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New Thinking
For Energy

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From ‘dirty’ energy to sustainable energy: UK Energy Policy and the role of community energy

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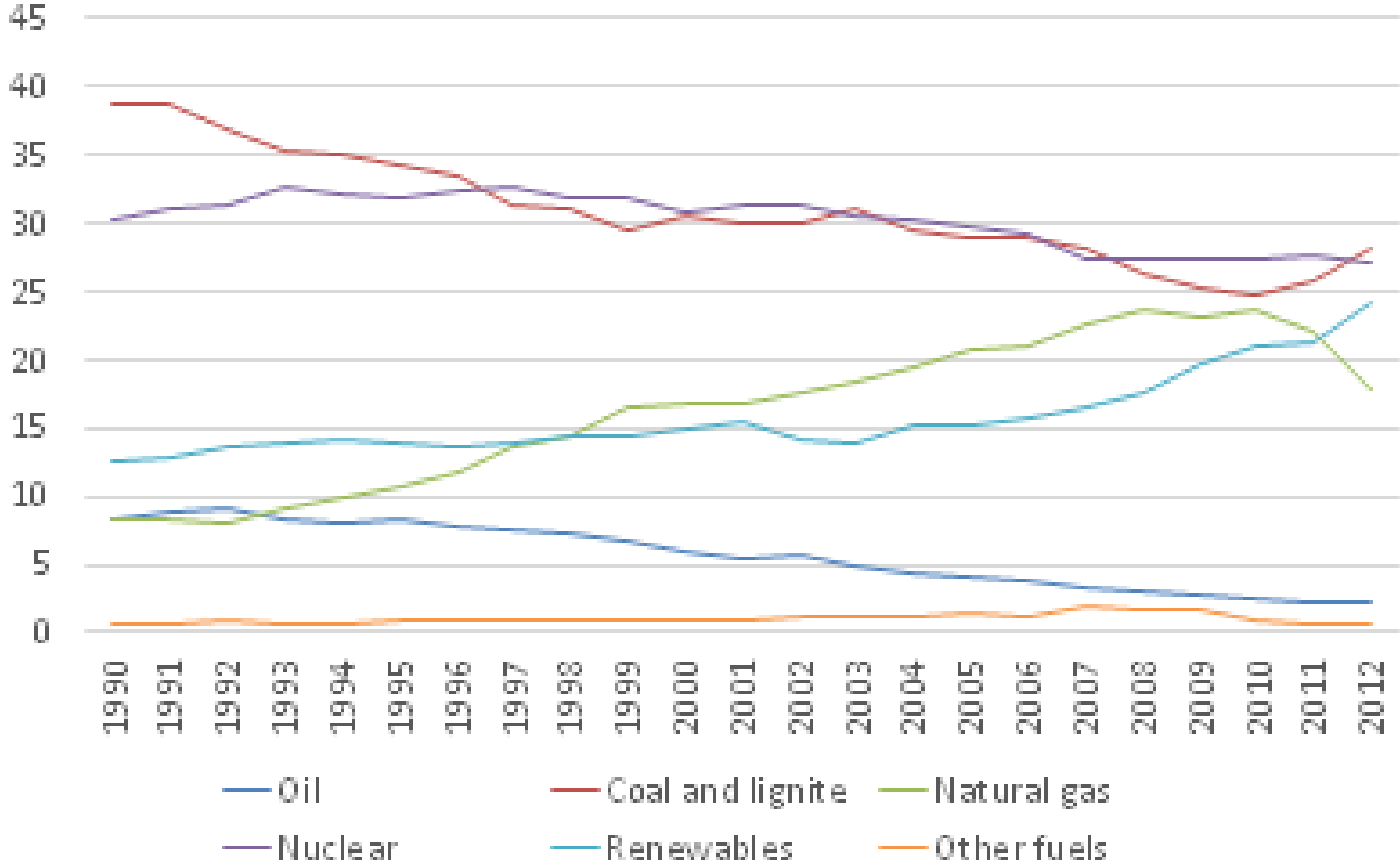
Overview

- How is energy developing at EU / global level?
  - Much more practice change (ie increased renewables; new companies; more community energy) happening in countries other than GB
- How is energy developing in GB?
  - Energy, anyway always political, has become very political under the coalition
    - Focus on nuclear power
    - Lip service to renewables, efficient energy demand management, energy demand reduction, community energy etc
  - Some changes at city / community level driven by people + changes occurring elsewhere

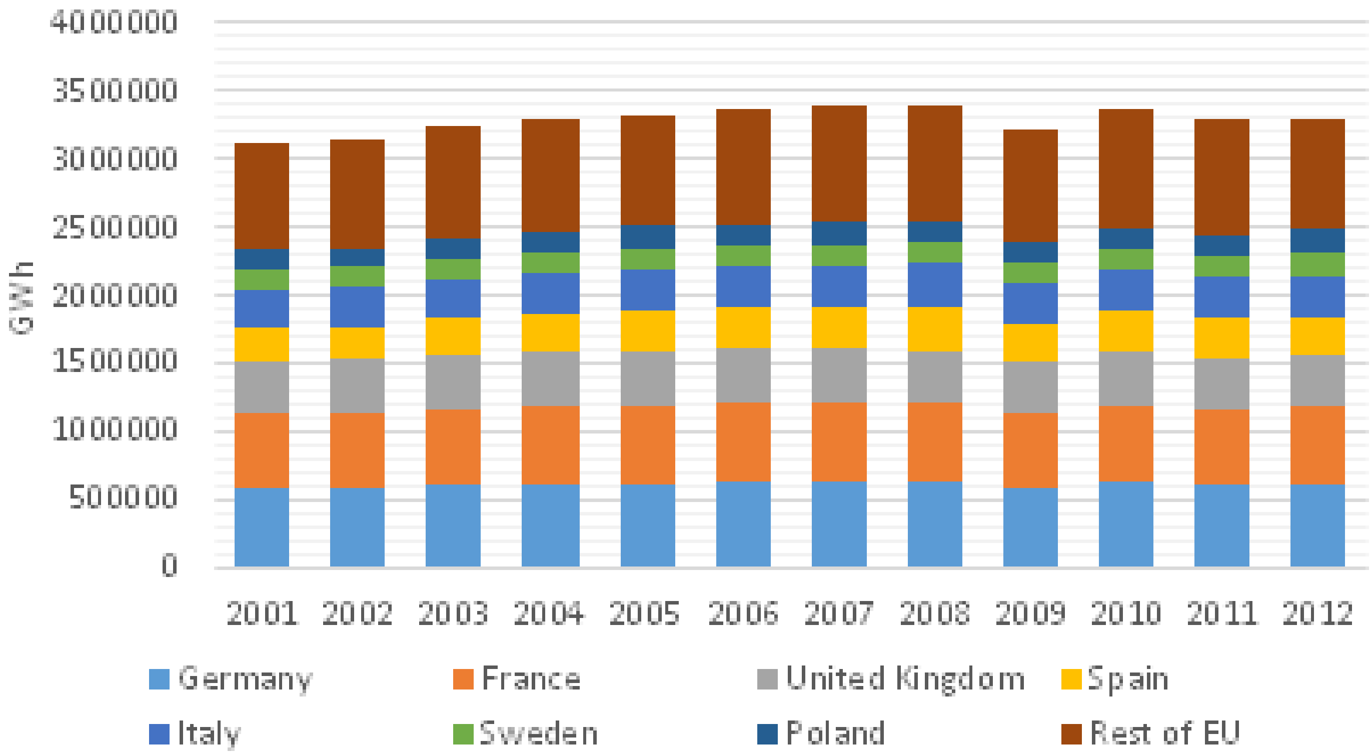
Context – Europe Overview

EU Changing Power Mix



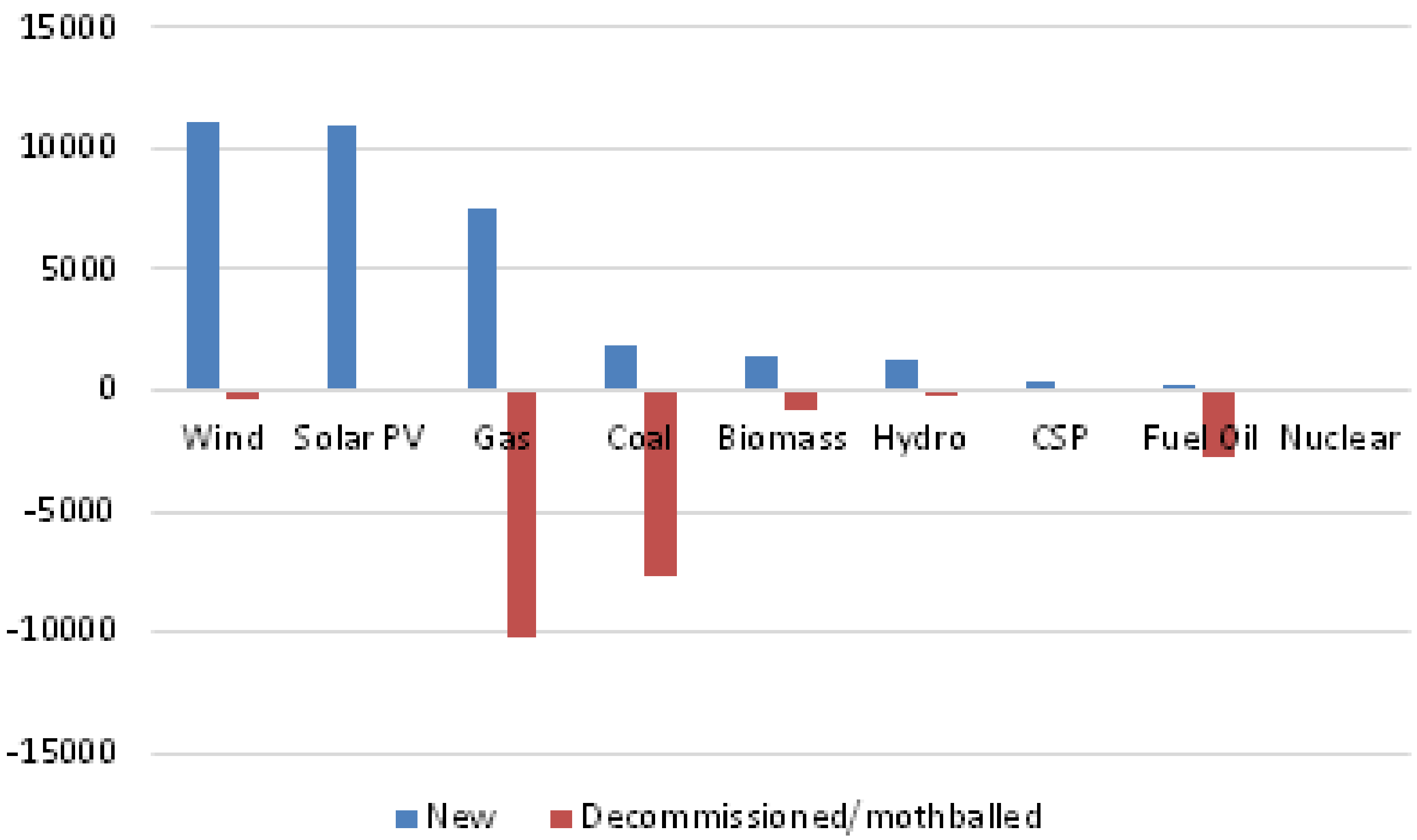
Source: Eurostat and IEA

Power demand



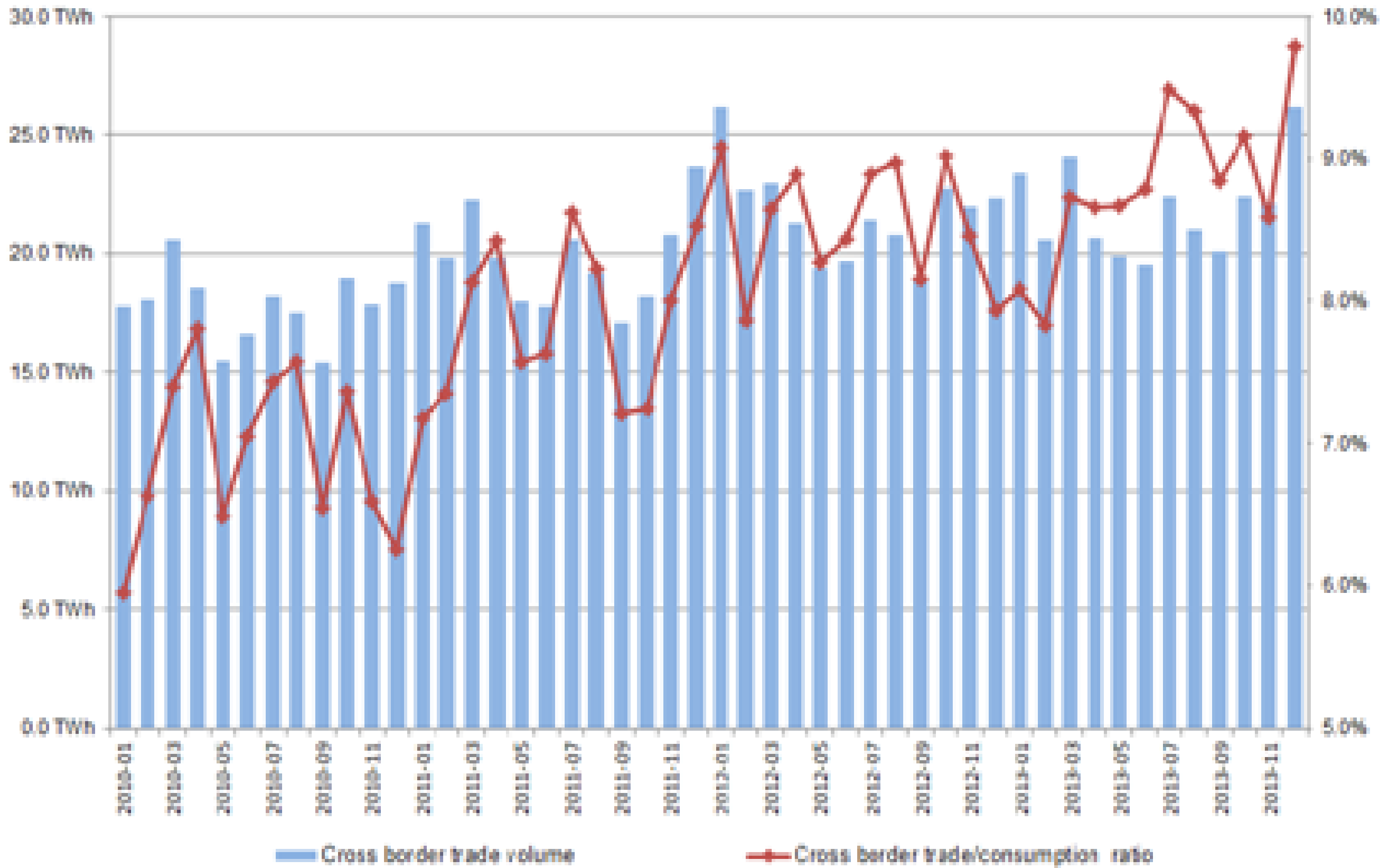
Source: Eurostat 2015

EU Net Electricity Generating Capacity Changes in 2013 (MW)

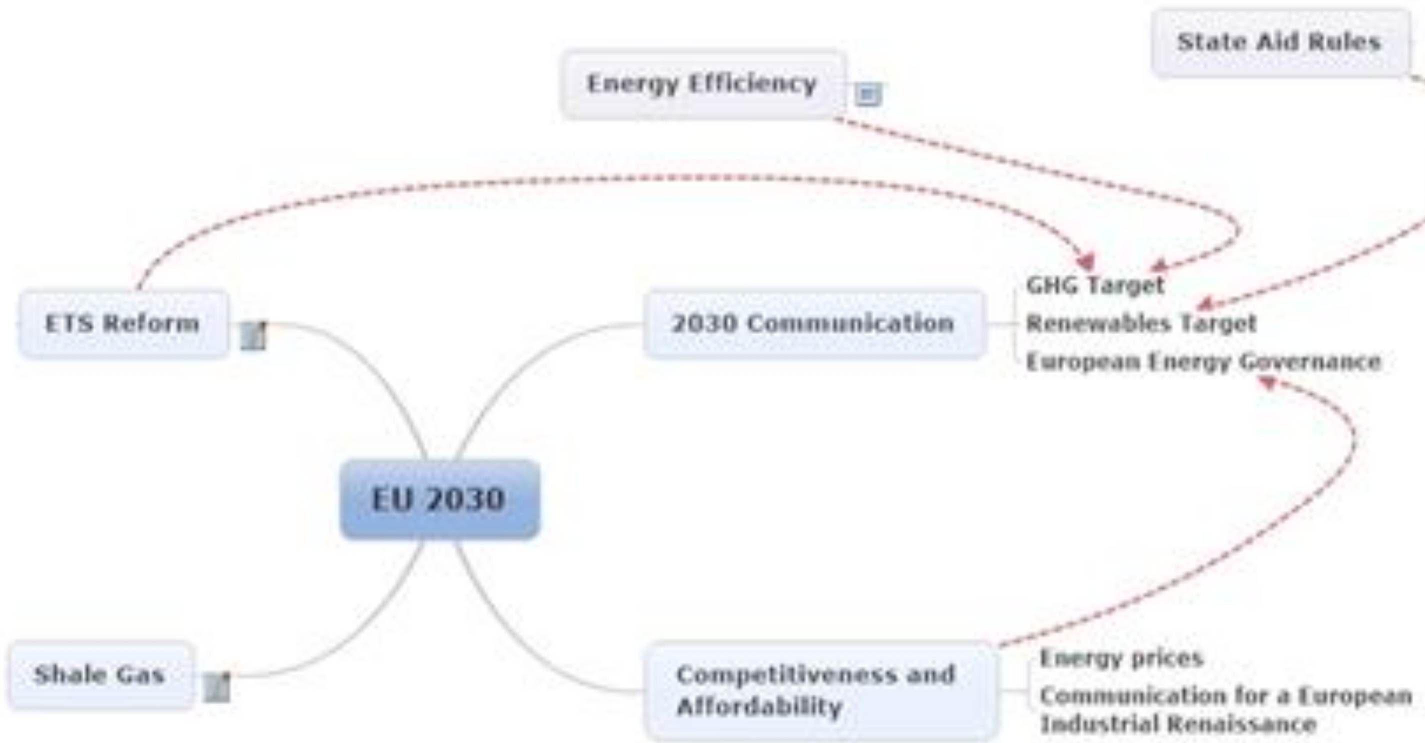


Source: EWEA 2014

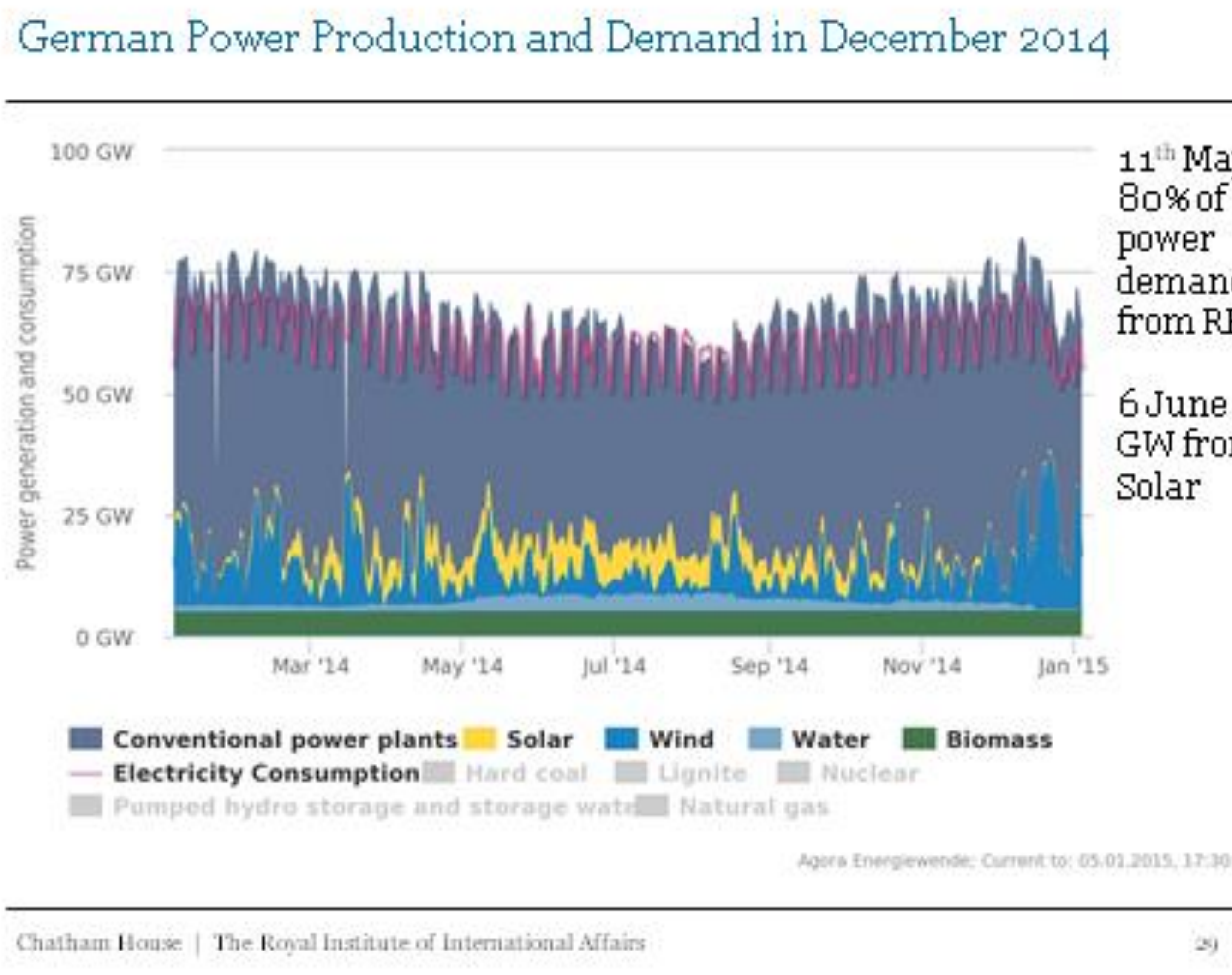
Interconnection



EU 2030 Package



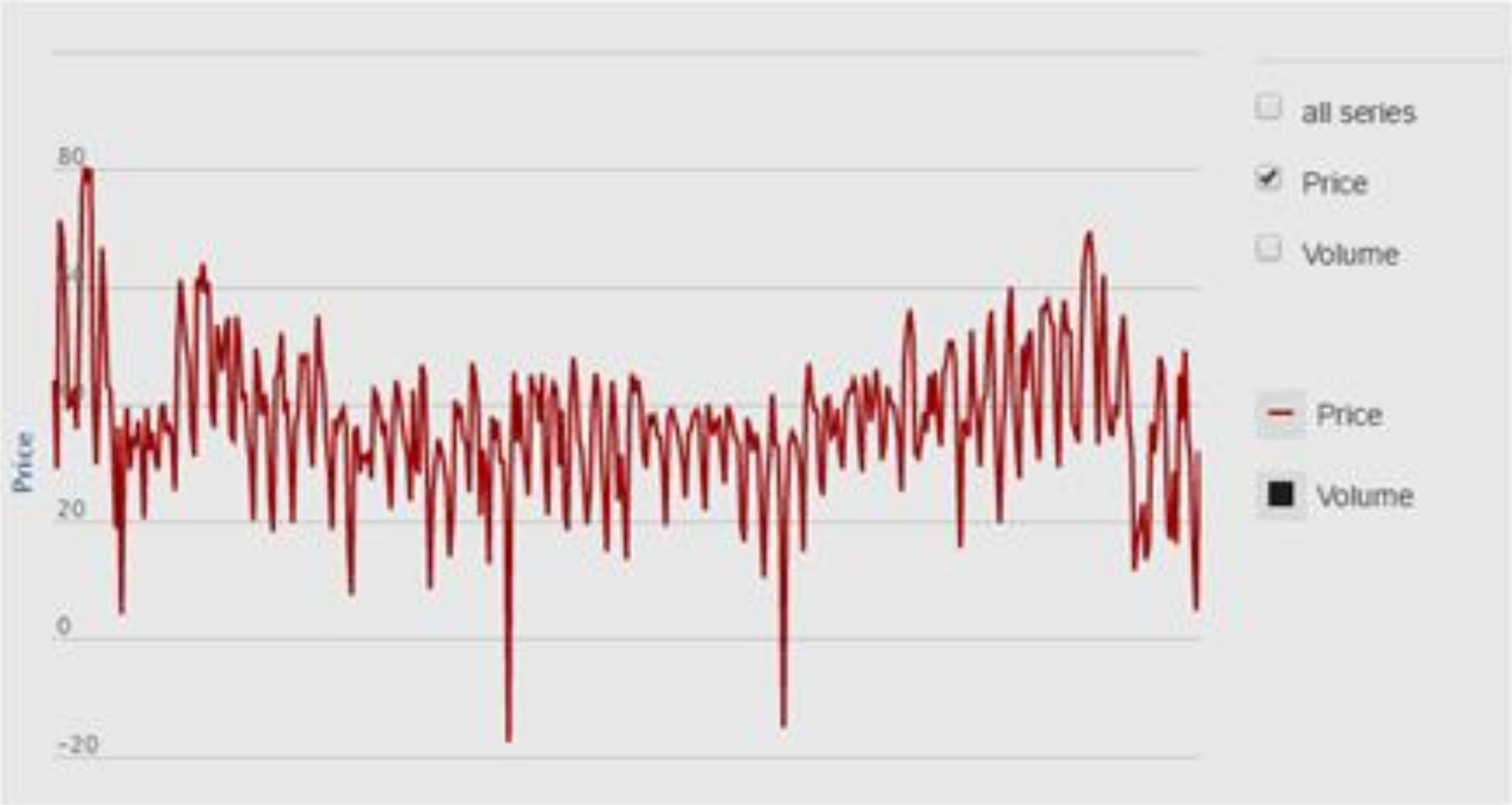
Some countries are undergoing fundamental change



11^{th} May 80% of power demand from RES

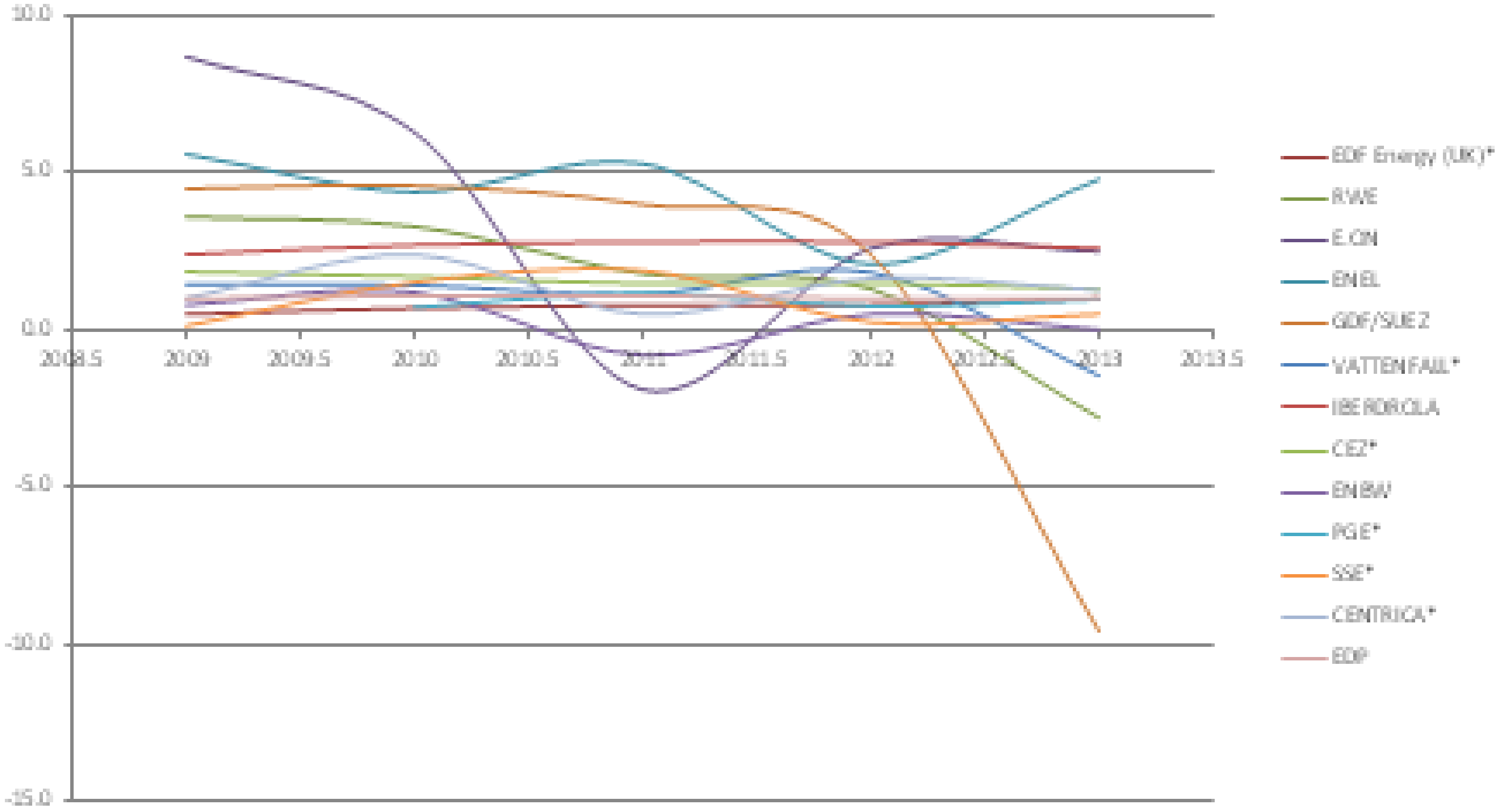
6 June 24 GW from Solar

Impact on Price on German Exchange in 2014



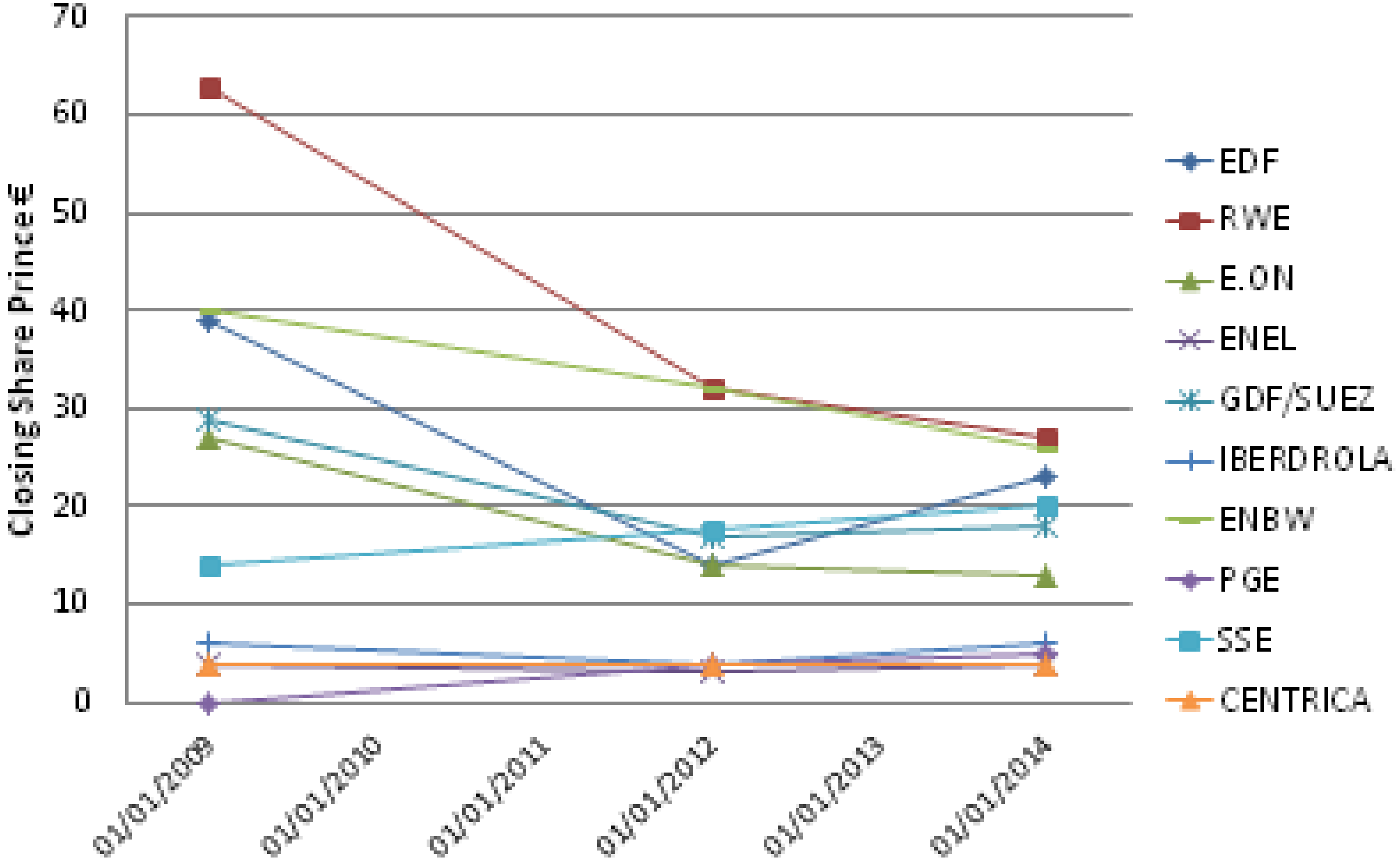
Source: EEX 2015

Net Income (€ billion)



Source: Annual Reports

Share Prices of Major European Electricity Companies



Source: Reuters

E-on Announced reform of whole business

GB – a very different place

- Self-reinforcing governance is in place in GB to keep the Big 6 incumbents dominant
  - http://projects.exeter.ac.uk/igov/working-paper-change-and-inertia-in-the-uk-energy-system/
  - Non-big 6 Suppliers still have only 9% of supply
- EP focus been on nuclear
  - Only a few likely to be built
- Renewables, CE, demand side all secondary
- BUT despite this there are some real changes occurring

The GB electricity system is dominated by vertically integrated 'Big 6' incumbents in all parts of the value chain and in both gas and electricity

Table 5: Different arms which make up each of the six largest vertically integrated energy companies

Company	Exploration/ production	Generation	Trading	Retail	Net-work	Gas storage	Renewables
E.ON*	x	x	x	x		x	x
EDF		x	x	x		x	x
SSE	x	x	x	x	x	x	x
Centrica/ British Gas	x	x	x	x		x	x
ScottishPower		x	x	x	x	x	x
RWE		x	x	x			x

**E.ON operates each of the businesses listed (Exploration and Production, Generation, Trading, Retail, Gas Storage and Renewables) as an independent standalone business within the overall E.ON group, which must optimise its own position separately, and not on a vertically integrated basis.*

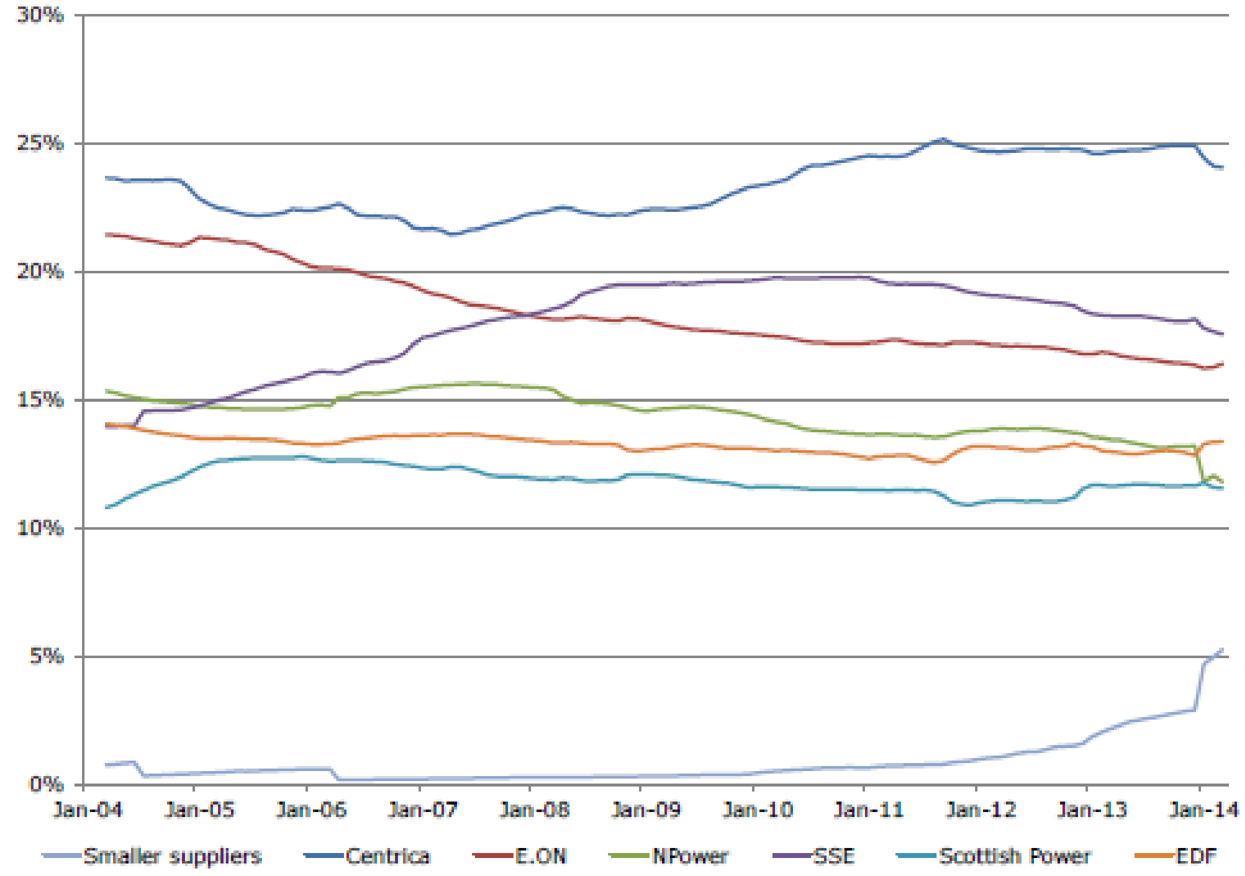
Source: Q 115, Q 224

Source: Ofgem 2008

Non Big 6 supply whilst increasing at the end of 2013 (in part stimulated by 'reset' speech) is still only 9% of electricity, less for energy

(Ofgem OFT 2014 Market Assessment)

Figure 3: Domestic electricity supply market shares



Source: Meter Point Administration Number (MPAN) data from Distribution Network Operators (DNOs)

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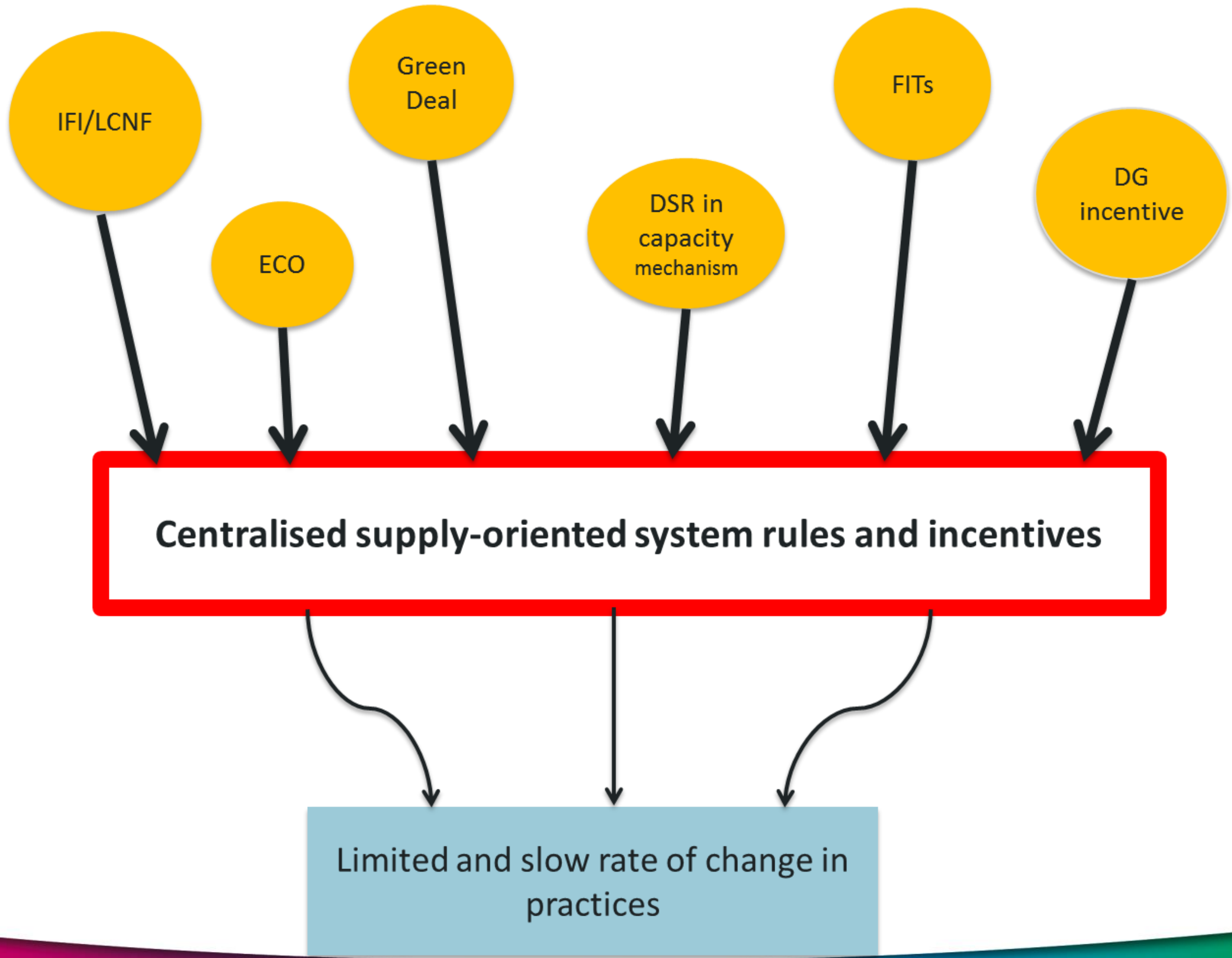
The system just not set up to make it easy for new entrants, new ideas

Tempus Energy

Demand side policies find it difficult to make headway in the current energy system



Its not all doom and gloom in GB

- Community Energy policy is inconsistent but
  - numbers of CE groups increasing
  - has various lobby groups now (eg CE England, 150 members)
  - FITs has been a great success and kick-started all sorts of developments
- City-wide projects also strengthening eg
  - Public sector starting to want a new role
    - Seeing energy as complementary to their goals
  - New demand side new entrants eg Tempus
  - OVO creating a new financial model
- Electricity / heat coming together more
- Individuals demanding more say in decisions

Achieving a sustainable economy

- New ways to sell / reduce demand via new markets ie new groups of individuals, communities, cities in whatever way creating a new way of producing / using / selling
  - It's the way to change energy
  - GB has not had the benefit of many policies available elsewhere but impacts of other countries is helping GB to change