

*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	1
Question date	07/08/2018	Answer date	09/08/2018
Submission section question relates to	Section 4		
Topic	Criteria d) Innovative		
Question	Please explain how the work to be undertaken under the depot optimisation system method and the site planning tool differs from the other work undertaken by corporate groups which include network operators in GB		
Notes on question			
Answer	<p>To date, we are aware of the following two projects with potential similarities to Optimise Prime:</p> <p>1. Smart Electric Urban Logistics: <a href="https://crossriverpartnership.org/projects/smart-electric-urban-logistics/">https://crossriverpartnership.org/projects/smart-electric-urban-logistics/</a></p> <p>2. POD Point and Skanska project: <a href="https://pod-point.com/electric-car-news/largest-single-site-installation">https://pod-point.com/electric-car-news/largest-single-site-installation</a></p> <p>Compared to the aforementioned projects, the depot energy optimisation system is different as:</p> <ul style="list-style-type: none"><li>• It will optimise the charging of all fleet vehicles at the depot not only based on information about static local network constraints and vehicle demand and routing, but also on energy import tariff information to achieve maximum savings for the fleet operator. The optimisation of charging will also take into account other factors affecting vehicle charge consumption, such as weather forecasts;</li><li>• Network constraints that the optimisation system takes into account for coordinating vehicle charging will not be limited to a static capacity number. The system will be capable of keeping load (including that of the actual building as well as the charge points' load) below a given load profile, i.e. the profiled connection agreed between the fleet operator and the DNO;</li></ul>		

	<ul style="list-style-type: none"> <li>• The optimisation system will be capable of participating in flexibility events if it deems this feasible and cost-efficient. Flexibility signals will be received by the system. The system will then decide if vehicle charging is still achievable while participating in the flexibility event and whether it will deliver financial benefits to the fleet operator (for example, if the event conflicts with a time of use tariff and the incentive is not high enough, the system may decide to not participate in the event);</li> <li>• The depot optimisation system will control and optimise the use of behind the meter technologies (where applicable) including low carbon technologies, such as storage and renewables. The aim will be to deliver all charging requirements at minimum cost whilst complying with any network and site constraints; and</li> <li>• Finally, the optimisation system will also take into account multi-depot information in cases where vehicles move between different depots.</li> </ul> <p>UK Power Networks presented Optimise Prime at the ENA Low Carbon Technologies Working Group to gain feedback from all other GB DNOs. They confirmed that they have not undertaken or participated in any projects looking at depot optimisation systems and site planning tools. GB DNOs felt that Optimise Prime would add value to the wider GB EV project portfolio.</p> <p>We are aware that systems exist in the market for the monitoring and control of energy use, including charging, on a site. As shown in Figure 3 of the FSP, we will look to procure the local depot controller to achieve best value, and focus development in the project on software-based optimisation to direct the depot controller.</p> <p>To the best of our knowledge, although there are companies offering consultancy services to fleet operators such as the Energy Saving Trust, there are no commercially available site planning tools in GB similar to the proposed tool in Optimise Prime.</p> <p>If Ofgem are aware of other products or solutions on the market that include some or all of this functionality we welcome them informing us of these solutions so we can investigate thoroughly whether any of our scope is unnecessarily duplicated.</p>
Attachments	