

Executive Summary: Delivering flexibility services for hard to reach or vulnerable domestic energy consumers

Socially Green Phase 3 Market Engagement
September 2023

Executive Summary

This summary reports on the market engagement element for Phase 3 of the Socially Green project. Delivered on behalf of UK Power Networks (UKPN), Socially Green is exploring how UKPN, as part of its work in RIIO-ED2, can continue to support vulnerable customers in the transition to a net-zero energy system.

Phase 3 of Socially Green focuses on delivering more flexibility services to vulnerable customers. Inclusive flexibility is an area that has received increasing government and industry interest over the last few years. Socially Green Phase 3 seeks to develop and implement a trial of an inclusive flexibility service through which UKPN will be able to secure more flexibility services from vulnerable or hard to reach customers in future.

The objectives of this research were:

1. Engage with two groups of people involved with inclusive flexibility (flexibility service providers and vulnerable customers) to seek their opinions on a range of proposed solutions for enabling providers to obtain more flexibility from vulnerable or hard to reach customers.
2. Draw together some recommendations from both groups to inform the development of the trial of an inclusive flexibility service in the rest of Phase 3.

Research design

Survey of flexibility service providers

An online survey was emailed to a total of 52 flexibility service providers and community energy groups known to be interested in potentially delivering flexibility services in UKPN license areas. The survey sought opinions on a range of both procurement and enabling solutions for increasing access of vulnerable customers to flexibility services. It also asked about any support providers might need to increase their confidence in offering inclusive flexibility services.

17 responses were received in total (four complete, 13 partial). Data was cleaned then analysed in MS Excel and Word. Only eight responses provided insight about delivering flexibility to vulnerable customers, so only these responses are included in results.

Focus groups with vulnerable customers

A sampling frame was designed to recruit four focus groups of participants living in UKPN areas with different vulnerabilities and opportunities to benefit from flexibility services:

- Deep Impact Low Enabler (DILE) - Participants had health vulnerabilities.
- Deep Impact High Enabler (DIHE) - Participants had electric hot water (and heating).

- Wide Impact Low Enabler (WILE) - Participants were digitally constrained with low choice in household appliances.
- Wide Impact High Enabler (WIHE) - Participants were digitally confident with high choice in household appliances.

Focus groups were conducted with 24 participants online. Building on the procurement and enabling solutions discussed by flexibility providers, vulnerable customers discussed four examples of flexibility services:

1. Home Energy Action Plan (HEAP) with flexibility information and advice
2. Battery with grid services package – home installation and 2+) battery and solar PV – community installation
3. Use of surplus renewable electricity to heat hot water

A poll was also used to establish customer willingness to participate in the different examples, and attitudes towards flexibility services in general. Transcripts of focus groups discussions were analysed thematically.

Results

Flexibility service providers

Benefits and concerns

Overall, providers were more supportive for enabling (and consumer) over procurement measures. Providers felt educational solutions were more appropriate as they focused on the consumers UKPN wanted to support. Providers thought that better engagement with innovators would help to overcome inertia on flexibility in the sector and that the market could come up with interesting options, such as gamification of user interfaces.

On procurement solutions, providers flagged the prior need to build consumer trust in and awareness of flexibility services and the need for matching services to household needs: demand turn up was seen as more relevant to vulnerable consumers than demand turn down. One provider was unsure if any procurement activities could help them obtain flexibility from vulnerable customers as their service was more applicable to higher income households. There was support for common standards like HOMEflex, but acknowledgement that these should be accompanied by punitive measures. One provider felt that specific procurement rules for vulnerable customers were required.

‘[We] suspect a better route would be adopting punitive measures on providers that fail to meet their obligations under codes of conduct.

Aggregator, Tech Company & LCT Installer

Providers also gave feedback on perceived benefits and concerns around delivering flexibility services to vulnerable consumers in general. Several providers felt that services designed to meet the needs of vulnerable customers could help deliver lower costs, especially in social housing with heat pumps or households with electric water or space heating. Nonetheless, a

range of concerns were also highlighted. These included challenges identifying consumers, data and GDPR issues, and a lack of digital skills or trust on behalf of consumers.

Building confidence

Providers felt that specific funding, or a reduction in associated risks, were required to help build confidence in delivering flexibility services to more vulnerable customers. Other suggestions raised here included: better information around identification of vulnerable customers and their needs and partnerships with those already working with vulnerable groups.

Vulnerable customers

Benefits and concerns

The HEAP was the most preferred example overall. This suggests that vulnerable customers would recognise benefits from the enabling solutions favoured by providers. Most focus group participants liking the opportunity to receive advice and potentially save money.

I probably would participate in it. It seems like, obviously, it's just gonna give me ideas on what I can do and give the advice on how I can do it to cut down.

P1 DILE group

Some participants in the WIHE group were less convinced: they would rather find out about flexibility opportunities themselves. One WIHE participant said having a smart meter made it easier to track their energy usage. Some DIHE participants also were concerned about not having Economy 7 smart meters.

Although some providers suggested batteries may help to tackle both flexibility and energy efficiency solutions, the battery examples split opinion amongst customers. The home battery was relatively popular with the DILE and WIHE – who liked the backup power supply and bill-saving potential. Nonetheless, a wide range of concerns were raised about this example. Space and safety were common issues. Some participants also had doubts about complexity of operation, financial reward and contract length. The community battery was overall as popular as the home battery, but with different participant groups. Participants in the two groups with flexibility barriers (DILE and WILE) preferred the community battery, citing the lack of direct responsibility for the battery as a benefit. WIHE and DIHE participants had concerns about logistics and preferred the direct control offered by the home battery.

Feedback from vulnerable customers aligned with that of flexibility providers around the surplus electricity example. Providers suggested this would be ideal for some households with high electricity demand and this was borne out by testimony from the customers. Participants with high electricity usage (DILE and DIHE) were most keen on the surplus electricity. This reflected their need to reduce bills and the ease (for DIHE participants) with which the example would fit with their existing hot water system. This also tallied the broader perception that this offer would work well for low-income families with young children: most DIHE participants lived with children. Participants in all groups felt the example would work best in new-builds or in properties with existing immersion tanks. They feared disruption and extra costs in other property types.

Building confidence

To improve their confidence in taking up a HEAP, participants wanted more detailed information about what a HEAP would entail, including how any financial calculations were made. This reflects general concern around the finances of flexibility services. One participant also suggested delivering HEAPs via trusted intermediaries. This may help to address some concerns raised around certain household groups receiving HEAPs.

Flexibility provider accreditation or sign up to codes of conduct and endorsement of flexibility services by trusted organisations would further increase vulnerable customer confidence in flexibility offers. These findings support the suggestions of flexibility providers that an enforced code of conduct would be an effective procurement solution.

Case studies were deemed important for raising confidence in the home battery, plus the opportunity to trial the example before committing to a long contract. Participants also wanted more safety information and guaranteed financial returns: reflecting the broader concerns around minimising risk for flexibility services in general.

DIHE participants felt that using the electricity to reduce communal charges might allay some of their logistical concerns about the community battery example. Other participants wanted guaranteed bill reductions and clear live information to use alongside the offer.

As with all other examples, participants reported that more detailed information on financial savings would give them more confidence in taking up the surplus electricity example. This reflects the broader importance of finances in relation to flexibility services in general for the participant group.

Evidence from participants also indicated a number of other options for increasing uptake of flexibility services in general amongst hard to reach groups. These included: transparency around finances, emphasising different benefits of flexibility services in communications with clients, using trusted intermediary organisations and working with landlords of private tenants.

Recommendations and next steps

Drawing on the analysis of both vulnerable consumer and flexibility service provider results, the following suggestions are made to inform the design of a trial flexibility service with hard to reach or vulnerable consumers in a UKPN license area in 2023, and future flexibility services.

1. Prioritise enabling solutions that will increase awareness, understanding and trust of flexibility services amongst vulnerable customers. Provide funding for a holistic suite of support for vulnerable customers to overcome multiple barriers to adopting flexibility services, including digital support.
2. Deliver advice about flexibility sensitively, acknowledging that many customers are already doing all they can to manage and limit the energy use due to poverty.
3. Support community energy groups or other intermediaries to act as trusted messengers to vulnerable groups.

4. Clearly explain all aspects of in-home flexibility services: space requirements; safety of technologies; connectivity; installation; how financial rewards are calculated; means to check live electricity use; how customers can optimise financial savings via time of use tariffs. Reassure consumers of protections for adequate electricity or hot water supply.
5. Communicate the community and wider benefits of flexibility services: giving back to the grid; environmental benefits; energy security; continuity of supply.
6. Consider how to manage financial barriers by offering free or discounted technologies. Provide a running cost guarantee, to minimise risk and appropriately reward domestic customers for flexibility services.
7. Explore flexibility service design to support engagement with private tenants and landlords.
8. Identify appropriate solutions that fit with consumers' needs, appliance replacement timeframes and dependence on electricity supply, e.g. trial the delivery of in-home battery storage solutions that provide resilience to those medically dependent on electricity, replace immersion heaters with smart hot water tanks, or enable automation of electric heating. Consider turn up solutions as well as, or instead of turn down solutions.
9. Specify adoption of HOMEflex as a requirement of all flexibility providers UKPN procures from. Establish penalties in contracts aligned with HOMEflex, particularly to prevent false advertising, and enforce if obligations are not met.
10. Give flexibility service providers clear direction and guidance on how to identify vulnerable consumers and measure their uptake of services, such as via use of UKPN vulnerability mapping tool.
11. Share learning from trials with flexibility providers to establish best practice and build an evidence base to inform future service design. Engage with innovators to develop trial options and explore new solution areas.

Next steps

Research and suggestions can be used to inform the development of a trial flexibility service with hard to reach customers in 2023 in UK Power Network licensed areas and future flexibility procurement and service design.