

NIA Project Annual Progress Report Document

Date of Submission

Jul 2026

Project Reference Number

NIA_UKPN0120

Project Progress

Project Title

PULSE (Patterns of Usage and Load for Support Evaluation)

Project Reference Number

NIA_UKPN0120

Project Start Date

March 2026

Project Duration

1 year and 10 months

Nominated Project Contact(s)

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Scope

The project will be split into three work packages, with relevant activities split across the work packages.

Work Package 1 (WP1), Proof of Concept (PoC)

Project Set-Up and Survey Design: Following project kick-off, any final set-up will be completed and a survey for qualitative data collection designed.

Data Collection and Ingestion: Twelve months of historical data and ongoing live data will be ingested and processed. Customer satisfaction and sufficiency of the data being collected will be assessed on an ongoing basis.

Model Development: In parallel to data collection, the data will be analysed, and an estimation model will be developed and validated. The model will analyse the data to estimate impact of fuel poverty delivery services.

Data Validation: Given the myriad factors that can affect consumption data, data validation will be carried out to confirm that the model correctly identifies patterns of self-disconnection and self-rationing. This validation will take the form of a follow-up survey to add qualitative detail to the patterns identified in the model analysis of consumption data.

The scope of WP2 and WP3 is dependent on the learnings and success of WP1 and the proof-of-concept.

Work Package 2, Scoping and (Optionally) Developing a BAU solution

Scoping requirements for a BAU solution: Alongside the PoC, a BAU solution for consent management and a storage solution for household level consumption data will be scoped.

Develop BAU solution: Subject to the success of the PoC, we will develop a consent management platform and data storage solution, assuming that the concept has been proven in WP1 and there is value in progressing the solution.

Work Package 3, (Optional) Predictive modelling

Predictive Modelling: Subject to the success of the PoC, there is the option to develop a predictive algorithm which will enable insights to be extrapolated beyond surveyed customers. Outputs from this will also be integrated into the live tool.

Closedown: A report summarising the predictive modelling methodology, key findings and recommendations, and wider implications for industry best-practice will be written and shared – this will enable industry-wide learning, allowing organisations to enhance how they identify and support customers in vulnerable circumstances.

Objectives

Sign up a sufficient number of customers to validate the impact of the proposed methodology, ideally allowing observations during the winter period.

Re-engage a proportion of participants to support validation of emerging findings.

Determine the percentage of households with smart meters that exit or avoid fuel poverty due to fuel poverty interventions to draw out the true impact of fuel poverty intervention programmes.

If the proof of concept proves viable, integrate model outputs into existing consumer vulnerability tool / dashboard as appropriate.

Success Criteria

When delivering the project, success will be evaluated against the following criteria:

Data readiness: Successful acquisition and pre-processing of smart meter, survey, and contextual data. Developing a functional algorithm/model that can:

Identify self-disconnection and self-rationing behaviours.

Detect before/after behavioural changes following fuel poverty interventions.

Practical applicability: Demonstrated potential for integration into UK Power Networks' systems and the potential to deliver household level insights.

Model outputs which can successfully integrated into the appropriate consumer vulnerability dashboard to display useable insights into the effectiveness of the programme.

A clearly defined consent management and data storage approach is produced, meeting the requirements set by internal stakeholders.

Dissemination of learnings: Evaluate impact on SROI and demonstrate accuracy of methodology. Disseminate learnings to provide an evidence-based assessment methodology and comparison point for SROI proxies.

Performance Compared to the Original Project Aims, Objectives and Success Criteria

The project was launched in late March 2026 and has so far been focused on mobilisation. The project team have started to develop the survey and underlying data architecture to support the data collection process. The project is progressing as anticipated.

Required Modifications to the Planned Approach During the Course of the Project

No changes required to date, the project is progressing as anticipated.

Lessons Learnt for Future Projects

The project started in late March 2026; there are no lessons learnt to be logged for this regulatory period.

Note: The following sections are only required for those projects which have been completed since 1st April 2013, or since the previous Project Progress information was reported.

The Outcomes of the Project

The project started in late March 2026; there are no outcomes or insights to be logged for this regulatory period.

Data Access

Any data gathered during the project such as trial data and analysis, technical feasibility notes, and use case documentation will be stored securely within UK Power Networks' internal systems.

Where appropriate, de-sensitised data and non-confidential findings will be made available to interested parties in alignment with our Data Sharing Policy. UK Power Networks recognises that Innovation projects may produce network and consumption data, and that this data may be useful to others. This may be shared with interested parties, whenever it is practicable and legal to do so, and it is in the interest of GB electricity customers. In accordance with the Innovation Data Sharing Policy, UK Power Networks aims to make available all non-personal, non-confidential-sensitive data on request, so that interested parties can benefit from this data.

To view UK Power Networks' Innovation Data Sharing Policy, please access it through our innovation microsite:

<https://d1oyzg0jo3ox9g.cloudfront.net/app/uploads/2025/11/UKPN-Innovation-Data-Sharing-Policy.pdf>

Foreground IPR

The data created, outputs, and deliverables produced as part of the project will conform to the default treatment of IPR. No foreground IPR has been developed in this regulatory period.