Project ID	DIP077		
Long Title	Powerloop: Domestic V2G Demonstrator Project		
Short Title	Powerloop		
Keywords	Small-scale; Multi-sector/Grid; Electricity; Transport; Direct Electric Storage; Virtual Power Plant; Vehicle-to-Grid; Electric & Hybrid Vehicles; Smart Transport Networks; Transport System Enablers; Energy Strategy Development;		
Location (Town, Region, Country)	London		England
Latitude and Longitude	51.52N	0.11W	
OSGB code	TQ 313 815		
Status	Ongoing		
Start Date	2018		
End Date	2020		
Description	Electric vehicle batteries unlock a new benefit that drivers have never experienced - the battery can help power their home, their street and the whole of the UK. In turn, this enables an innovative management of electricity demands on the grid, minimises network reinforcement costs, and supports the further roll-out of intermittent renewable energy generation. Octopus Energy are leading a consortium to unlock this value with six other key players - Octopus Electric Vehicles, Chargepoint Services, UK Power Networks, Open Energi, Navigant Consulting and the Energy Saving Trust. This unique group will enable customers to discover electric vehicles, take them for a test drive and access a special Vehicle to Grid (V2G) bundle. A two-way charger will enable the driver to charge their vehicle intelligently, use the power in the battery in the home when prices are high, or sell it back to the grid - creating value for the driver. The availability of the domestic electric vehicle (EV) batteries to help balance the system makes the grid flexible and responsive, allowing greater use of variable generation like renewable energy, and reduces the cost of EV ownership by rewarding owners for taking part. As the first project of its kind, Beating Home provides critical insight into how effective EVs are as a grid balancing mechanism, how drivers would like to interact with their EV charging system, and the technology to make it all possible. With this data, the UK can simultaneously encourage greater uptake of EVs while smoothly integrating them into the grid, aligning with UK decarbonisation goals. The consortium includes the market leading charge point platform provider (CPS), an innovative aggregator (Open Energi) and the DNO in the area where EV penetration is highest (UKPN). The unique combination of participants in the consortium enables an unparalleled opportunity to validate domestic V2G at scale in regional clusters.		

Sectors	Transport
Funding Sources	InnovateUK
Budget £	£7 million
Partners	Octopus Electric Vehicles, Chargepoint Services, UK Power Networks, Open Energi, Navigant Consulting and the Energy Saving Trust
Energy vectors	Electricity, Transport
Scale (lab/site /small/community/region/national)	Small
Technologies demonstrated	Battery storage, EV charging, vehicle-to-grid
Economic models demonstrated	Virtual power plant/market aggregation, grid services, new commercial models
Other concepts demonstrated	Consumer impact analysis
Industry engagement	
Consumer engagement	
Project Reports (incl. links)	
Datasets (incl. links)	
Website/social media	http://www.openenergi.com/domestic-v2g-trial/ http://www.v2g.co.uk/
Information sources	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/681321/Innovation_in_Vehicle-To-Grid__V2G__Systems_-_Real-World_Demonstrators_-_Competition_Results.pdf