

We will be carrying out system maintenance between 6:00pm and 9:00pm on Thursday 24th August. You may not be able to access the service during this period. Please save any changes before then.

Project details

Application team

MYSOCIETY

Organisation details

Type	Public sector, charity or non Je-S registered research organisation
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Team members

Full name	Email	EDI survey
Siôn Williams	sion@mysociety.org	Complete
Zarino Zappia	zarino@mysociety.org	Complete

Application details

Competition name

Ofgem Round 3: Call for Ideas

Application name

Catalysing domestic demand-side response through conditional commitment

When do you wish to start your project?

1 September 2023

Project duration in months

3 months

Summary of your idea

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We're keen to explore how conditional commitment---something we deployed successfully in our previous Pledgebank platform---can help DNOs aggregate demand, unlock economies of scale and trigger tipping points to transform energy system transition.

With Carbon Co-op, we've developed a hypothesis -- digital tools, conditional commitment, and Community-Based Social Marketing could accelerate and deepen flexibility market participation more effectively than existing approaches, and concentrate activity geographically.

Benefits could include:

Broader participation in the market and energy transition. Leveraging existing social capital could address barriers to participation---such as mistrust of new technologies---and unlock virtuous cycles of increasing social capital.

Increased access to smart systems and low carbon technologies. Supporting the community energy sector to establish Energy Service Companies (ESCOs) and Energy Services Cooperatives (ESCoops) could catalyse installation of flexible assets and cultivate critical masses of engagement in flexibility tender areas.

Delivering net zero ambitions at lowest cost to the UK consumer. Greater uptake of local flexibility schemes could reduce the need for network reinforcement, with net savings across the energy system of up to £16.7bn per annum by 2050. This could enable reductions in consumer bills, while providing a revenue stream to offset the high capital costs of heat pumps, EVs and batteries.

Application questions

1. Previous sharing

Have you previously shared this proposal with the Energy Networks?

No

2. Background to your organisation

Background to your organisation

Since 2003, mySociety has pioneered the use of digital technologies and data that empower individuals and civil society to participate more fully in democratic processes.

Our widely-used, open source and citizen-centred digital services --- including TheyWorkForYou, WhatDoTheyKnow, FixMyStreet and the Climate Action Plan Explorer --- make data and information created by public bodies and democratic institutions widely available to citizens in practically useful ways, helping them understand and engage in democratic processes and civic life. One in three people in the UK have heard of our services, and one in five have used them at least once; in 2022 there were 30 million sessions across our UK sites.

We employ 34 staff across four practice areas: Democracy, Transparency, Community and Climate. We share and learn internationally through our TICTeC programme, which brings together civic tech practitioners and researchers to explore and better understand the impacts of civic technology.

We have a long history of collaboration, partnership and delivery with government departments, public authorities and civil society groups. Just one example of a collaborative project we've undertaken was with Tower Blocks UK, where we worked with tower block tenants, law and fire safety experts and councils to create the FixMyBlock.org toolkit.

3. Challenge

Challenge

Challenge 2: Novel technical and market approaches to deliver an equitable and secure net zero power system

4. Challenge theme

Challenge theme

Challenge 2 - Effectively managing peak demand and stability through increased flexibility including over longer time periods [multi-day and seasonal].

5. Type of Innovation

Type of Innovation

a specific piece of new technology, including analysis and modelling systems or software, in relation to which the Method is unproven

6. Problem Statement

What is the business need, technological challenge or market opportunity behind your innovation?

Distribution Network Operators (DNOs) have an increasing need to secure local flexibility on their networks. Domestic demand side response can be facilitated by aggregators---contracting with a critical mass of householders hosting flexible assets, or implementing permanent domestic demand reduction measures---with flexibility payments split between aggregator and householder.

However, the current domestic flexibility market is immature. DNOs report that flexibility tenders are under-bid for by aggregators. The market has doubled since 2020, but over half of flexibility tenders (2.6GW) went unfulfilled in 2022. The critical issue for aggregators is achieving a critical mass of householders with flexible assets within specific DNO flexibility tender areas. Householder engagement is hampered by complexity, the invisibility of local flexibility need and low trust in energy providers and unknown new market entrants.

The dominant individualised approach to home energy atomises householders, who are overwhelmed by confusing and costly changes to their homes and behaviour. At a network planning level, it hinders coordination and visibility of householder demand. A bottom-up, community-led approach could address these barriers, encouraging wider take-up and usage of flexible assets -- especially among fuel-poor and vulnerable consumers who could potentially benefit from government funding, but are currently challenging to aggregate into profitable cohorts.

7. Proposed Solution

What is your proposed solution and where will the focus of your innovation be?

Our focus is on identifying existing flexibility potential within areas of grid constraint, developing equitable mechanisms for aggregating and activating this potential and enabling further rollout of flexible assets locally.

We want to work with community energy companies and cooperatives, like Carbon Co-op, to explore the potential for a community-led approach combining innovative digital tools, conditional commitment mechanisms and Community-Based Social Marketing to overcome weak incentives for individual households to participate in flexibility markets.

Analysis of Pledgebank---a previous mySociety website that enabled conditional commitments---notes that when "a proposal reached around 30% of its target of required support to go ahead, a tipping point was reached and commitment levels quickly reached the target."

We're keen to explore challenge-based models of action to drive collective behaviour change. In addition to hyperlocal patterns of network constraints, we'd like to consider how data from Local Area Energy Plans, Distribution Future Energy Scenarios, Local Development Plans, Climate Action Plans and other relevant sources could be incorporated. This might allow householders to explore locally-specific pathways of home energy action that best match their---and their community's---requirements. Metered Energy Savings tools such as RetroMeter could also be integrated to evidence the impact of actions leveraged via this approach.

8. Proposal Benefits

How would your solution benefit the Energy Networks' users?

Leaving aside the estimation of expected social, environmental and energy supply resilience benefits of increased domestic participation in flexibility markets using the approved methodologies in the SIF Governance Document v2.1, a distinctive benefit of this approach is a **higher potential to accelerate and deepen participation**, and to **concentrate it within flexibility tender areas** relative to top-down approaches.

Consumer benefits could include:

Increased access to smart systems and low carbon technologies. Utilising neighbourhood networks to normalise action and enabling early adopters to act as trusted messengers within communities can overcome resistance to new technologies that enhance potential for participation in flexibility markets, such as smart meters. Harnessing the untapped potential for community energy organisations to establish trusted Energy Service Companies (ESCOs) or Energy Services Cooperatives (ESCoops) could help overcome barriers to participation for consumers in vulnerable situations, with flexibility payments and capitalisation of future financial benefit funding the installation of individual or shared community-scale assets.

Broader participation in the market and energy transition. By building on existing social capital in neighbourhoods and experimenting with collective

incentives, more people can be encouraged to participate in flexibility markets. Cultivating virtuous cycles of increasing social capital could unleash a step change in participation.

9. Partner Aspirations

What type of Energy Network would you like to partner with, for example a gas distribution network or electricity transmission network?

Distribution Network Operators. Vertically-integrated Energy Networks are of particular interest.

10. Other Relevant Information

Other Relevant Information

mySociety brings distinctive skills and experience from 20+ years of groundbreaking digital service delivery.

Our climate lead, Zarino, has decades of deep user research and development experience, working with government departments, councils and communities to design and deliver large-scale, user-centred solutions.

Our senior developer, Struan, possesses unique technical experience from working on TheyWorkForYou and FixMyStreet, which serve millions of users every year.

Our network coordinator, Siôn, pioneered digital innovations with a pan-European campaign coalition.

Our senior researcher, Alex, measures impact using mixed methods.

Our policy lead, Julia, brings Parliamentary advocacy experience.

Delivery partners Carbon Co-op have developed deep expertise in local flexibility services, authoring reports and feasibility studies on the subject for BEIS/DESNZ and delivering the REScoopVPP project, piloting cooperatively owned flexibility services in five European countries. They've developed a 'Community Flexibility Box' to support implicit demand side response, automating the control of high load home devices in response to OpenADR-based flexibility signals. It's open source, part of the 'PowerShaper' stack of energy system software services developed in-house:

- PowerShaper Monitor: a UK smart meter data access tool.
- PowerShaper Flex: an OpenADR-based flexibility service.
- PowerShaper Tracker: a Metered Energy Saving calculator to quantify the impact of energy efficiency interventions over time.

11. Optional Video Pitch

Optional Video Pitch

No video

SIF Governance Document

SIF Governance Document

Partner SIF Governance Document

MYSOCIETY (Lead) [Third Party \(/application/10093811/form/terms-and-conditions/organisation/83166/question/34507\)](/application/10093811/form/terms-and-conditions/organisation/83166/question/34507)
