Electricity Network Innovation Competition Full Submission

Supplementary Answer Form

Project: Black Start from Distributed Energy Resources

Tick if this answer has been provided verbally: ☐

Project code	ESOEN01	Question Number	11
Question date	14 August 2018	Answer date	16 August 2018
Submission section question relates to	n/a		
Topic	Value for Money		
Question	Please provide further detail, including timescales and summaries of realised or expected outcomes, of the complementary NIA projects referred to throughout your submission.		
Notes on question			
Answer	We are currently scoping an NIA research project entitled "Capability study of Black Start from emerging distributed energy resource technologies". The purpose of this NIA project is to assess the technical capability of earlier-stage DER (e.g. wind with self-start capability, solar, storage, DSR, EVs) to contribute to Black Start. The DER capability being evaluated will be the ability to self start, provide reactive range for energising network equipment, accept blocks of demand, and contribute to Power Island Management via ongoing management of frequency and voltage. Expected Duration: October 2018 – March 2019 (6 Months) Expected Outcomes: in terms of the NIC project, the technical assessment of various technologies will result in one of two outcomes: 1. The technology is deemed to be of sufficient readiness to be trialled as part of the NIC project, and will be included in the assessment of case studies in the NIC technical workstream 2. The technology is not of sufficient readiness to be trialled, and will need further research and development to reach sufficient TRL to be trialled for Black Start (so will not be considered in NIC project)		

	High-level activities: • Develop a methodology for evaluating the Technology Readiness Levels (TRL) of identified DER technologies to contribute to Black Start • Evaluate capability of emerging technologies to contribute to a Black Start • Studies into the proportion of emerging DER technologies that can be included in a Power Island of varying scales • Carry out gap analysis of current vs required capabilities Deliverables: • Methodology for evaluating the readiness of new DER technologies to deliver Black Start services • Document Black Start capability of current connected DER equipment to provide a baseline • Action plan to inform industry of capability requirements, to enable those DER investigated to reach readiness level to contribute to Black Start • Operational understanding of the maximum proportions of emerging technologies that can be included in a Power Island
Attachments	