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Carbon Tracker Initiative

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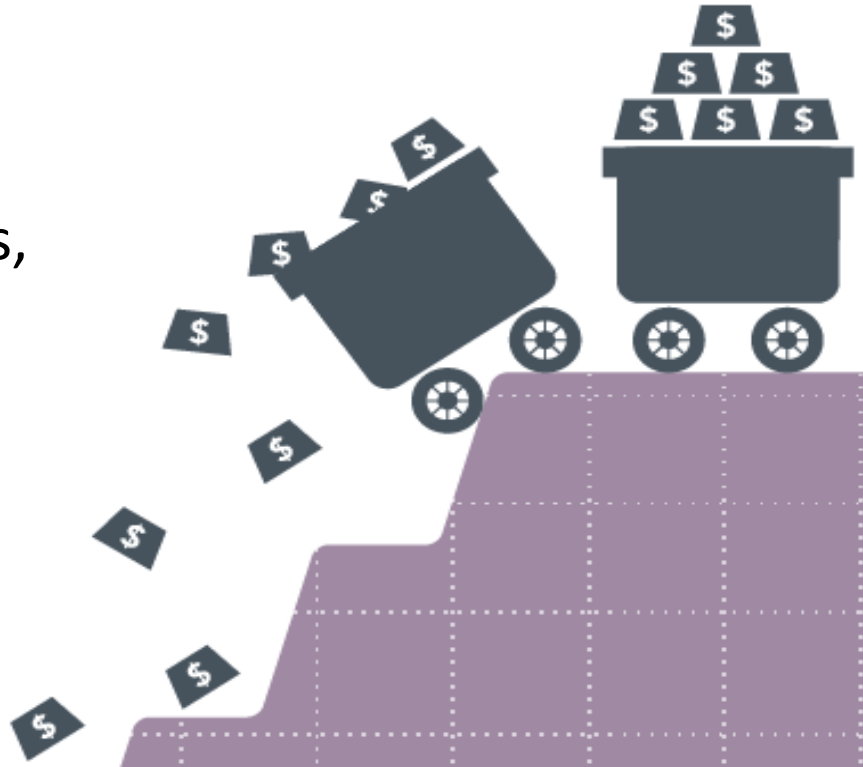

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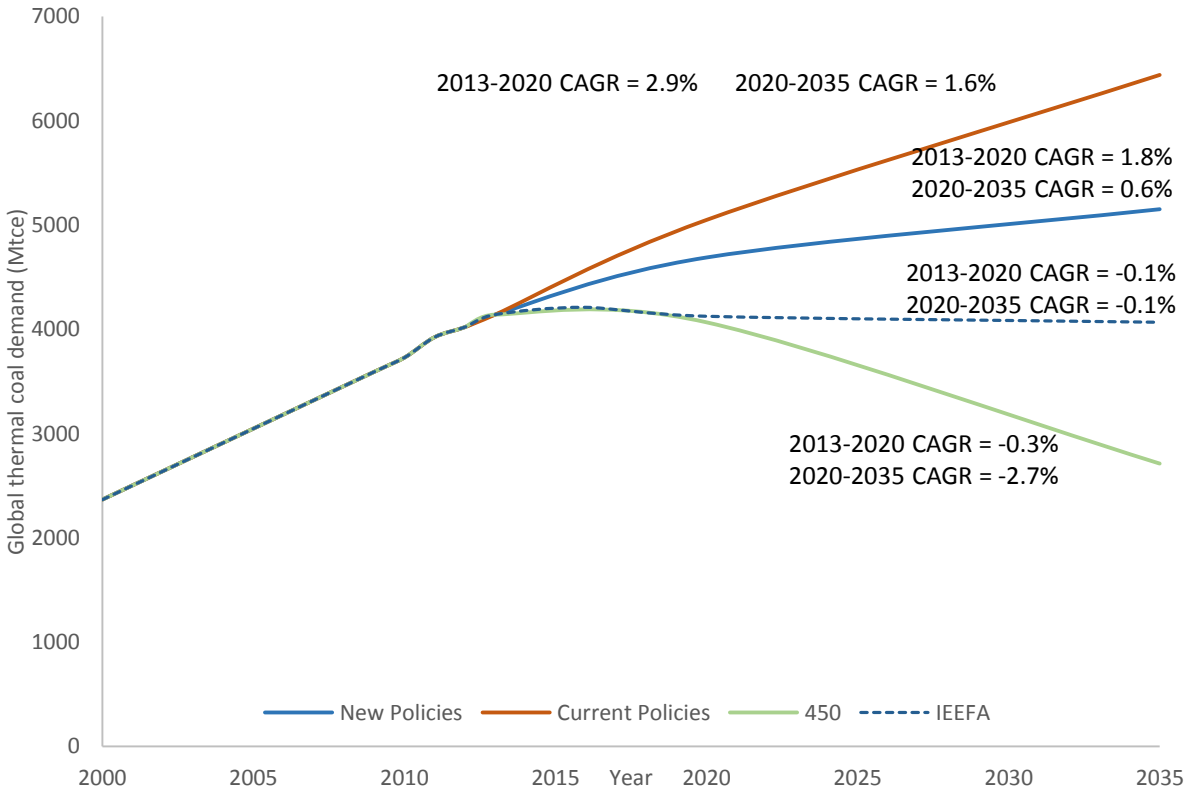
GLOBAL THERMAL COAL IN STRUCTURAL DECLINE

- IEA NPS assumes 18% growth over next 22 years
- IEEFA forecasts absolute decline of 2% from 2013
- Global thermal coal will peak by 2016, coinciding with a peak in China's domestic consumption
- Seaborne thermal coal demand will average 850mtpa to 2035, down 15% on current levels
- Energy efficiency, energy security and renewable energy are key drivers



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WHERE IEEFA DIFFER FROM THE IEA

- Lower forecasts for real GDP growth in China and India
- Long assumed life assumption for renewable generation capacity
- Greater technology advances driving higher capacity utilisation rates for wind and solar hence 20% more installs
- Greater capital cost reductions for onshore wind and solar
- Taxes at coal's point of use have seen a material step up in 2014, lower relative economics
- Faster removal of fossil fuel subsidies
- The US Clean Energy Plan is enacted largely as proposed

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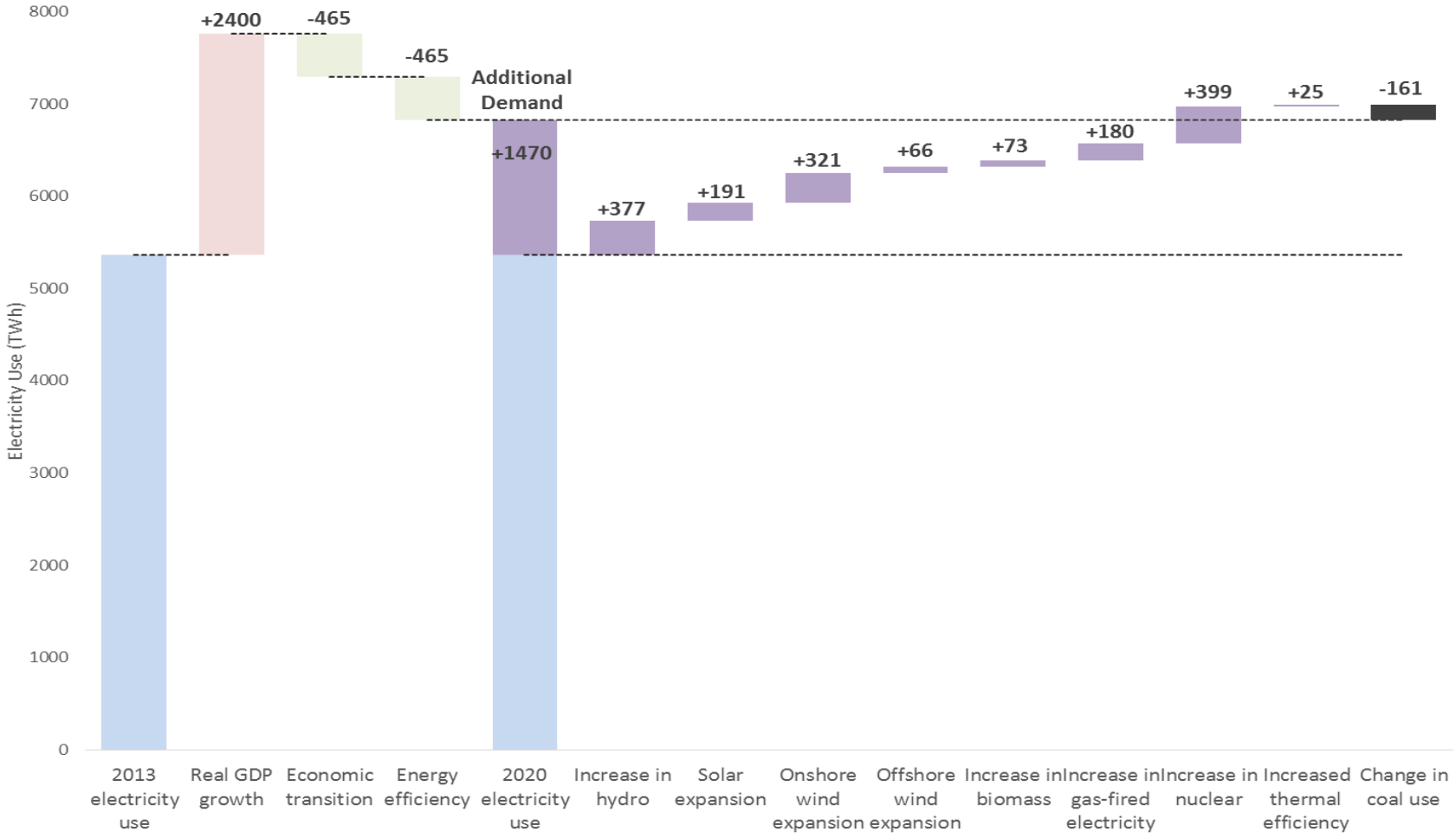
CHINA PEAKS IN 2016 BECOMING OPPORTUNISTIC EXPORTER

Energy security through diversity – power production to 2020



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United States

Coal demand down 16% by 2020 on 2013 levels

- Coal's share of power generation has declined from 49.8% in 2004 to 39.1% in 2013
- Energy efficiency to be scaled up significantly
- Addition of 39GW of wind power takes US installed base to 100GW
- Addition 22GW of solar power takes capacity to 35GW by 2020
- Gas revolution continues apace to substitute for coal
- These drivers combine with mercury and air quality regulations and the US Clean Power Plan to close between 60GW-180GW

- US increases exports adding to seaborne oversupply

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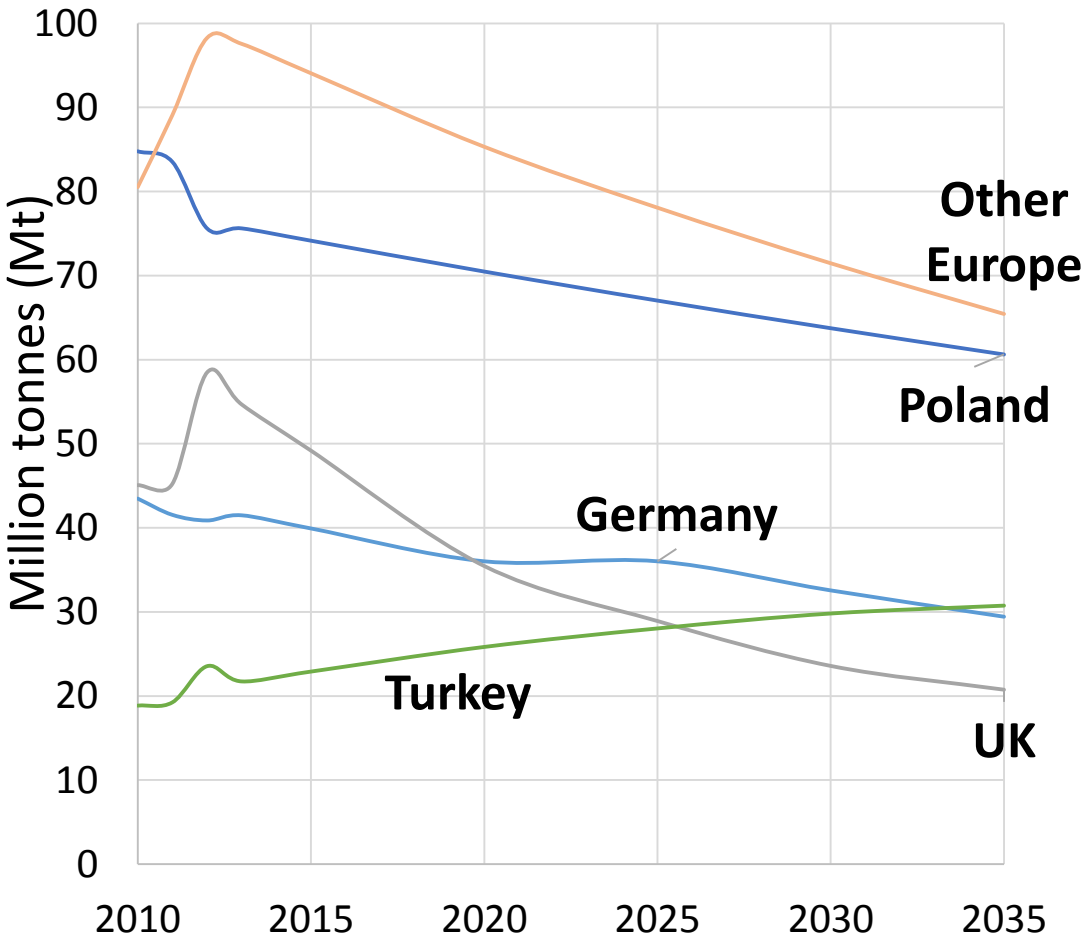
EUROPE

- Europe's coal demand set to fall by 24% on 2013 levels
- Large Combustion Plant Directive followed by Industrial Emissions Directive are significant, particularly in the UK
- Germany to move away from reliance on nuclear, thermal and lignite



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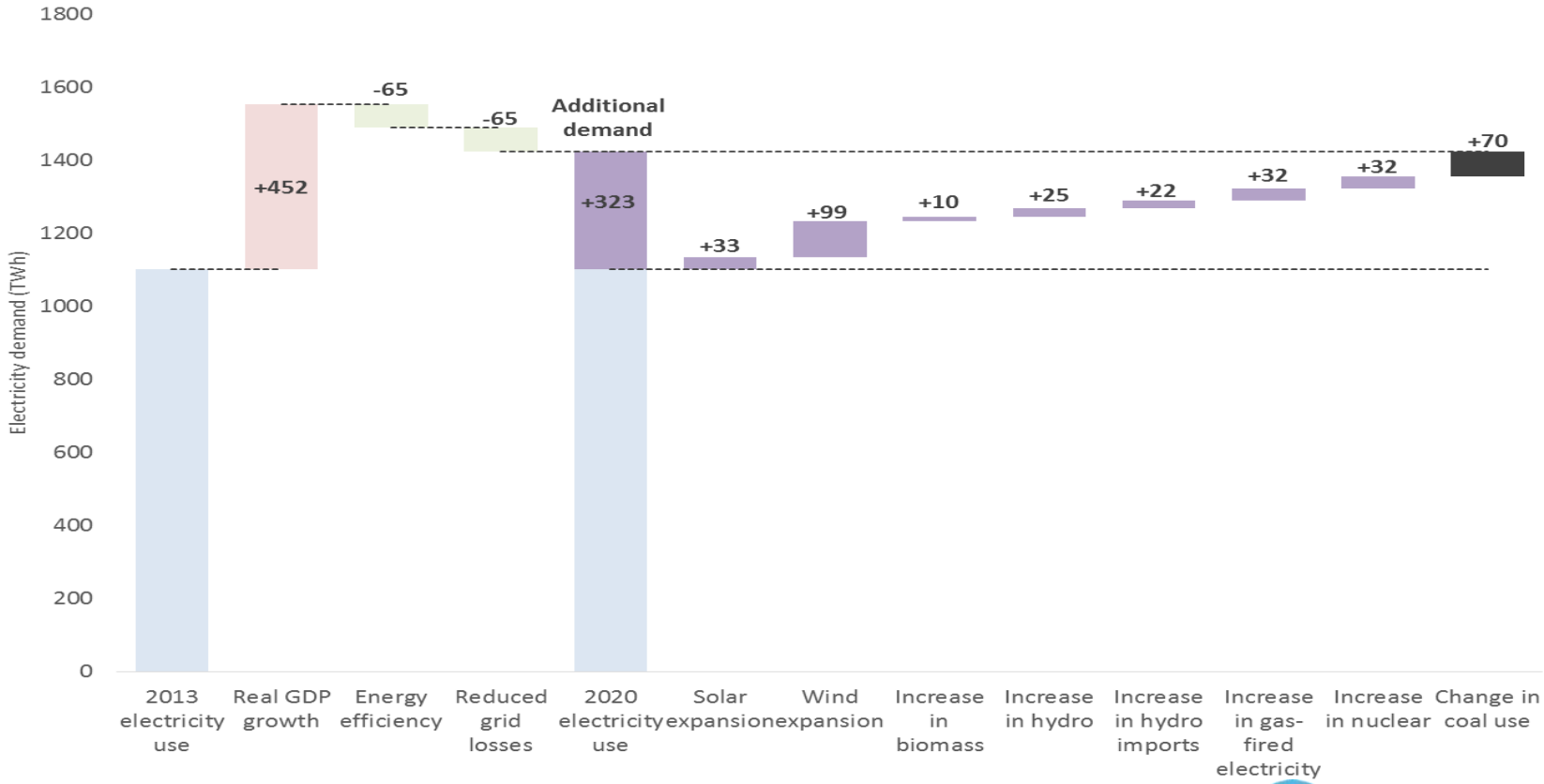
INDIA does not materialise as the great white hope of the coal export industry

A weak financial system and heavy subsidies can not support a loss-making power sector based on imported coal; renewable energy options huge.



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Japan – A case study that energy efficiency can be transformative

- Efficiency gains have reduced electricity demand 12% from 2010-2013 despite 1%pa real GDP growth.
  - This equates to reduced electricity demand per unit of real GDP of 5% pa.
- We forecast energy efficiency to continue reducing demand
- We forecast a modest restart of nuclear in Japan.
- The FiT will create an additional 57GW of solar by 2020.
- Ultimately, this means Japan's coal demand will fall 49% by 2020.

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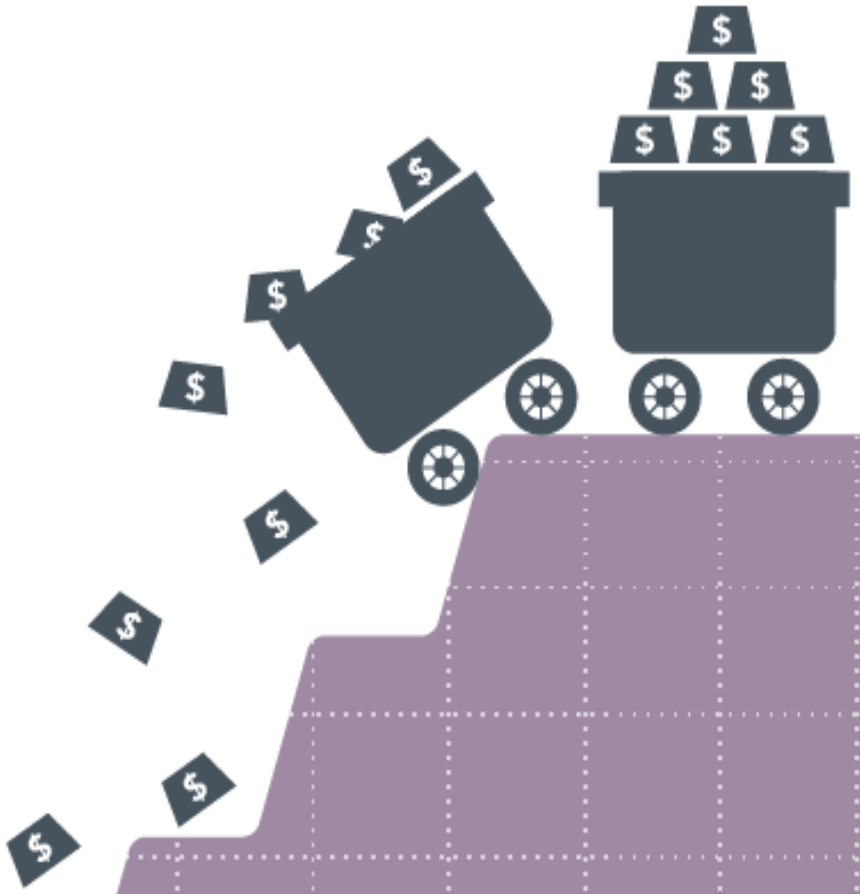

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www.carbontracker.org
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