

Electricity Network Innovation Competition Full Submission
Supplementary Answer Form

Project: Optimise Prime

Tick if this answer has been provided verbally: ☐

Project code	UKPNEN03	Question Number	4
Question date	09/08/2018	Answer date	13/08/2018
Submission section question relates to	Section 2		
Topic	Criteria b) Direct Impact		
Question	Please explain how the Depot Energy Optimisation and Planning tool has a Direct Impact (as defined in the Governance Document).		
Notes on question			
Answer	<p>The NIC defines Direct Impact as: <i>"Where the deployment of the Method will cause a measurable change in the operation of the Transmission System or in the operation of the Distribution System in a controllable way."</i> The NIA governance adds the clarification: <i>"Where the Method involves measures that aim to reduce or shift the electrical demand of commercial or domestic Customers, it is deemed to be controllable."</i></p> <p>The depot energy optimisation system and site planning tool are both integral elements of the proposed Method 2 of Optimise Prime. Method 2 proposes developing and demonstrating optimal connection profiles for depot based commercial EVs and the remaining capability for demand response or charging flexibility from this fleet user segment.</p> <p>The site planning tool will, based on a number of factors, calculate and advise on the optimal EV charging infrastructure and specify the need for and benefits of any other behind the meter energy assets. This will help depot based fleet operators build their business case in a way that is efficient and scalable. The site planning tool will also produce a load profile curve for a depot that can be used in applying for a network connection to the DNO. This load profile curve is then used by the DNO to provide fleet operators with a profiled connection, which could reduce the cost of network infrastructure upgrades required at specific locations of which connected electricity customers pay a proportion of.</p>		

	<p>The EV charging and energy infrastructure specified by the planning tool, when installed, is controlled by the depot energy optimisation system. It will do so based on the EV charging schedule proposed by the planning tool and other information such as energy import tariffs, signals for participation in flexibility events and the profile of the connection to the DNO network. The latter means that the depot energy optimisation system ensures the depot's demand is kept within the profile of the provided network connection at all times, even when participation in demand response activities has been agreed. This will give network licensees greater confidence of the diversity of depot loads and enable them to implement new operational practices in the planning of network capacity.</p> <p>As a result of these tools the requested connection capacity will be different and the electrical demand (perhaps also generation) of commercial Customers will be different, in a controllable way.</p> <p>This constitutes a Direct Impact on the electricity system, and delivers benefits to the connecting customer (depot) and the connected customers as described in our submission.</p>
Attachments	