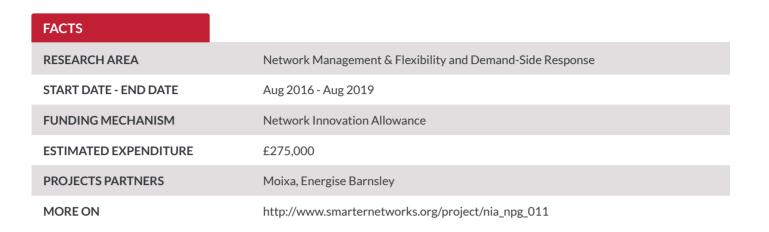
# DISTRIBUTED STORAGE AND SOLAR STUDY (DS3)



#### CONTEXT

The growth in photovoltaics (PV) systems has the potential to increase thermal loading and cause voltage issues on low voltage distribution networks, particularly where these are installed in clusters. The removal of the requirement for those installing PV systems to pay for any reinforcement required, means that those projects that do go ahead may result in a reinforcement need, funded from future DUoS charges.

#### APPROACH

The use of residential storage allows owners to make more use of their PV panels and possibly, in the future, benefit financially from ToU tariffs and trading on frequency response and demand-side markets. These technologies are commercially available now and their use alongside PV is forecast to grow, initially as retrofits and eventually as part of the initial installation.

This project investigates the impact that distributed residential energy storage can have on a distribution network operator (DNO) network and whether this impact is sufficient to require additional design guidance on the connection of PV associated with storage – which may allow more PV to be connected to the network.

### **EXPECTED OUTCOMES**

This builds on the work undertaken in our Customer-Led Network Revolution project. It seeks to develop sufficient data to determine whether it would be appropriate for network designs to take into account the presence and impact of distributed residential energy storage when considering an application to retrofit significant amounts of PV, especially on clustered installations such as social housing schemes. It will also explore the extent to which such battery systems can be used to reduce the winter evening peak load.

## LONG TERM PRIORITIES

















Network Environmental Footprint Network Reliability & Availability



Demand-side Response Network Planning & Design

Communication & Engagement

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IT-enabled Process Improvements Social Responsibility

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