Energy Networks Innovation Process

Annual Project Progress Report Document

The voice of the networks

Date of Submission: 16/06/2021

Annual Project Progress Report Document

Notes on Completion: Please refer to the NIA Governance Document to assist in the completion of this form. Please use the default font (Calibri font size 10) in your submission. Please ensure all content is contained within the boundaries of the text areas.

Project Title (*This cannot be changed once registered*)	Project Reference
Equal Electric Vehicles	NIA_SSEN_0049
Funding Licensee(s)	**Project Start Date**
Scottish Hydro Electric Power Distribution Southern Electric Power Distribution	October 2020
Project Duration	**Year**
18 months	2021
Nominated Project Contact(s)	
SSEN NIA Programme Delivery Manager – Colin Mathieson	

1. Scope

The scope of the project is to carry out an initial desktop study of the enablers and barriers for disabled motorists as well as differences in charging behaviour. The project will recommend and develop an innovative solution to overcome challenges including trialling wireless charging technology. This project will also investigate the changes and new support and services to be offered to vulnerable customers by DNO.

2. Objective(s)

1. Identify the enablers and barriers for EV adoption for drivers with disabilities, along with recommending traditional and innovation solutions for making EV and EV infrastructure more accessible.
2. Trial the use of wireless EV charging solutions to consider contactless charging for disabled and otherwise vulnerable customers.
3. Investigate V2G technology for offering at-home resilience for vulnerable customers.
4. Explore how the services that DNOs offer need to adapt to support vulnerable customers adopting EVs.
5. Explore how best to data share between DNOs, OEMS and organisations like mobility to facilitate vulnerable customer’s needs.
6. Develop a cost benefit analysis to understand the viability of wider roll out and adoption of innovative solutions.

3. Success Criteria

If the project delivers the anticipated learning to GB stakeholders, then it is deemed successful.

4. Performance compared to the original project aims, objectives and success criteria

Details of how the Project is investigating/solving the issue described in the NIA Project Registration Pro-forma.
Details of how the Project is performing/performed relative to its aims, objectives and success criteria.

Project background

There are over 2.3 million disabled parking badge holders in the UK, with approximately 630,000 vehicles registered through the Motability Scheme - a scheme focussed on vehicle leasing for motorists with disabilities and their care providers. Disabled motorists are often overlooked with regards to EV charging. There is a need to investigate and understand the enablers for both public and domestic charging solutions, not just for drivers with a disability but also for a wider range of potentially vulnerable customers such as elderly people or those with chronic illnesses.

Project performance

Following registration of this project the following has been achieved;

1. **Identify the enablers and barriers for EV adoption for drivers with disabilities, along with recommending traditional and innovation solutions for making EV and EV infrastructure more accessible.**

The project has appointed Impact Research to investigate the enablers and barriers for drivers with disabilities adopting EVs. Stakeholder research is still underway, however to date there has been a literature review and two focus groups held which included 14 different companies and organisations which included local government, charities and independent start-ups leading the way in either accessibility, technology or electric vehicles. The findings to date have identified the following barriers:

Access to charge points - The physical act of using an EV charge point can be a real challenge for those with mobility problems, with different considerations depending on the charge point location.

Cost - The initial outlay of EV is applicable to all drivers. However, driving can already be more expensive for mobility-impaired drivers than for able-bodied drivers due to adaptions needed to the car, increased insurance costs, and additional mobility equipment needs.

Psychological barriers and range anxiety - Through the literature review, we have identified that mobility-impaired drivers are likely to be more risk averse than able-bodied drivers and are more likely to be affected by EV range anxiety. Being able to travel independently is key, and so journeys are often subject to a higher level of planning and preparation than for able-bodied drivers. Uncertainty about where and when they may be able to charge is a key barrier for many mobility-impaired drivers. The amount of time out of their day needed to find a charger and charge their car is a further unknown.

Lack of information on accessible charging - Specialist organisations such as Motability, Disabled Motoring UK and publications such as UCan2 the driving magazine all provide information on driving EVs. However, this information is not presented unless drivers have reached the consideration stage of their EV decision making journey, and actively search for it. In addition to this, many mobility-impaired drivers do not consider themselves disabled as such and wouldn't necessarily be exposed to specialist messaging. Without more widespread knowledge of and exposure to EVs, assumptions that EV charging isn't practical for these mobility-impaired drivers will be difficult to address.

The project is undertaking individual stakeholder interviews with members from Disabled Motoring UK as well as an online survey to further validate these findings and identify enablers for drivers to adopt EVs.

The first stage report will be available in May 2021.

2. **Trial the use of wireless EV charging solutions to consider contactless charging for disabled and otherwise vulnerable customers.**

   This is stage 2 of the project which will not begin until May 2021.

3. **Investigate V2G technology for offering at-home resilience for vulnerable customers.**

   This is stage 2 of the project which will not begin until May 2021.

4. **Explore how the services that DNOs offer need to adapt to support vulnerable customers adopting EVs.**

   This is stage 2 of the project which will not begin until May 2021.

5. **Explore how best to data share between DNOs, OEMS and organisations like mobility to facilitate vulnerable customer's needs.**

   This is stage 2 of the project which will not begin until May 2021.

6. **Develop a cost benefit analysis to understand the viability of wider roll out and adoption of innovative solutions**

   This is stage 3 of the project which will not begin until Summer 2021.

5. Required modifications to the planned approach during the course of the project

The Network Licensee should state any changes to its planned methodology and describe why the planned approach proved to be inappropriate. Please confirm if no changes are required.

N/A

6. Lessons learnt for future projects

Recommendations on how the learning from the Project could be exploited further. This may include recommendations on what form of trialling will be required to move the Method to the next TRL. The Network Licensee should also state if the Project discovered significant problems with the trialled Methods. The Network Licensee should comment on the likelihood that the Method will be deployed on a large scale in future. The Network Licensee should discuss the effectiveness of any Research, Development or Demonstration undertaken.

The stakeholder research is still being gathered. Once we have validated this research, the project will investigate how we can use this learning to develop both traditional and innovative solutions to enabler drivers with disabilities and mobility issues to adopt EVs.

7. The outcomes of the project

When available, comprehensive details of the Project's outcomes are to be reported. Where quantitative data is available to describe these outcomes it should be included in the report. Wherever possible, the performance improvement attributable to the Project should be described. If the TRL of the Method has changed as a result of the Project this should be reported. The Network Licensee should highlight any opportunities for future Projects to develop learning further.

The first stage report will be available in May 2021.

8. Data Access & Quality Details

A description of how any network or consumption data (anonymised where necessary) gathered in the course of the Project can be requested by interested parties. This requirement may be met by including a link to the publicly available data sharing policy.

See Network Innovation Competition (NIC) and Network Innovation Allowance (NIA) Data Sharing Procedure at https://www.ssen.co.uk/InnovationLibrary/Distribution/

9. Foreground IPR

A description of any foreground IPR that have been developed by the project and how this will be owned.

N/A