UK Energy Policy: past and future directions

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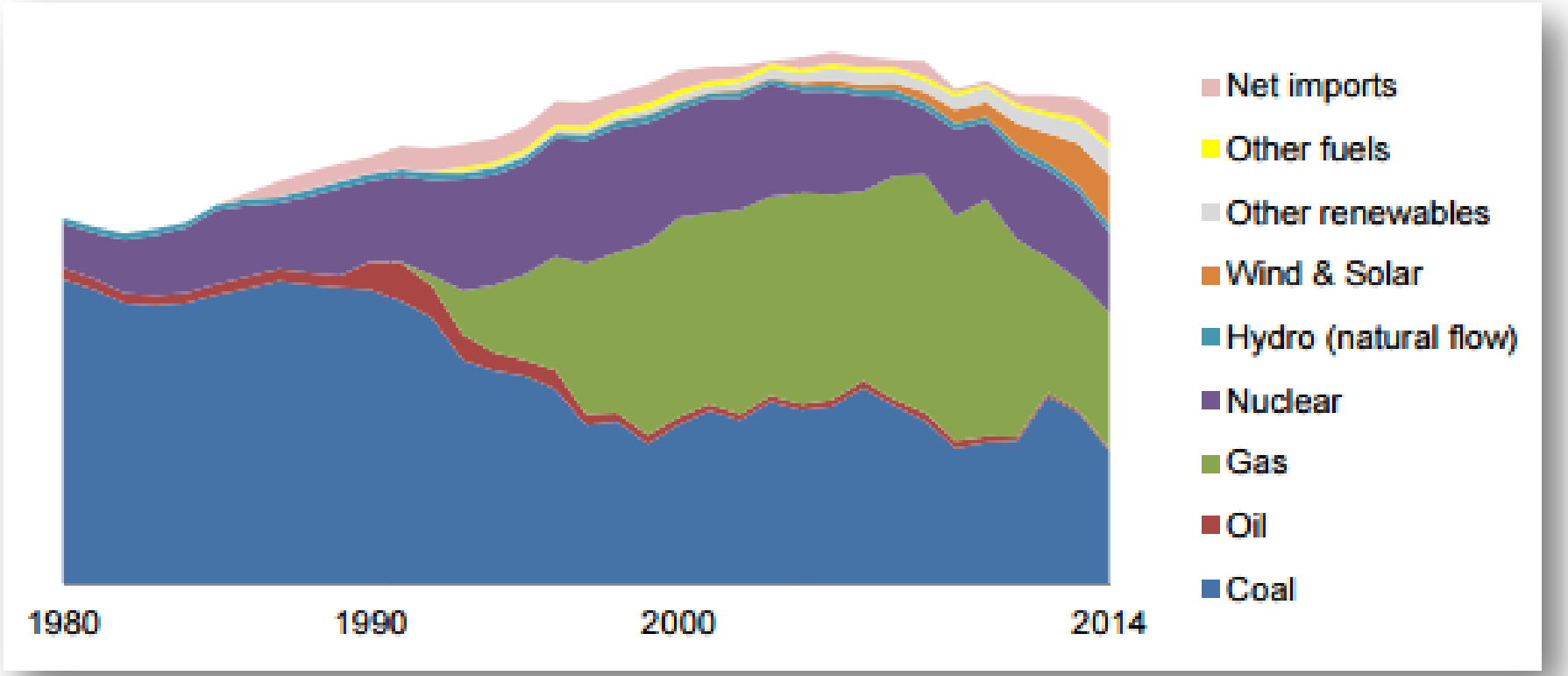
UK Energy Policy: past and future directions

- 1990s: market evolution
- 2000s: internationalisation
- 2010s: blue and yellow (and green)
- Post-Brexit: certain uncertainty
- Conclusions

1990s: market evolution

- Electricity Act (1989): part of wider liberalisation and privatisation of utilities and market design
- Early development of UK renewables sector
  - Non-Fossil Fuel Obligation, 1994 (final contracts expire 2019)
  - First commercial onshore windfarms (Delabole, 1991)
- 'Dash for Gas' – 1991: CCGTs 0pc of power > 1997: 27pc
  - Sped-up the decline of UK coal industry
  - 1997: Labour committed to create level playing field for coal and gas
  - Tighter consent policy on new-build CCGTs to ensure supply diversity
- UK liberalisation was ultimately used as a blueprint by the EU

Dash for Gas

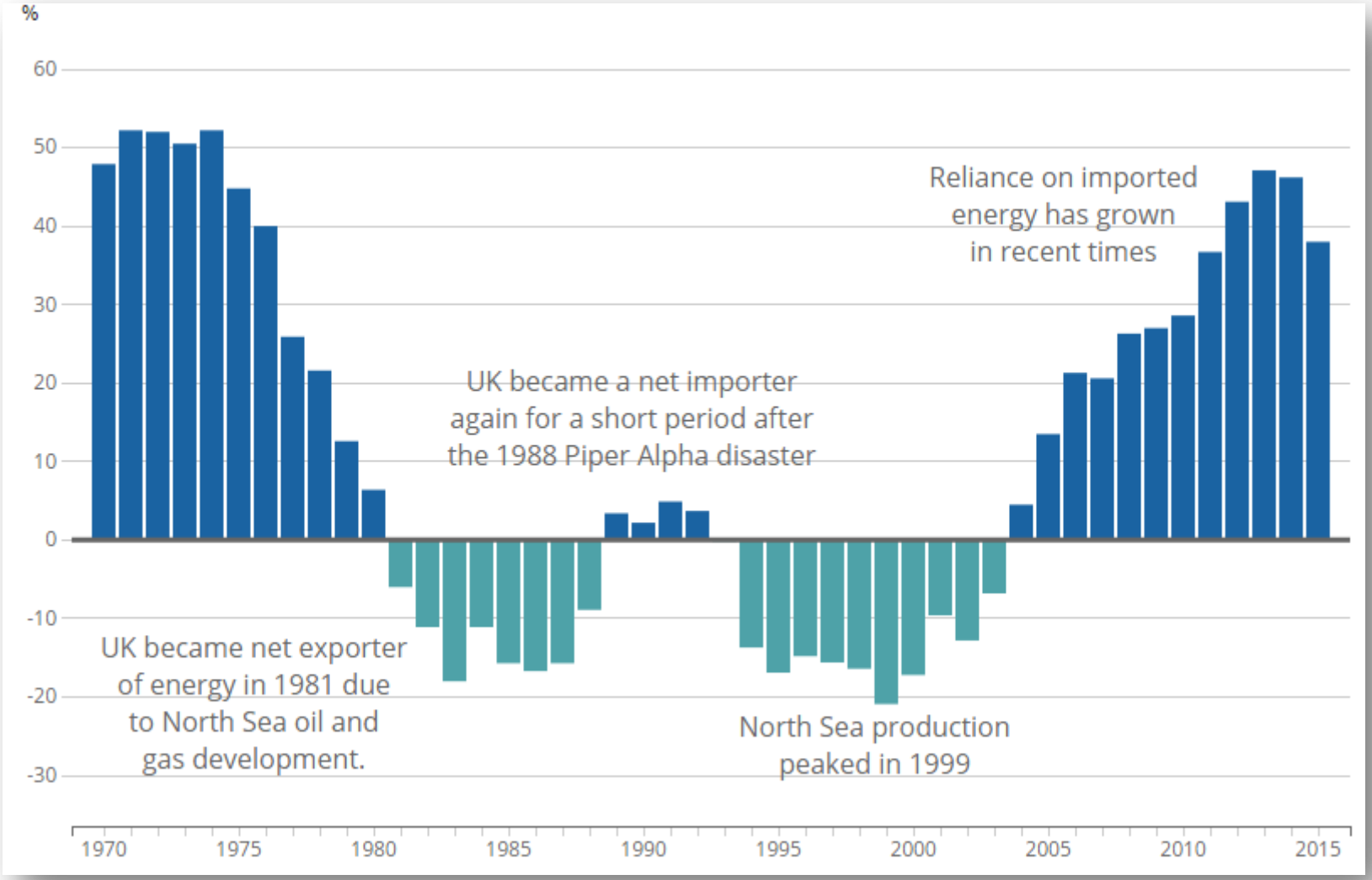


Electricity generation by source

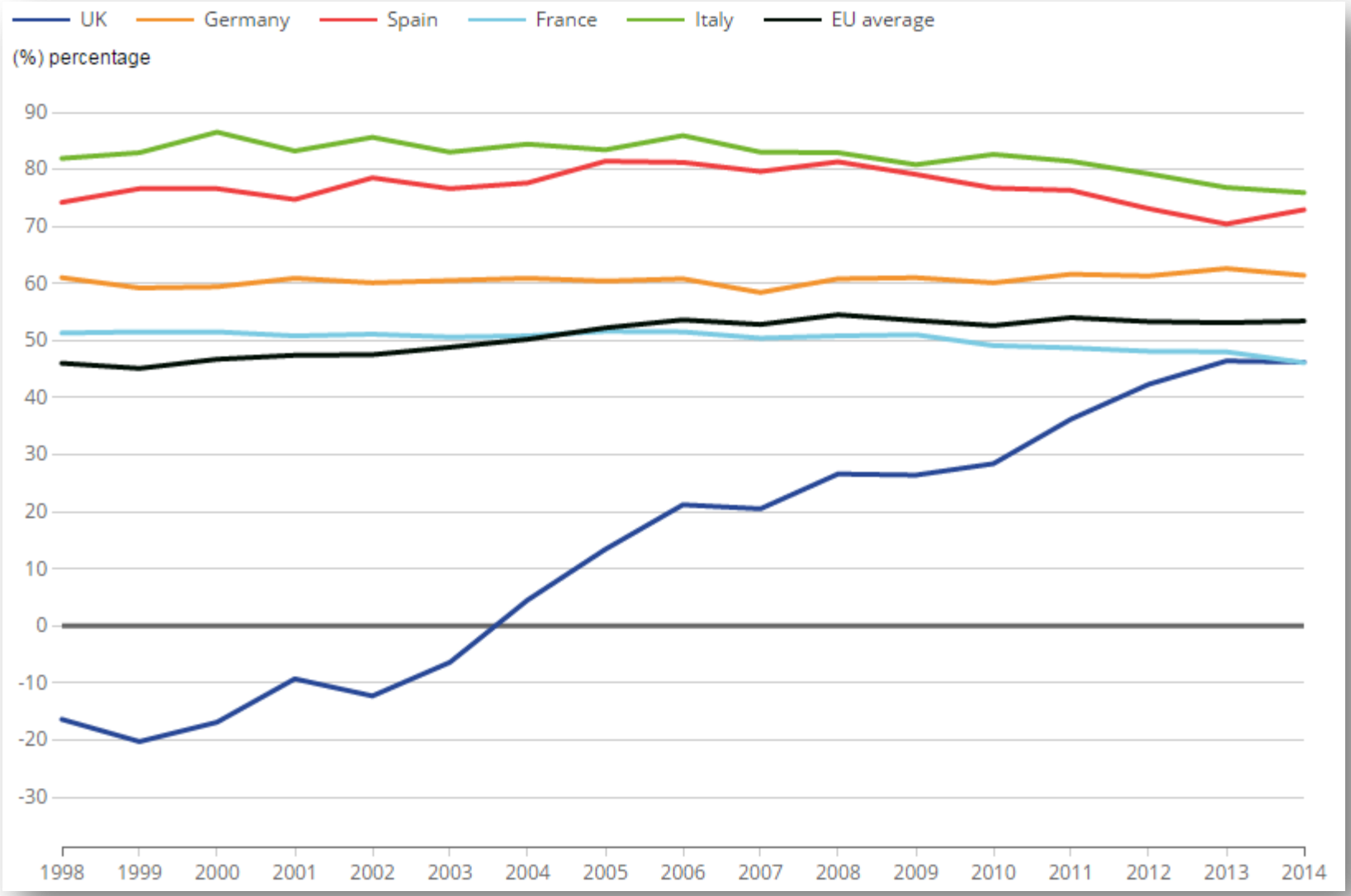
Source: Decc, DUKES 2015

2000s: internationalisation

- UK becomes net energy importer
- 2003: government white paper committed to liberalised, deregulated and global energy market
- 2005 UK EU Presidency – focus on energy
  - Climate change, energy supply, internal energy market
- Commitment to tackling climate change (post-Kyoto)
  - UK views climate change as a foreign policy matter
  - International security threats, military intervention



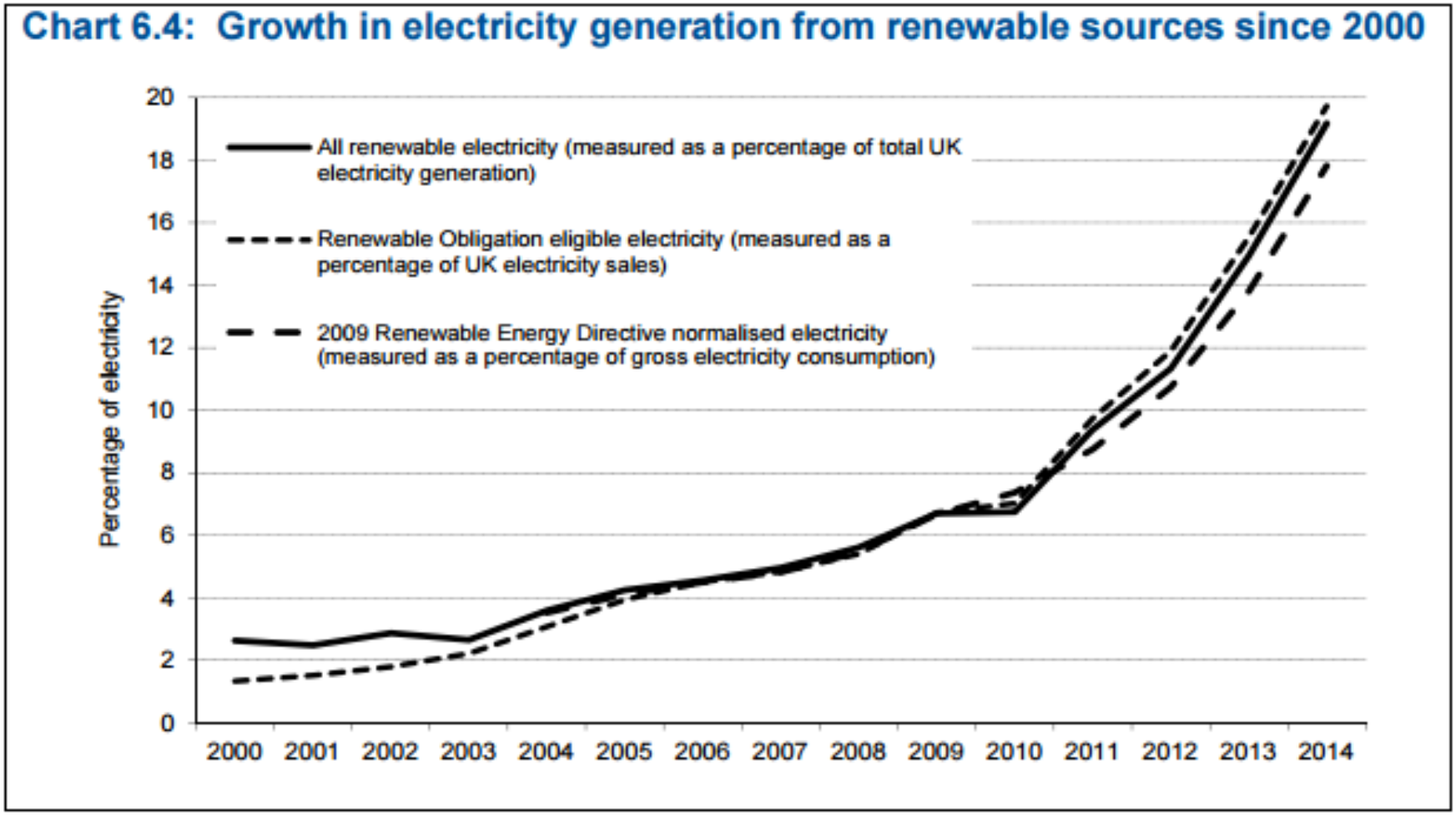
Source: ONS; Decc, DUKES 2016



Source: ONS; Decc, DUKES 2016

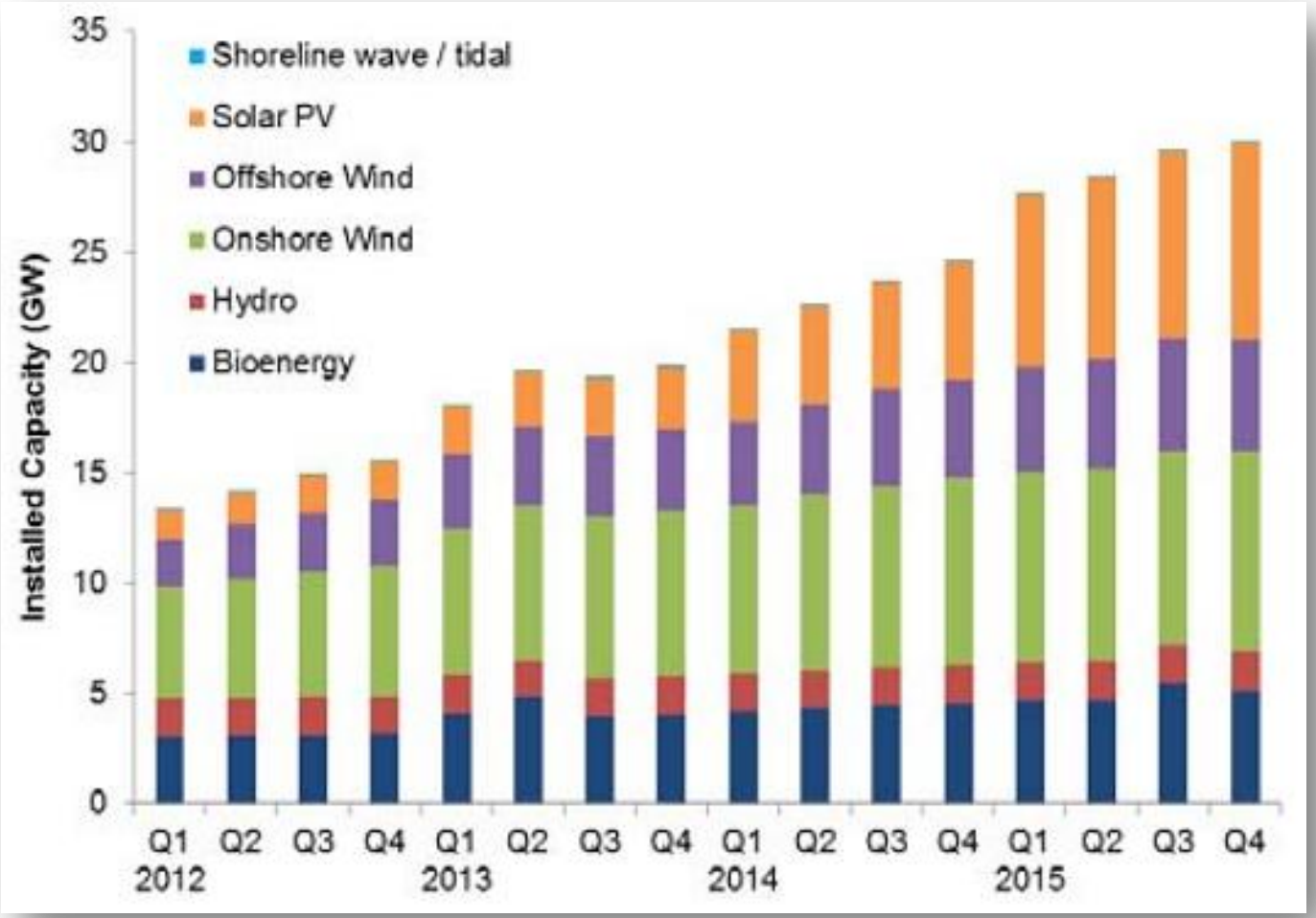
2010s: blue and yellow (and green)

- Conservative-Liberal Democrat coalition – Decc had LibDem Secretary of State Ed Davey
- Continued development of renewable generation sources
- Renewables + natural gas (by default?)
  - Cautious push for shale gas development, alongside renewables
  - Expansion of offshore wind, solar and biomass (and CCS research)
- 19GW of thermal generation capacity closed or mothballed in 2011-May 2016
- Phase out of coal in UK power generation
  - Restrict unabated use by 2023; phased out by 2025 *(post-coalition policy)*



Renewable sources of energy

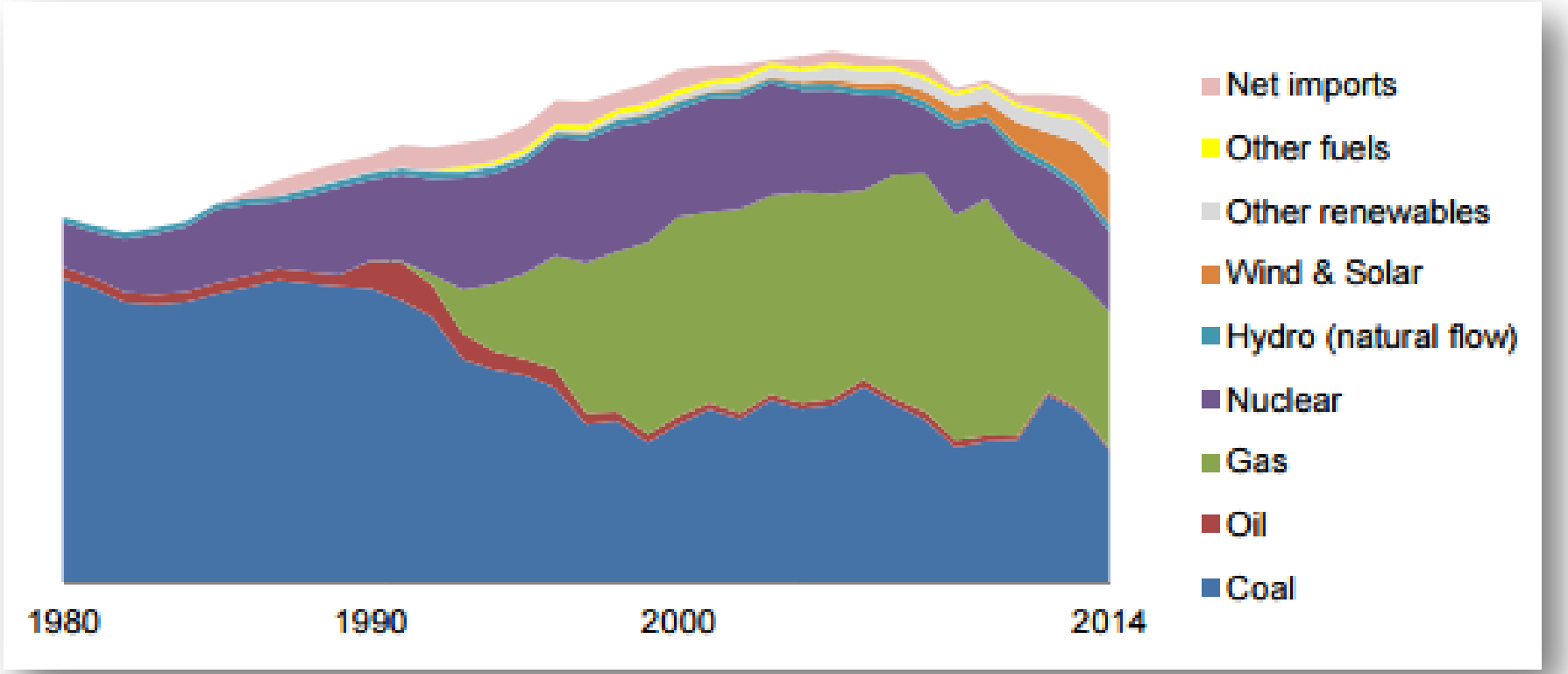
Source: Decc, DUKES 2015



Source: Decc, Energy Trends March 2016

Coal supplied only 4pc of electricity in May 2016 (less than solar, with 6pc) compared to 25pc in May 2015

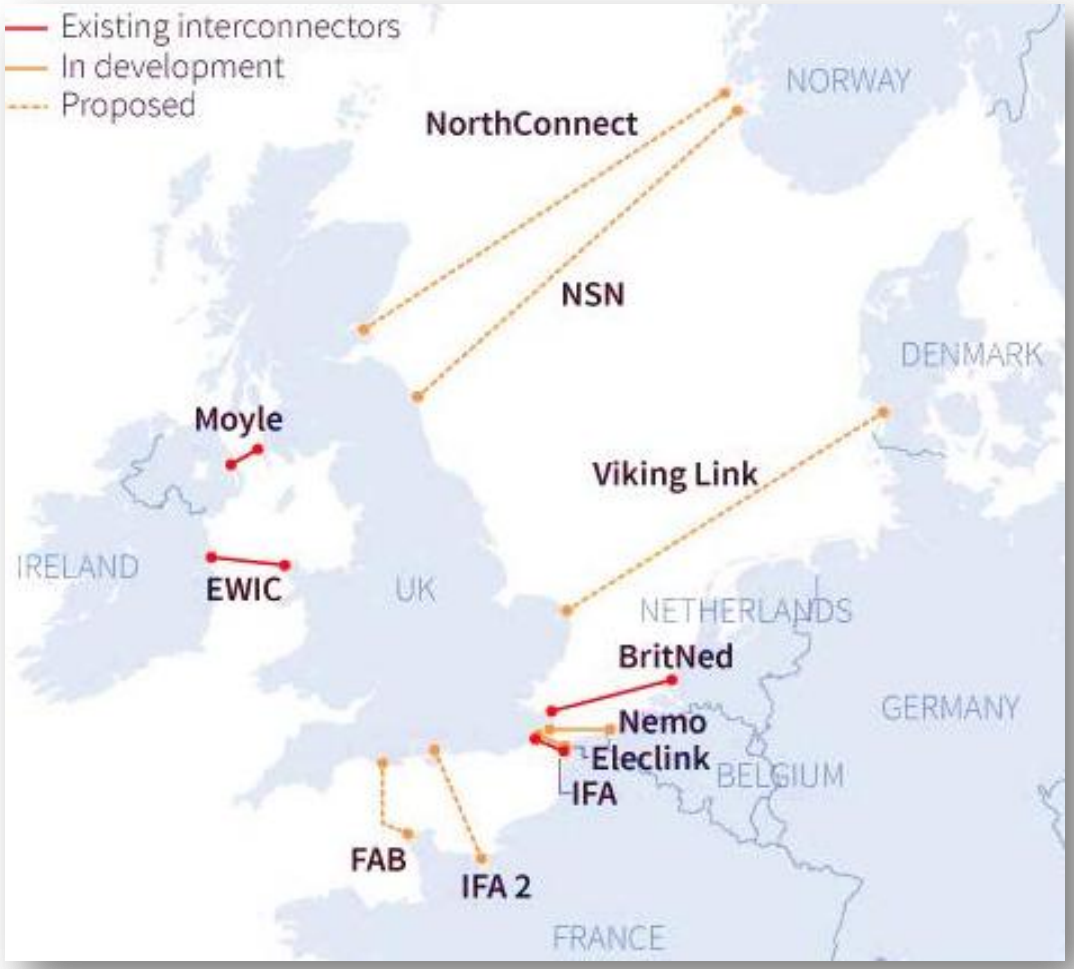
10 May 2016: no coal-fired generation for first time since 1882



Phase-out of Coal-fired Generation

- 2008: 28 GW → 2016: 12 GW (5GW IED compliant; 7GW T.B.C)
- *Large Combustion Plant Directive (2001); Industrial Emissions Directive (2010)* at an EU level
- Increasing renewables output has led to negative electricity prices
- Increased UK carbon floor price (2015): £9.55/t > £18.08/t
  - £23/t when EU ETS is included
- Falling wholesale cost of natural gas (also limiting CCGT investment).. But this has since reversed

Electricity Interconnectors



- 4GW capacity
- 2015: 6pc of total electricity demand
- IFA (1986); Moyle (2002); BritNed (2011); EWIC (2012)
- 2GW under construction (Belgium & France)
- At least 5.8GW planned (*Ireland & Iceland not on map*)

Electricity Interconnectors

- Key part of UK (and EU) electricity policy now and in the future
  - Low carbon and baseload electricity supply (e.g. hydro, geothermal)
- System balancing tool to cope with intermittent renewables
- EU target: 15pc of installed generation capacity by 2030
  - UK had only approx. 5pc in 2014
  - Percentage of peak demand better? (i.e. intermittent renewables)
  - UK has its own regulatory regime: ‘cap and floor’
- ‘North Seas Countries' Offshore Grid Initiative’ (NSCOGI)
  - Projects of Common Interest (Connecting Europe Fund)

Brexit: certain uncertainty

What if Bremain..?

- Was UK policy consistent with the EU and the future Energy Union framework anyway?
- UK energy policy was already diverging from EU members
  - Fracking/shale, new nuclear, capacity market
- Renewables and efficiency support rolled back ('reset')
- UK is very unlikely to meet its existing 2020 targets…
- Pro-renewables/Climate Change at EU level; current government not so much domestically…

Post-Brexit reset?

- UK Climate Change Act 2008 to remain (80pc lower GHG by 2050)
  - UK could further develop its own renewables sector [HoL, 2013]

- Single Market: access to or membership of?
  - Both very different in terms of contributions and requirements
  - Canadian-style FTA not suitable: limited sectoral scope, no common standards,

- EEA membership (Norway):
  - EU policies directly apply, but Norway has no vote/veto in institutions
  - Adheres to EU ETS, state aid rules, environmental quality regulations

- EFTA (Switzerland): underlying EEA treaties + bilateral negotiations

Outsiders, but at the centre…

Norway: integral energy supplier for the EU

- Oil/petroleum products, natural gas, hydro; regional electricity market (Nordpool) [2° oil & gas; 9° solid fuels]

Switzerland: key electricity transit state, hydro

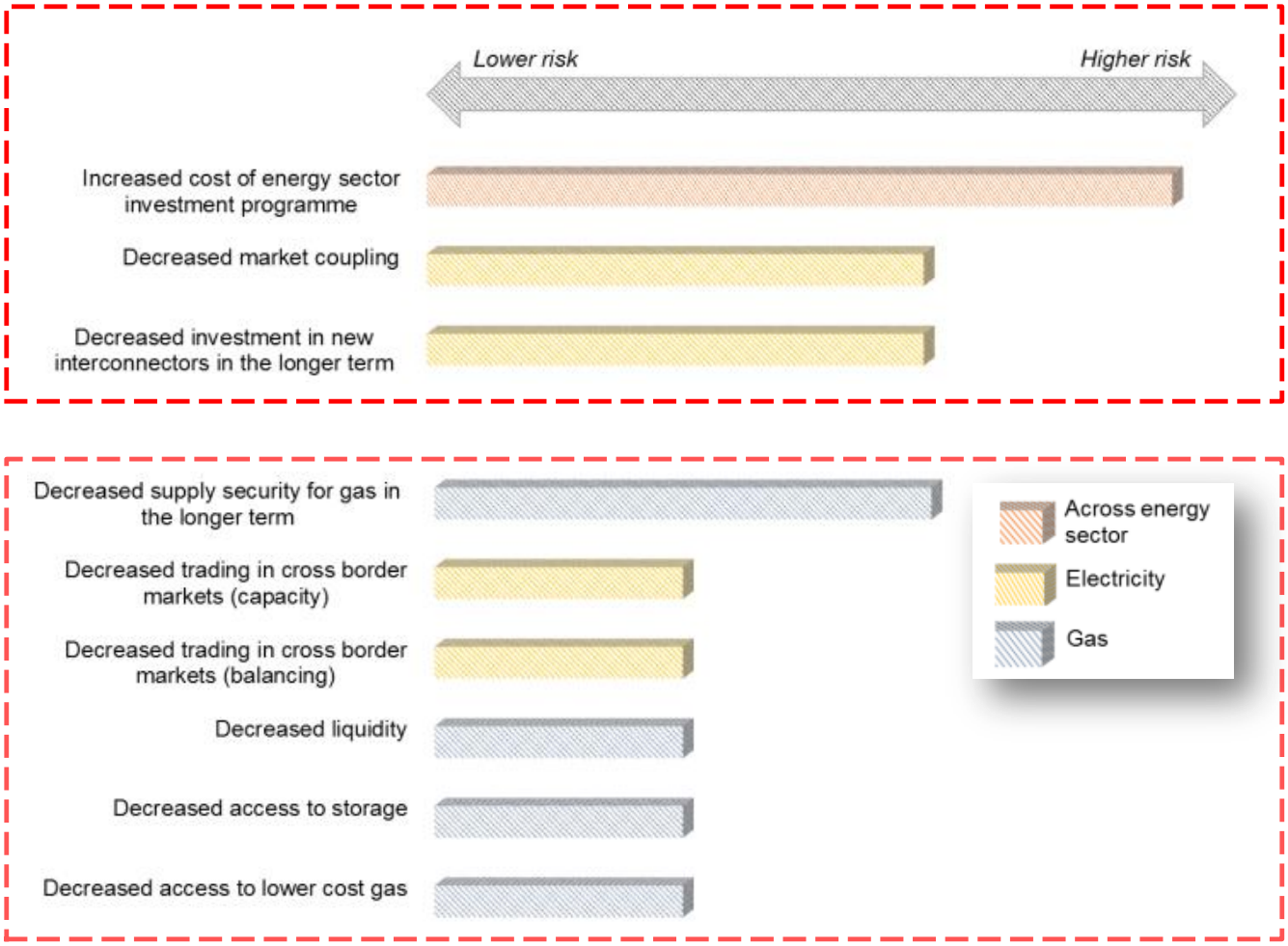
- Hydro as baseload and form of storage; physically integrated – negotiating trading rules (market coupling etc.) with the EU

UK: **net energy importer but regionally important**

- Refined petroleum products; natural gas supply via pipelines; global LNG destination; future electricity export via interconnectors

Canada: *minerals to the EU, but not a two-way relationship*

Brexit energy sector risks profile



‘Cost’ of Brexit for the UK

- Exchange rate impact on cost of energy imports
  - Gas and electricity prices immediately increased
  - Feeds into domestic and household bills
- Cost of accessing finance for new infrastructure investment
  - Networks and grids needed for energy transition
  - Delayed investment because of years of instability
- Being part of internal and integrated market delivers cost savings
- Tariff and non-tariff barriers to single market access for energy

Policy changes since June 23

- DECC → Business, Energy & Industrial Strategy (BEIS)
- Go-ahead for new Hinkley Point C nuclear reactor…finally
- Proposal of direct payment of shale gas tax revenues to households and communities via Shale Wealth Fund
- Trying to encourage new gas-fired generation (capacity market)
- Fear of rolling back environmental quality regulation (but not yet…)

Conclusions

- Distinct phases of energy policy across recent decades
- UK has been a policy maker at EU level… but the EU has also been a driver of renewables, coal phase out, interconnectors…
- Unclear what will happen following Brexit, but UK was already diverging from EU and other member states
- Feasible that large areas of policy will remain with single market membership/duplication/spillover