

Dinker Bhardwaj,
Ofgem,
Third Floor,
Commonwealth House
Glasgow
G1 1LH

20 July 2018

Dear Dinker

Request for Information on LCNF1 Second Tier Projects seeking discretionary reward

Further to your previous letter please find attached the SSEN response to your request for information. At SSEN, we have developed our portfolio in an incremental manner to validate the outcomes of earlier projects until we reach a stage where we are sufficiently confident to deploy the innovation into the business. This incremental approach has ensured that we have been able to deliver maximum value from customers' funds and ensure that we achieve best value by identifying any risks at the earliest stage. This has included learning from our own portfolio and also from projects delivered by other DNOs, including those projects seeking Second Tier Reward. Please see details on the attached table.

In our experience, maximum value is created by combining learning from multiple innovation projects to create an outcome which is greater than the sum of all parts. This incremental approach to network innovation has ensured that we have used learning from across a wide range of innovation projects including those of other DNOs to inform our decision making, until we are confident enough to deploy it into BaU. The most successful innovations will have been based on learning from multiple projects across the wider innovation portfolio. Therefore, we have utilised the learning from all of the projects identified to help inform the development of both our own innovation portfolio and also our approach to BaU. These learnings have invariably combined with learning from other projects then adapted to suit the particular needs of the SSEN networks or SSENs existing operational practises.

The attached models, which were produced to help inform our earlier submission for the First Tier Portfolio reward, show how we have used learning from a wide range of projects to develop our thinking in five key 'Innovation Areas'. Hopefully, this will assist



in your understanding of how we have used the outputs from the various LCNF Tier 2 projects in developing approach.

Hopefully, this is sufficient for your needs at this stage, however, if you require any further information do not hesitate to contact to contact my colleague Frank Clifton (frank.clifton@sse.com / 01738 456237) if you require any further information.

Yours sincerely

Stewart Reid
Head of DSO and Innovation

DNO Group	Project Name	Description	Have the outputs and/or findings from any of these Projects been deployed on your networks?	Have the learnings from any of these Projects been incorporated into your operational practices?
Northern Powergrid	Customer-Led Network Revolution	A project that brings together the trialling of smart meters and customer-side interactions with new network technologies.	Yes – The outputs from CLNR have helped develop SSEN develop our approach to Energy Storage, Demand Side Management and LV especially around connection of LCTs	Yes – The outputs from CLNR have helped develop SSEN develop our approach to Energy Storage, Demand Side Management and LV especially around connection of LCTs
WPD	Low Carbon Hub	A focussed project to investigate how new network technologies can increase the capacity of wind generation that can be connected to a rural distribution network. New commercial arrangements also explored.	Yes – SSEN were the first DNO to install an ANM scheme and we have continued to invest in its improvement and development since its original inception. Learning from projects such as LCH have helped inform this development	Yes – see attached model for ANM
WPD	Low Voltage Network Templates	A focussed project assessing the impact of low carbon, demand-side technologies on the low voltage network. The aim is to create generic network models to assist DNOs in efficiently planning, developing and operating these networks as they transition to facilitate a low carbon future.	Yes – in particular our approach to preparing for the uptake of LCTs and their impact on the LV network.	Yes – see attached model for LV Strategy
WPD	SoLa BRISTOL	A small project investigating the potential for battery storage in conjunction with PV solar generation to be used within homes, schools and	Yes – see attached models, although the learning from this project recognises it was a relatively small project	Yes – see attached model for LV Strategy

		an office to provide network and customer benefits. A variable tariff will be trialled to incentivise customers to use the battery to reduce electricity consumption at peak times.		
ENWL	Capacity to Customers	A project that trials new operational techniques to release latent capacity within the existing high voltage (HV) network. The project will utilise this capacity by combining network automation and 'interruptible' contracts with large customers.	Yes – this has helped inform the development of our approach to Constraint Managed Zones (CMZ)	Yes – this has helped inform the development of our approach to Constraint Managed Zones (CMZ). The learning from C2C has helped inform SSENs requirements specification for our procurement process to secure services.
WPD	FALCON	A project deploying smart interventions on the HV network and novel commercial arrangements with customers. Data from these trials will be used to develop an investment tool to model where these techniques can be deployed efficiently across the whole HV network.	Yes – this has helped inform the development of our approach to CMZ and demand side management.	Yes – this has helped inform the development of our approach to Constraint Managed Zones (CMZ). The learning from C2C has helped inform SSENs requirements specification for our procurement process to secure services.
SPEN	Flexible Networks	A project investigating how to obtain extra capacity from the existing HV network in three separate locations by co-ordinating innovative engineering practices. The project also looks to encourage large customers to improve their energy efficiency.	Yes – this has helped inform the development of our approach to Constraint Managed Zones (CMZ) and our ongoing ANM development.	Yes – this has helped inform the development of our approach to Constraint Managed Zones (CMZ). The learning from FN has helped inform SSENs requirements specification for our procurement process to secure services.
UKPN	Flexible Plug & Play	A project trialling ways to improve the control of the extra high voltage network to connect increased volumes of wind generation. The project will trial an open communications platform	Yes – SSEN were the first DNO to install an ANM scheme and we have continued to invest in its improvement and development since its original inception. Learning from projects such as FPP have helped inform the	Yes – this has helped inform the development of our approach to ANM and Flexible Connections.

		and develop an investment model for connecting renewable generation to the distribution system.	ongoing development of ANM and the associated development of flexible connections on our network.	
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