

Electricity Networks in Great Britain: Net Zero by 2050

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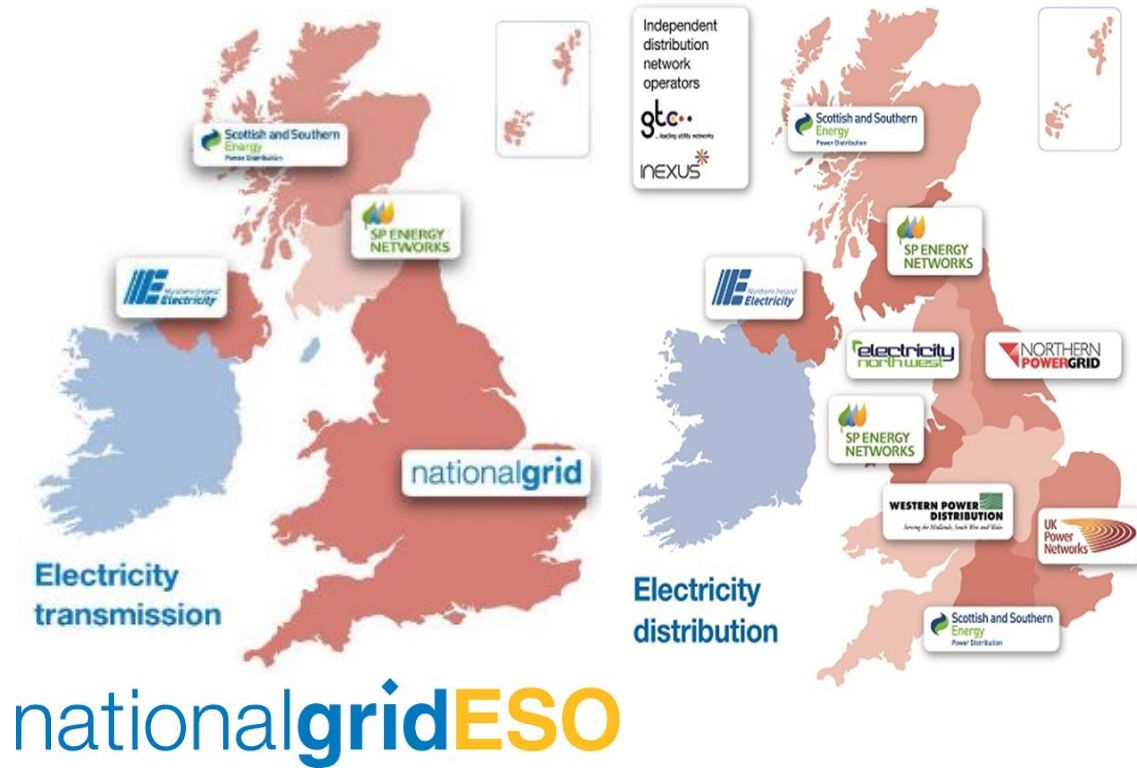
Agenda

1. Great Britain's Electricity System at a glance and the role of regulation
2. Net Zero 2050: the challenge
3. Balancing the Electricity Network
4. Connecting to the Electricity Network
5. Capacity on the Electricity Network

The Electricity System at a glance

Day-to-Day Network Management

Electricity Network Policy and Regulation




Department for
Business, Energy
& Industrial Strategy

ofgem

Electricity Networks: Regulation's Role

- Electricity network price control: RIIO
 - Sets allowances and outputs expected of networks across a 5 year period
 - Sets allowed returns for shareholders
- Electricity charging regime, including Access and Forward-Looking Charges and Use of System charges
 - Reflects users' costs for using the network
 - Sends signals to users to join network at most efficient point

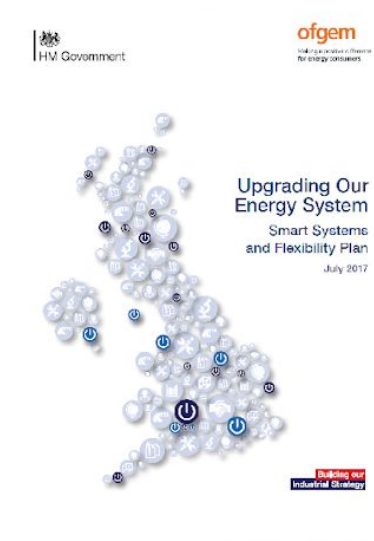
Net Zero by 2050: the challenge for electricity networks

- >50% UK's power is from low-carbon generation
- Net Zero by 2050, including 40GW offshore wind by 2040
- Challenges?
 - System Operation: balancing supply and demand
 - Networks: connections and capacity

Balancing the Electricity Network



A joint response across the sector:



Connections to the Electricity Network

Speed and ease of connections to the network	Cost of connecting to the network and using it: Charging Regime
<ul style="list-style-type: none">• Ofgem <i>incentivises</i> networks to do this via the price control, RIIO, including via<ul style="list-style-type: none">• Customer Satisfaction• Guaranteed Standards of Service• ‘Time to Connect’ incentive• Government is working with network companies and Ofgem to:<ul style="list-style-type: none">• Ensure greater consistency in approach between network companies• Encourage ‘flexible connections’	<ul style="list-style-type: none">• Ofgem sets the regime by which network users are charged for their use of the network, aiming to be cost-reflective of burden users put on the system• Access and Forward-Looking Charging Review (ongoing) considers how this will impact on renewables across GB, including whether:<ul style="list-style-type: none">• upfront connection charges act as an undue barrier to new low carbon projects• ongoing charges incentivise smaller generators to site in most efficient locations

Future Network Capacity for Net Zero 2050

Physical Infrastructure between Generation and Demand



Smart solutions combined with generation



Questions

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