

Market design & renewables

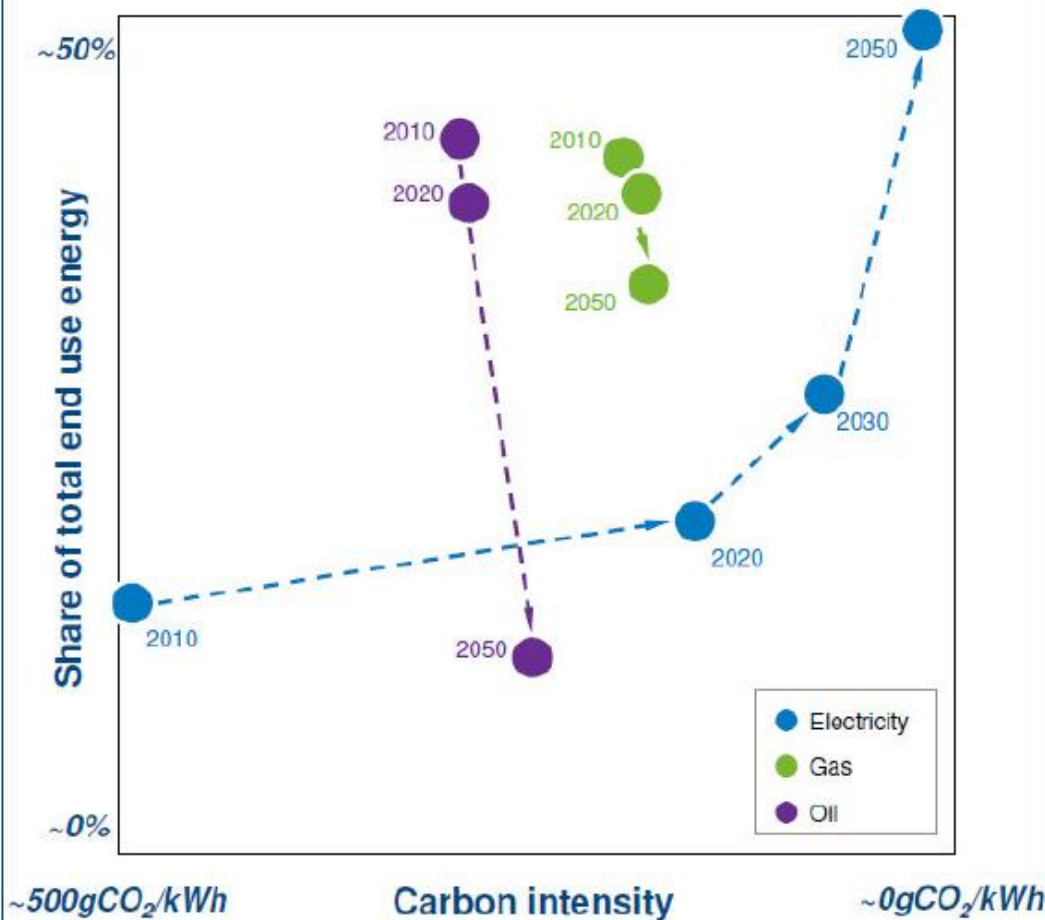
IEA ELECTRICITY SECURITY ADVISORY PANEL



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National Grid

The changing energy landscape

Where does our energy come from?



Power station closures

~25%

of total capacity by 2020 vs 2010 levels



Decarbonise electricity

80%

CO2 reduction by 2050



Energy from renewables

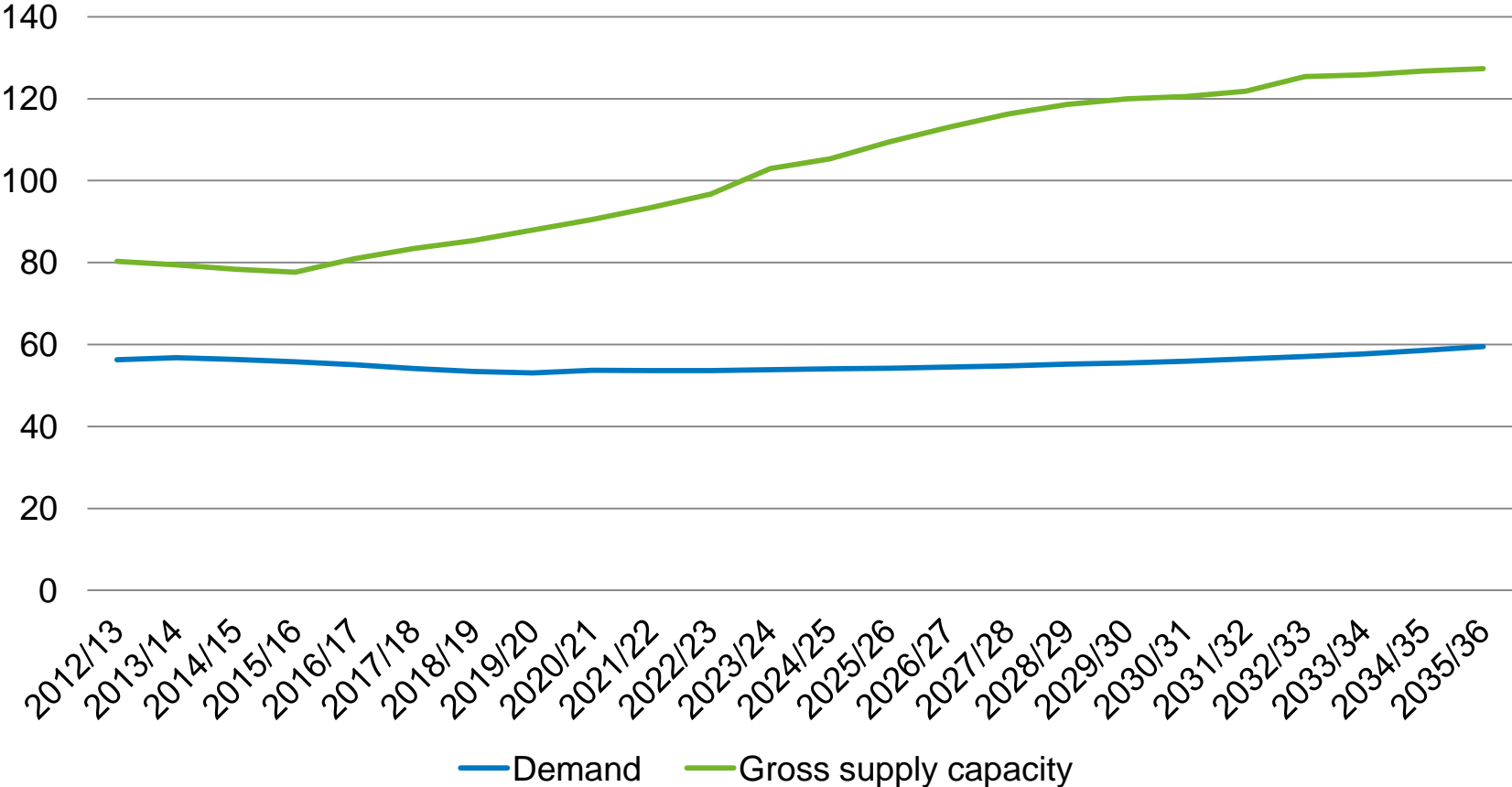
~15%

of total supplies by 2020



Conventional metrics no longer provide appropriate investment signals

Gross power supply capacity & demand (GW)



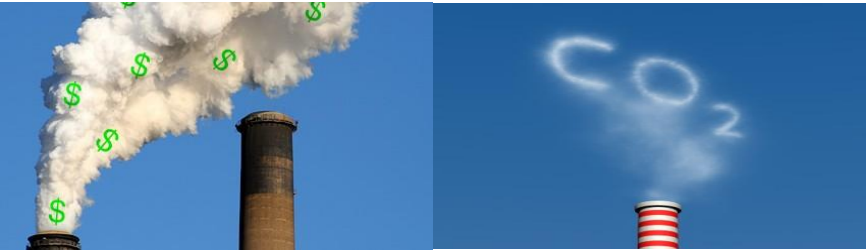
Source: National Grid's UK Future Energy Scenarios, 'Gone Green 2013', published July 2013 at www.nationalgrid.com

Electricity Market Reform measures bring forward Investment

A package of measures to.....



Incentivise low carbon investment

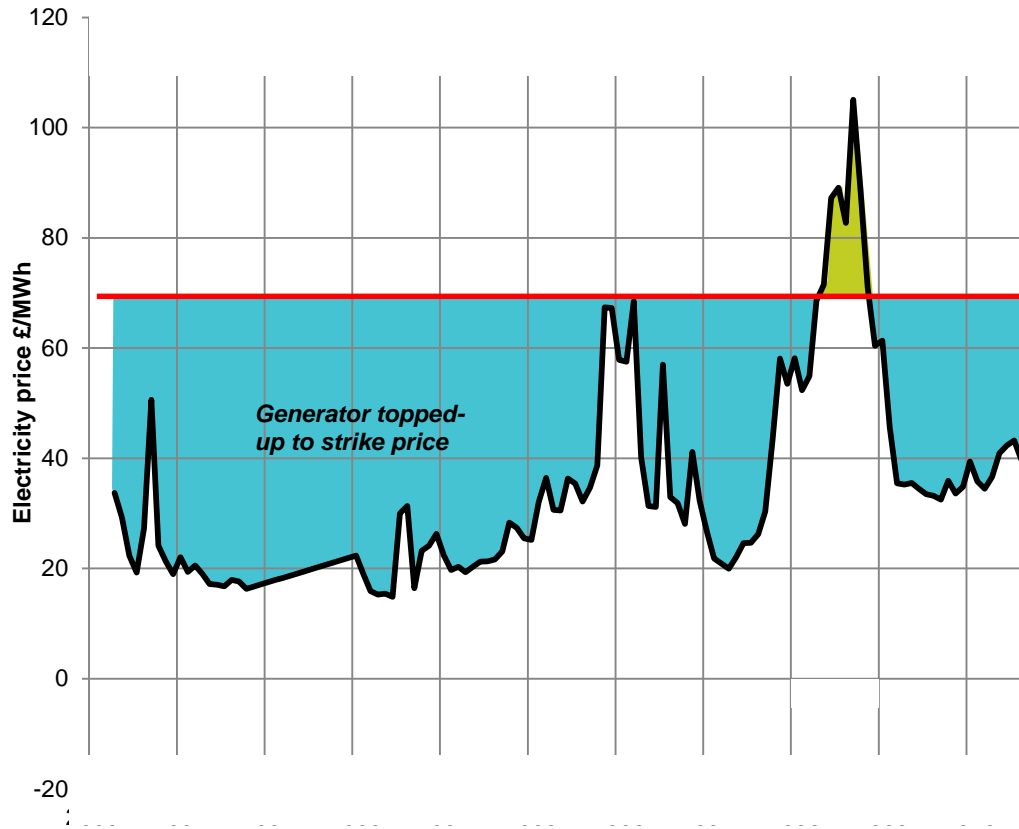


Manage emissions



Provide reliable and flexible
security of supply

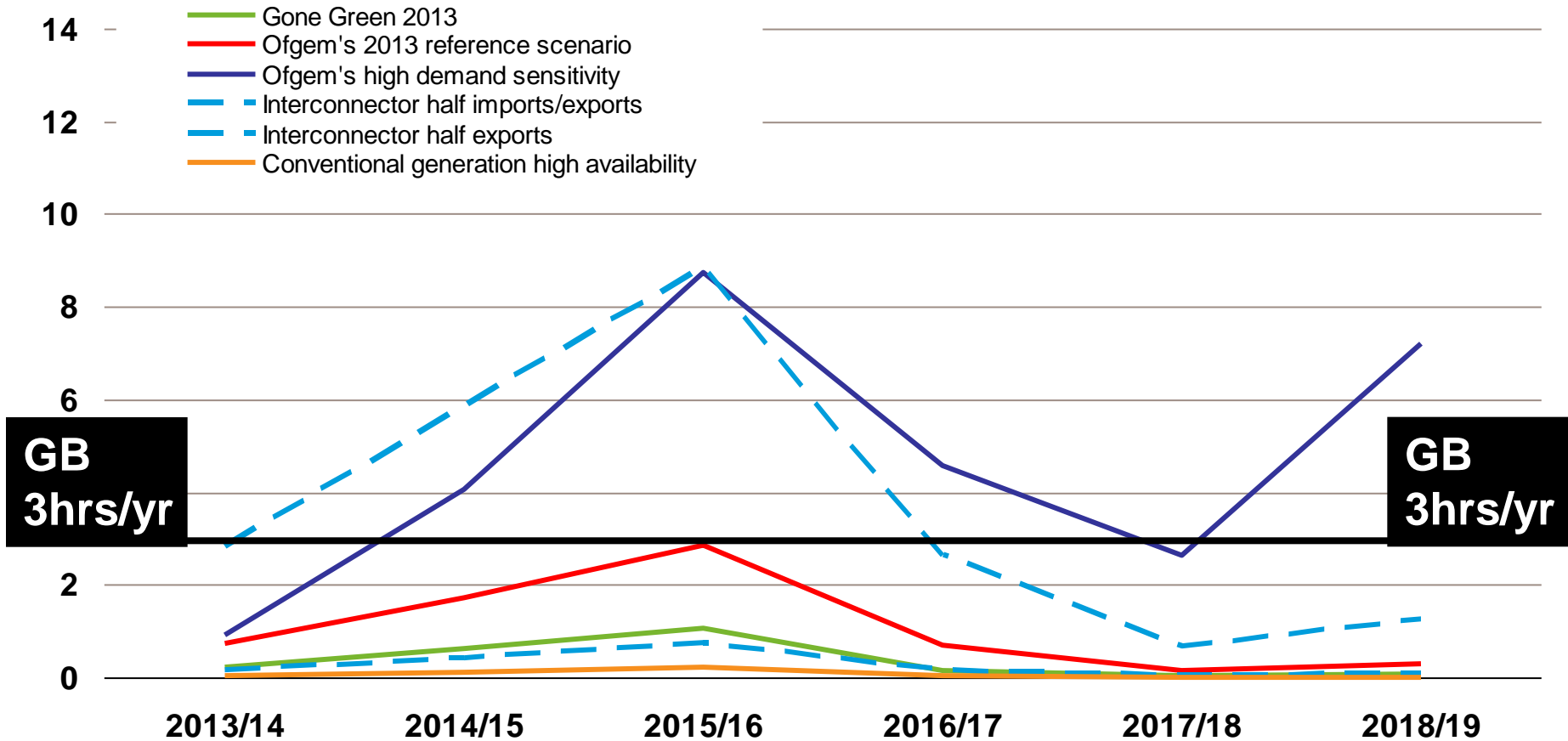
Contract for difference framework



- Eligibility
 - Planning permission
 - Grid Connection agreement
- Allocation
 - Levy Control Framework availability
 - First come, first served
 - Allocation rounds
- Industry Concerns
 - Levy Control Framework Budget
 - Strike price degradation
 - Contract length
 - Project phasing

Capacity mechanism

Loss of load expectation (hours per year)



Our 2014 Future Energy Scenarios

- We aim to make our UK Future Energy Scenarios evidence-based & shaped by stakeholder feedback
- Two key feedback themes emerged through our 2013/14 stakeholder engagement process:
 - the need for a broader scenario range than in 2013 to capture the wide bandwidth of uncertainty
 - we should explore scenarios based around the 'trilema'
- In response to this feedback we have developed four scenarios based around 'affordability' & 'sustainability' as key variables
- Our scenarios are designed to be holistic & self consistent across all energy supply & demand

