Electricity Network Innovation Competition Full Submission

Supplementary Answer Form

Project: REVISE

Tick if this answer has been provided verbally: ☐

Project code	WPD/EN/NIC/05	Question Number	45
Question date	02 October 2018	Answer date	04 October 2018
Submission section question relates to			
Topic			
Question	Please provide an output of the network modelling setting that indicates how many times the INR would be required to reconfigure the network within the period of a day.		
Notes on question	None		
Answer	This response builds on our answer to Question 5. The methodology for our power system studies can be found in the response to Question 37. Our power systems modelling saught to emulate INR's behaviour by generating various network configurations and then adding generation/load until a network violation was encountered. The configuration that yielded the most capacity release was selected as the 'optmimum' configuration that INR would determine autonomously. The studies did not determine the frequency of INR operation, however, we understand the parameters that will trigger a new optimum configuration to be generated by the INR system. We anticipate that INR switching could occur up to several times during a day. We estimate that INR switching will most likely occur during instances when there is a sustained step change in network demand and/or DG output. A key part of the INR studies, design and build phase of REVISE will be to develop a technical specification that stipulates these parameters are included as modifiable variables in the detailed design. In this way the frequency of the reconfiguration can be tuned to a sensible number during the factory and integration testing of the INR control system.		

	The number of reconfigurations will also be dependent on the priority mode that the system is utilising. The modes of operation are further detailed in Section L.4.3 of the FSP. This will also be investigated and tested in the trial.
Attachments	