

WPD - NIC Bid Challenges

Third Party NIC Bid Information

Introduction

For Ofgem's 2016 Network Innovation Competition (NIC), Western Power Distribution (WPD) intends to enable a third party to submit an NIC application. This document outlines the three network challenges, which WPD now or in the future will face, relating to temporarily or permanently increasing the capacity of a network.

This document also outlines the process WPD intend to follow and the timeline through to full submission pro-forma (FSP) submission. The first process is to complete the attached NIC Initial Proposal Form by the 17th February 2016 (12pm). No additional information, above that included, will be provided at this stage. Please submit to: wpdinnovation@westernpower.co.uk.

This call has been published on Achilles UVDB, ENA Collaboration Portal and WPD's Website. Shortlisting to the information day will be based on how readable the submitted information is, evidence that the proposal is truly innovative and novel and that there isn't an undue level of risk.

Requirements

The NIC is an annual opportunity for electricity network companies to compete for funding for the development and demonstration of new technologies, operating and commercial arrangements. Up to £81m per year is available through the Electricity NIC. The NIC is expected to focus on funding larger scale innovative projects.

As set out in Ofgem's Electricity NIC Governance Document an NIC project must involve the development or demonstration of at least one of the following:

- A specific piece of new (i.e. unproven in GB) equipment (including control and/or communications systems and/or software);
- A specific novel arrangement or application of existing electricity transmission and/or distribution equipment (including control and communications systems software);
- A specific novel operational practice directly related to the operation of the electricity Transmission System/Distribution System; or
- A specific novel commercial arrangement.

Also, it must be demonstrated that a project meets all the following criteria:

- Accelerates the development of a low carbon energy sector and/or delivers environmental benefits while having the potential to deliver net financial benefits to existing and/or future network customers;
- Delivers value for money for electricity customers;
- Creates knowledge that can be shared across energy networks in Great Britain (GB) or create opportunities for roll-out across a significant proportion of GB networks; and
- Is innovative (i.e. not business as usual) and has an unproven business case where the innovation risk warrants a limited Development or Demonstration Project to demonstrate its effectiveness.

Challenges

Discussed below are three network challenges that require a technical solution or solutions.

An Initial Proposal Submission is to be made for each challenge considered. No information other than the Initial Proposal Form is to be submitted.

A – Summer and Winter Peaking Networks

Increasingly network assets, for a particular part of a day, week or season, are being overstressed or are close to and require significant network reinforcement. Typically these peaks occur in either the summer or winter. Peaks of power consumption traditionally occurred in winter; however, there are now an increasing number of network points that have summer peaks, driven through the output of distributed generation at times of low general load on the network.

A permanent technology solution is to be considered for installation at any point on the distribution network between 33kV and 132kV.

B – Low Voltage Temporary Capacity Uplift

As both distributed generation and low carbon technologies increase their level of penetration on the low voltage (LV) network a facility for temporary capacity uplift is required. Permanent solutions to this issue, larger transformers and cables, often entail long lead times and significant construction activities.

The solution should be applicable as either a temporary measure until traditional asset reinforcement is carried out or for certain times based on transient network conditions.

C – Network Capacity Increase

The requirement for greater power transfer capability within the distribution network continues to increase. This is driven by a variety of reasons such as transferring large generation power to load demand centres. Traditional rebuilds of existing networks often don't release the capacity required and the installation of new network assets, due to stringent construction requirements and public opposition is becoming increasingly challenging.

This solution should utilise existing 33kV to 132kV network assets, through the use of new or developed technologies to permanently increase the networks' capacity.

Timeline

The first process for consideration is to submit the Initial Proposal documentation by the **17th February 2016, Noon (12pm)** and be available for a face to face meeting on the 24th February 2016 in London.

Requirement	Date
Submission of Initial Proposal	17/02/2016 (12pm)
Notification of Progress to Information Day	19/02/2016
Attend Information Day Meeting	24/02/2016
Announcement of Bids to Proceed	26/02/2016
Submit ISP	Early April 2016 (Exact date to be confirmed)
Announcement of Bid to Proceed to FSP	Late April 2016 (Exact date to be confirmed)
Submit FSP	Late July 2016 (Exact date to be confirmed)