Notes on Completion: Please refer to the appropriate NIA Governance Document to assist in the completion of this form. The full completed submission should not exceed 6 pages in total.

NIA Project Registration and PEA Document

Date of Submission

Apr 2024

Project Reference Number

NIA_SPEN_102

Project Registration

Project Title

PSR Resilience System (ED-2)

Project Reference Number

NIA_SPEN_102

Project Licensee(s)

SP Energy Networks Distribution

Project Start

April 2024

Project Duration

2 years and 4 months

Nominated Project Contact(s)

Robbie MacQuarrie

Project Budget

£300,000.00

Summary

The project aims to create a method to improve the support offered to consumers in vulnerable situations by developing an efficient vulnerability system. The system will look to upgrade the PSR to be more accurate in the quality and content of the data held to enable better manage of consumers in vulnerable situations and extend the details of characteristics and needs of consumers beyond the current PSR codes.

Preceding Projects

NIA_SPEN_0086 - PSR Resilience System

Third Party Collaborators

MorganAsh

Centre for Energy Equality

Energy Innovation Centre

Nominated Contact Email Address(es)

innovate@spenergynetworks.co.uk

Problem Being Solved

The PSR is a free service provided by utilities to offer additional support to customers who have either identified themselves or have

been identified by their utility provider as being in a vulnerable situation. The qualifying criteria to be included on the PSR is broad and covers customers who are temporarily in vulnerable situations.
It is essential for DNOs to maintain an accurate PSR to ensure consumers in vulnerable situations can be prioritised during both planned and unplanned power outages.
The current methods to validate PSR records is both time consuming and resource intensive.

Method(s)

The project will deliver additional value and innovation through:
1. Data Analysis and Cleansing: Utilising a novel data processing methodology that combines existing PSR data with external data sets to remove inconsistent and erroneous data, creating a confidence score against each record that will enable records with a low confidence score to be reviewed.
2. Vulnerability and Resilience Management System; Delivery of an innovative, enduring system that engages with consumers to assess, collate and report on consumer characteristics, and implement treatments for vulnerable consumers in proportion to the severity of their characteristics and circumstances. This will improve on current processes as it will enable a multi-media contact process that allows consumers to better engage with their energy network, deliver an objective methodology for assessing resilience of consumers to ensure those who need the most support are better prioritised and appropriate support is identified for each vulnerability situation.

Scope

1. Discovery: to understand and detail specific project requirements and build specifications for the various elements
2. Data Analysis and Cleansing: to transfer and remove inconsistent data. To highlight consumers who have had a change in circumstances that may contribute to invalid details which need updated
3. Data Enrichment: Obtain customer contact data that is not currently held in the PSR system
4. Resilience System Development: To develop a Resilience System to be suited to DNO customer data. Establish the customer characteristic elements required, build these into the Resilience Rating, and establish the appropriate rating for each element
5. Validation with Consumers: Test the system with consumers, test the engagement, and the "Resilience Rating" and make any changes required for a future larger scale BaU roll-out.

Objective(s)

- Upgrade PSR to be more accurate in the quality and content of the data held to enable better management of consumers in vulnerable situations
- Extend the details of characteristics and needs of consumers beyond the present PSR codes
- Provide the ability to automatically update PSR data
- Develop objective measure of vulnerability through a "Resilience Rating".

Consumer Vulnerability Impact Assessment

This project has been input into the ENA Consumer Vulnerability Impact Assessment Tool and there are no negative impacts on consumers in vulnerable situations therefore there is no need to take mitigation measures.

Success Criteria

- Validate PSR data by cleansing and cross checking against existing publicly available and commercial data sets
- Data validation checks conducted, for data integrity, reducing erroneous, incomplete and duplicate data
- Improved understanding of consumer characteristics and vulnerability, resulting in better targeting and hence efficiency in supporting consumers in vulnerable situations
- Determine and demonstrate the effectiveness of consumers' resilience rating.

Project Partners and External Funding

The project is faciliated through the EIC.

Potential for New Learning

- Develop a new approach to managing PSR data, based on individual consumer characteristics
- Develop how proactive customer contact can support PSR data validation and new PSR services for all customers
- Develop how a method for scoring resilience could help better prioritise services
- Develop a series of detail treatments on what to do in specific circumstances - that can be automatically implemented per each consumer characteristics and circumstance.

Scale of Project

The Resilience System will be trialled with 200,000 PSR customers.

Technology Readiness at Start

TRL6 Large Scale

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

The project will be focused on SP Energy Networks data, however will be replicable across other DNOs.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

£300,000

Project Eligibility Assessment Part 1

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations

Please answer **at least one** of the following:

How the Project has the potential to facilitate the energy system transition:

N/A

How the Project has potential to benefit consumer in vulnerable situations:

Improving the accuracy of PSR data will allow more effective communication with consumers in vulnerable situations. By improving the understanding of individual needs will also allow better targeting of support and hence directly improve the service offered to consumers in vulnerable situations.

Requirement 2 / 2b

Has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

Please provide an estimate of the saving if the Problem is solved

This is a research project to develop a resilience system and test the viability of using the system to improve communication with consumers in vulnerable situations and improving testing approaches to automatically cleanse and validate PSR data.

Please provide a calculation and/or description of the expected benefits of the solution

N/A

Please provide an estimate of how replicable the Method is across GB

The method developed for validating and cleansing PSR data, and the development of a Resilience System for consumers in vulnerable situations, will be replicable for other DNO's to use.

Please provide an outline of the costs of rolling out the Method across GB.

All DNO's could use the results from PSR Resilience System to automatically cleanse and validate PSR data. The Resilience System will be designed for PSR data and therefore replicable across all DNO's.

Requirement 3 / 1

Involve Research, Development or Demonstration

Projects must have the potential to have a Direct Impact on a Network Licensee's network or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

☐ A specific piece of new (i.e. unproven in GB, or where a method has been trialled outside GB the Network Licensee must justify repeating it as part of a project) equipment (including control and communications system software).

☐ A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)

☐ A specific novel operational practice directly related to the operation of the Network Licensees system

☐ A specific novel commercial arrangement

Involve Research, Development or Demonstration - Please select all that apply

☐ A specific piece of new equipment (including monitoring, control and communications systems and software)

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

☑ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)

☐ A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology

☐ A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution

☐ A specific novel commercial arrangement

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

The learning generated will enable new methods to validate and cleanse PSR data, while also developing an innovative approach to better support consumers in vulnerable situations.

N/A

Is the default IPR position being applied?

☑ Yes

Project Eligibility Assessment Part 2

Not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed. Networks must explicitly mention similar projects that they have considered and how these differ.

Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

A search of the ENA smarter network portal and publication on the ENA huddle portal has revealed no other projects carrying out this specific work.

If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

N/A

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

There is an opportunity to improve the current PSR validation methods to ultimately improve the accuracy of PSR records. The Data Accuracy element of the project is innovative by utilising internal data and external open-source data to provide confidence scores for individual PSR records.
The development of a real-time monitoring of consumer needs, developing a methodology for assessing resilience of consumers to ensure those who require the most support are prioritised, is an innovative approach to supporting consumers in vulnerable situations.

Relevant Foreground IPR

N/A

Data Access Details

N/A

Please identify why the Network Licensees will not fund the project as a part of it's business and usual activities

The risks associated with both the cleansing of PSR data and developing a vulnerability and resilience management system are

currently preventing the widespread deployment of the solution due to the unknown effectiveness of both methods. Therefore a trial is necessary to understand if the system is suitable as a long term solution for capturing needs of consumers in vulnerable situations and if PSR data can be automatically cleansed using multiple data sources.

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks (e.g. commercial, technical, operational or regulatory) associated with the project

The associated risks with the uncertainty around the feasibility of such a solution is why the project can only be undertaken with the support of NIA.

This project has been approved by a senior member of staff

☑ Yes