

ESO 2030 Ambition Workshop

28 September 2018



nationalgrid**ESO**

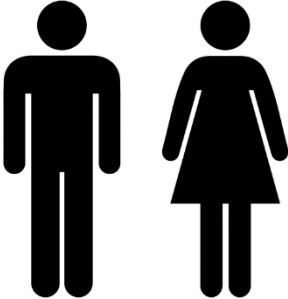
Welcome

Kayte O'Neill

Head of Strategy & Regulation



Housekeeping



The Changing Landscape and Role of the System Operator

Fintan Slye

Head of UK System Operator



The energy landscape has been changing

Decarbonisation

400%

Increase in all renewable capacity since 2010



Decentralisation

3 times

More distributed capacity connected than in 2010



Digitalisation

12.3 mil

Smart and advanced meters in homes & businesses in GB



System operations are changing as a result

March

25

2017

transmission demand was **lower** in the day than overnight for the **FIRST TIME**

June

7

2017

renewables provided **over 50%** of generation for the first time

April

24

2018

The electricity system ran for **76 hours without coal**

The future is uncertain

Uncertain Demand

3 to 11 million

Electric Vehicles driving on our roads by 2030



Uncertain Supply

37 to 50 GW

Of wind capacity generating on the system by 2030



Uncertain Markets

10s to 1000s

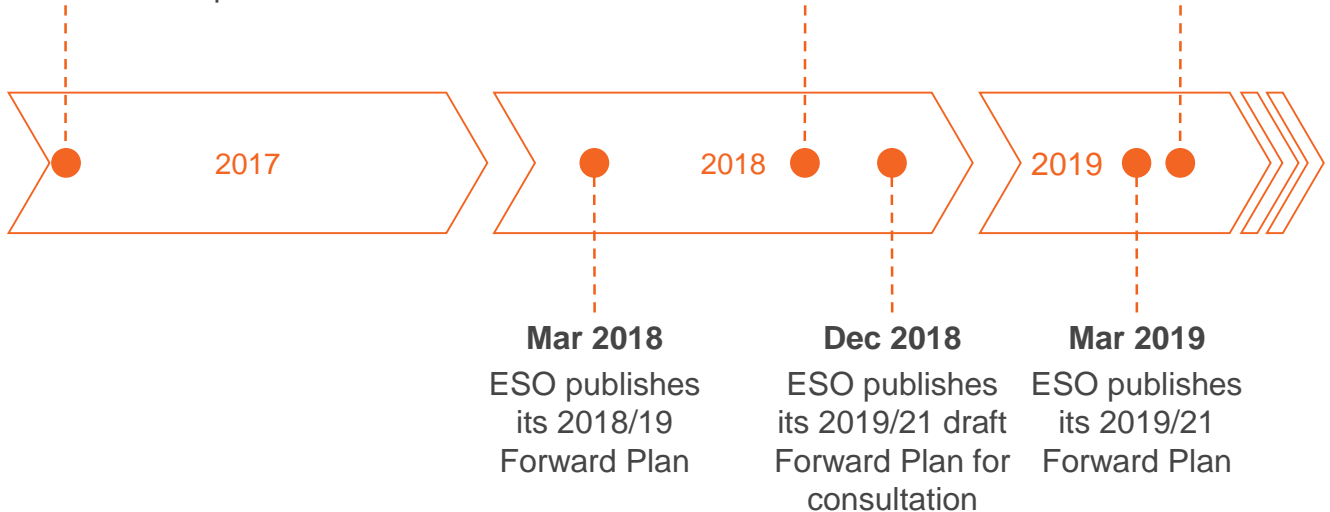
Of active energy suppliers across the country by 2030



We are changing the way we interact with the industry

Jan 2017

NG, BEIS and Ofgem announce plans to create greater separation of the ESO from NG Group



Our SO Mission focuses us on delivering value

We keep the lights on and the gas flowing round the clock for GB energy consumers; we play an essential role in enabling the transition to a more sustainable energy future.

Therefore we believe that:

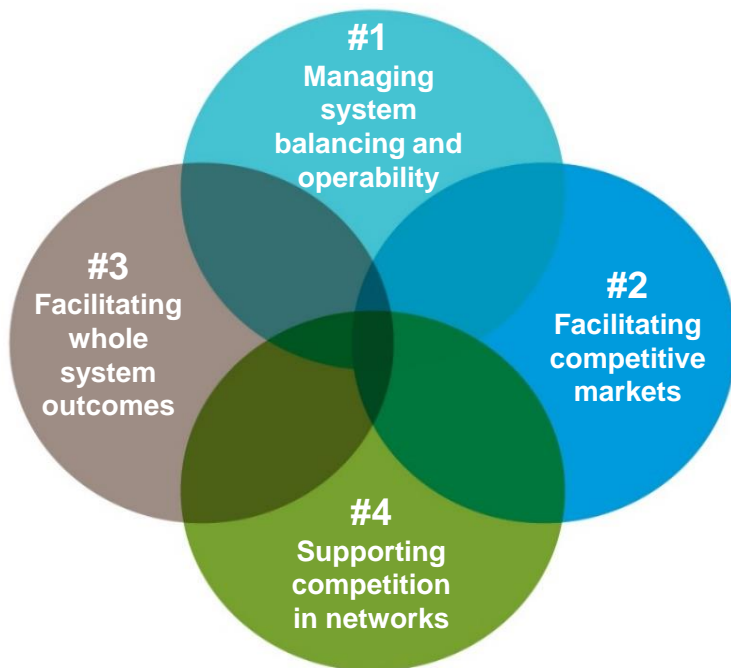
- We deliver value for consumers first and foremost, while also ensuring that we build and maintain trusted partnerships with our customers and stakeholders
- We influence the energy debate positively with our independent perspective
- Through using markets, data and networks in new ways across gas and electricity, we help move GB towards a more reliable, affordable and sustainable energy world
- An incentivised for-profit model ensures we deliver the best long-term outcomes for consumers, society and the GB economy

Introduction to the carousels

Kayte O'Neill

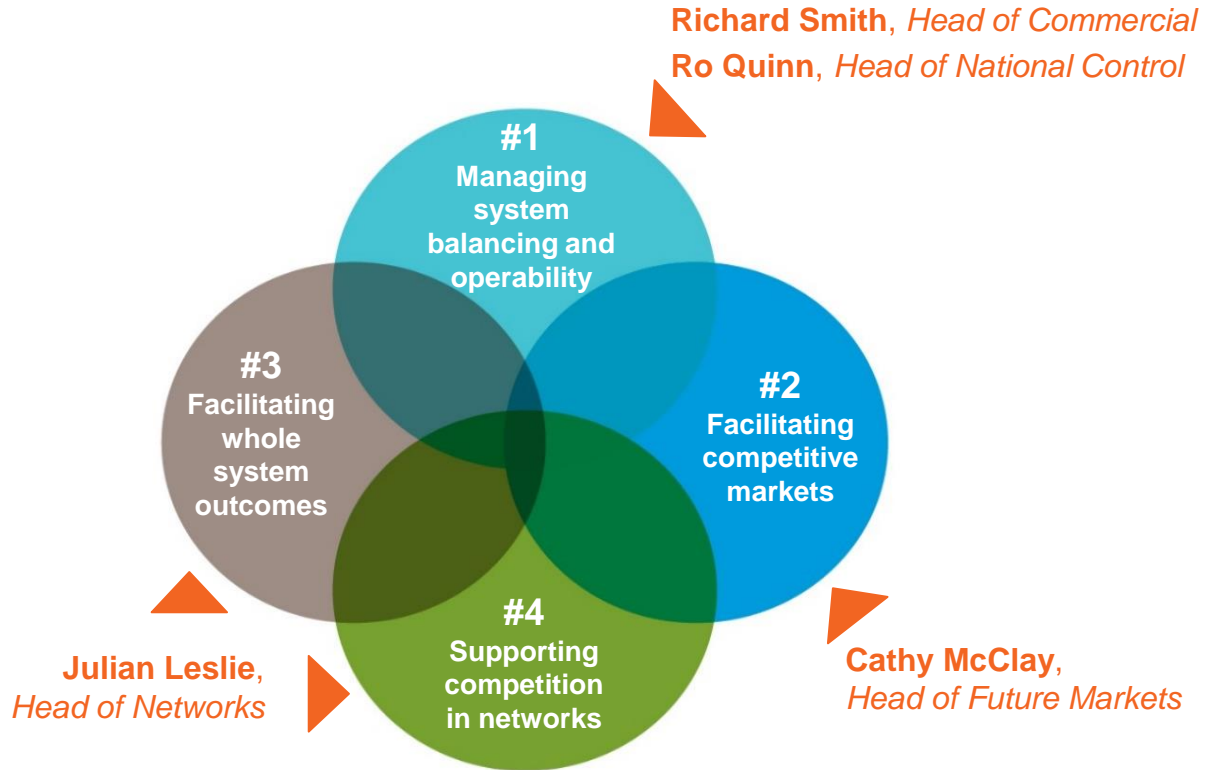


The activities we deliver under our roles need to evolve



- **2018-21 incentives framework**
- **2021-2026 separate regulatory framework**
- **2030 strategy**

Introduction to our 4 ESO roles



Carousels





Role #1: Managing system balancing and operability

Richard Smith

Head of Commercial

Ro Quinn

Head of National Control

How the world might look in 2030



Principle 1

Support market participants to make informed decisions by providing user friendly, comprehensive and accurate information

Potential themes

- Equal and open access to data
- Coherent and complete whole system data

Principle 2

Drive overall efficiency and transparency in balancing services, taking into account impacts of ESO actions across time horizons

Potential themes

- Right suite of tools to operate the system efficiently and transparently
- Stable balancing costs

Key enablers that could unlock this 2030 ambition are:

#1.1

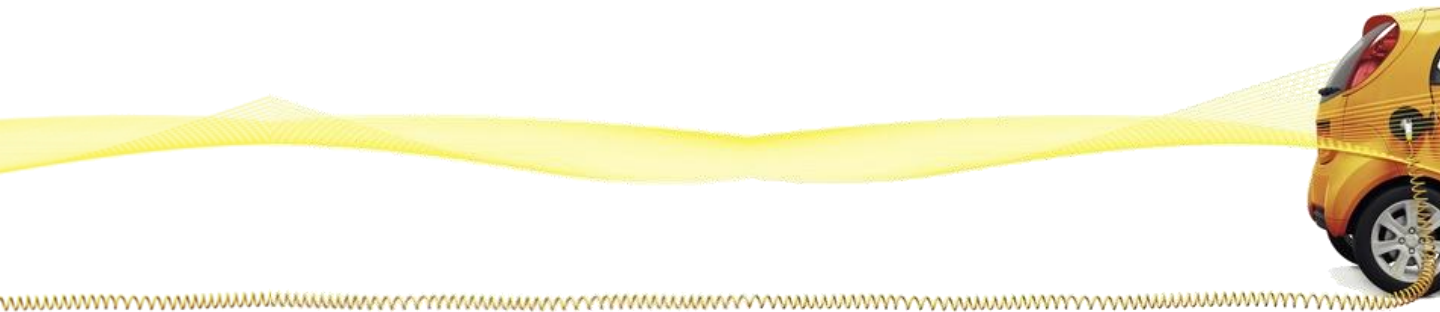
Reimagining tools for the **21st Century Electricity Control Room** for a low carbon, decentralised and digitalised world

#1.2

A comprehensive national **register for energy assets** will sit alongside other existing and emerging data sets to complete that picture

#1.3

Data and insights are easily accessible in an **open architecture portal**





Role #2: Facilitating competitive markets

Cathy McClay

Head of Future Markets

How the world might look in 2030



Principle 3

Ensure the rules and processes for procuring balancing services maximises competition where possible and are simple, fair and transparent

Principle 4

Promote competition in the wholesale and capacity markets

Potential themes

- System security and operability is delivered by competitive, transparent and accessible markets
- Agile industry market frameworks to support change
- Underpinning infrastructure to allow efficient decision making

Key enablers that could unlock this 2030 ambition are:

#2.1

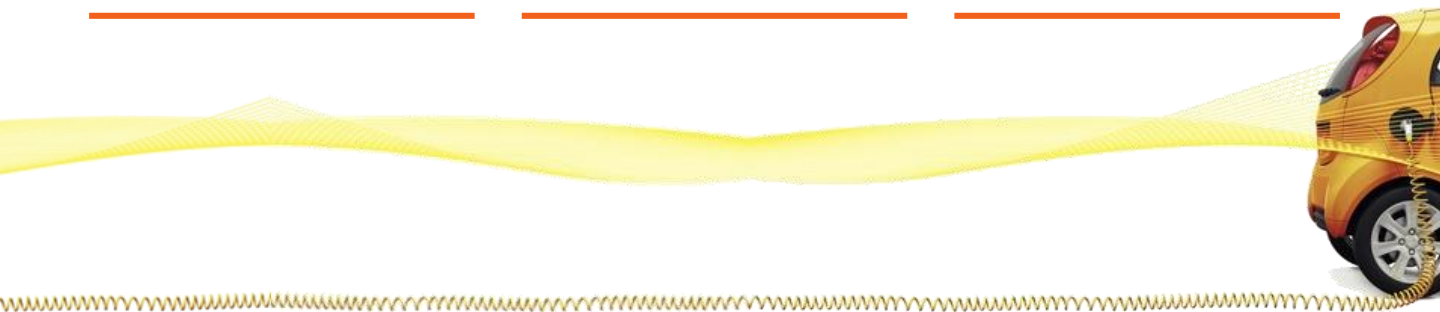
Short-term, liquid balancing services markets which deliver investor confidence and work with the wider set of markets

#2.2

A governance model which works for a large number of market participants, allowing sufficient pace of change whilst maintaining investor confidence

#2.3

An **infrastructure** that supports parties to make efficient decisions across a range of markets





**Roles #3:
Facilitating whole
system outcomes**

**& Role #4:
Supporting
competition in
networks**

Julian Leslie

Head of Networks

How the world might look in 2030

Principle 5

Coordinate across system boundaries to deliver efficient network planning and development

Principle 6

Coordinate effectively to ensure efficient whole system operation and optimal use of resources

Principle 7

Facilitate timely, efficient and competitive network investments

Potential themes

- Planning, development, investment and operation of the GB T&D networks optimised on a whole electricity system basis irrespective of ownership boundaries.
- Solutions to T&D challenges open to a full range of participants, facilitating both market and asset solutions.
- Best overall value for consumers is achieved, irrespective of the ESO or DSO performing the analysis.
- All investment decisions of value are assessed through a consistent cost benefit approach across the whole electricity system

Key enablers that could unlock this 2030 ambition are:

#3.1

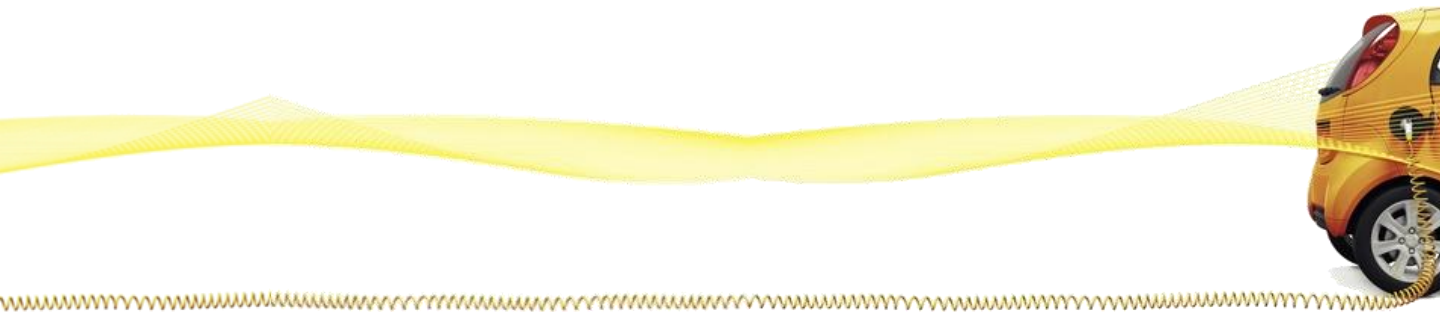
Aligned **commercial, technical and regulatory arrangements** across transmission and distribution

#3.2

Provision of **information and tools** to enable efficient whole system decisions across operational and investment timescales

#3.3

Driving **competition** so that all parties can offer solutions and participate



Panel

Richard Smith

Ro Quinn

Cathy McClay

Julian Leslie



Thank You!

nationalgridESO

