SIF Discovery Round 2 Project Registration

Date of Submission

Jul 2023

Project Reference Number

10059427

Project Registration

Project Title

VIVID - Vulnerability Identification Via Informative Data

Project Reference Number

10059427

Project Licensee(s)

Scottish and Southern Electricity Networks Distribution

Project Start

Apr 2023

Project Duration

3 Months

Nominated Project Contact(s)

Simon O'Loughlin - simon.o'loughlin@sse.com

Project Budget

£104,954.00

Funding Mechanism

SIF Discovery - Round 2

SIF Funding

£94,459.00

Strategy Theme

Supporting consumers in vulnerable situations

Challenge Area

Supporting a just energy transition

Lead Sector

Electricity Distribution

Other Related Sectors

Electricity Distribution

Funding Licensees

SSEN - Scottish Hydro Electric Power Distribution Plc, SSEN-D - Scottish and Southern Electricity Networks Distribution

Lead Funding Licensee

SSEN - Scottish Hydro Electric Power Distribution Plc

Collaborating Networks

Scottish and Southern Electricity Networks Distribution

Technology Areas

Poverty

Equality, Diversity And InclusionSurvey

Yes

Project Summary

VIVID meets the aim of the specific Supporting a Just Transition SIF Challenge in the following respects:

o Providing novel and replicable approaches for identifying consumers in various vulnerable situations by analysing data available from smart meters. The project will then look at developing appropriate interventions to support these customers. We are designing the process so it could be used by others in the future, and we will ensure it is applicable GB wide. We are also liaising with UKPN, our Innovation Partner on their Helping Hands project to ensure that there is no duplication and identify opportunities for possible future collaboration and expansion

o Project VIVID will improve inclusion of vulnerable and disadvantaged consumers. From the outset the partners are focused on the outcomes for consumers in vulnerable situations, especially customers who are digitally excluded and are in danger of being left behind by technology. These are households who could be left behind in the Net Zero transition, without access to low carbon technologies (LCTs) and flexibility services

The energy network innovation involves:

o Working with a broader range of smart meter data than currently used by DNOs

o Using data to gain insight on customer vulnerability at scale, testing the process from end to end, from data acquisition through to customer engagement and assistance

o Developing new marketing and outreach activities for Priority Services Register (PSR) promotion and fuel poverty initiatives

o Finding new ways to support 'missing' consumers who are likely to be left behind in the transition to net zero

o Spotting trends in vulnerability more quickly and accurately allowing quicker targeted response

VIVID has four Discovery project partners:

SSEN-D, CGI, Quarriers and Aberdeen City Council

The main output of VIVID will be better identification of vulnerable customers. Better service delivery as a result will provide many positive outcomes including:

o Lower levels of fuel poverty following better targeted financial help

o Warmer and healthier population arising from energy efficiency activities being better directed

o Safer communities after resilience planning is provided to people identified as being less resilient

o Lower carbon emissions by reaching people who would most benefit from low carbon technologies, or who would be left behind otherwise

o Better collaboration between service delivery partners all working from the same data to deliver services more efficiently

o More investment in communities as organisations have greater confidence in providing help to the right households

Project Description

Project VIVID will develop new techniques to use smart meter and public data sets to identify which consumers would most benefit from timely, relevant and free offers of practical and financial support for from their local authority, reputable charities and responsible energy companies.

To enable identification of people who would benefit most from additional support and to see when they are likely to need help the most, we will use several innovative techniques:

· Firstly, we will unlock the trapped potential of usage data from smart meters. Until now smart meters have successfully helped customers to reduce energy usage by reminding them how much they are using; but by using consumptions data in a fresh, secure and responsible manner we can see which customers could save more money, access financial support, or benefit from free safety and resilience measures.

· Secondly, publicly available socio-economic data can combine with usage patterns to fine tune areas where services will be most

beneficial. These services will range from financial support, energy efficiency measures, help with bills, safety advice, low carbon technology information and extra help during power cuts.

· Lastly, as an electricity network operator, we are ideally placed to bring trusted partners into the Project. Being geographically tied we can combine local partners including charities and local authorities that can provide local knowledge, help to shape the information and services on offer, as well as delivering support to residents and communities.

The team of partners delivering VIVID in the Discovery Phase are second to none in the areas required:

- SSEN-D: bring consumer vulnerability and Priority Service expertise across some of the most diverse regions and communities in the UK - CGI: bring expert digital services and smart meter skills

- Quarriers: are one of the UK's leading social care charities. Renowned for their expertise in inclusion, particularly digital inclusion, and helping individuals and communities who are often left behind

- Aberdeen City Council: serve nearly a quarter of a million residents provides a representative cross section of many community types. As Scotland's third largest city. VIVID will develop a framework to bring together numerous support options in a single innovative and replicable solution.

Nominated Contact Email Address(es)

fnp.pmo@sse.com

Project Description And Benefits

Applicants Location (not scored)

Scottish Hydro Electric Power Distribution Ltd (SSEN-D)

Inveralmond House

200 Dunkeld Road

Perth

PH1 3AQ

Project Short Description (not scored)

Project VIVID will develop new techniques to use smart meter and public data sets to identify which consumers would most benefit from timely, relevant and free offers of practical and financial support from their local authority, reputable charities and responsible energy companies.

Video description

https://vimeo.com/770699670/261b5c143c

Innovation justification

VIVID will find people who, until now, haven't registered for the PSR or received the financial and energy efficiency help they are entitled to.

In the Discovery and Alpha phases, new methods of identification will allow contact with customers who have been left out of engagement, not realised the support they are entitled to, or have found it hard to ask for help previously.

VIVID will use innovative techniques to unlock the potential of smart meter data by combining it with social and local information to drive inclusion in the energy economy.

During Alpha and Beta, the value delivered by VIVID will escalate dramatically. We will see VIVID expanding, with more local authorities, charities, delivery partners and potentially other DNOs using the process to identify the right people to help and support.

The value delivered by VIVID and the interventions it enables will be measured in four ways; two quantitative and two qualitative:

1. Direct savings for customers – calculating how much customers in total save off their bills from energy efficiency measures, fuel poverty advice, supplier switching, help with tariffs and income maximisation checks

2. Social Return on Investment calculations – considering improvements in health from warmer, safer homes following VIVID interventions

3. Engagement – with stakeholders, partners and end users of the services and support delivered by VIVID.

4. Customer satisfaction surveys – allowing us to benchmark service levels, the perception of the Project and driving continuous improvement

VIVID will break new ground by combining smart meter data with other information to produce dynamic analysis for vulnerability management, allowing short term changes in behaviour to quickly be interpreted as a potential requirement for consumer assistance like never before. The work done during Discovery will assess the potential for a unique, GB-wide, vulnerability assessor tool. Evaluating this tool as an "other user "of Smart DCC means the tool could be used by a wider range of accredited organisations ensuring that societal good and is not tied to one specific DNO.

SSEN-D are leaders in the promotion and provision of Priority Services using many innovative outreach techniques. VIVID will use new technology to find 'missing' consumers and engage with then in an inclusive, non-judgemental and positive manner, CGI and

Quarriers both submitted excellent SIF pitches. VIVID combines their skills into one more efficient project to provide better outcomes for more customers at a lower cost than two concurrent projects.

Benefits Part 1

Environmental - carbon reduction – direct CO2 savings per annum against a business-as-usual counterfactual
Environmental - carbon reduction – indirect CO2 savings per annum against a business-as-usual counterfactual
Financial - cost savings per annum on energy bills for consumers
Financial - future reductions in the cost of operating the network
New to market – products, processes, and services

Benefits Part 2

Financial - future reductions in the cost of operating the network

DNOs conduct extensive engagement and promotion for the PSR which has significant time and cost implications. Using the VIVID solution would identify households most at risk automatically, and facilitate rapid offers of financial and practical support, saving time and money. VIVID should reduce costs in engaging, recruiting and maintaining the PSR by using automated data analysis to find previously hidden customers help them register for Priority Services.

Financial - cost savings per annum on energy bills for consumers

Customers identified by VIVID will get faster and more targeted advice on possible interventions including energy efficiency, tariffs, switching, financial support, grants and debt management. The positive impacts will be calculated as a direct saving, a social return on investment and potentially by monitoring smart meters allowing further engagement to achieve more energy savings and further cost reductions.

New to market – products, processes, and services

As DNOs and suppliers look to use smart meter data for vulnerability identification VIVID will allow this to be done in a consistent, joined up manner by creating a common GB-wide vulnerability assessor tool, using smart meter data for societal good. This would also contribute to the idea of a common Consumer Consent Portal being investigated and part of Ofgem's digitalisation projects. Operating a central service should allow consistency and cost reduction as duplication of effort is removed. VIVID will assess how vulnerable groups experience energy exclusion and trial practical solutions to help people understand and access digital information on energy support, transition and Net Zero.

Environmental - carbon reduction – indirect CO2 savings per annum against a business-as-usual counterfactual

VIVID will open conversations about Low Carbon Technologies (LCTs), promote energy reduction and carbon savings. Examples include spotting geographical clusters which would benefit from communal LCTs or usage patterns indicating, for example that subsidised PV panels would be more cost effective than debt and vulnerability management. Behavioral impacts of LCTs may also be monitored and combined with information from existing SSEN innovation projects, such as Vulnerability Future Energy Scenarios - VFES, Smart and Fair with the Centre for Sustainable Energy, and HOMEflex, brining fairness to Household or Microbusiness Energy flexibility fairness. Quarriers will proactively help less confident or tech savvy customers to understand and adopt LTC, helping customers who would otherwise be left behind to play an active role in net zero and energy flexibility.

Project Plans And Milestones

Project Plan and Milestones

The work in the Project has been divided into four core work packages:

WP1 Project Management: Led by SSEN-D. Co-ordination of all activities and discovery deliverables, project performance, risk management and reporting. The key deliverable from this stage will be final Discovery report.

WP1 Costs = £12,554.40

WP2 Consumer: Led by Quarriers. Outline key scenarios to be achieved in vulnerability management. Define customer selection approach, outline privacy and data protection requirements. Identify stakeholder groups for each of the phases and to ensure that the need and appetite is there for further work to be warranted

WP2 Costs = £23,974

WP3 Technical: Led by CGI. Break down use cases and ambitions for the evaluation of smart meter data into a clearly defined technical design for a solution to achieve The Project aims. Identify data requirements and analytic methods needed to achieve the use cases. Desk based validation of solution assumptions with anonymised smart meter test data.

WP3 Costs = £45,886

WP4 Regulatory: Led by CGI. Identify regulatory constraints and potential market models which can address them, review regulatory alignment of energy market direction of travel and along with smart meter and data use perception.

WP4 Costs = £22,540

Details of success criteria, deliverables and cost breakdown for each work package are included in the attached project management template.

Key risks are in the areas of data privacy, data management, and public perception of smart meters and the use of data for social good. These will be investigated during Discovery. These risks will be tracked during all phases of the Project, along with appropriate mitigation which will be reviewed and agreed with stakeholders. Regular review of the risk profile will be part of ongoing project management.

Regulatory Barriers (not scored)

The data privacy regulations for smart meter data use are necessarily relatively strict to protect consumers. All partners will comply with DPA 2018 and UKGDPR and already have structures in place to ensure compliance. Within these legislations we will look to maximise the use of smart meter investment for societal good. The ability to maintain consent for use of customer smart meter data in an efficient manner and the potential for vulnerability assessment to be a specific legitimate interest for the use of data will all be considered.

During Discovery, the Project will investigate the issues from specific data sets and flows between stakeholders required to enable the vulnerability use cases. At this more detailed level of analysis the Project will identify areas of regulation and policy which may hinder the solution and make recommendations for potential improvements, including potentially trialing some alternative approaches during Alpha and Beta phases. Any potential requirement for derogations will be highlighted at the earliest moment.

This project will also aim to contribute to ongoing discussion, via the Digitalisation team at Ofgem, on the creation of a common Consumer Consent Portal.

Commercials

Route To Market

The “Other User” method to access smart meter information proposed by VIVID is a standardised and proven means to access smart meter data by non-supply or distribution companies, that is already in operation with SmartDCC. Hence, the route to Business as Usual (BaU) operation is very clear for this portion of the solution and all existing market competition is maintained.

Solutions will be built for Beta against live smart meter data, linking into real vulnerability management process and real customers. In addition, the Beta trial will be at scale demonstrating solution will work for BaU.

A BaU version of the VIVID solution would have distributed ownership; the Other User service would ideally sit outside DNO or supplier control, each DNO, supplier, third sector organisation would continue to own their own vulnerability service whilst sharing knowledge from this project. The project will look to better understand the interface and information flows to support the best options for consumers.

The process will be inclusive and not leave anyone behind. For those with additional support needs the digital divide is growing. People who depend on in-person support will be left behind, without intervention. VIVID will promote digital inclusion within the energy economy for such groups.

Quarriers will use their experience in addressing digital exclusion to develop digital inclusion partnerships in the context of energy networks and net zero transition. Focusing on supporting people with additional support needs and those with barriers to digital access. Resulting in the transition to a digital customer support model, co-produced by those who will access it.

People with additional support needs

• can safely and confidently manage energy preferences online

• can access energy and net zero transition learning, increasing engagement and understanding

• are supported to engage in discussion of energy preferences through improved customer service

Co-ordination between energy networks and stakeholder groups will be significantly improved, allowing for an efficient approach for identifying, supporting the most vulnerable and disadvantaged customers. Ensuring these groups of society are heard, supported and included would allow for better support in all aspects of a just energy transition. Quarriers will facilitate this as accessible, inclusive and replicable programme.

Additional new routes to market include energy efficiency advice, LCT products and resilience services to help people in emergency situations. Examples being:

• insulation and efficient heating/lighting products

• solar panels, heat pumps, smart white goods, battery storage

• generators, batteries, flood defenses, blankets, flasks, telecoms etc

Intellectual property rights (not scored)

To ensure clarity is provided to the Project partners, UKRI and Ofgem regarding the intellectual property (IP) landscape, the Project is using an IP register to track the Background IP provided to the Project, the Foreground IP the Project generates, and the use and access rights to all this IP.

The main contract governing the Project (the Collaboration Agreement) will include detailed, mutually agreed terms governing IP that are in line with the SIF Governance Document. For the Discovery Phase, all the IPR arrangements will follow the default recommendations of Chapter 9 SIF Governance Document.

Costs and value for money

VIVID is a lean project given the impacts it will deliver, potentially GB wide. Costs will fall well within the £150,000 SIF Discovery budget, at £104,954.40

Once the 10% contribution from SSEN-D has been deducted the funding required is **£94,459**

The costs per project partner are split as follows:

SSEN-D: £13,190.96 a split of **14%**

Quarriers: £11,160 a split of **11.8%**

CGI: £59,908 a split of **63.4%**

Aberdeen City Council: £10,200 a split of **10.8%**

We have allowed for time and for travel of stakeholders who may be required during Discovery.

Based on existing fuel poverty outreach projects the cost savings for customers who received advice or interventions on energy efficiency via the VIVID project will result in reduction in energy costs of up to £4.00 for every £1.00 invested. It is hoped that similar benefits will results from the other interventions developed in the project.

The SROI will be higher than this. An accurate SROI will be calculated during Discovery, at the beginning and end of Alpha, the start of Beta and ongoing annually after that. An estimation of SROI based on existing SSEN-D projects between 2019 and 2022 is between £10.00 and £20.00 for every £1.00 spent.

We will also measure the Net Present Value (NPV) of activities conducted by VIVID.

Document Upload

Documents Uploaded Where Applicable

Yes

Documents:

10059427_VIVID_ProjectDirection.pdf

End of Phase for VIVID Discovery.pdf

VIVID Discovery Show and Tell FINAL.pdf

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This project has been approved by a senior member of staff

☑ Yes