Innovate UK

# Results of Competition: Electric Charging for Public Spaces: Real World Demonstrators

## Competition Code: 1902_CRD_MMM_OLEV_EVPUBLIC_P2

Total available funding is £19,400,000 (Total funding for both streams is £38,650,000)

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

| Participant organisation names | Project title | Proposed project costs | Proposed project grant |
|---|---|---|---|
| ELEMENT ENERGY LIMITED | Subsurface Technology for Electric Pathways (STEP) | £123,578 | £86,505 |
| Birmingham City Council | | £3,338 | £3,338 |
| London Borough of Brent | | £176,358 | £176,358 |
| OCTOPUS ENERGY LIMITED | | £59,634 | £29,817 |
| The London Borough of Camden | | £109,752 | £109,752 |
| TROJAN ENERGY LIMITED | | £3,940,342 | £2,758,239 |
| UK POWER NETWORKS (OPERATIONS) LIMITED | | £29,483 | £0 |
| University of Leeds | | £50,603 | £50,603 |

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Funders Panel Date: 19/06/2019

## Project description - provided by applicants

EV adoption is crucial for the UK to meet climate targets and tackle air pollution. Battery costs and consumer acceptance are improving, but a remaining barrier inhibiting rapid EV uptake is lack of public recharging infrastructure. A substantial 8m vehicle owners in the UK don't have access to off-street parking and therefore cannot charge an EV at home.

There are several approaches to this problem, however each has drawbacks:

* Standalone on-street chargepoint -- often inconveniently located, expensive, and presents access issues due to bulky equipment
* Lamppost charging -- cheap but limited to lampposts close to the road. Power restricted to 2-5kW.
* Wire trenches -- slotting cable in pavement between chargepoint in home and car. Needs users parked directly outside their house
* Pop-up and wireless charging -- in early stages of development
* Rapid charge hubs -- no evidence yet that this is a solution for residents

The Trojan Energy system however, presents a novel, cost-effective solution to the lack of on-street chargepoints. It involves a flush connection, where the chargepoint is slotted into the ground, resulting in no permanent street clutter on the pavement edge. To charge an EV, the user inserts the 'lance' into the connector, and the other end plugs into the car.

The STEP Phase 1 study successfully proved the feasibility of these chargepoints. There is substantial demand for the commercially viable product: ~90% of workshop attendees said they wanted the technology installed outside their home, and the majority of survey respondents said the solution would help overcome the barrier of lack of public charging. Additionally, local authorities have confidence in the technology, particularly as it is scalable and helps to relieve parking pressure within boroughs.

The Phase 2 trial will demonstrate the charging system in a real-life environment. Entire streets within Brent and Camden will be fitted with the technology -- connectors will be placed about 5m apart, allowing residents to charge regardless of where they park. Several users have already expressed interest in the technology, and Octopus Energy will also recruit some of their home energy and EV customers.

Furthermore, as 20 connectors can run in parallel, requiring only one grid connection, costs can be reduced, and effective grid management can be enabled. Chargepoints and vehicles will be monitored in the trial, to gain information on charging behaviour and to substantiate potential revenue from grid services, an important aspect for distribution network operators (DNOs).

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|---|---|---|---|
| GRIDSERVE SUSTAINABLE ENERGY LIMITED | Demonstrator for UK's First Solar Electric Forecourt | £6,993,455 | £4,895,418 |
| Brunel University London | | £260,002 | £260,002 |
| Essex County Council | | £118,567 | £118,567 |
| UPSIDE ENERGY LTD | | £149,636 | £104,745 |

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| GRIDSERVE are bringing to the UK market a revolutionary product: the Solar Electric Forecourt(r) that will make electric vehicle charging as easy as using a petrol station and be supplied by clean, low-cost solar energy. Our national network will address public concerns around mass-market EV charging that is currently preventing widespread adoption while simultaneously balancing the electricity grid and expanding solar energy generation. Each site will contain up to 24 ultra-rapid charging bays with charging speeds of less than 30 minutes, a multi-megawatt battery storage system, solar canopy and on-site facilities including convenience retail, healthy eating and airport-style lounges with high-speed internet.<br><br>The UK's first Solar Electric Forecourt(r) demonstrator is a key step in GRIDSERVE's vision to deliver convenient, mass-market, rapid charging at prices that are competitive to home charging. The UK-wide network roll-out will include over 100 future-proof local community charging hubs across urban areas and transit corridors requiring an ambitious £1B capital investment programme that is strongly aligned to the UK Government's Road to Zero strategy. GRIDSERVE has worked with world-class partners to design the sites including Arup, a leading multi-disciplinary design firm and Chargepoint, which operates the world's largest and most open EV charging network primarily in North America. Each site will have dedicated zones for both consumer and fleet vehicles, such as taxis, buses and delivery vehicles and will be designed with the EV user at the centre with the objective of making owning and operating an electric vehicle an enjoyable, convenient and stress-free experience.<br><br>This demonstrator project is an exciting opportunity for all consortium partners. Essex County Council (ECC) aims to be at the forefront of the clean growth agenda and electromobility innovation while facilitating low-carbon transport and consumer choice for EV users. The ECC will examine how this innovative product can support reduction in carbon emissions and pollutant levels in urban and urban-fringe areas while assessing the contribution to local communities. Upside Energy will enhance its cloud-based platform to optimise and despatch on-site infrastructure by using advanced algorithms to provide real-time forecasts for EV charging demand and solar generation. Brunel University will use this data and on-site research to study the practicalities of successfully operating a Solar Electric Forecourt(r) based on customer numbers, arrival and charging times, power requirements and usage of on-site facilities. Together, these collaborative workstreams will provide invaluable insights during the demonstrator project and be exploited across the national network roll-out. |

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| CHAR.GY LIMITED | On-street Residential Induction Charging | £2,346,295 | £1,642,406 |
| Buckinghamshire County Council | | £87,850 | £87,850 |
| London Borough of Redbridge | | £143,400 | £143,400 |
| Milton Keynes Borough Council | | £87,670 | £87,670 |
| Open University | | £119,415 | £119,415 |
| University of Warwick | | £298,302 | £298,302 |

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| The project's approach seeks to support business growth, to inform the creation of appropriate institutions to bring sectors together and to do this in a way that stimulates affordable green growth. Specifically, this project sets out to demonstrate an induction charging solution that provides a convenient on-street charging solution for residents who want to move to electric vehicles but need somewhere to charge while freeing up the streets from trailing cables and additional infrastructure, and alleviate the high contention for parking bays near the limited infrastructure. The project will unlock the wireless technology from specific vehicle and pad pairing, allowing for deployment to public streets and enabling its use by multiple vehicles.<br><br>The project will provide benefits to transport practitioners by informing the design of business models and product service systems with a range of economic benefits:<br><br>* To the supply industry for wireless/wired systems for small vehicle services<br>* To EV manufacturers that would be able to reach users in residential areas that are currently unsuitable for EV adoption<br>* To service providers that can coordinate the joint delivery of infrastructure and retrofit kits and manage the complex back office tasks associated with energy provision, that could win export business in much the same way that UK management and engineering companies do for conventional transport development projects.<br><br>Char.gy has a backpack charge point that attaches to lampposts and a satellite bollard charge point that utilise the power available in the lamppost giving the residents access to charging infrastructure outside their home without needing expensive additional infrastructure works. This project will take that solution and existing induction charging technology and modify it to be fitted aftermarket to electric vehicles across several vehicle manufacturers. The project will deploy the ground assemblies to residential streets in a London Borough - Redbridge, a regional city - Milton Keynes and towns in Buckinghamshire. WMG at the University of Warwick will be supplying parts of the induction charging and vehicle adaption solution. The Open University will identify and onboard local residents to the trial, engage with OEMs, facilitate the collection of data and disseminate the results of the project. |

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|---|---|---|---|
| URBAN FORESIGHT LIMITED | Clean Streets EV Infrastructure Toolkit: Demonstrator | £262,622 | £183,835 |
| ALBRIGHT PRODUCT DESIGN LIMITED | | £1,560,552 | £1,092,386 |
| CO-WHEELS CAR CLUB COMMUNITY INTEREST COMPANY | | £178,781 | £125,147 |
| DUNDEE CITY COUNCIL | | £549,782 | £549,782 |
| Plymouth City Council | | £550,000 | £550,000 |
| URBAN ELECTRIC NETWORKS LTD | | £647,000 | £452,900 |
| YELLOW LINE PARKING LTD | | £118,334 | £82,834 |

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| Our feasibility study showed that a) councils need both information and guidance, and a new type of charging architecture if they are to support electric vehicle (EV) charging in public places at-scale; b) on-street public charging is possible with a flexible and context-specific "toolkit" approach with "pop-up" EV chargers integrated with smart parking; and c) a majority of councils do not have the financial resources or desire to fund EV infrastructure at scale.<br><br>The study identified that:<br><br>* A 'flat and flush' charging infrastructure solution which both avoids street clutter and obstructions when not in use and integrates EVSE into the streetscape is an extremely attractive on-street solution for both councils and pavement users.<br>* This solution is suitable for both residential and public/visitor parking.<br>* The development of smart city system within system solutions - integrating charging into parking apps - will significantly improve customer experience.<br>* Feeder pillars integrated into street furniture has potential and will be prototyped in Phase 2\.<br>* Councils have insufficient funding to cope with the forecast demand for urban charging, particularly 'at home' on-street charging, so a fully self-funded solution is required .<br>* Councils can be incentivised with a revenue share model that at 50% chargepoint utilisation will double the revenues from parking alone.<br><br>Our demonstrator will prove that, supported through an integrated parking and charging policy, pop-up chargers can offer a driver-friendly, aesthetically pleasing and rapidly scalable means of providing on-street charging for the 50% of cars that are parked on-street at night in our cities - without the need for public sector funding contribution post-demonstrator.<br><br>The demonstrator will consist of up to 18 hubs deployed with two different councils for a 9-12 month period. Hubs will be mainly installed in residential and public streets with on-street parking and will consist of 3 to 6 chargepoints in each hub that will result in a patent-protected solution ready for commercial deployment. To reduce costs and improve the user experience, the solution is to be developed as an app-operated dual socket featuring tap and pay.<br><br>The Phase 2 project will also demonstrate other elements of the Toolkit plus the viability of the Toolkit itself. We will trial the Toolkit as a decision making and strategy generation tool in the context of a variety of different councils. We will also run a design challenge to prototype the most innovative approaches to integrating EVSE within the cityscape. |

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|---|---|---|---|
| EB CHARGING LTD | EV Network Extender (EV NetX 2) | £519,291 | £363,504 |
| Brighton & Hove City Council | | £95,778 | £95,778 |
| FLEETDRIVE MANAGEMENT LIMITED | | £203,336 | £142,335 |
| HANGER19 LTD | | £426,711 | £298,698 |
| HODOS MEDIA LIMITED | | £103,820 | £72,674 |
| JAYWING INNOVATION LIMITED | | £101,724 | £50,862 |
| Southend on Sea Borough Council | | £170,389 | £170,389 |
| Stoke-on-Trent City Council | | £53,209 | £53,209 |

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| The NetX project is seeking to address a number of key barriers to the adoption of electric vehicles (EVs); the cost of infrastructure, the ease of use of that infrastructure, and the challenging business case for investing in that infrastructure. Solving these facilitates the 'oversupply' of connectors reducing the restriction on EV drivers (or potential EV drivers) who do not have access to off-street parking (and charging).<br><br>The current business model for EV charging is based around a margin on the energy sold through the network. This requires a well utilised asset and a high turnover of vehicles. This is in direct conflict with the user experience, as users will often require the parking space for longer than the charging event duration, for example a driver without off-street parking using an on-street charger doesn't want to move their fully charged vehicle at 2am. This tension prevents the investor from maximising the utilisation of their assets and in turn restricts further investment in infrastructure, and other drivers from accessing the chargepoint, both of which inhibits the take-up of EVs.<br><br>A key advantage of EVs, is that by leveraging the established electricity grid, we can offer drivers the option to plug in every time they park their vehicles. This however, requires an oversupply of chargepoints, or a vehicle rotation policy. Some technology solutions have arisen around the deployment of mobile chargers linked to a battery. These however, come with the additional overheads required to move and operate the mobile charger.<br><br>The NetX solution builds on the existing charger network to increase the number of access points, without requiring the installation of additional chargers, and the associated cost, until energy demand warrants it. Therefore, if the charging demand is reaching the upper limits of a NetX installation, the owner can then install more traditional chargepoints confident in the demand for them, because NetX provides visibility, unlocking a better view of the granularity of demand and type of supply required at each location.<br><br>By providing end users multiple connectors from one chargepoint, linked to a smart network, we are able to both offer a significant reduction in the cost of the infrastructure, improve the user experience by removing the need to move a charged vehicle and improve the utilisation (and ROI) of existing and planned assets. |

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| ZAPINAMO LIMITED | Zapinamo StreetHubz Real World Demonstrator for EV Charging in Exeter & Environs. | £4,127,946 | £2,889,562 |
| CO-CARS LIMITED | | £285,116 | £199,581 |
| Devon County Council | | £72,817 | £72,817 |
| GAMMA ENERGY LIMITED | | £641,121 | £448,785 |
| REGEN SW | | £24,641 | £24,641 |

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| The ideal solution to EV charging in public spaces will be able to fit around whatever street furniture is there already, have no impact on grid supply, be cheap to install and offer easy relocation in response to changing demand patterns. StreetHUBZ, from ZAPINAMO is such a solution. It has the potential to fit elegantly around existing street furniture, taking up minimum additional space. Each unit is interconnected with others, meaning an EV driver can park anywhere in a StreetHUBZ-equipped on-street location. User interfaces will allow them to select a trickle charge, possibly with a delay to take advantage of off-peak pricing or pay premium for a rapid charge from StreetHUBZ storage. Using low power domestic electricity supply minimises groundworks, making HUBZ rapid and inexpensive to install.<br><br>In this project, ZAPINAMO have formed a consortium with Gamma Energy Ltd (GAMMA) and Devon County Council (DCC). They will design, build, install operate and maintain 150 pre-production, on-street, semi-rapid (35kW) EV chargers in a world-first demonstrator in the Exeter area. CoCars will provide cost-effective, on-street PAYG EV rental cars to boost awareness & EV adoption. Regen will collect data to build transferable business models, applicable to different locations. There are particular challenges to EV use and charging around Devon, namely: current lack of chargepoints; an electricity grid with no spare capacity in the majority of locations; longer journeys than elsewhere due to dispersed population; need to preserve aesthetics of streetscapes; need to maintain pedestrian and vehicle access along streets that are often narrower than UK average.<br><br>ZAPINAMO have adapted HUBZ around these criteria, in close collaboration with GAMMA and DCC. GAMMA will own and operate infrastructure during and post-project. They will develop business models that maximise use of clean, local energy and develop flexible pricing models that will boost EV uptake.<br><br>With its modular design that fits virtually anywhere, easy installation, flexible operation and ability to provide EV charging with minimal grid impact, ZAPINAMO's StreetHUBZ, powered by GAMMA's solar PV farms, complete the pathway of clean, local energy to clean vehicles. |

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| CYBERMOOR SERVICES LTD | Scaling On Street Charging Infrastructure (SOSCI) Phase 2 | £762,600 | £533,820 |
| BAY CAMERA & COMMUNICATIONS LIMITED | | £224,200 | £156,940 |
| BLACKHALL MILL COMMUNITY ASSOCIATION | | £66,962 | £66,962 |
| Carlisle City Council | | £203,738 | £203,738 |
| Charge my Street | | £335,569 | £335,569 |
| CO-OP ENERGY LIMITED | | £351,451 | £175,726 |
| CUMBRIA ACTION FOR SUSTAINABILITY | | £179,847 | £179,847 |
| Durham County Council | | £263,638 | £263,638 |

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| JUUCE LIMITED | | £275,952 | £193,166 |
| Lake District National Park Authority | | £81,380 | £81,380 |
| MIRALIS DATA LIMITED | | £171,696 | £120,187 |
| South Lakeland District Council | | £106,260 | £106,260 |
| VATTENFALL UK SALES LIMITED | | £1,106,282 | £553,141 |

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| Scaling on Street Charging Infrastructure will deliver pilot EV chargepoint installations to work towards our vision for the 8 million homes without off street parking to be within 5 minutes walk of an Electric Vehicle (EV) Chargepoint. This will deliver:<br>* increased take up of electric vehicles, allowing people to save money on fuel costs;<br>* reduced air pollution and CO2 emissions.<br>The vision has been developed by the partners working on the Phase 1 project combining learning from previous projects - CEVEN, SAMBA, V2GO funded by Innovate UK. The CEVEN project has already demonstrated that community investment can provide chargepoints and stimulate demand for EVs in areas without off street parking. The challenge is to scale this up to other Local Authority (LA) areas and the consortium has been widened for Phase 2\.<br><br>OBJECTIVES & FEATURES<br>The project will implement the activities researched in the feasibility phase, including the following elements:<br>a) planning community owned charging infrastructure in LA areas and Community lead chargepoints. This is based on local demand, mapping data and engagement with local stakeholders;<br>b) incorporating a variety of additional uses into chargepoint infrastructure -- renewables integration, battery storage and defibrillators. The project will measure the social and financial value for stakeholders as well as<br>technical / commercial implications of each use case;<br>c) installing and managing chargepoints in the different use cases.<br>d) developing an online platform for community investment and evaluating levels of community / private / public investment required in different locations (with variable socio-economic profiles and population density)<br>e) Building a coherent exploitation plan and business plan.<br>DETAILS OF INNOVATION<br>The innovation lies in the business model - giving local people the tools to identify and finance their own<br>chargepoint with little reliance on LAs. It builds on earlier projects by assessing commercial impacts of integrating other technologies like solar panels on community centres to generate additional value. A demand lead approach - encouraging local people to invest, reduces the risk on public and private investors as they can target funding where chargepoints are most likely to be used.<br>The project offers a new way for hard pressed LAs to stimulate chargepoints in their area and make the most of their limited resources. |

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| SMS ENERGY SERVICES LIMITED | Virgin Park and Charge 2 (VPACH2) | £1,891,207 | £945,604 |
| Belfast City Council | | £55,000 | £55,000 |
| CENEX (CENTRE OF EXCELLENCE FOR LOW CARBON AND FUEL CELL TECHNOLOGIES) | | £215,257 | £215,257 |
| CHARGEPOINT SERVICES LIMITED | | £468,480 | £327,936 |
| CONNECTED KERB LIMITED | | £173,685 | £121,580 |
| Croydon Council | | £104,902 | £104,902 |
| DETA GROUP LIMITED | | £109,573 | £76,701 |
| FULLY CHARGED SHOW LIMITED | | £191,206 | £133,844 |

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| GINGER TELEPORTER LIMITED | | £237,272 | £166,090 |
| Liverpool City Council | | £80,336 | £80,336 |
| London Borough of Hammersmith & Fulham | | £105,474 | £105,474 |
| Loughborough University | | £199,799 | £199,799 |
| Northamptonshire County Council | | £104,899 | £104,899 |
| Oxfordshire County Council | | £104,519 | £104,519 |
| Southend on Sea Borough Council | | £88,687 | £88,687 |
| VATTENFALL UK SALES LIMITED | | £1,334,212 | £667,106 |
| VIRGIN MEDIA LIMITED | | £3,608,858 | £0 |
| Wandsworth Council | | £104,900 | £104,900 |
| West Midlands Combined Authority | | £420,133 | £420,133 |
| Worcestershire County Council | | £104,900 | £104,900 |

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| The Virgin Media Park and Charge project (VPACH) will demonstrate at scale an innovative new approach to building on-street charging solutions for hard to address residential areas using the existing and widespread power and communications network assets of Virgin Media<br><br>VPACH has an ambitious target of deploying and operating 1200 charge points. Key to providing the scale of this project will be a group of Local Authorities covering 11 local authority areas: they are committed to ensuring that site selection, parking and highways strategy, procurement processes, and street furniture requirements are aligned with the need of the communities to provide charging solutions which will encourage and enable the uptake of EV adoption.<br><br>The scale of the project is supported by the scale of the existing infrastructure portfolio that Virgin Media has, which includes 170,000 km of ducts and 40,000 grid connections plus tens of thousands of additional cabinets. This will provide the cost-effective foundation upon which a variety of Charging Point Operators (CPOs) can install their open source, fully integrated, hardware and systems. This approach will help minimise new street furniture and benefit from access to a high-speed data communications network for charging apps and EV data offload alongside public Wi-Fi and IoT services such as pollution monitoring and parking management.<br><br>This project will develop a demand led charging point request process to engage with existing and potential EV owners alongside geospatial planning and analysis to identify the most suitable locations overlaying forecast EV demand, grid constraints, infrastructure costs and Virgin Media's network coverage.<br><br>The consortium is led by SMS plc in partnership with Virgin Media and is made up of key constituents of the residential charging value chain. Vattenfall Incharge and Chargepoint Services Ltd. are the charging point operators. The Local Authorities led by Phase 1 participants Oxfordshire County Council and West Midlands Combined Authority also now include Worcestershire County Council, Croydon, Southend, Northampton,Wandsworth and Liverpool councils. Technical, geo-spatial planning and grid flexibility expertise will be provided by Cenex, Loughborough University Transport Studies Institute and The UK Decentralised Energy Trading Association (DETA). Innovation in hardware and eMobility Services will be provided by Connected Kerb and GINGER. We are also delighted to welcome Robert Llewellyn's Fully Charged as our communications and events partner. |

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| ENTRUST SMART HOME MICROGRID LTD | EnSmartEV - Entrust Smart EV Charging System for Public Spaces | £1,820,076 | £1,274,053 |
| E-CARE TECH LTD | | £124,852 | £87,396 |
| ENTRUST PROFESSIONAL SERVICES LTD | | £111,800 | £78,260 |
| FRANKLIN EV LIMITED | | £451,296 | £315,907 |

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| The project aims to develop and demonstrate an innovative and game-changing smart public fast EV charging system, EnSmartEV.<br><br>The government has made commitments to reducing CO2 emissions but current public EV chargers use peak power to charge EVs and still require burning of large amounts of fossil fuels, so the problems are being moved elsewhere - to the point of power generation rather than the vehicles themselves.<br><br>Our vision is to provide a smart, public, fast EV charging solution to truly enable low/zero carbon transportation and encourage purchase of EVs, particularly for those without off-street parking and business users.<br><br>EnSmartEV offers fast DC and AC charging for CCS standard EVs, such as BMW i3, and fast AC charging for other standard EVs with Type 2 inlet, such as Nissan Leaf. It is designed for all EV models (including cleaning and delivery vehicles, i.e. not only passenger vehicles) in the UK/EU.<br><br>EnSmartEV integrates lithium batteries and is designed to charge EVs with ~100% off-peak or low tariff power or renewable electricity at highest power efficiency and lowest grid connection costs, which enables high penetration of renewable power with the grid infrastructure.<br><br>EnSmartEV enables re-use of after-service EV batteries, and which extends EV batteries life-span.<br><br>EnSmartEV system includes a Battery Container and three slim/simple Charging Posts. The Battery Container houses all the equipment and can be screened to be embedded in a space away from the street/pavement. The Charging Post has very small footprint on street/pavement, is designed for all users (including disabled drivers), and considers other road users, particularly the blind and wheelchair users.<br><br>Each Charging Post is designed to serve two electric vehicles charging simultaneously and provide multiple uses, such as mobile phone top-up charging, lighting the street/pavement while indicating drivers the status of the charger.<br><br>EnSmartEV is designed to provide supporting services (i.e. balancing and frequency support) to the grid at zero extra cost, and which is well beyond V2G (vehicle to grid) and demand response.<br><br>EnSmartEV is truly the next generation smart EV charging solution which enables low carbon transportation and addresses climate change.<br><br>EnSmartEV can be used for all public locations, including but not limited to on-street, community parking hub and car parks when there are spaces available for the Battery Container.<br><br>EnSmartEV will facilitate rapid growth of EVs, stimulate road transport electrification, enable re-use of after-service EV batteries, enhance air quality and hence quality of life. |

Note: you can see all Innovate UK-funded projects here: https://www.gov.uk/government/publications/innovate-uk-funded-projects
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Innovate UK

# Results of Competition: Electric Charging for Public Spaces: Real World Demonstrators

## Competition Code: 1902_CRD_MMM_OLEV_EVPUBLIC_P2

Total available funding is £19,400,000 (Total funding for both streams is £38,650,000)

Note: These proposals have succeeded in the assessment stage of this competition. All are subject to grant offer and conditions being met.

| Participant organisation names | Project title | Proposed project costs | Proposed project grant |
|---|---|---|---|
| ZETA SPECIALIST LIGHTING LIMITED | Park and Charge Pilot | £1,635,918 | £1,145,143 |
| Oxfordshire County Council | | £758,800 | £758,800 |
| SSE Utilities Solutions Ltd | | £1,996,207 | £798,483 |
| University of Oxford | | £363,118 | £363,118 |
| URBAN INTEGRATED LTD | | £446,966 | £312,876 |

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| Project description - provided by applicants |
| --- |
| With 30% of households in the UK lacking access to off-street charging or home charging, the market opportunity identified in this Park and Charge model is that existing car parks in close proximity to residences can be used at night to provide Electric Vehicle Service Equipment (EVSE) to these potential EV buyers. Detailed work undertaken in Feasibility Stage 1 indicated that most existing car parks are under-utilised from 6 pm to 8 am and through a detailed survey, 70% of potential EV buyers were willing to walk for 5 minutes to charge their EV. This opportunity is exploited in this project using the Park and Charge (PnC) model, summarised as:<br><br>* Production of 300 state-of-the art smart EVSEs by UK SME Zeta: offering advanced features like dynamic charging; fault detection; remote fault rectification; V2G support; dual output with variable charge balancing; remote software upgrade; built in CCTV and Bluetooth.<br>* Demonstration of an Interoperable Electric Mobility Service Provider (eMSP) Platform & App. by UK SME \[ui!\]uk enabling EVSE reservations; parking space reservations; Charge Point Operator (CPO) data integration; payment integration; reporting and visualisation.<br>* Refinement of Park and Charge (PNC) Modelling Tool- A replicable analytical modelling tool to identify suitable PnC sites considering vectors such as local EVSE demand, on-street parking capacity, car park suitability and socio-economic characteristics .<br>* Demonstration of Park and Charge Business Models- Demonstration of new long-term private sector led investment models, risk and reward analysis, in public EVSE infrastructure.<br><br>PnC will test a business model solution that:<br><br>* is suitable for investment- a large low carbon investment partner, SSE, is a core partner<br>* provides local authorities with new options they can be confident in- PnC has 6 local authority participants instrumental in the design and feasibility and intrinsic to the ongoing successful delivery;<br>* encourages electric vehicle take up in the area and maximise improvements in local air quality: 300 new charge points will be provided in existing public sector car parks adjacent to high density residential areas with no off street parking- creating local charging hubs;<br>* provides great experiences for end users: with bespoke pre-booking and billing services, avoidance of pedestrian disruption and street congestion.<br>* Is ready for rapid scale-up, locally and nationally with 18 letters of support secured from other potential stakeholders.<br><br>Social and behavioural aspects will enjoy expert attention through the academic rigor of Oxford University ensuring the PnC solution is: inclusive, accessible, affordable and optimal. |

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