

power
responsive

nationalgrid

Current status of Demand Response markets in GB

Thomas Maidonis

Storage & Flexibility Expert
National Grid

06/07/2017



National Grid's job is to Bring Energy to Life



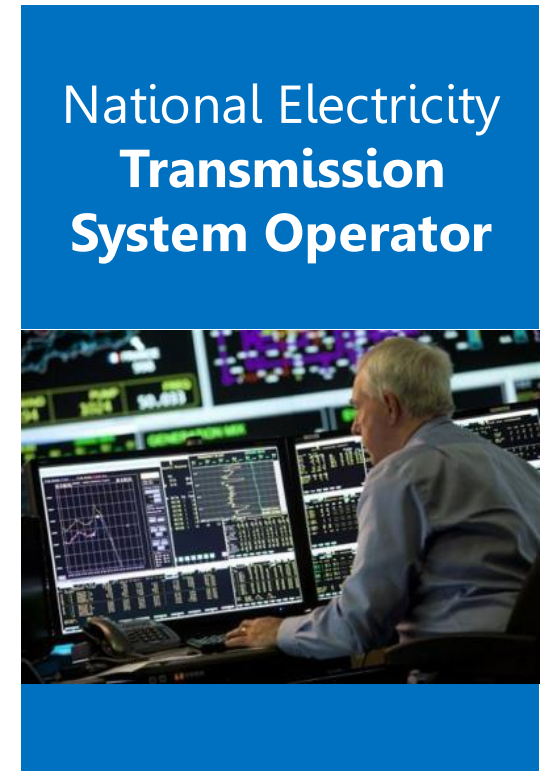
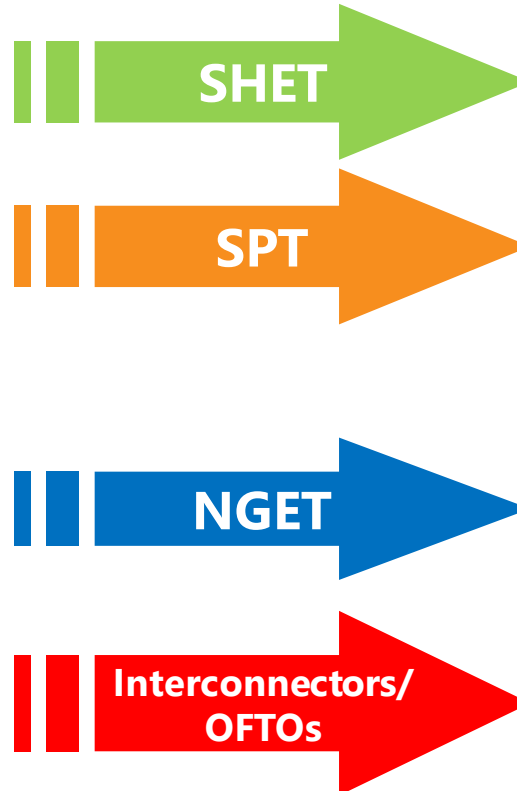
power
responsive

national**grid**

Electricity Transmission Ownership & System Operation



Multiple TOs

One SO



The Electricity Industry is Changing

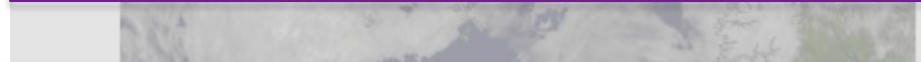



NG Control Room  @NGControlRoom · May 26 
#Solar has just broken another record in Great Britain, providing 8.7 GW (24.3% of demand)




The Electricity Industry is Changing

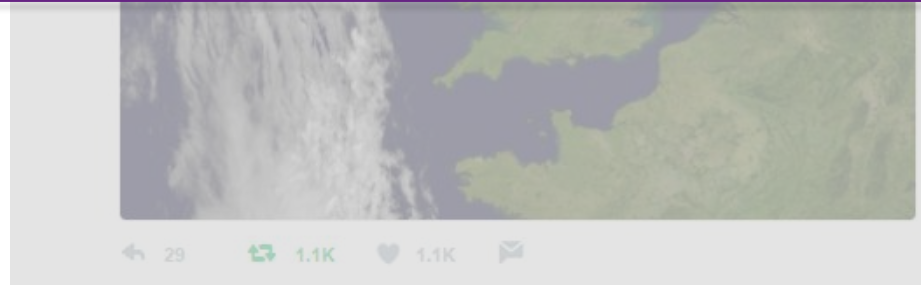
 **NG Control Room** @NGControlRoom · May 26
#Solar has just broken another record in Great Britain, providing 8.7 GW (24.3% of demand)



 **NG Control Room** @NGControlRoom · May 26
#Solar has just broken another record in Great Britain, providing 8.7 GW (24.3% of demand)

 **NG Control Room** @NGControlRoom · Jun 7
#Renewables (wind, solar, biomass, hydro) breaking another record at 1pm today providing 18.7 GW (50.7% of demand)

2 105 81



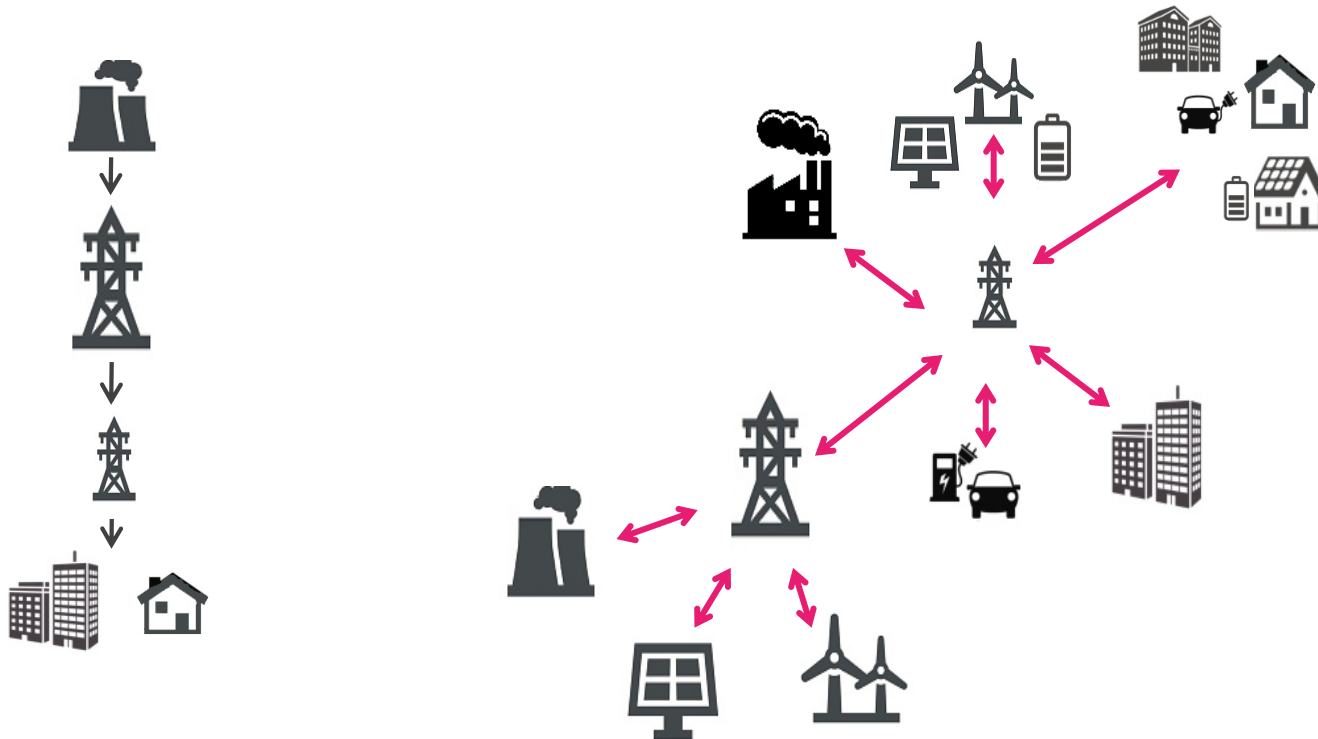
The Electricity Industry is Changing

| Area | Prediction in 2012 | Actual figures |
|------------------------------|--------------------|-----------------------------|
| Installed Solar PV | 1GW by 2020 | 11GW in 2017 |
| Installed onshore wind | 11GW by 2020 | 15GW in 2017 (5GW embedded) |
| Level of embedded generation | 12% by 2020 | 23% in 2017 |

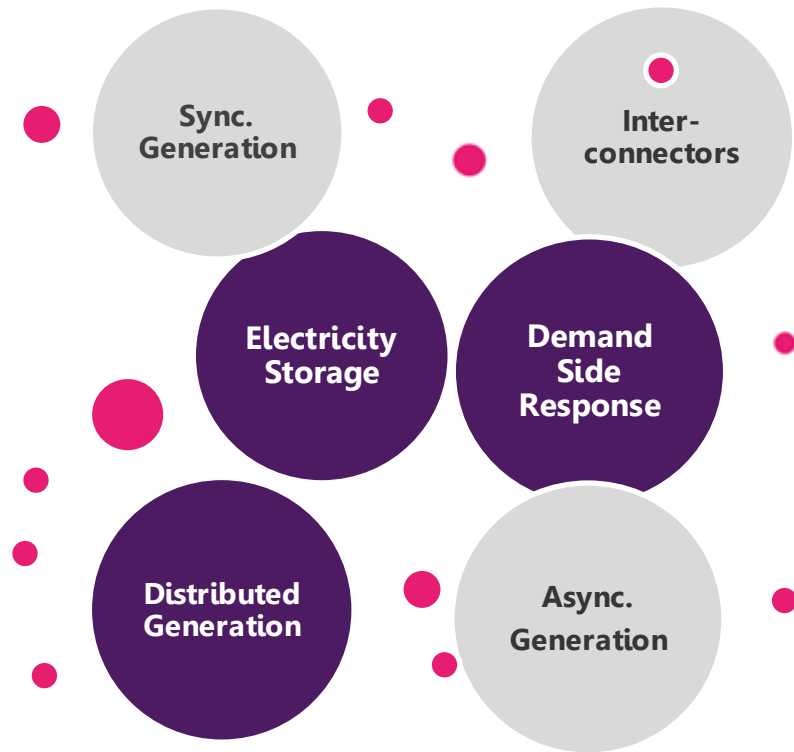
New Interactions – New System Needs

Yesterday

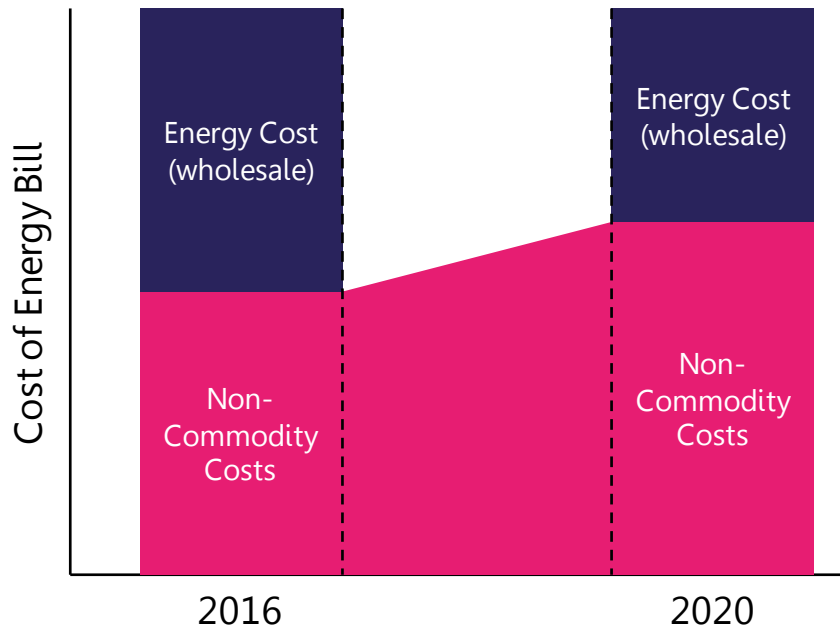
Future System – increased interactions



Our System Vision for Flexibility



The I&C DSR Perspective



Potential Benefits



Cost Savings - Shifting energy use away from periods of high network charges

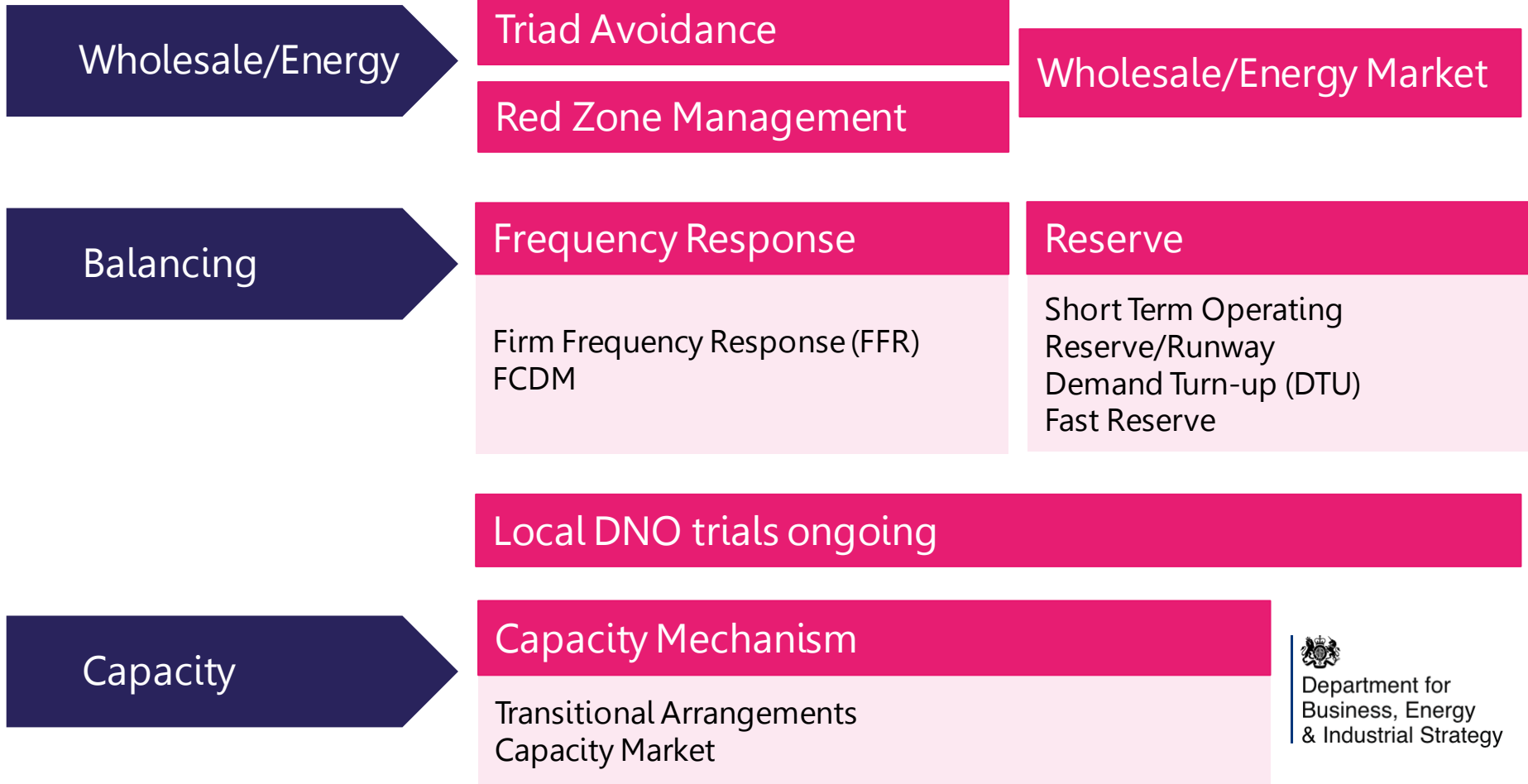


Revenue Potential - Schemes to reduce, increase, shift usage to a given signal have revenue available to earn



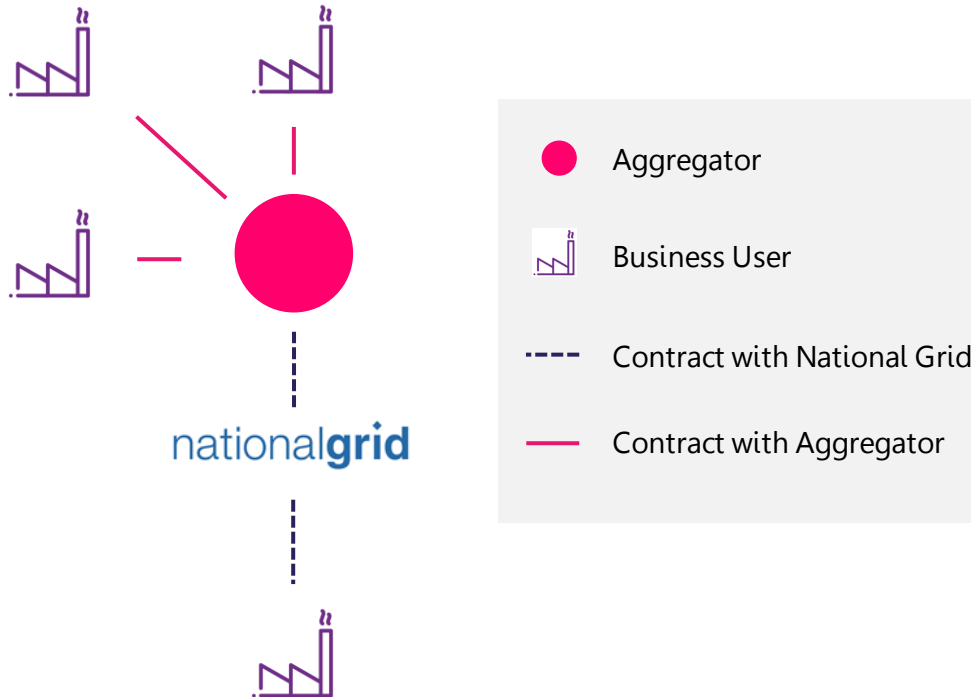
Low Carbon System - Offering flexibility of existing assets helps manage a low-carbon, majority renewable energy system

Possible Revenue Streams




Department for
Business, Energy
& Industrial Strategy

Ways of Participating in DSR



Considerations

Technical Parameters of assets/load

Business capability & understanding

Access to technology solution

Case Studies

Most Recent



To help you browse through the case studies shown below, we've categorised them by sector.

Retail



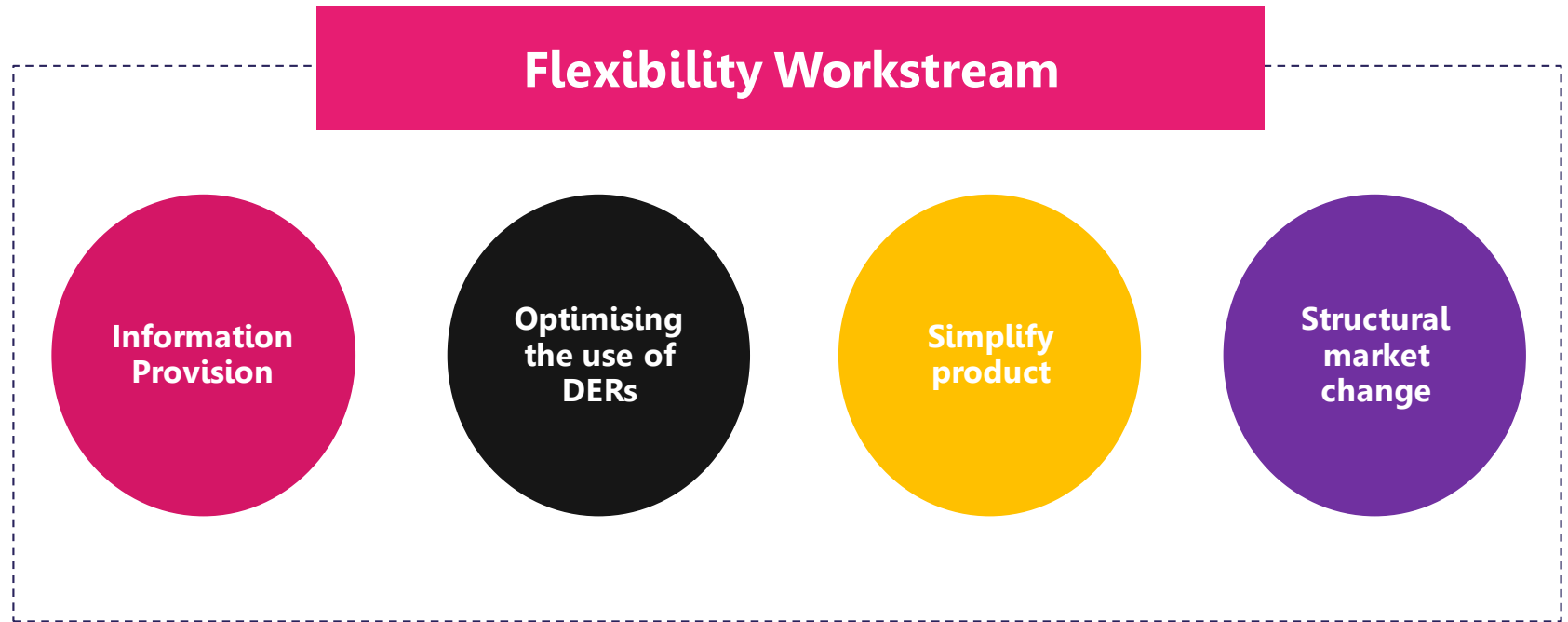
Hotel & Leisure



Manufacturing



What's next?



System Needs & Product Strategy



- Report out on 13 June

<http://www2.nationalgrid.com/UK/Services/Balancing-services/Future-of-balancing-services/>

- Consultation open till 18 July

Future Vision for Ancillary Services

New Procurement Approaches

- More real time markets in line with EU aspirations
- Pay-as-clear auctions

Wider Markets

- Investigate access to the Balancing Mechanism for non-BM parties
- Understand how new technologies and business models can be commercialised

To get in touch...

Power Responsive Programme:

www.powerresponsive.com

LinkedIn:

Power Responsive

For National Grid service opportunities:

commercial.operation@nationalgrid.com