NIA Project Registration and PEA Document

Date of Submission

Aug 2016

Project Reference Number

NIA_WPD_022

Project Registration

Project Title

Carbon Tracing

Project Reference Number

NIA_WPD_022

Project Licensee(s)

National Grid Electricity Distribution

Project Start

August 2016

Project Duration

1 year and 8 months

Nominated Project Contact(s)

James Bennett

Project Budget

£327,000.00

Summary

There will be thorough investigation of the numerous candidate data sources that will be required in order to make the app and website work to deliver an accurate picture of the generation breakdown and associated information. Some of this data is sourced internally (true load, solar response profiles, substation details, attached local generation) while weather, geographic information, almanac information and national generation mix are all externally to be sourced – some in real-time via live data feed/API.

The app and website will be rolled out across all of WPD's areas. In order to obtain access to interested customers we will be partnering with the Carbon Trust. They will be actively working with WPD and the customers to manage interest groups and trials with customers to monitor uptake with us throughout the project.

The Carbon Trust carried out their research on the project as part of their scope of work. This concluded that an agile approach is more appropriate to the development of an app and the website. In order to achieve this it is necessary to reshape the originally foreseen delivery schedule and carry out the activities over a longer timescale. The project objectives remain exactly the same, although the approach has been adjusted.

Because the approach Is changing to an agile delivery method over the course of a longer duration the budget is increasing to £327k. This includes the additional digital marketing campaign costs.

Third Party Collaborators

Carbon Trust

Problem Being Solved

Giving visibility of generation mix to customers.

Method(s)

There is currently no mechanism for telling a customer how the generation in their area is made. We feel that by providing a mechanism for them to find out that this will act as:

- A catalyst for more information about generation
- Apotential new avenue into the community and those customers with an interest of where the energy they use comes from.

In addition we also feel that this project could also help with the engagement and use of Demand Side Management- allowing customers to see the impact of using their LCTs and possibly shifting their load.

Scope

There will be thorough investigation of the numerous candidate data sources that will be required in order to make the app and website work to deliver an accurate picture of the generation breakdown and associated information. Some of this data is sourced internally (true load, solar response profiles, substation details, attached local generation) while weather, geographic information, almanac information and national generation mix are all externally to be sourced – some in real-time via live data feed/API.

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Objective(s)

The project will address a perception that customers are increasingly interested in how their energy is made up. We continue to see the adoption of Solar and Wind generation and as such being able to tell a customer what the mix is like at any point in time is deemed valuable. Having created an app and website we will then test with local groups before a cross WPD implementation enabling customers to see their generation mix and allow for their own generation as well.

Once this is available to all, we will then measure interest across the WPD area.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

Success will be measured within the trials and then monitored once live.

We will also be monitoring how we can make the calculation more accurate over time.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

We will trial this with customers first and if possible across more than one geographic area. This is because we believe that we should test the premise of the project fully first to see what the level of interest is in this deliverable. Failure to do this could mean that we miss an important validation of the project. It is though our intention that this should be as a minimum across all WPD areas.

Technology Readiness at Start

Technology Readiness at End

TRL2 Invention and Research	TRL3 Proof of Concept

Geographical Area

We intend to trial in as many areas as possible but as mentioned above, we want this to be across all areas from the outset.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

£294,641

Project Eligibility Assessment Part 1

There are slightly differing requirements for RIIO-1 and RIIO-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RIIO-2 / RIIO-1).

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations (Please complete sections 3.1.1 and 3.1.2 for RIIO-2 projects only)

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:

n/a

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 (RIIO-1 projects only)

There is no direct monetary saving to customers by providing this solution. The benefit is expected to derive from customers being more aware of where generation comes from as a function of time of day/year with this capability therefore providing them with information to allow informed behavioral adjustments they may then make. This is all about making informed choices and enablement.

Please provide a calculation of the expected benefits the Solution

N/A

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

All network licensees could use this application if it is proven to be successful. Costs are relatively small as it is about the development of an app/website. Conceivably many customers across all geographies could use the Method to inform their energy usage or perhaps invest in LCTs on the back of the information provided.

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

This could be rolled out across all GB and this project would mean that other DNO's would ostensibly be saved the costs of developing the underlying calculation.

Requirement 3 / 1

Involve Research, Development or Demonstration

A RIIO-1 NIA Project 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

RIIO-2 Projects

☐ 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

Parties will be able to take the learning and develop their own app/website for their geographical area. In addition they will be provided with the detailed design of the app and website.

Parties will also be able to see the specific customer feedback from trials.

Or, please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the project (RIIO-1 only)

n/a

☑ Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees

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.

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

n/a

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

n/a

Relevant Foreground IPR

n/a

Data Access Details

n/a

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

n/a

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

n/a

This project has been approved by a senior member of staff

☑ Yes