Innovation Competitions - Full Submission

Supplementary Answer Form

Tick if this answer has been provided verbally: ☐

Project code	UKPNT206	Question Number	22
Question date	14/08/2014	Answer date	18/08/2014
Submission section question relates to	2		
Topic	Project Description		
Question	It is stated that contigency analysis is not used to manage the 132kV transmission network in Scotland. Why is it not used there?		
Notes on question			
Answer	During preparation of its bid, UK Power Networks spoke with *redacted* from ScottishPower and *redacted* from Scottish and Southern Energy, facilitated by their respective Future Networks managers. UK Power Networks have come to the understanding after liaising with distribution network stakeholders across GB that contingency analysis utilising real-time data within operational timescales has not been used before at the distribution network level. The Scottish DNOs do not use contingency analysis with real-time data within operational timeframes in their distribution network. They use contingency analysis offline, usually the day before, to examine some of the worst potential operating conditions, and their analysis does not include any data from the transmission network. The studies are manually configured in the load flow tool which they use. The intention of our project is to remove the manual configuration step currently involved in off-line load flow studies, so that many more studies can be run; and to give an overview in the control room of contingencies which is regularly updated, without requiring the control engineers' time or input. Furthermore, due to the fact the 132kV network is (operationally) part of		

	the transmission network in Scotland, the operation at that level is done by National Grid, which uses contingency analysis that is purposed to serve transmission network-related constraints, like voltage stability and generation dispatch. SP and SSE only examine the 132kV network for planning purposes and conduct "offline" contingency analysis based on historical data in order to determine long-term capacity constraints on the 132kV network. UK Power Networks believe that despite the fact the fundamentals of contingency analysis are the same, the analysis at the transmission level is significantly different and the use of the results of the analysis does not transfer across to the distribution network level.
Attachments	