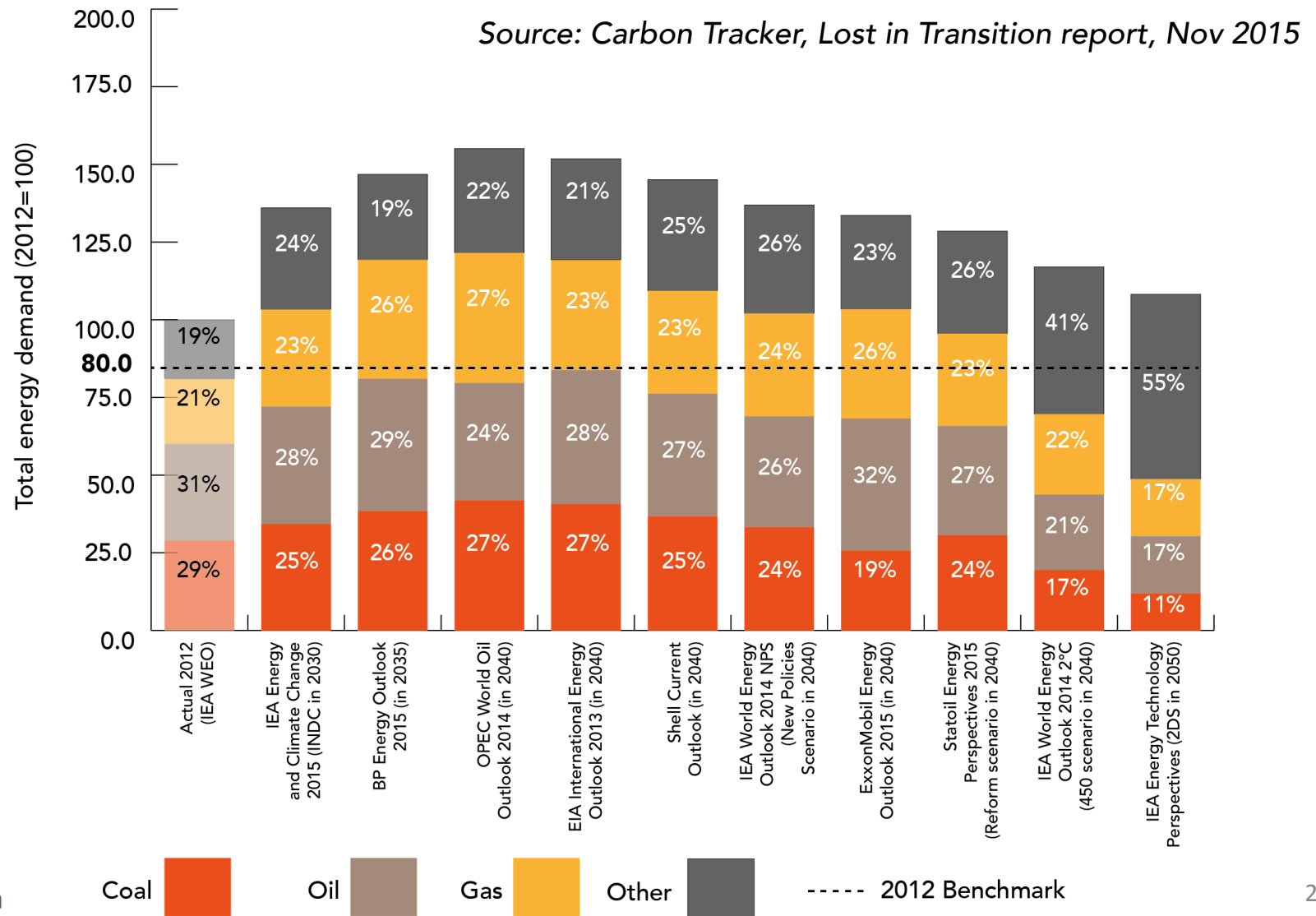




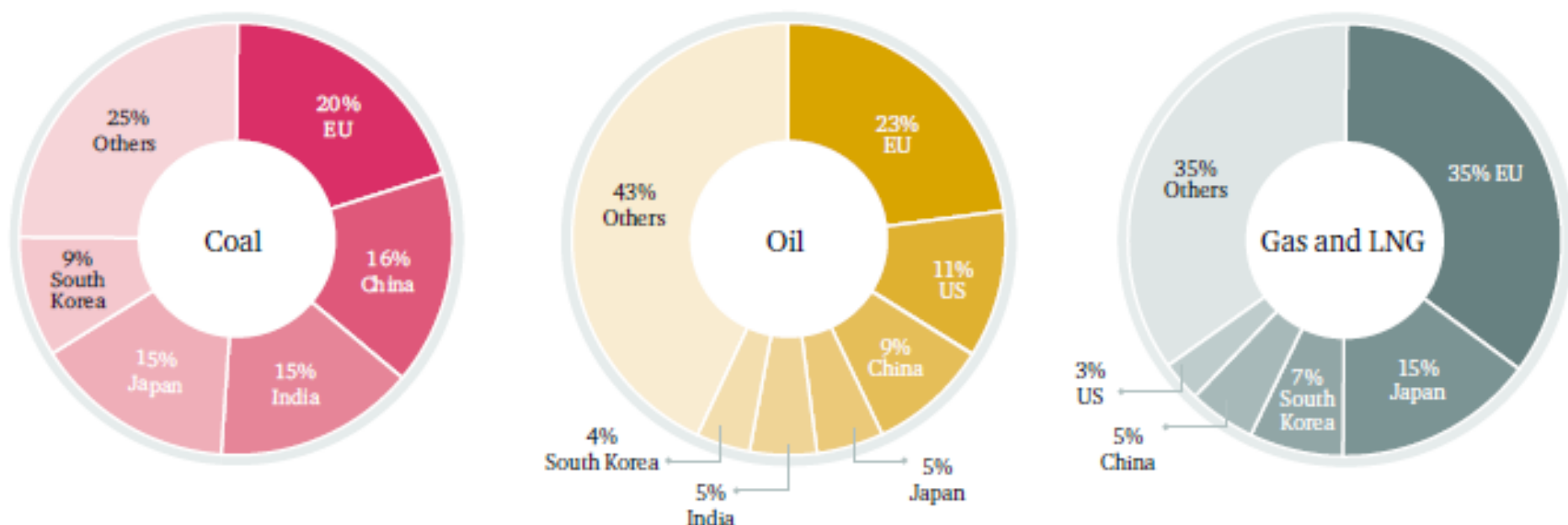
Face direction of travel

**BEYOND PARIS:
THE ELECTRICITY INDUSTRY AND THE
ACCELERATED MOMENTUM OF CLIMATE POLICY**

Level of fossil powered generation has to shrink in 2DS – a small slice of a smaller pie



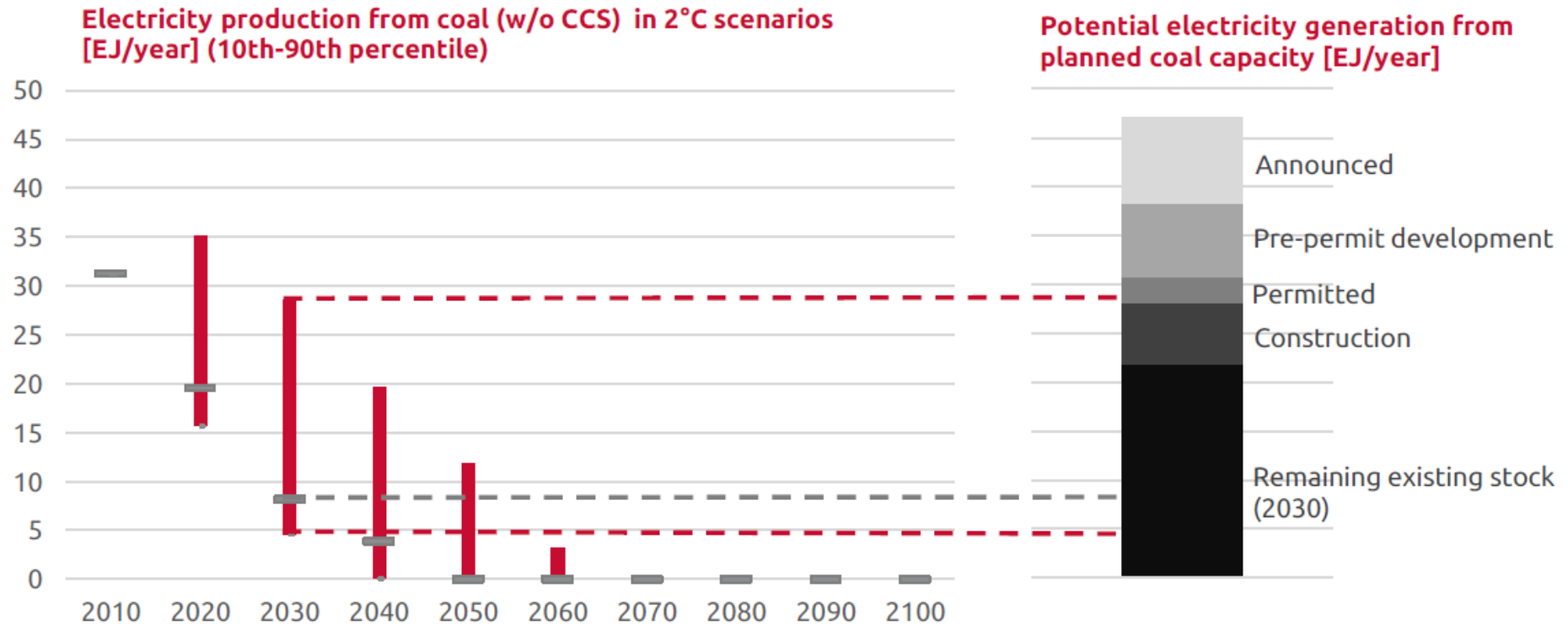
Energy imports by value 2014 – reducing imports makes economy and energy system more resilient



Source: Chatham House Resource Trade Database, UN COMTRADE, 2016.

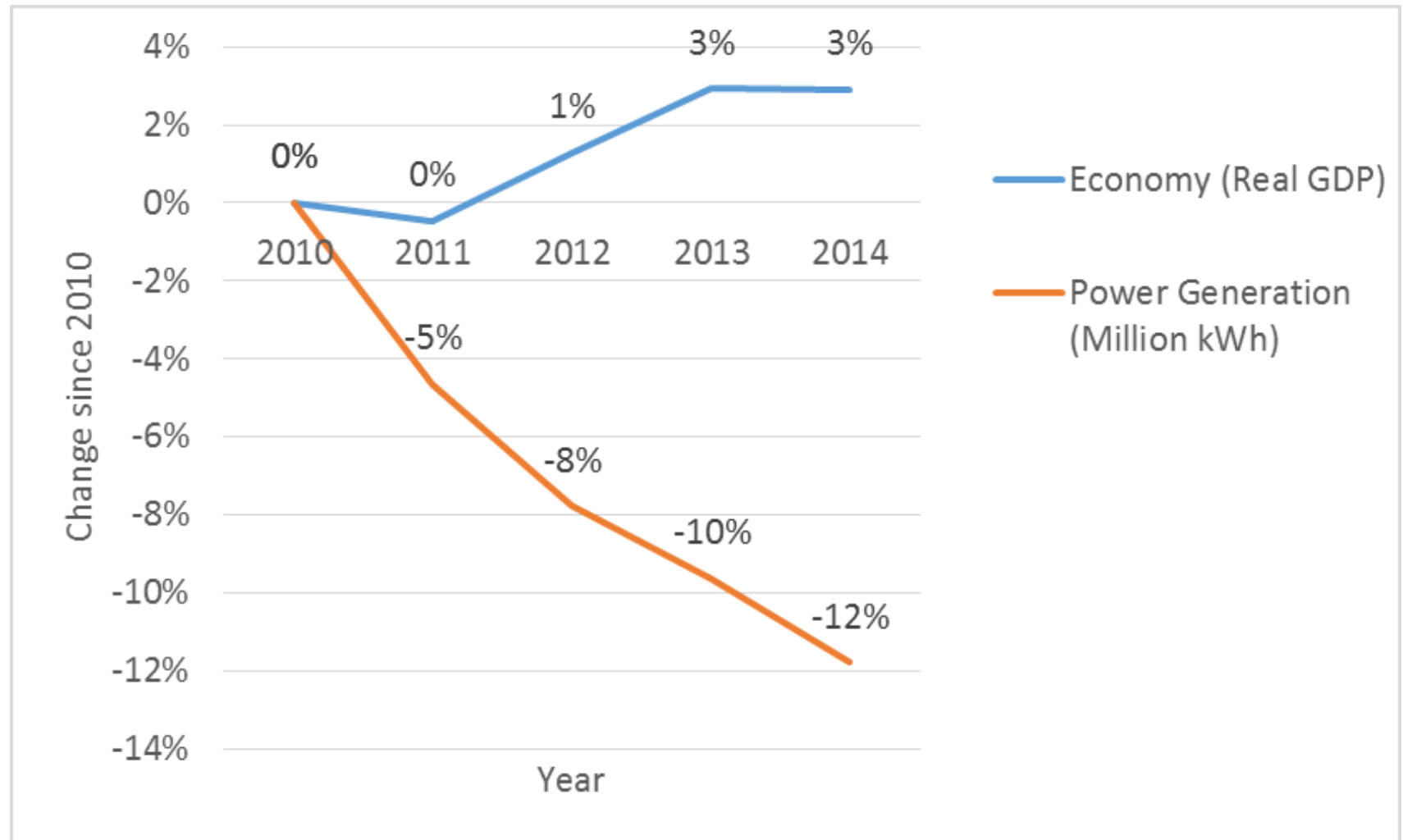
And many of the largest importers (EU, US, China, South Korea) are seeking to reduce GHG emissions too.

Proposed new coal without CCS doesn't fit in 2DS – many planned plants are not getting built

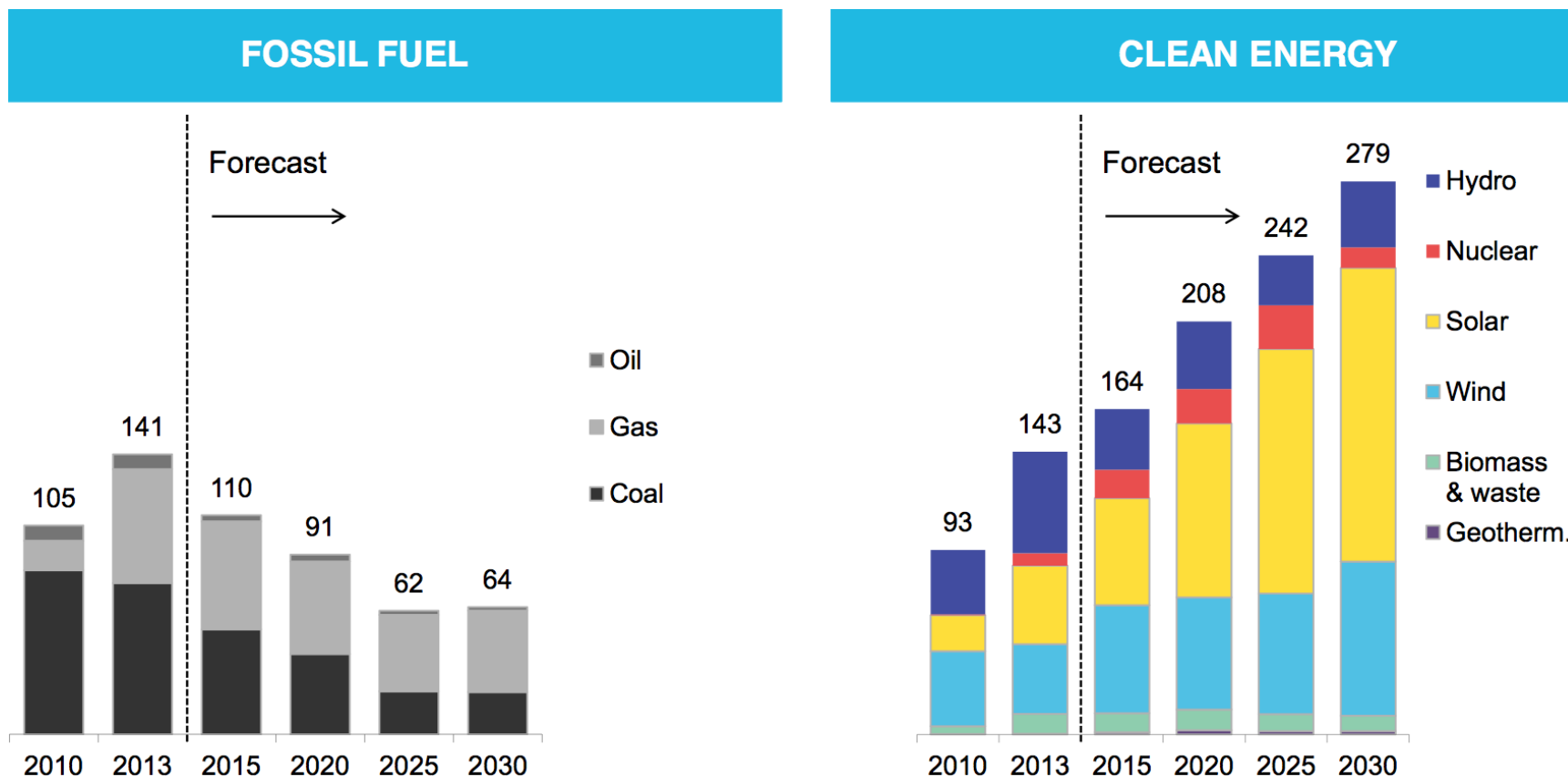


GDP and power generation decoupling, eg Japan

Energy efficiency improves energy security



BloombergNEF – the tide has turned - non-fossil dominate capacity additions

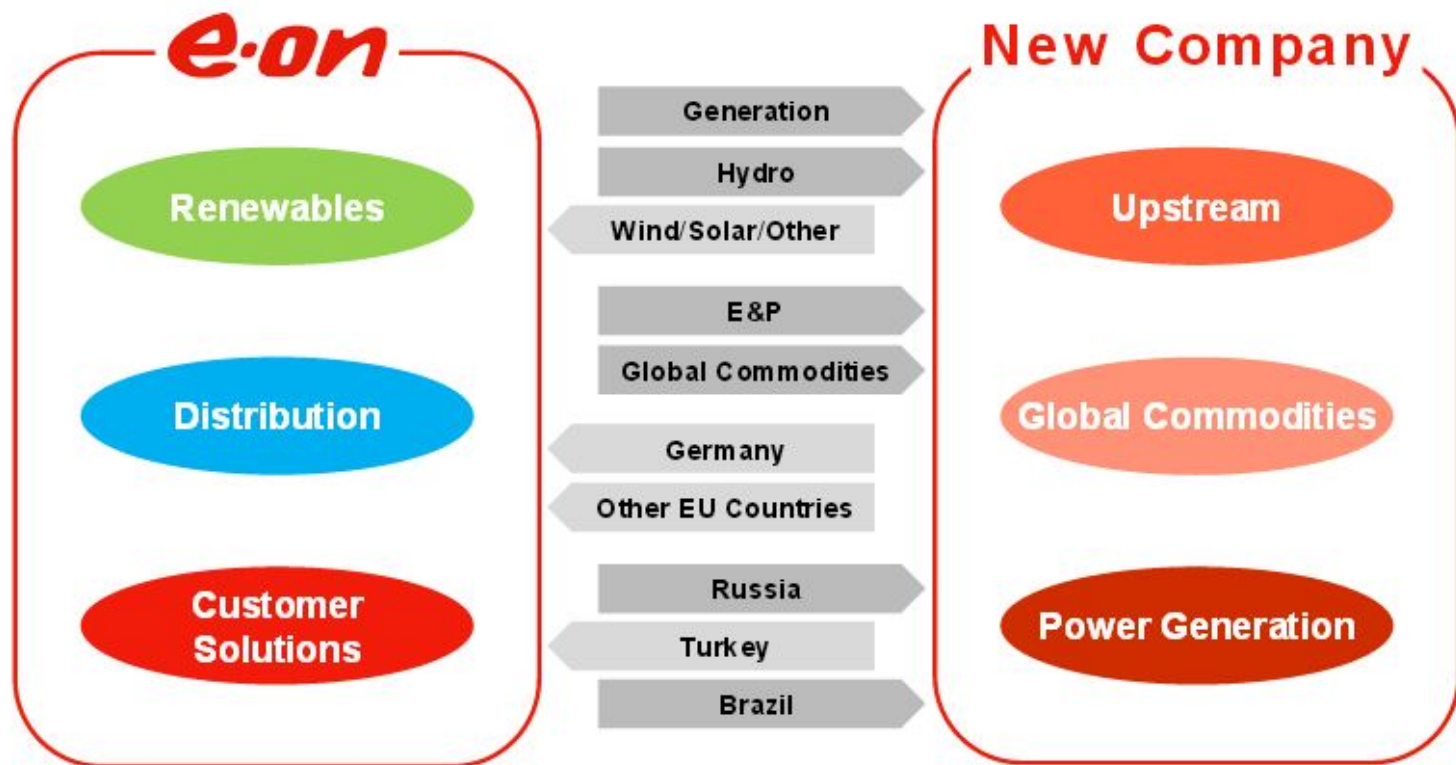


Power generation capacity additions (GW)

EU Utilities changing structures & business models - e.g RWE, Vattenfall, e.on

Splitting fossil fuels/ and renewables:

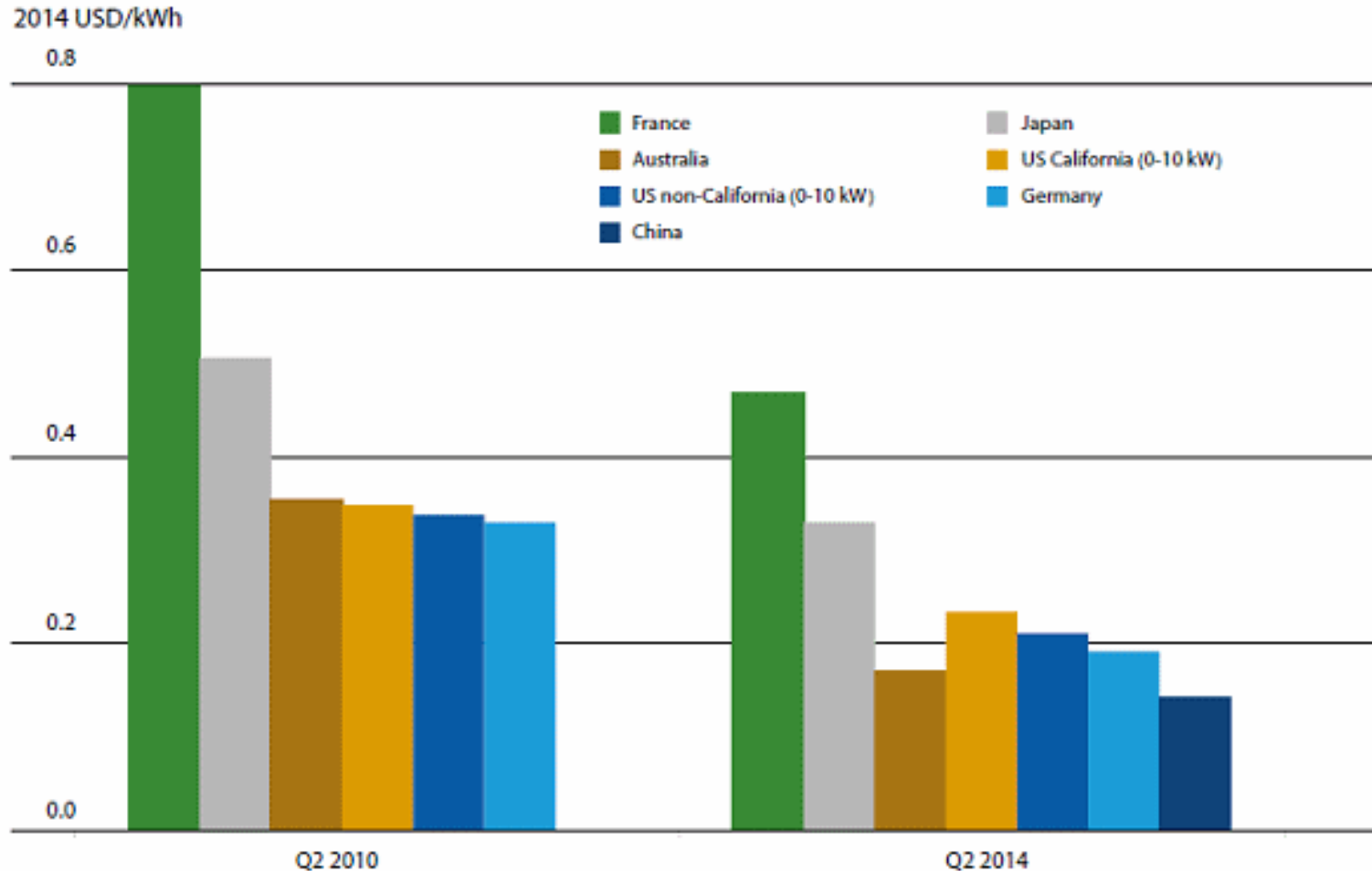
Two leading companies for two energy worlds



Distinct opportunities, mindsets and capabilities

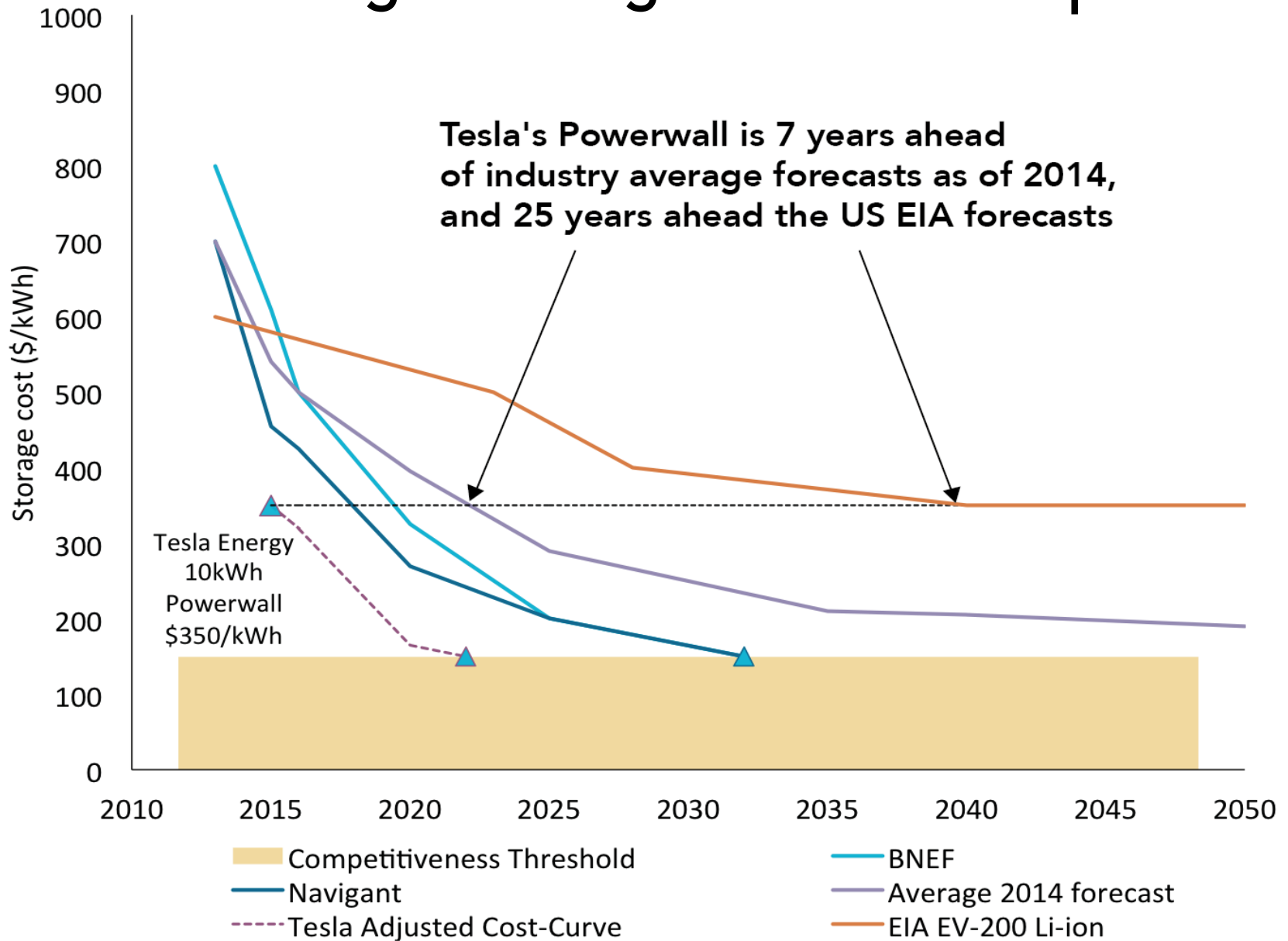
Costs of solar coming down rapidly – need to keep up

FIGURE 2.6: LEVELISED COST OF ELECTRICITY OF RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEMS BY COUNTRY, 2010 TO 2014



Sources: IRENA Renewable Cost Database; BSW, 2014; CPUC, 2014; GSE, 2014; LBNL, 2014; and Photon Consulting, 2014.

Technological change faster than expected



Its not just about Paris

Largest 2 economies developing
technology at scale

Five year plan and CPP already
setting clear direction

Others will get on board
or get left behind



Capital markets regulators getting involved

A photograph of Mark Carney, Governor of the Bank of England, speaking. He is wearing a dark blue suit, a white shirt, and a blue patterned tie. He is gesturing with both hands, palms facing outwards, as if explaining something. The background is a blurred blue and grey.

Financial regulators
are now tracking carbon

"Climate change is the
biggest issue for the
future"

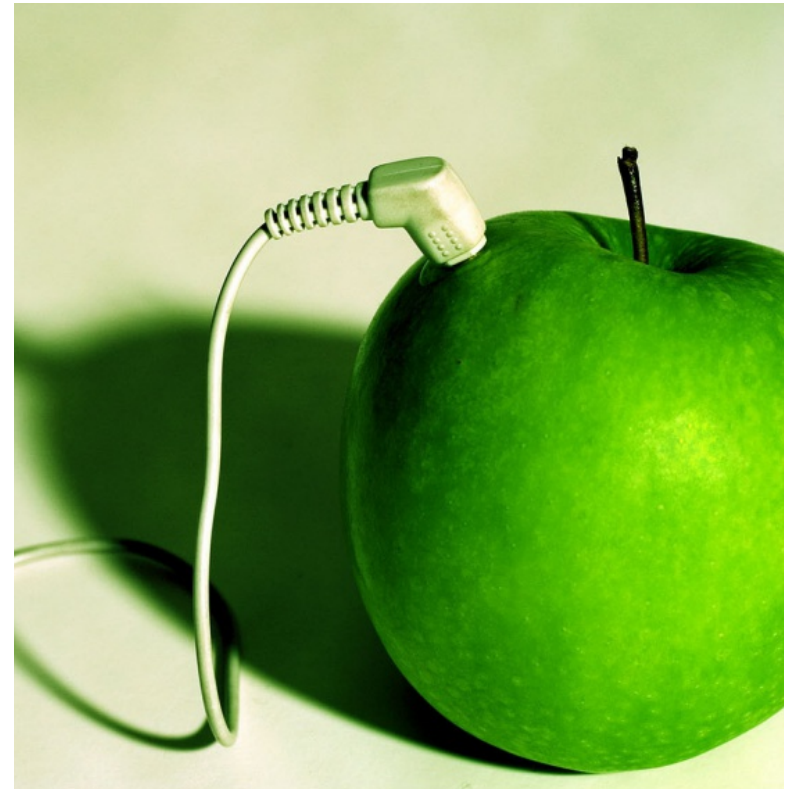
Stranded assets:
*"..investors must be
given the data to
"invest accordingly"*

*Mark Carney, Governor,
Bank of England*

Source: [Financial Times](#)

New market structures, demand managers, suppliers, prosumers, create opportunities

- Energy becoming as much about technology and finance as engineering
- Established utilities lose customers and financial strength
- Companies and Cities generating their own energy
- Infrastructure and efficiency can create investment opportunities
- The energy transition is already underway





**Thank you.
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