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	46
Question date	6 Sep 2018	Answer date	10 Sep 2018
Submission section question relates to	Appendix A		
Topic	a) Low carbon/environment and net financial benefits		
Question	Please explain why the carbon cost of the method is forecast to be zero (Table A.3, page 51) if DERs in the method case are expected to include gas or diesel stations (page 45).		
Notes on question			
Answer	The carbon impact that we have derived is based on the need to regularly dispatch generators that would not otherwise be dispatched to ensure that they are in a state of readiness to support restoration. Of the generator types considered in the CBA, we have included the need for such readiness actions for coal, biomass, and CCGT generators connected to the transmission network. Even though the project may have a role for carbon-emitting generators on the distribution network (e.g. gas or diesel stations), due to their size, these generators do not require the same type of readiness actions to ensure that they are available. There will be some (minor) carbon impact associated with involving DERs in restoration. This might include, for example, the impact of running diesel generators during testing, as well as the impact of running them during the highly unlikely event of a system restoration, or even carbon associated with the provision of new distribution network equipment. But, we expect this total volume of carbon to be negligibly small compared to that which will be a result of the energy market's regular readiness requirement actions; we have therefore not sought to quantify it at this stage, although we are be open to considering doing this this further along throughout the project itself.		

	The overall carbon benefit is given as 2.5 MtCO2e, with a method case cost listed as 0. This is an error that will be rectified in the final submission – the overall volume of carbon associated with readiness actions is 4.4 MtCO2e in the base case and 1.9 MtCO2e in the method case (as the method does not completely eliminate the need to use these larger generators in restoration). The overall carbon benefit is unchanged, at 2.5 MtCO2e.
Attachments	