

DSO

DISTRIBUTION SYSTEM OPERATOR

Indian Delegation – UCL

Tim Manandhar, Jessica Melville, Sepair
Zalmi, Florentine Roy

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DSO

UK
Power
Networks
Delivering your electricity

Overview of UKPN & DSO Strategy



How An overview of UK Power Networks

Scope

Regulated:

- We own and maintain electricity network infrastructure across London, the South East and East of England and make sure power flows reliably, safely, and securely.
- We are the UK's biggest electricity distributor by customer numbers delivering power to 8.5 million homes and businesses
- 3 licenced regions LPN, EPN & SPN

Unregulated:

- We own, develop and maintain private energy networks and deliver major national power infrastructure projects across the UK.



Key metrics

Measure	Data	% of industry
End customers	8.5m	28%
Population served	c.20m	29%
Distributed generation connected	10GW	30%
Connected Electric Vehicles	541,000	36%
RIIO-ED2 totex allowance (2020/21 prices)	£5,032m	23%
Energy distributed	71.5TWh	28%
Peak demand	14GW	N/A
No. of DNO employees (FTE)	5,819	N/A
Total length of network	190,015km	N/A
Area served	29,250km ²	N/A

Our Vision

UK Power Networks' vision is to be:



An Employer
of Choice



A Respected
and Trusted
Corporate
Citizen



Sustainably
Cost Efficient

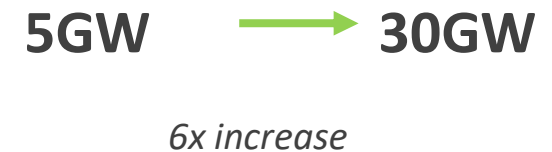
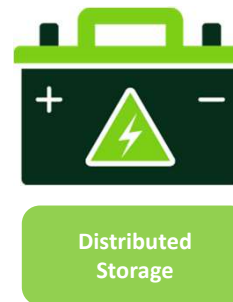
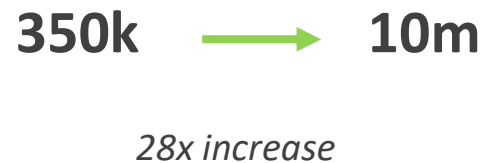
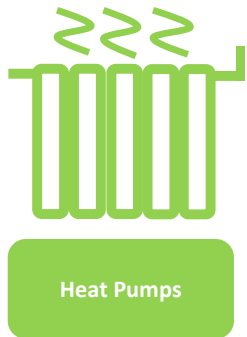
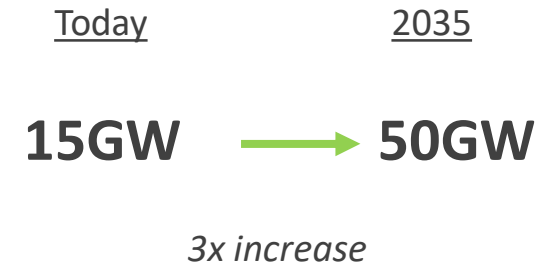
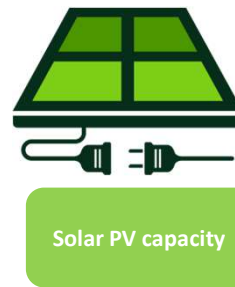
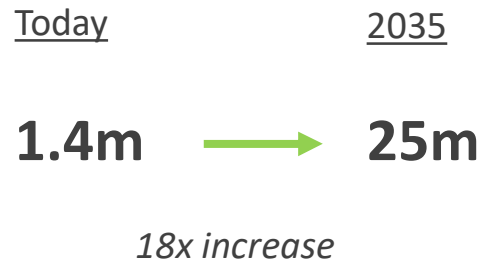


Enabling
the Net Zero
Transition
For All

To be consistently the best-performing Distribution Network and
Distribution System Operator (DSO) in the UK within an agreed set of values

Electricity networks will need to cater for a doubling of demand by 2035 in GB

The below figures are based on the latest National Grid Future Energy Scenarios publication for **Great Britain**. UKPN's regions represent about a third of the totals.



Given the scale of distribution networks, our challenge is to understand where, when and how much capacity is required to facilitate this demand to avoid misdirected or wasteful investment and unnecessary costs for customers

How we deliver the DSO roles



DNO:DSO interfaces set out in Operational Agreement



Ensuring flexibility services are used in the control room



- Ensures safety of employees and members of public
- Delivers new assets
- Manages connections
- Deliver excellent customer service
- Improves reliability and resilience



Forecasts, data, options, products and services to maximise utilisation

Supporting local authorities with their decarbonisation plans

Local Net Zero

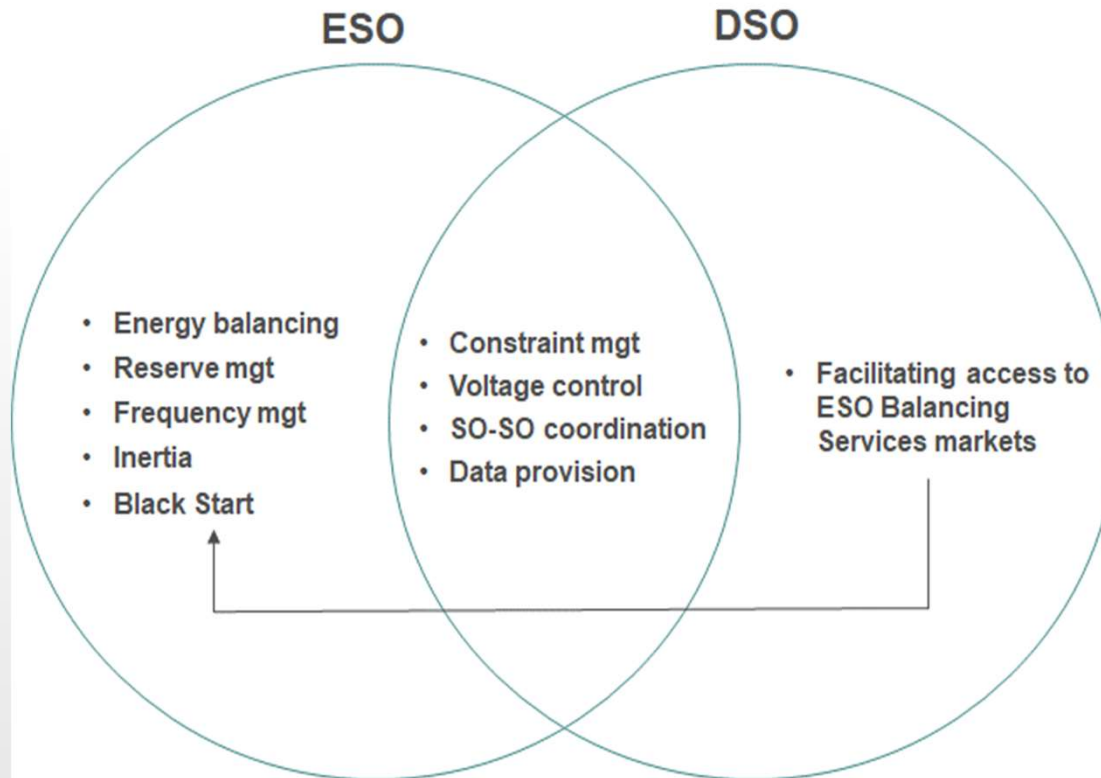


Developing flexibility products and services

Transmission and Distribution system operation



Transmission level system operation focusses on energy balance with much higher network redundancy and lower volumes of network events



At Distribution level the picture is more dynamic with a focus on network constraints

The dynamic nature and high volume of distribution networks requires fast action and clear accountabilities to restore customers