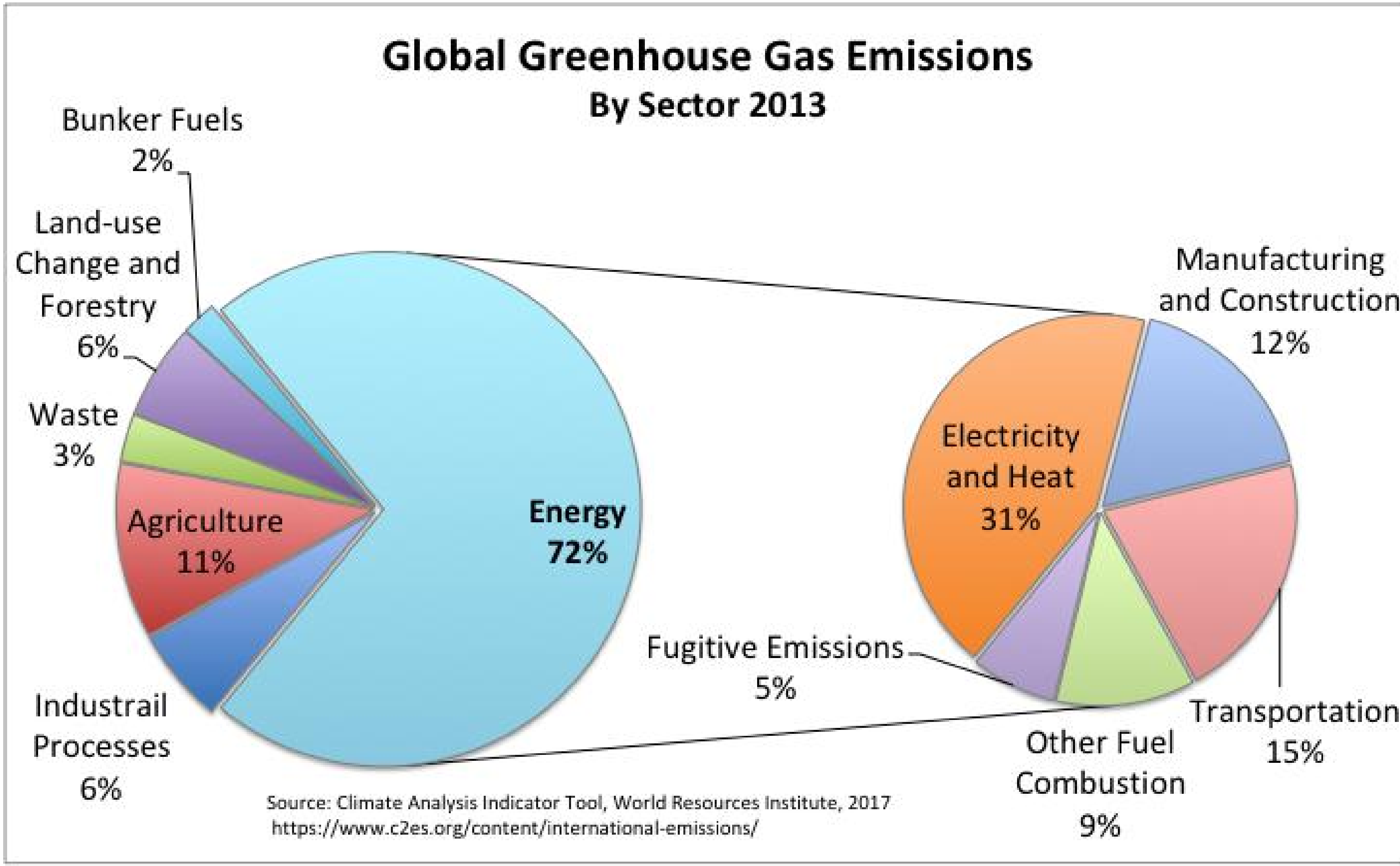
- The 2015 Paris Agreement[1] was an historic event
- Signatories agreed to limit temperature rises to
  - less than 2°C; and to
  - pursue efforts for less than 1.5°C

- Emissions reductions targets to be determined individually by signatories
  - Australia has adopted a 26-28% target by 2030
    - CCA recommended a 40-60% reduction in emissions
  - Indonesia has a target of 29% by 2030
    - 41% with sufficient international support

Achieving Paris goals requires economic action

- Climate change is an economic problem
  – arises from pollution being ‘free’
- Policies to combat green house gas pollution include:
  – put a price on emissions
  – regulate polluting entities
  – subsidise non-polluting activities
- Australian experience shows policy consistency important

What are the main sources of emissions?



Financial & Economic Implications: Some Broad Observations

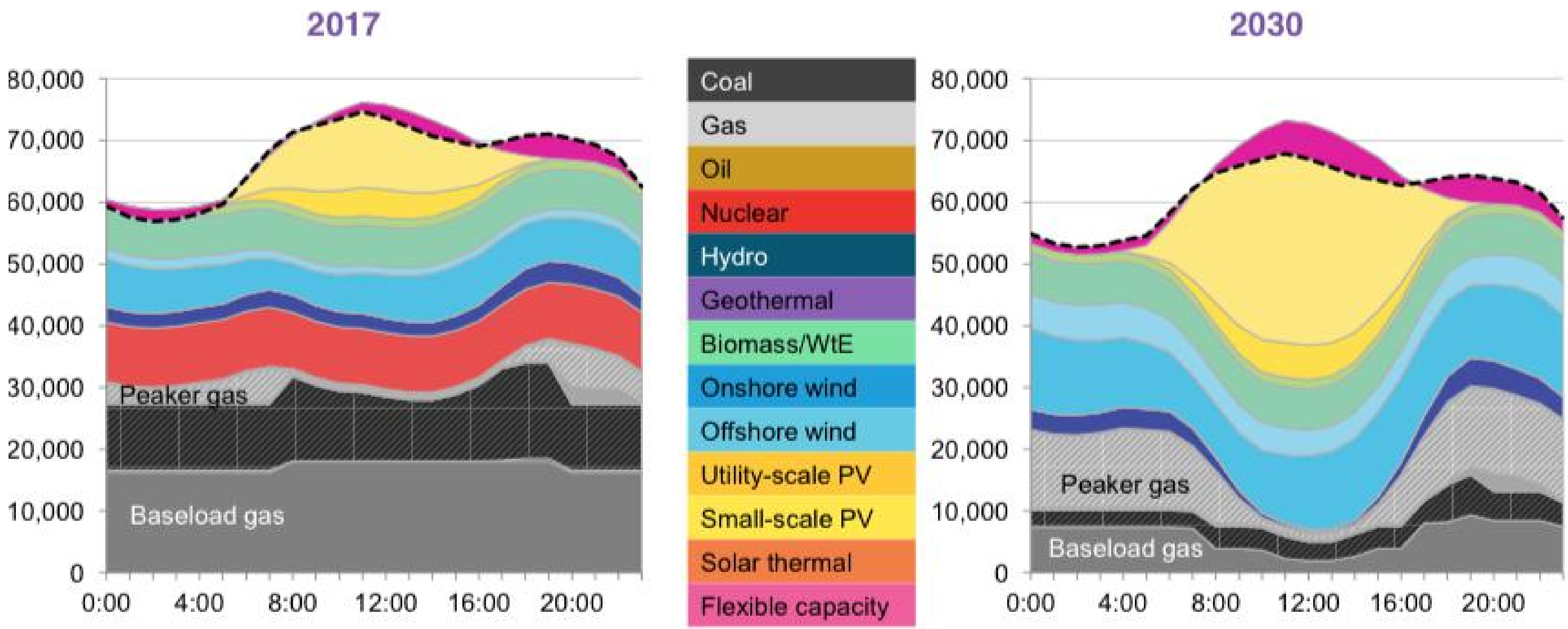
New policies are driving structural change

Markets are anticipating/reacting to new policies:

- Mining industry undergoing substantial dislocation
  - for Banks: more lending risks for fossil fuels
- Property markets coming into focus
  - for Insurers: will no longer insure for sea-level rises
- Electricity generation switching away from coal
  - for Banks: renewables are new growth industries

Industry structural change: Electricity's future?

Germany electricity supply: Hourly dispatch



Source: Bloomberg New Energy Forecast

Source: Bloomberg New Energy Finance

* Flexible power technologies: Energy storage and gas generation

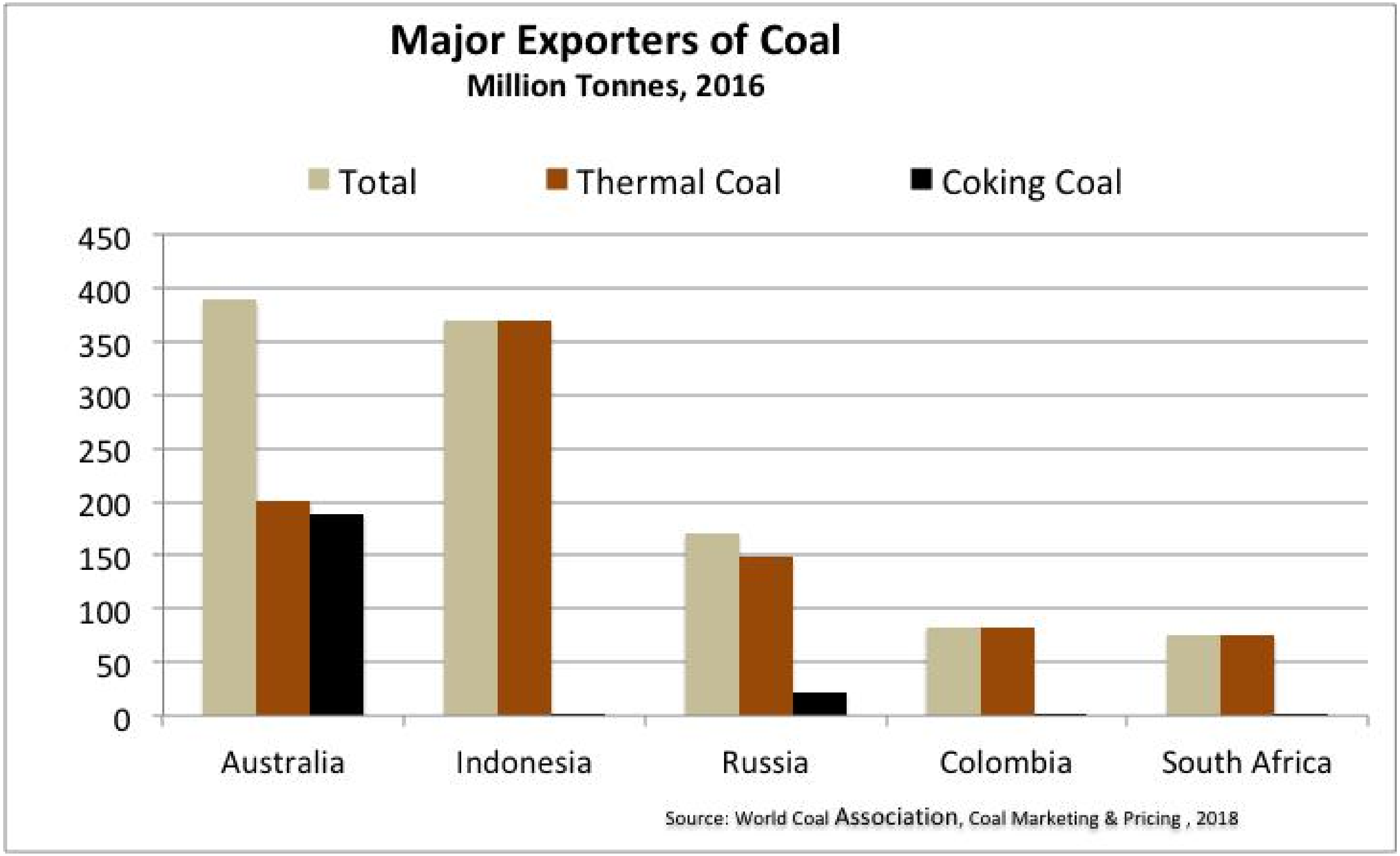
Rapid structural change increases bank risks

- Mark Carney highlighting climate change risks
  i. Physical risks – property damage; important for insurance
  ii. Liability risks – compensation for damage
  iii. Transition risks – falling asset values; stranded assets

- APRA went further
  – Directors of companies could be personally liable
  – Finance sector on notice: APRA is watching
- “Big Four” Aussie banks all now have climate policies
  – each major bank has ruled out funding the Adani mine
  – all are highlighting their low emissions credentials

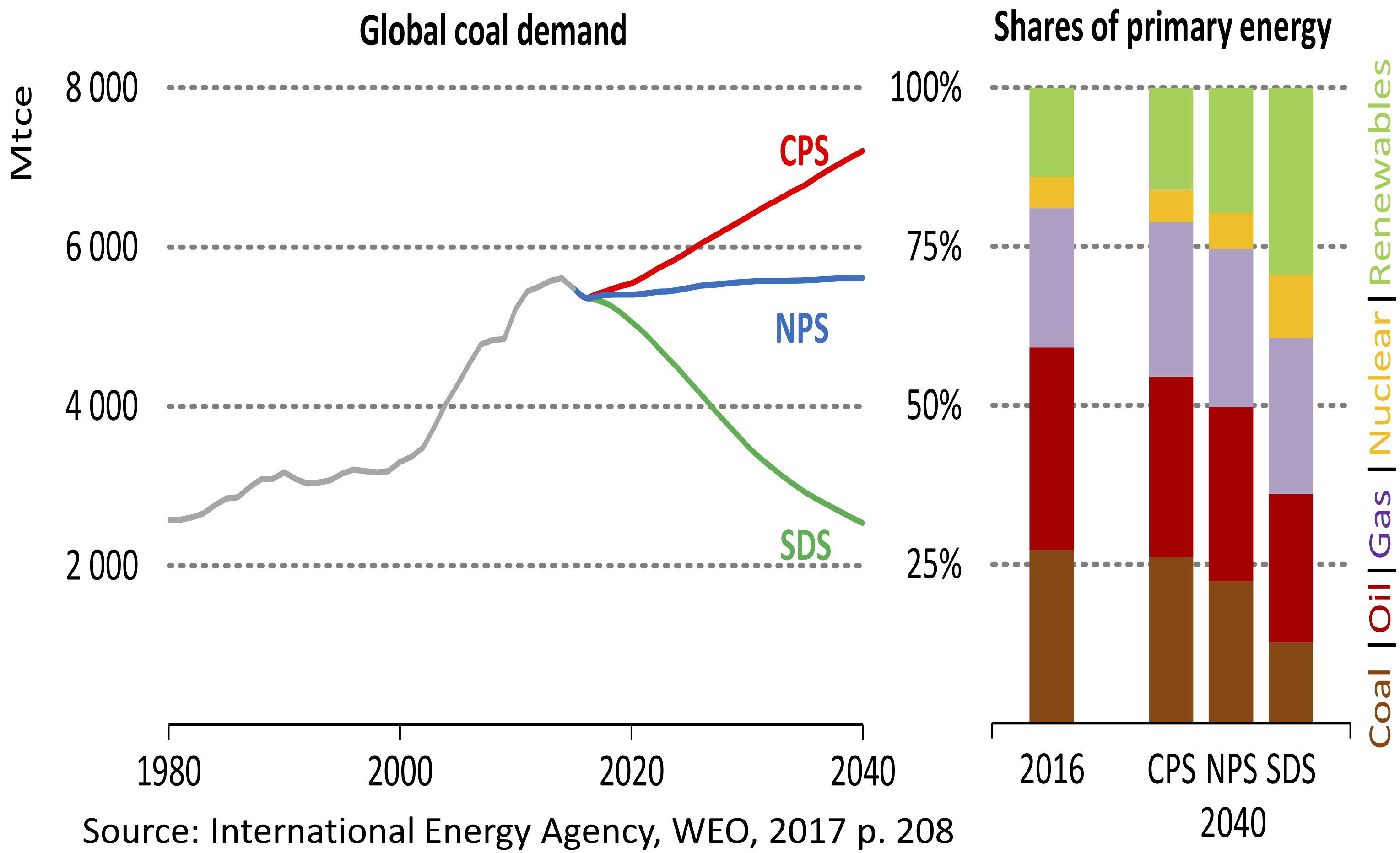
Financial & Economic Implications: Drilling Down

Coal outlook and implications: Big exporting countries



Global coal demand is forecast to fall

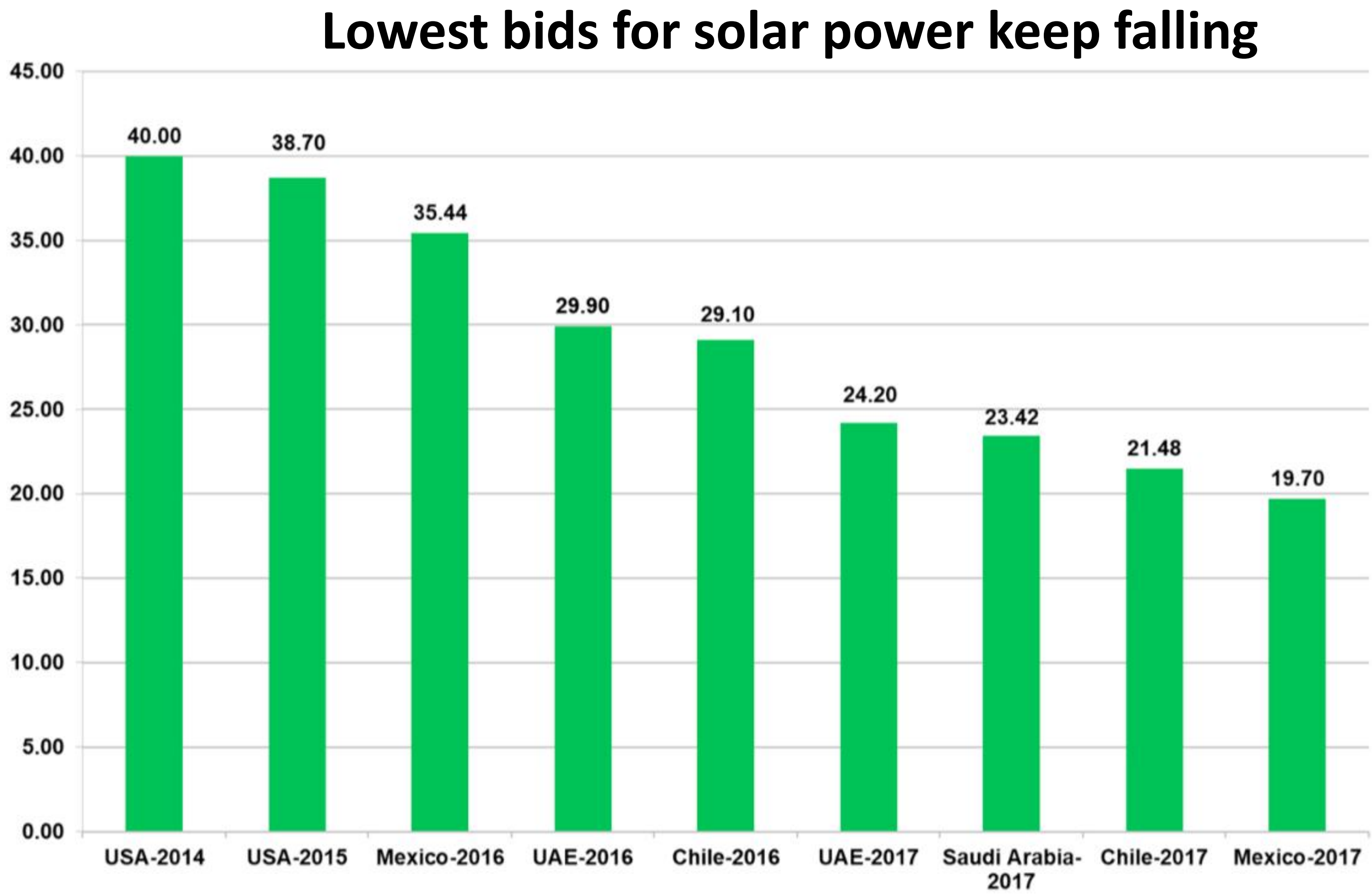
Global Coal Demand and Shares of Demand Under IEA Policy Scenarios



Source: International Energy Agency, WEO, 2017 p. 208

* CPS is Current Policy Scenario; NPS is New Policy; and SDS is Sustainable Energy Scenario

Falling renewables prices are reducing coal demand



Source: IEEFA, http://ieefa.org/ieefa-update-cheap-renewables-transforming-global-electricity-business/

Coal outlook: Financial markets implications

- for Australian banks, funding coal mines is risky
  - Adani mine in Queensland has been ruled out by the majors
- Investment funds also exiting coal investments
- Bank boards and executives must weigh personal risks
- As one project finance banker said to me recently

"Project finance for coal mines just doesn't stack up economically anymore…."

Electricity generation outlook: Banks won’t fund ‘clean coal' power generators

- Aust Government favours new ‘clean coal’ generators
- For banks, ‘clean coal’ looks very risky
- Some additional categories of risk include:
  - Supply
  - Off-take
  - Political
  - Reputational risks

No proven clean coal projects

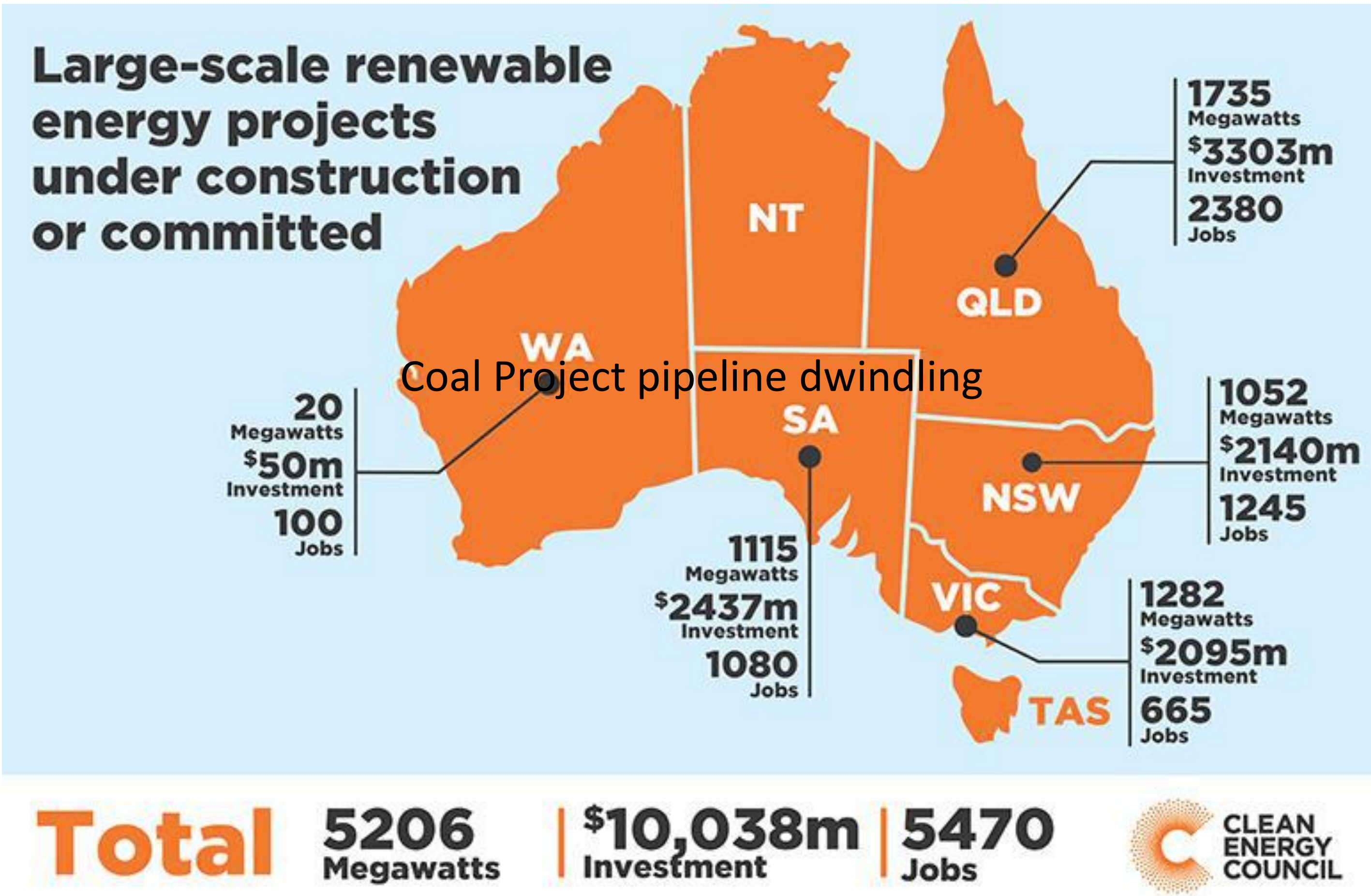
- Clean coal project examples:
  - **Boundary Dam**, Canada, 2014 — Operational; reliability issues
  - **Petra Nova**, Texas, 2017— “uneconomic”
  - **Kemper**, Mississippi, 2017 — $7.5bn; running on gas

- Government could direct fund non-commercial projects
  - But would face reputational and fiscal risks

Financial & Economic Implications: Opportunities

Renewables: A growth sector for banks and investors

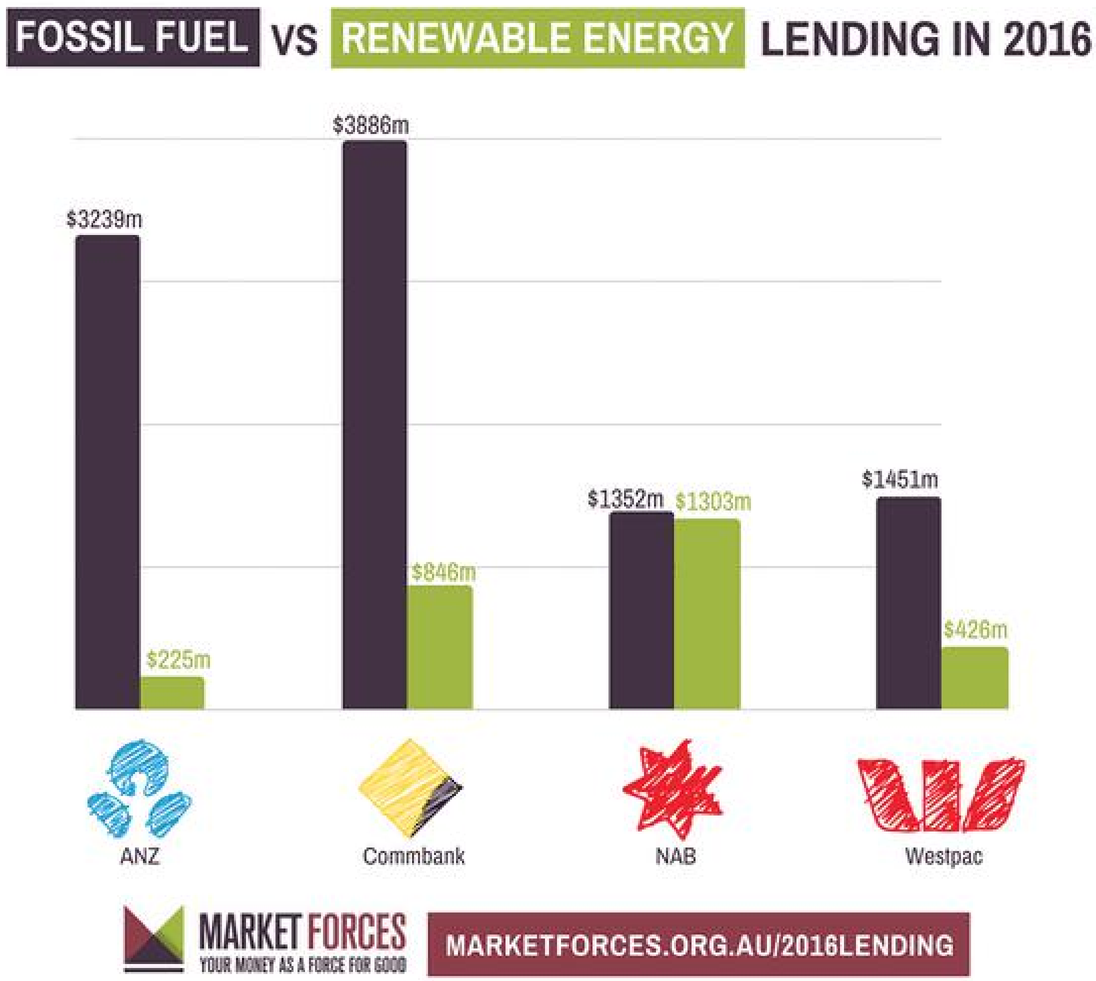
Renewable projects pipeline already substantial



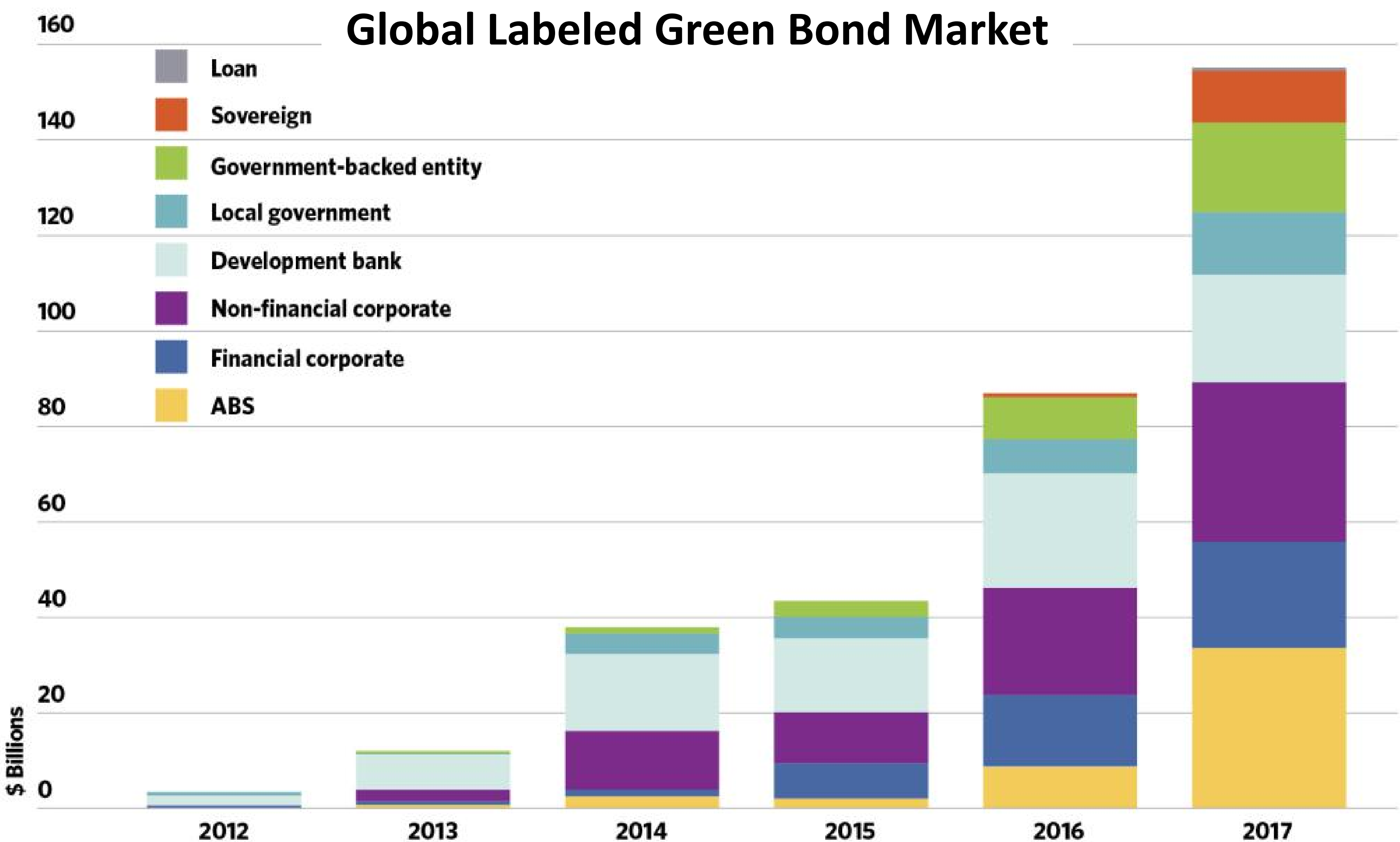
Coal Project pipeline dwindling

Source: Clean Energy Council
https://www.cleanenergycouncil.org.au/policy-advocacy/renewable-energy-target/jobs-and-investment.html

Banks are switching to 'green' activities



Funds managers are snapping up 'green bonds'



Source: Climate bonds initiative, Green Bonds Highlights, 2017

Closing remarks

- Structural change always has winners and losers
- Governments, banks and investors all need to understand the financial and economic implications
- Banks need to measure and manage the risks
- And be flexible enough to act on the opportunities

“…***financing clean energy is not only good for the environment, good for the planet, but good for business too “*** …

NAB Executive General Manager Capital Financing, Steve Lambert