

*Electricity Network Innovation Competition Full Submission*  
**Supplementary Answer Form**

**Project: Charge: Refuelling Tomorrow's Electrified Transport**

Tick if this answer has been provided verbally: ☐

Project code	SPMV1	Question Number	49
Question date	30/08/18	Answer date	17/09/18
Submission section question relates to		N/A	
Topic	a) Low carbon/environment and net financial benefits		
Question	Both financial and carbon benefits in Method 2 rely on the uptake of EVs being accelerated. Is the assumption of a one-year acceleration described as "modest" plausible given the total government and private resources applied to the uptake of EVs on LV networks?		
Notes on question			
Answer	<p>The funding / grants available from Government is generally limited to the charging infrastructure and not the corresponding network connection or reinforcement costs, which will be essential to accommodate the increased demand from chargers across different voltage levels. Charge will address this point by providing better visibility of network capacity at higher voltages (method 1), options to connect (method 2) to the network, and a quicker and more efficient use of funds for lower voltages (method 3). This intelligent application, will result in greater numbers of chargers being deployed from the same finite resources.</p> <p><b>Financial Benefits</b> The financial benefits do not assume a one year acceleration of the uptake of EVs. We assume that Government targets will be met by 2040/50 which will result in an increase in the total demand regardless of an accelerated uptake by this date.</p> <p>Method 2 uses the industry recognised Transform Model, to assess the various representative circuits as identified within the proposal, the counterfactual network reinforcement costs have been calculated. The financial benefits were calculated by introducing 'smart interventions' to reduce the peak demand and lower reinforcement costs; the difference in investments on the circuits in question represents the savings.</p> <p><b>Carbon Benefits</b> The carbon benefits have been calculated using a different methodology when compared to the financial benefits, and attributed to the whole project rather than to the different methods.</p>		

	<p>Carbon Benefits have been calculated by accelerating the expected baseline EV uptake by 2030, by 1 year – As the counterfactual assumes that the EV transition will progress regardless (to meet government 2040/50 targets) the benefits of Charge will reduce over time as the transition happens. In reality, this means the number of additional EVs (and corresponding reduction in conventional vehicles) compared to the counterfactual will peak early 2030 before falling back in later years. We have used the mid-range for EV predictions based on a range of forecast and our own stakeholder engagement. The acceleration of 1 year has the effect of increasing the proportion of EVs in the UK from 20% to 25% by 2030 and in line with the upper targets of FES 2018 (Consumer Evolution &amp; Community Renewables)</p> <p><i>NB. On reviewing this question we have discovered an error within our submission. Whilst the expected CO2 savings remain the same the peak number of additional EVs in SPM licence areas, when compared to the counterfactual, will peak at ~52k in 2033 and not the reported 61K as indicated on P19. We will to address this point in the resubmission.</i></p>
Attachments	n/a