Scottish and Southern Energy
Power Distribution

Date of Submission

July 2013

NIA Project Registration and PEA Document

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.

Project Registration

Project Title		Project Reference
Sustainable Commercial Model For Networks		NIA_SHET_0001
Project Licensee(s)	**Project Start Date**	**Project Duration**
Scottish Hydro Electric Transmission	Jun 2013	22 Months
Nominated Project Contact(s)		**Project Budget**
George Cobb		£499,000

Problem(s)

The lack of a clear and consistent commercial approach to quantify and analyse the social and environmental impacts of network developments alongside the economic costs and benefits and illustrate their quantification in a transparent way has led to overreliance on subjective interpretation by TOs and external bodies including planning authorities and potential objectors. This, in turn, has lead to significant delays in projects while these impacts are debated, resulting in an increased cost to deliver infrastructure projects, borne by network customers.

An example of this would be the Beauly Denny line which was delayed for 3 years while a Public Inquiry was held over the potential impacts of the transmission line on the Scottish Highlands. An estimated cost of £81m was agreed with Ofgem to mitigate the 73 planning consent conditions identified during the Public Inquiry; a cost to electricity consumers which could potentially be reduced in future projects from a refined assessment of the social and environmental impacts.

Method(s)

SHE Transmission has internally funded an initial investigation in this area, including research to define the most material areas of social, economic and environmental impact from the construction of existing Transmission Developments. We have also established an advisory board of internal staff (SSE Group Finance Director, Director of Transmission, Sustainability Accountant), external academics (Prof Jan Bebbington, Prof David Collison, Dr Tim Cockerill and Prof Michael Grubb) and professional bodies (Scottish Environmental Protection Agency (SEPA), Institute of Chartered Accountants Scotland (ICAS), Institute of Chartered Accountants England and Wales (ICAEW), Accounting for Sustainability (A4S)) to ensure early stakeholder engagement.

Based on this initial investigation and research, SHE Transmission intends to use NIA funding to progress the recommendations from initial investigation and research to:

· Develop techniques for quantifying the incremental costs and benefits to the environment, society and the wider economy of Transmission developments;

· Based on these techniques, develop and implement an analytical framework in order to provide a holistic understanding of the costs and benefits to the environment, society and the economy of Transmission developments – known as the “Sustainable Commercial Model” (SCM); and

· Trial the SCM in a network environment to illustrate potential application and merits to the GB networks.

It is intended that the Sustainable Commercial Model will provide a consistent measure of the incremental environmental, social and wider economic impacts on network customers, to allow for more informed and consistent:

· Network Planning decisions; and

· Debate on how to analyse and communicate transmission project costs and benefit impacts.

The SCM will use data from SHE Transmission's share of the Beauly Denny line as a case study.

Scope

The scope of this project is to develop and implement methods and an analytical framework to quantify the value the social, environmental and wider economic impacts of Transmission Line Developments (the SCM), and demonstrate the use of the SCM with a specific case study.

Objective(s)

The key objectives of the project are outlined below.

Provide a method and software model for quantifying the contribution of Transmission projects to the wider Scottish and UK economy from direct, indirect and induced expenditure on network projects (demonstrated with a specific case study).

Provide a method and software model for quantifying the social and environmental impact value to stakeholders from the construction of Transmission projects, by providing an effective commercial approach to stakeholder engagements at early stages with transparent case study of examples.

Provide a method and software model for quantifying the incremental social, environmental and economic impacts of optioneering so that more information can be provided to stakeholders to support commercial decisions and their rationale (demonstrated with a specific case study).

Success Criteria

The success of the project can be measured by the financial quantification of the selected methodologies in the SCM by April 2015.

Technology Readiness Level at Start	Technology Readiness Level at Completion
3	5

Project Partners and External Funding

No project partners will be used for the current project.

Potential for New Learning

The Project is expected to develop the following new learning:

Advance knowledge to inform commercial arrangements as part of Transmission projects through a detailed and novel illustration of how to incorporate not only economic but also social and environmental impacts into decision making areas of possible concern or risk within a broader and more encompassing impact assessment.

Identify the key drivers of value creation and impact in the analysis of a current transmission project in order to support the development of future frameworks that facilitate options analysis.

Advance data collection and benchmarking possibilities to demonstrate in a clear and precise way a league table of incremental project impacts and be able to trade off key impacts with strategic priorities during project optioneering.

Illustrate how different transmission project options would have rated under this analytical framework

Contribute to the impact assessment area of research by establishing research techniques for transmission and distribution operators to use in their strategic projects to quantify the economic, social and environmental costs and benefits of undertaking infrastructure projects

Identify key opportunities for network operators where the level and type of stakeholder engagement can be improved to ensure that the stakeholder experience is improved and that future communications are transparent on intent and encapsulate the total impact of an infrastructure project – Gas, Offshore, Distribution or Transmission network.

Scale of Project

The project has been designed on a scalable framework with the level of work in direct implementation of the models being developed and the level of detail in each. Initial estimates are that the project is for the equivalent of 1.5 FTE and external specialised resource for the next 2 years to develop the selected methods into the SCM. The process of demonstration to other TOs would then take place after April 2015 as a discrete dissemination phase.

Geographical Area

This project will be undertaken within the SHE Transmission area.

Revenue Allowed for in the RIIO Settlement

This project is focused on making more informed and consistent decisions, taking into account overall holistic costs and benefits to Transmission customers. Potential benefits and cost saving may be realised on future infrastructure projects and potentially earlier delivery of strategic projects.

Indicative Total NIA Project Expenditure

The project expects to fund 90% of the project costs from SHE Transmission's NIA allowance.

The total expenditure is expected to be £499k.

Project Eligibility Assessment

Specific Requirements 1

1a. A 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 systems and 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	☒

Specific Requirements 2

2a. Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees ☒

Please answer one of the following:

i) Please explain how the learning that will be generated could be used by relevant Network Licenses.

The plan is that other TOs, DNOs, GDNs and OFTOs would take the lessons learnt in regard to commercial arrangements, data collection and the ability of the SCM to quantify wider economic, social and environmental impacts and apply it to their own strategic projects. The output could then be used for the internal planning stages of optioneering and enhanced and streamlined stakeholder engagement on costs versus impacts discussions.

ii) Please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the Project.

2b. Is the default IPR position being applied?

Yes	☒
No	☐

If no, please answer i, ii, iii before continuing:

i) Demonstrate how the learning from the Project can be successfully disseminated to Network Licensees and other interested parties

ii) Describe any potential constraints or costs caused or resulting from, the imposed IPR arrangements

iii) Justify why the proposed IPR arrangements provide value for money for customers

2c. Has the Potential to Deliver Net Financial Benefits to Customers ☒

i) Please provide an estimate of the saving if the Problem is solved.

This project is focused on making more informed and consistent decisions, for the overall holistic benefits of Transmission customers. This consistent holistic approach, backed-up by evidence and case-studies is expected to shorten the duration of the planning process for Transmission Development projects, with an associated cost saving (which would reduce the cost to Transmission customers).

There is also the potential for cost savings from early and informed engagement with stakeholders, to identify the most cost effective options, taking into account the incremental social, environmental and economic impacts.

A key focus of the SCM is having the appropriate reliable and transparent information for the early engagement with stakeholders to ensure that the commercial arrangements for planning or construction decisions are as effective as possible.

Finally, when the SCM is developed the next phase would be to roll it out to other GDNs, OFTOs, DNOs and other TOs so that they may also share the benefit from the main learning points on their own strategic projects and distribute greater financial benefits to their network customers too.

ii) Please provide a calculation of the expected financial benefits of a Development or Demonstration Project (not required for Research Projects). (Base Cost – Method Cost, Against Agreed Baseline).

Not required for research project

iii) Please provide an estimate of how replicable the Method is across GB in terms of the number of sites, the sort of site the Method could be applied to, or the percentage of the Network Licensees system where it could be rolled-out.

The number of possible examples and level of rollout to future projects over £50m will depend on the stage of each project when the SCM is ready for detail testing and the level of incremental economic, environmental and social impact. It is anticipated that at least 3 SHE Transmission future projects between 2015 and 2021 could utilise the SCM from initial conception through to delivery. In addition, it may be possible, to utilise the SCM after April 2015 with SHE Transmission projects which are more advanced than initial conception and optioneering decisions. In addition to SHE Transmission projects it is envisioned that after April 2015 the SCM will be available to other TOs, OFTOs, GDNs and DNOs for them to utilise in their own stakeholder engagement, commercial scoping of preferred options and planning discussions on GB Network projects.

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

It is expected that once the SCM has reached a mature stage for wide spread implementation that the cost of rolling out the method across GB Network would be approximately a total of £75k depending on the level of support required by the other TOs. This total estimated cost is expected to be the time required to sufficiently train a candidate at the relevant Transmission owner companies and provide initial support for a period of 6 months after the initial training.

2d. Does Not Lead to Unnecessary Duplication 

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

A review of other Ofgem funded projects has been performed and no similar projects have been identified. A similar review of current academic literature and journals from leading UK and international universities has been performed to ensure identify any potential overlap with the current project. No similar projects have been identified.

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