

## Help us Shape 'A Smart Grid for all'

The world is changing fast, and so is our role. UK Power Networks has already begun to change our role and transition the business into a Distribution System Operator (DSO) to continue to support the low carbon transition. We want to facilitate your low carbon plans, and we need your feedback on our plans to make this vision a reality.

### A changing energy landscape

We need to make this change, because the world is changing around us:



Great Britain has just had its first coal-free day since the 1880s



Growth in electric vehicles with over 300 electric buses expected by 2020



We've received nearly 16GW of applications for battery storage

With the rise of smart homes, smart systems and smart meters, we need to be smart about how we deliver the energy system of the future.

And we need to all of this while delivering our core objectives: providing excellent customer service, supporting the low carbon economy at the lowest possible cost, and ensuring that the lights stay on.



### What does this mean?

We are already taking steps to meet our customers needs, for today and for the future.

Whatever changes occur in the energy landscape, we believe that the core objectives of UK Power Networks' vision – keeping the lights on, providing great customer service, and lowering our costs will remain central to any future DSO role. The way in which we meet those objectives will have to adapt in a number of ways. In addition to fulfilling the core DSO objectives using new tools and techniques, the future full DSO will play an increasingly important role in delivering value for customers in the wider electricity system. This role will include: supporting whole system optimisation, enabling markets and enhancing network visibility, modelling and control.

Our journey has already begun and we have been developing our emergent DSO capabilities since 2010 when we launched our Low Carbon London innovation project. We have delivered a large and successful portfolio of innovation projects, investing £88.2m between 2010-15, which has helped us to trial and demonstrate the foundation capabilities underpinning a DSO. We continue our focus on emergent DSO capabilities within ED1, whilst investigating and trialling requirements for a full DSO role.

### Enhanced roles



### New roles



## How we intend to get there – our transition to Distribution System Operator

We have set out our DSO strategy for the next two years. We need your help in letting us know if we are prioritising the right areas, or if there is other work we can be doing to make this transition as successful as possible.

# Our DSO Strategy for 2017–2018



## 1. Facilitate cheaper and quicker connections using proven innovation

Continue rollout of Flexible DG that uses Active Network Management



## 2. Use customer flexibility as an alternative to network upgrades

Run market tenders for flexibility services such as Demand Side Response



## 3. Develop enhanced System Operator capabilities

Develop TSO – DSO Commercial Framework, DER Dispatch capability and readiness for smart meters



## 4. Collaborate with industry to enable GB wide benefits

Actively participate in industry forums to make this transition a reality



## 5. Prepare and facilitate the uptake of Electric Vehicles

Enable connections using smart solutions and ensure business readiness

## What this will deliver

These roles will allow UK Power Networks to deliver benefits directly to our customers, as well as benefit the wider electricity system:



### Keep the lights on

- Maintaining the safety and reliability of our electricity networks whilst managing the increased complexity driven by the increasing number of Distributed Energy Resources (DERs) connected to our networks.



### Provide great customer service

- Providing fast and cost-effective access to our distribution networks.
- Extending and upgrading the network to meet our customers' future needs as they engage and become active in the energy market through Electric Vehicles (EVs), smart appliances, smart meters, storage and distributed and on-site generation.
- Innovating to continually improve the customer service we provide to our customers.



### Lower our costs

- Harnessing the successful innovations and customer flexibility to optimise network investment decisions.
- Collaborating with National Grid, the GB System Operator (GBSO), to reduce total systems costs through coordinating distributed and flexible energy connected to our networks.

## What we need from you

At a time of unprecedented change, the industry needs to collaborate like never before. We now need your feedback on our DSO strategy. We also need you to continue to challenge us as we progress on this journey to full DSO status. We want to facilitate your low-carbon plans. Hold us to it.

## How to respond to this consultation

Please find on our microsite [FutureSmart.ukpowernetworks.co.uk](http://FutureSmart.ukpowernetworks.co.uk) the consultation response form that can be filled out digitally or printed out. We ask that you please send your feedback to: our DSO email: [futuresmart@ukpowernetworks.co.uk](mailto:futuresmart@ukpowernetworks.co.uk) or by post to: UK Power Networks, Futuresmart response, Newington House, 237 Southwark Bridge Road, London, SE1 6NP