

GB Ancillary Services Market: Taking Stock and Looking Forward

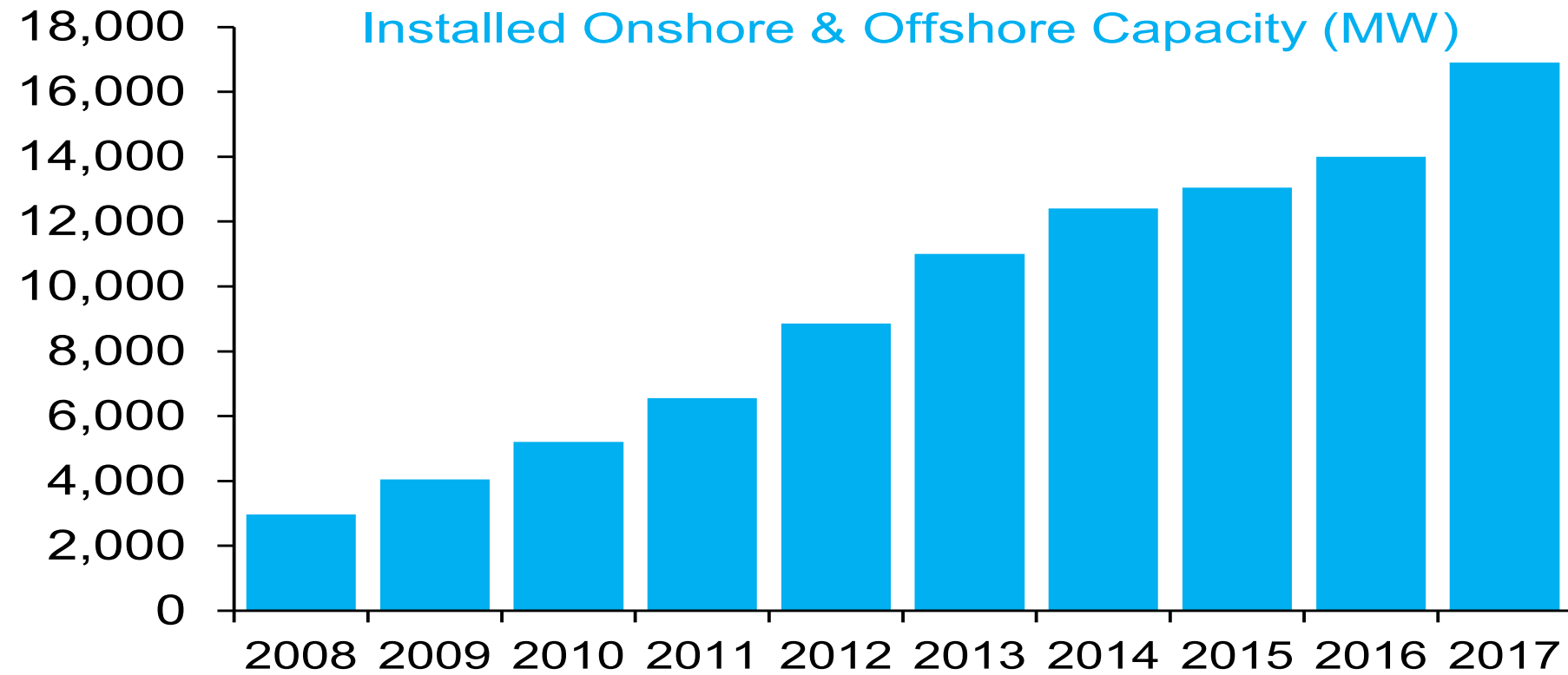


Dr Cathy McClay, Head of Commercial, Electricity
System Operator, National Grid

Changing Energy Landscape

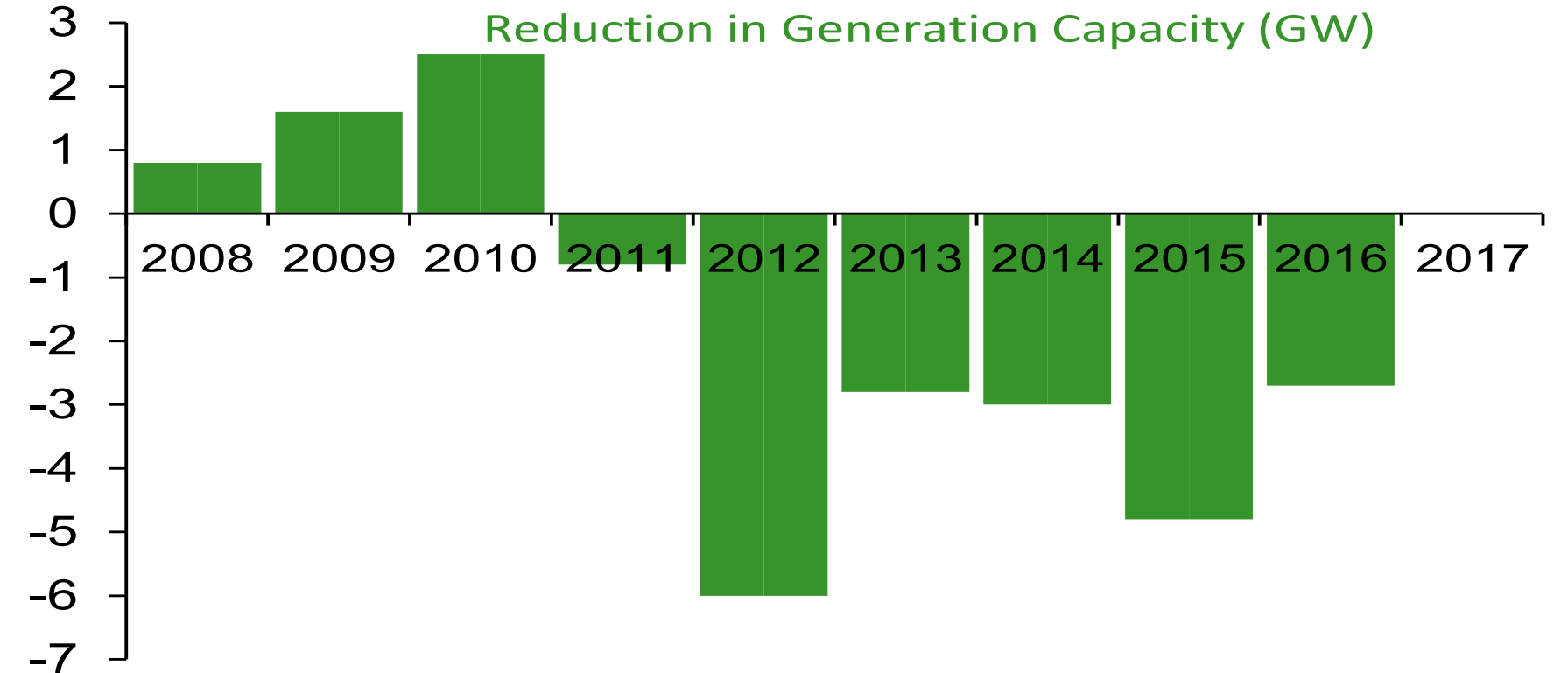
Wind

Installed Onshore & Offshore Capacity (MW)



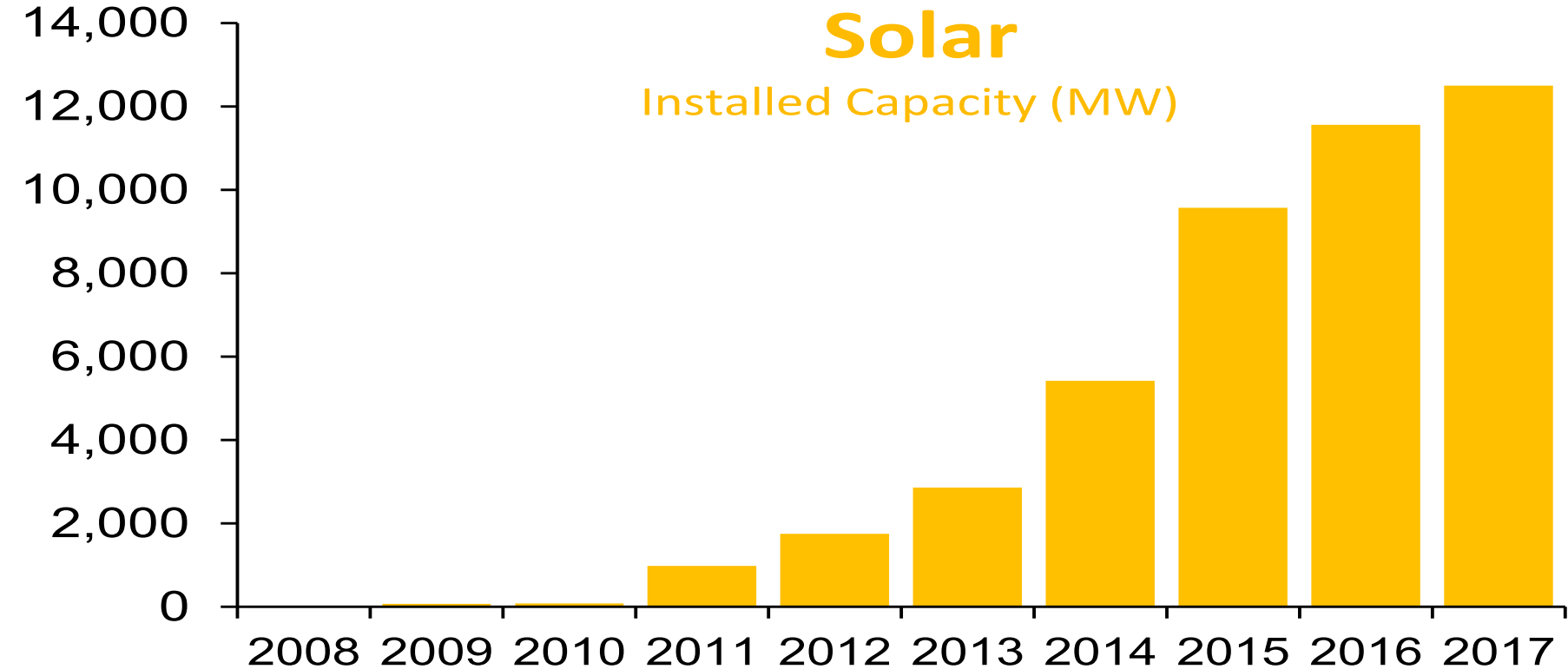
Fossil

Reduction in Generation Capacity (GW)



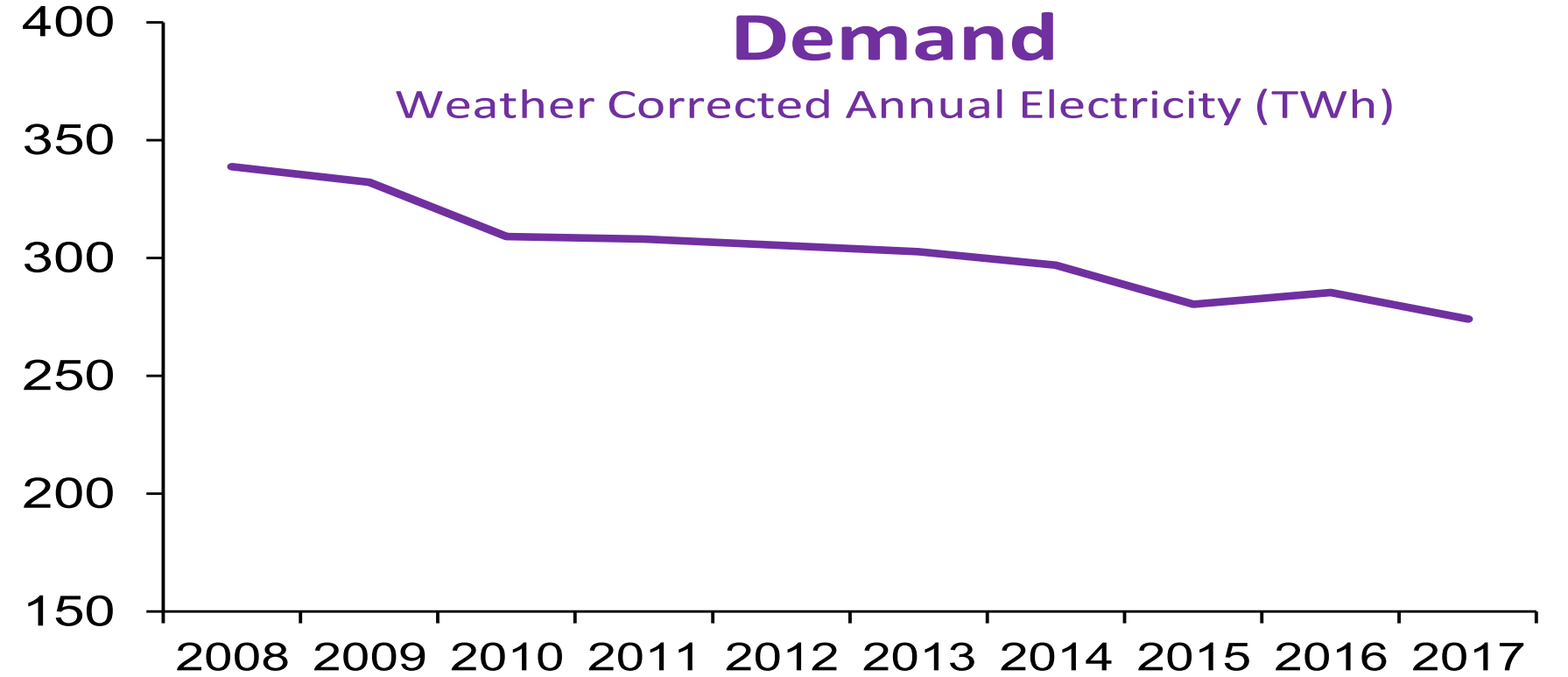
Solar

Installed Capacity (MW)



Demand

Weather Corrected Annual Electricity (TWh)



Impact on the transmission system

More generation connected to distribution system

Move from small number of large generators to smaller sources

Uncertainty on system increased

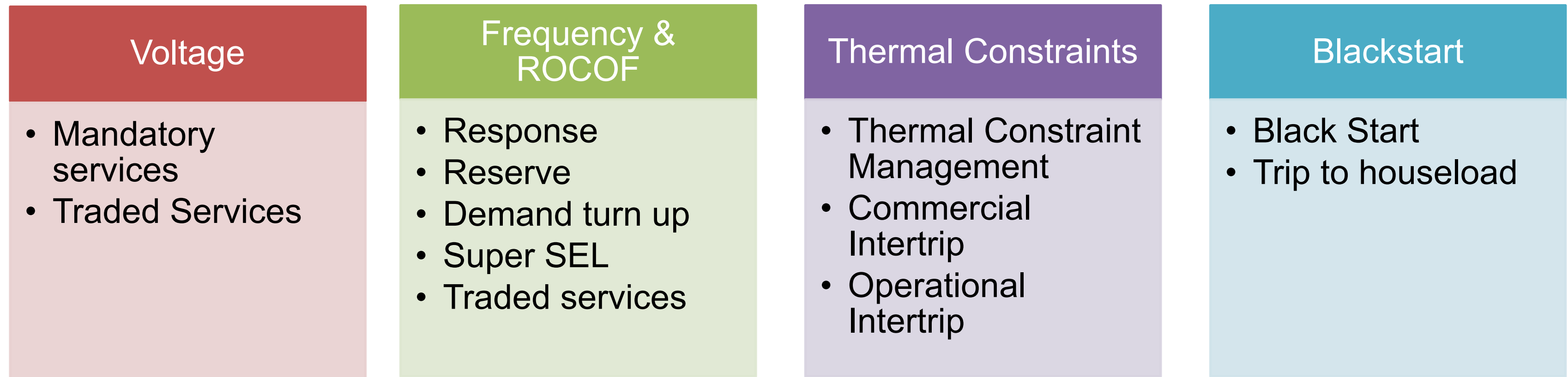
Dynamics of system changed

Requirement for more flexibility on the system

Sources of flexibility have changed

Our range of ancillary services are no longer fit for purpose in this changing world

Overview of Ancillary services



- Services originally designed for large thermal plant with more options added to allow for new types of market participants
- Approach has created complexity and a lack of transparency
- Currently 22 services (rationalised from 30 last year)
 - Large number of potential variations within services makes it difficult to understand
- In June 2017 we launched our Systems Needs and Product Strategy
 - Explained our needs for each group of services
 - Consulted on the approach to take

Approach taken



- As a result of consultation with the industry the System Operator has adopted a standardisation approach
- Clear view that price transparency is important to drive liquidity
- Recognise that it will likely result in a suboptimal solution

Standardisation

- Simple, clear products with fixed parameters
- Parameters set to meet needs of National Grid and product providers
- Transparent price for product
- Multiple products could be cleared in a single auction

Single product

- Single product for a service e.g. reserve
- Multiple parameters to represent different capabilities of assets
- Algorithm chooses 'best' combination of products to meet needs
- No single price



Example – frequency response

Rationalisation (complete)

- Remove 3 products including those designed specifically for certain technologies
- Reduce clip size to 1MW and allow users to merger contracts – reduces barriers to entry and allows virtual power plant to grow

Simplification (in progress)

- Improve price transparency by standardising daily windows and contract length
- Publishing more information on tender results plus webinars to explain decisions
- Simplify terms and conditions
- Review exclusivity clauses to improve product stacking

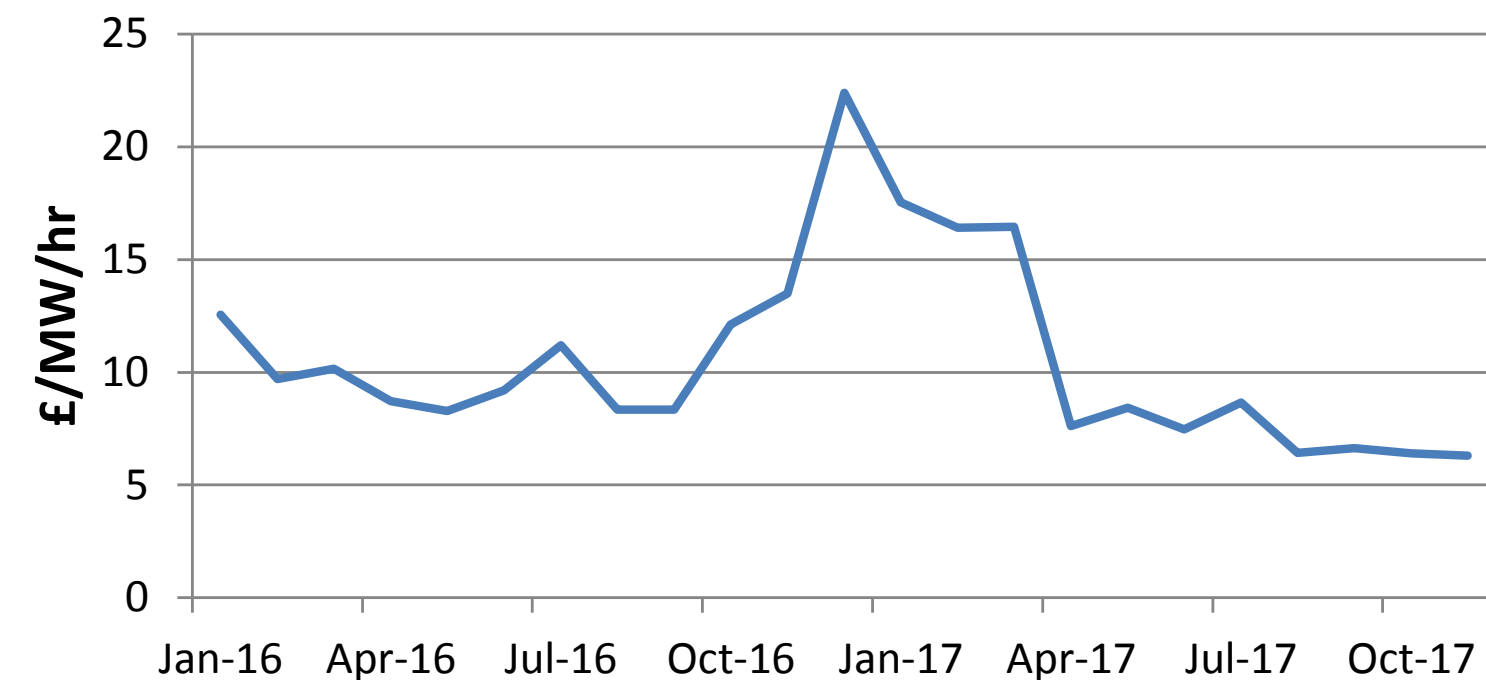
Improvements (Q3 18/19)

- Introduce trial of a weekly auction with intention to move to day ahead
- Aim to clear different frequency response products together
- Allows technologies such as wind to take part
- Test assumptions and behaviours before adopting final solution

Impact of changes

| | Jan17 | Mar 18 |
|--------------------|-------|--------|
| Tenders received | 56 | 336 |
| Units tendering in | 15 | 53 |
| Providers | 6 | 28 |

Average Submitted FFR Tender Price



Final thoughts

- Changes to response and reserve markets have increased liquidity and reduced prices
- Focus is on removing barriers to entry and transparency
- Moving markets closer to real time will allow more technologies to participate
 - May still need some longer-term contracts to support investment
- Important to provide access to Balancing Mechanism for small participants
 - Work currently underway to allow this to happen