

Community DSO Request for Information (RFI) Questions and Answers

The recently launched **£14.5m Community DSO project** with **Northern Powergrid, LCP Delta** and **TNEI** with support from **Ofgem's Network Innovation fund**. We aim to demonstrate a commercial and technical framework that empower communities to pursue their own decarbonisation agenda with greater levels of control over their energy and low carbon technologies. The project will develop tools for Network Operators to enable more energy communities to be connected to the network and improve network resilience.

The project will fund four energy community trials, applying the **Community DSO** approach to strengthen local energy independence and incentives for local decarbonisation, whilst delivering carbon and cost savings.

A RFI webinar was held on the May 4, 2023 by way of an introduction to the project and to let potential participants and organisations find out how they could get involved. The webinar is available to view here: <https://www.youtube.com/watch?v=afF5vXxlPQ4>

This publication aims to answer in more detail the questions raised in the session and also share answers issued via email to enquiries about the project.

To receive the RFI Document that accompanied webinar or submit additional questions, please contact us on CommunityDSO@northernpowergrid.com. Your details will be shared with the project partners for the purposes of this project.

Can you provide details of the funding available to the community groups ?

There is budget allocated within the funding from Ofgem of £7m for the four trials in this project. This funding will cover the hardware and software necessary to implement the Community DSO concept on the electricity network. We expect trials to vary in size and complexity therefore each trial would have a unique budget.

We have also included budget for some extra financial incentives to help maximise customer participation in the trials and the potential for customer compensation for disruption/inconveniences that trial could cause.

However, the project will not fund energy assets within the community (e.g., heat pumps, domestic batteries etc). If a Community Group is providing a competency role in the project e.g. Energy Community, we would expect there would be some ringfenced budget assigned by the Trial Coordinator to recompense for this provision.

Is this solely dedicated to domestic electricity demand? Would a depot of electric fleet vehicles be of interest?

We are interested in any customers who may be able to provide flexibility to the LV networks. We expect domestic customers will be key to this in the long-term, but other types of non-domestic customers (like an EV charging depot or a local business/factory) will be of interest too.

We would like there to be some variety between the four trials - for example, one might be almost entirely domestic customers whereas another might include a mix.

What scale of Energy Community are you looking for?

The largest size of the community will be dictated by the size of the Low Voltage electricity network which connects the community. These networks typically connect around 100 to 300 customers, most of which will be domestic homes.

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Referring back to the Electricity Demand chart (presented in the RFI Webinar), how do you intend to move the peak electricity demand of consumers?

We do not want to be prescriptive about how the community achieves flexibility - in fact, we hope this approach will empower communities to adopt what suits them best.

This might be communities agreeing to adopt energy efficiency measures, or to all respond to local time of use pricing, or even to invest in a communal energy storage facility. We want the Community DSO framework to work for all these possible approaches, and we hope the trials will demonstrate a wide range of possible options.

What do incentives need to be (for this concept to work)?

This project will investigate the business case for the Community DSO concept. This will provide learning on what are the incentives for a community to adopt the approach, and whether these are sufficient (do they reflect the true value to the system and to the society, and are they large enough that a community would choose to proceed).

We expect this will need to include financial benefits, but other benefits might include accelerated local decarbonisation and increased community engagement.

What is the granularity of the data on the Low Voltage (LV) side, and is there active monitoring at the level of each feeder phase (electricity network supply cable)?

We will consider the requirements for monitoring within the design of the trials, and granularity (both locational and temporal (time)) will be a factor.

The monitoring requirements may be different for the trials compared to a standard implementation.

Will the boundary for any Community DSO be at the secondary substation supplying a group of Low Voltage (LV) customers, or could it be across further secondary substations connected to the same primary substation?

A community must be centred around a Low Voltage (LV) network cell - therefore, a Community DSO will not need to consider network or customer assets further upstream than the secondary substation.

One entity could, in principle, operate multiple Community DSO, however these would each have separate interfaces with the DNO. This will not necessarily be tested within the trials.

Is the start date for Trial 1 based on other project dependencies and immovable, or is there the potential to start Trial 1 sooner if the consortia is ready to do so?

If it is possible to start Trial 1 sooner we would be interested in exploring this, however we expect this could be challenging given dependencies on other activities within the project.

If you believe you could start a trial sooner than Q4 2024 we would be interested in hearing how you would achieve this in your RFI response.

Is there any power level requirement for the trial?

The trials are focused on the 400V Low Voltage (LV) network. Most customers connected to this voltage level will have a peak demand of several kilowatts (kW) of electrical power.

The LV networks interface with the High Voltage (HV) network via secondary substations, which typically have ratings of up to 1 MVA (Mega Volt-Amp).

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Does the project consider DC (direct-current) networked microgrid solution?

We would consider this but it may depend on the nature of the solution, as one of the overall aims of the concept is to maximise the efficient use of existing network assets and minimise the need for investment.

What is the largest size of a community? Is it limited to connections on a LV node, or can it cover the whole DSO area?

Please see the answer above (marked ¹).

Can some development of control take place or must it be oven ready?

We would expect that much of the control capability for cell management would be available off-the-shelf.

Further development to align existing capabilities with the requirements of the trials will be permitted, as long as this does not pose a risk to the overall programme.

How big is the trial (electrically speaking)?

Please see the answers above (marked ²).

Will there be a preference on certain technologies, aligned with Northern Powergrid's landscape or are you open on the tools and platforms for the trials?

There is no preference for specific technologies and, in fact, across all four trials we hope to test a variety of solutions.

Has the innovation project established any framework for integrating Smart Local Energy Systems (SLES) to drive local decarbonisation milestones? Or is it still in process of developing a new framework to support the facilitation & incentivising aims?

The project aims to provide recommendations on tools and policies that would support this sort of framework, however it has not been established yet.

We will take research learnings from academic studies, previous trials and current projects investigating this area though.

Could you affirm whom are the major/primary project partners networking together to strengthen the local energy markets?

Northern Powergrid has partnered with energy consultancies LCP Delta and TNEI to deliver this Network Innovation project.

The RFI contains further information about the sorts of additional organisations that we expect to be involved in the trials.

Please email communityDSO@northernpowergrid.com to request a copy of the RFI document.

Can you offer any insights from the latest market research activity(ies)?

Our understanding of the state of the market is summarised in the final report from the Community DSO Network Innovation Allowance project which will be published in June 2023 on the ENA's Smarter Networks portal.

https://smarter.energynetworks.org/projects/npg_nia_039/