

ENA Open Networks Project

Energy Networks Association

- Energy Networks Association (ENA) is the voice of the UK's energy networks, representing the 15 companies responsible for operating and maintaining the 'wires and pipes' that deliver electricity and gas to households, businesses and communities in UK & Ireland.
- ENA members serve over 30 million customers, whilst managing £62bn of assets that employ 30,000 people in communities across the country.

A pan-industry initiative: ENA Open Networks Project

- Launched in January 2017, the Open Networks Project will lay the foundations of a smart energy grid in the UK.
- The Project brings together the leading minds in the UK energy industry to transform the way our networks work - all 8 of the UK's electricity network operators (including National Grid as the System Operator), the Department for Business, Energy & Industrial Strategy and the energy regulator Ofgem, as well as leading academics, trade associations and NGOs.
- The Project will enable the UK's energy networks to move from their traditional role of delivering electricity in one direction from centralised power plants to our homes and communities, to one where they act as a smart platform that enables a whole range of new energy technologies that generate, consume and manage electricity. Local networks in particular will become more active managers of supply and demand within their area, which will require new services and interactions with the wider network.
- Many of the issues which the gas and electricity networks face are common and decisions that the government and regulator take in one area of energy policy affect others. Benefits can include more efficient processes and projects, cheaper costs for customers, better safety, simpler policy and avoiding bad practice. The Project ensures a whole system approach is achieved by consulting with a wide range of stakeholders, including the gas networks, through the Advisory Group.
- These technologies and services, when part of a smarter grid, have huge potential to not only make our electricity grid cleaner but also to:
 - Provide greater control of our energy and ability to lower costs
 - Promote greater competition in energy markets and;
 - Ensure that the operations and maintenance the energy networks is done as intelligently and efficiently as possible.
- The first phase of work will take place over the course of 2017. It will undertake a complete assessment of the parts of the electricity grid that need to change, providing options for delivering that change at the end of the year. After a period of assessment in 2018, regulations will be drafted and introduced to put them into effect.

Delivering smart energy technologies

- The change that the Project will deliver will enable the much anticipated widespread adoption of new smart energy technologies, which will benefit both consumers and network managers.
- They not only mean we will all be using and generating more electricity but that we will be using it differently:

- Renewable energy generates electricity at different times of day and under different weather conditions. These changes will mean we will be able to store and use more electricity locally in batteries. It will also mean that network companies can connect new technologies more cheaply, by avoiding having to pay to reinforce the grid for example.
- Electric vehicles will not just be re-charged from the network but they will feed electricity back into it. New technology will make it easier for people to buy and sell electricity to and from the grid and businesses will have the chance to take advantage of new services that will help them use energy more intelligently too.
- Our local electricity networks will become a platform that enables the development of a whole new market providing new products, technologies and services that will enable households and businesses greater control over their electricity use by working with service providers to allow that to happen.
- Their relationship with the national transmission network will change, as the lines and responsibilities between local and national networks become more blurred. This Project is about defining that interaction and those responsibilities.

The wider economic impact

- The outcomes of the Project will help underpin economic growth, attract investment and deliver long-term economic benefits to the UK:
 - Ensuring that the UK economy has access to some of the most affordable energy in the world is at the heart of the UK's Industrial Strategy. The Open Networks Project is about ensuring that the UK's energy networks facilitate new services and invest in their networks in the most efficient way possible, to keep our lights on in the most cost effective way – all whilst acting as a platform for new technology and services that give businesses the tools to keep their own costs down.
 - The development of new smart infrastructure by itself will deliver economic benefits across the UK, with an estimated potential of £13 billion of Gross Value Added, £5 billion of potential exports to 2050 and 8,000 – 9,000 jobs over the 2020s and 2030s associated with creating smart grids (DECC).
 - Our approach towards innovation and funding support through the regulatory framework has enabled network companies to trial smart network projects and transfer innovative solutions into business as usual to help address these challenges. This has provided a level of technical understanding that puts the UK in a strong position to develop our energy future, as well as delivering a forecast of nearly £1 billion of savings between 2015 and 2023 at a local electricity network level.

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