Innovate UK

Results of Competition: OLEV Low Emission Freight Demonstration - Stream 1
Competition Code: 1607_CRD_TRANS_OLEV_LEFD1

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Tevva Motors Limited UPS Limited	Zero Emission Capable Range Extended Electric UPS P80 delivery truck retrofit trial	£2,004,698	£1,099,231
Project description - provided by applicants			
Cities such as London are introducing low or zero emission zones to reduce the socio-environmental impacts of vehicles. Global logistics leader UPS have trialed pure electric vehicles and learned that they are limited on range. If a pure electric delivery vehicle runs low on charge, pulling in to a service station to refuel is not an option . Breakdowns can result in late deliveries and the spoiling of perishable items. In many cases vehicles need a range of at least 60 miles from distribution centres on the edge of town to be able to reach their delivery area in the city and then get back to base. Tevva Trucks™ Range Extended Electric powertrain technology and smart control software achieves this and more. By operating on electric only mode in the city and using a traditional, small car engine running at optimum efficiency to rechanrge its batteries, TevvaDrive constantly optimises performance to deliver both zero emissions in town and a long range. Tevva & UPS have run single vehicle trials successfully for 1 year & need to scale up to fleet wide trials. Tevva & UPS will build & operate 15 of UPS' highly visible, iconic brown P80 delivery trucks across two UK sites, driving daily routes of up to 150 miles to demonstrate the technology's readiness for mass fleet wide roll out.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Air Liquide Advanced Business & Technologies UK Limited Brit European Transport Ltd Cenex Ltd Emissions Analytics Ltd Great Bear Distribution Limited Howard Tenens Limited Kuehne + Nagel Microlise Limited Wincanton Holdings Limited	Dedicated To Gas	£4,927,609	£2,566,256

Project description - provided by applicants
This project will trial 86 dedicated gas HGVs ranging from 26 tonne to 44 tonne which are new to the UK market. Four vehicle manufacturers will be trialled across six different vehicle configurations, creating a wealth of valuable data on vehicle performance, fuel efficiency, reliability and cost. When using CNG/LNG, CO2e savings of up to 8% can be achieved, and biogas produced from waste will be introduced during the project, resulting in Well-To-Wheel CO2e savings of at least 70% compared to diesel. In addition five refrigeration units will use a prototype liquid nitrogen system, further reducing CO2e and air quality emissions. The vehicles will be trialled by five high profile transport operators across a range of different duty cycles, from urban to long haul. They will be supported by technical experts who will collate comprehensive data via telematics and portable emissions monitoring equipment, which will be fully analysed in order to quantify the potential benefits of dedicated gas technology compared to diesel. Two new state-of-the-art gas stations will be delivered as part of the project, in London and Birmingham, for which no funding is being sought, thus developing infra-structure that is needed to help reduce pollution from heavy transport, whilst keeping a low budget.

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: OLEV Low Emission Freight Demonstration - Stream 1
Competition Code: 1607_CRD_TRANS_OLEV_LEFD1

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Lawrence David Limited SDC Trailers Limited Tesco Distribution Limited University of Cambridge	Lightweight aerodynamic double-deck trailer trial	£543,942	£346,925

Project description - provided by applicants

Transport of goods such as groceries between distribution centres is frequently done using 'double-decker' trucks. However vehicle legislation limits the weight of these vehicles. For some operations this means that the vehicles cannot be filled to capacity. By reducing the unladen weight of the vehicles, more goods can be fitted into the truck while still keeping below the required laden vehicle weight. This in turn reduces the number of overall journeys required. When combined with an optimised body shape, designed to minimise aerodynamic drag, a target reduction of 15% or more in CO2 emissions and corresponding fuel costs will be achieved. The cost savings will benefit the consumer via reduced costs of goods. Lightweighting measures aim to achieve this reduction in weight by using new materials and novel designs in various areas of the vehicle structure. The aim of the project is to demonstrate the cost-effectiveness of these savings, by building demonstrator trucks with these features and running them on a commercial distribution route for a year. Data collected from this trial will allow the fuel savings and hence commercial benefit to be quantified, opening up the way for a greater take-up of such trucks and a consequent reduction in both fuel used and C02 emissions.

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Zapinamo Limited Farmdrop Limited University of Warwick - WMG	Zapinamo – Affordable, future-proof, rapid-charging infrastructure for electric freight vehicles	£2,223,793	£1,579,240
Project description - provided by applicants			
Urban freight transport makes up 20-40% of all road journeys but contributes 40-50% of local air pollution. Outdoor air pollution is contributing to about 40,000 early deaths a year in the UK, 9,416 in London alone. EVs are well suited for urban environments; they produce zero emissions at point of use and less noise pollution compared with gasoline powered vehicles. However, the growth of charging infrastructure in the UK has not kept the same momentum as vehicle development and threatens the widespread uptake of EVs, particularly for commercial freight operators, who are largely dependent on grid supply. With support from Warwick Manufacturing Group, we are CHANGING THE WAY WE CHARGE ELECTRIC VEHICLES. We are building movable, connected, power-boosting EV charging infrastructure. Our solution overcomes all charging infrastructure hurdles, enabling widespread EV uptake. We will trial our technology with Farmdrop, London's first all-electric grocery delivery service using the new IVECO Daily EV, the only light commercial EV large enough to meet Farmdrop's operational needs.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: OLEV Low Emission Freight Demonstration - Stream 1
Competition Code: 1607_CRD_TRANS_OLEV_LEFD1

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Gnewt Cargo Limited Greater London Authority	Gnewt Cargo Commercial Electric Vehicle Trial	£1,647,234	£1,105,178
Project description - provided by applicants			
This submission sets out Gnewt's Stream 1 proposal in partnership with the GLA. The trial will run from April 2017 to 2019. Gnewt proposes to lease 33 Voltia & BD-OTO, N1 & N2 vehicles for last-mile logistics that are potentially far better suited for urban deliveries. This project is a first of its kind deployment of innovative larger zero emission vans in London which will actively disrupt existing diesel fuelled vehicle technology and create a legacy for the future. The trial directly delivers the LoCITY & Mayor's programmes to improve air quality. Our proposal is essential, as existing barriers won™t change while cost, data gaps, limited vehicle options and unproven claims remain. Proving the viability of these innovative vehicles in a commercial setting will allow OLEV, GLA & LoCity to collate robust whole life costs, mileage, efficiency & energy data which plugs the current data gap in policy making. Whilst leasing and operational costs are high versus diesel, demonstrating that these vehicles can successfully overcome current electric vehicle limitations will help increase demand and manufacturing supply, thus driving down costs. This type of data is essential for assessing the potential for city-wide scale up in London & other leading big cities. Data from the trial will help policy makers lobby government and other EU or international funders to secure further funding for electric vehicles and charging.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
CNG Fuels Limited John Lewis PLC University of Cambridge	Maximising CNG Benefits	£3,251,966	£1,959,842
Project description - provided by applicants			
The 'Maximising CNG Benefits' Project will demonstrate the operational viability of a transition from a trial period, into a large scale fleet rollout of dedicated gas HGVs supported by local refuelling infrastructure in order to reduce emissions within the freight transport industry. John Lewis Partnership (JLP) will trial a fleet of 43 dedicated gas HGVs from their distribution centres at Magna Park, Milton Keynes; vehicles will also trial a novel transport refrigeration unit (TRU) that will further reduce vehicle emissions and reduce vehicle noise. CNG Fuels will provide a high pressure (LTS) grid-connected compressed natural gas (CNG) refuelling facility to supply biomethane to the fleet during the trial period, and additional infrastructure to enable continuous and growing gas demand into the future. Cambridge University will support the Project by gathering and analysing data in relation to vehicle and refridgerator performance.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Kuehne + Nagel Limited Microlise Limited Emissions Analytics Ltd Cenex Ltd	Reduced Emissions Logistics (Red-E-Log)	£1,894,637	£1,053,631

Project description - provided by applicants

Reducing air pollutant (NOx and PM) and CO2 emissions on UK roads is increasing priority for UK government, retailers, HGV hauliers and the general public. HGVs account for 17% of all UK road transport emissions; but the opportunities to significantly reduce their emissions in the near future are limited. The Reduced Emissions Logistics (Red-E-Log) project offers an immediate solution in the use of liquid biomethane (LBM) burning engines for HGVs. By making use of biomethane (methane produced by bacteria feeding off waste streams) significant amounts of fossil fuel can be eliminated from UK roads. This means the total CO2 equivalent for LBM trucks is as much as 85% less when compared to a present day HGV running on diesel, making this a solution to reducing global CO2 emissions that we can implement today. Red-E-Log is a collaboration between Kuehne & Nagel (K&N), Microlise, Cenex and Emissions Analytics (EA) to deploy 29 of the latest generation (2017 and 2018) OEM warranted 44t duel fuel and Liquid Natural Gas articulated trucks. The project will deploy three state-of-art truck technologies that are not currently (October 2016) in use in the UK with a high-profile fleet, and promote the reintroduction of LBM into the UK market.

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Ulemco Limited Aberdeen City Council Yorkshire Ambulance Service Ocado Operating Limited Wiles Greenworld Ltd London Fire and Emergency Planning Authority Westminster City Council Veolia ES (UK) Limited	HyTIME - Hydrogen Truck Implementation for Maximum Emission reductions	£1,714,136	£1,309,787

Project description - provided by applicants
This 24-month project will trial a range of vehicles and associated duty cycles with hydrogen dual-fuel technology (H2ICED®), in order to provide evidence of the carbon reduction and air quality improvement of this world leading unique approach. The project is led by ULEMCo, the technology provider in partnership with vehicle operators The London Fire Brigade (LFB), Wiles Greenworld (WG), Aberdeen City Council (ACC), Westminster City Council (WCC), Veolia, Ocado & the Yorkshire Ambulance Service (YAS) that will provide the vehicles, the fleet operations experience and their fleet management systems to support data gathering. The project provides value for money by incorporating a range of vehicles, duties and operators who will all get hands on experience of the benefits of the dual fuel technology including LFB(2 vans), WG(2 vans), ACC(2 RCV & 1 road sweeper), Ocado(1 chassis cab) and YAS(1 patient transport ambulance), that will largely make use of the existing hydrogen refuelling stations (HRS), with a temporary facility being installed for WCC. It aims to show between 40-70% reduction in tailpipe C02e is possible by displacing diesel, alongside improving real world air quality relative to the MY16 standards, & WtW of 5%-60% depending on the source of H2.

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
G-volution PLC ContainerShips UK Ltd Microlise Limited	Combustion Efficient Euro 6 HGV Dual Fuel	£1,349,269	£822,880
Project description - provided by applicants			
Natural gas (methane) is an excellent low carbon fuel for Internal Combustion powered transportation, particularly when used in dual fuel solutions for powering HGVs. Existing engines have been readily modified and proven at Euro 5 and 6 level as part of an Innovate UK Low Carbon Truck Trial. Unfortunately methane, as a Greenhouse gas, is 20+ times more powerful than CO2 and, not only does methane slip™ from large road going engines negate much of the CO2 saving achieved, but tighter Euro 6 emissions limits mean that compliance is challenging. This is severely hampering the UK and other European Governments' stated attempts for methane to become an alternative fuel of choice for HGV fleets. G-volution's earlier research into controlling methane slip and development of new after-treatment techniques has shown that compliance and CO2 reduction is possible with a combination of these. The consortium will develop and demonstrate 15 dual fuel (diesel/gas) road vehicles that comply fully with Euro 6 emissions regulation and show additional CO2 reduction in real life HGV operation.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Kuehne + Nagel Limited Microlise Limited Cenex Ltd Tevva Motors Ltd EarthSense Systems Ltd Emissions Analytics Ltd	TRIUMPH (Temperature-controlled Range-extenders & Integrated Urban Mapping of Pollution) Hotspots	£1,756,890	£1,084,682
Project description - provided by applicants			
TRIUMPH is a demonstration and study of zero emission capable trucks and refrigeration units in urban environments. Refrigerated urban delivery is a key component of the modern food distribution network and temperature controlled transport is highly polluting in urban environments. Zero emission technologies provide a solution to urban air quality and can also reduce CO2 emissions. A limited evidence base exists to support the uptake of new innovative technologies in a commercial vehicle environment. This project will investigate three solutions to zero emission delivery in urban environments. 1) Fully electric vehicles (supplied by Magtec); 2) Range extended electric vehicles (supplied by Tevva). 3) Liquid nitrogen engine refrigeration units (supplied by Dearman). A detailed study of all three options will be undertaken. The project will also: develop real time environmental sensing, provided by EarthSense, which will inform the control strategy of range extended electric vehicles to provide zero emissions operation in areas of the poorest air quality; develop fleet telemetry systems for the trial vehicles; develop fleet advice software to inform roll out in the wider fleet community; and compare the emission, cost and technical performance to Euro VI diesel vehicles.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Magnomatics Ltd Calor Gas Limited Hewland Engineering Limited AVID Technology Limited	HYLIGHT – HYbrid LIquefied petroleum Gas tanker witH magspliT	£1,918,591	£1,262,915
Project description - provided by applicants			
Magnomatics™ innovative and proprietary magnetic CVT MAGSPLIT integrates a magnetic planetary gear and a highly efficient control motor/generator to enable the realisation of more efficient and compact Plug-in Hybrid Electric Vehicle powertrains. A Commercial Vehicle Intent MAGSPLIT component has previously demonstrated high efficiency and robustness in a compact package, showing the potential to reduce CO2 emissions by 1m tonnes p.a. by 2025. For this project, two 18t DAF LF PHEV demonstrator trucks will be delivered by the UK based consortium and operated in a 1 year trial by Calor, with oversight by DAF LF manufacturer Leyland Trucks. Magnomatics will design, build and test the MAGSPLIT device and electrical traction subsystem; Hewland Engineering, a UK transmission manufacturer, will design and manufacture the MAGSPLIT transmissions and AVID Technology will convert, commission and deliver the vehicles, including proprietary electrified ancillaries to enable zero emission capability. The trial will verify the technology, business case and emissions benefits to the consortium, who represent UK based end user, OEM and Tier 1 suppliers, capable of delivering this high value, innovative powertrain to market from a UK manufacturing base.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: OLEV Low Emission Freight Demonstration - Stream 1
Competition Code: 1607_CRD_TRANS_OLEV_LEFD1

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
Howden Joinery Limited Sainsbury's Supermarket Ltd Alternatech Limited Imperial College London	Kinetic energy recovery for urban logistics applications (KERS-URBAN)	£2,208,177	£1,504,997

Project description - provided by applicants

This collaborative project aims to evaluate the energy and emissions benefits of a kinetic energy recovery system (KERS) supplied by Alternatech for urban delivery vehicles, including both articulated and rigid vehicles. The partners include Howdens, Sainsbury's, Alternatech and Imperial College London. During the trial period, Howdens and Sainsbury's will introduce 10 vehicles modified by Alternatech into their fleet alongside conventional vehicles. Vehicle telematics data will be collected by Imperial College to quantify the reduction in fuel consumption, CO2 emissions. Emissions testing and advanced vehicle emissions modelling will enable the team to evaluate the benefit of this technology to urban air quality. Furthermore, as the KERS technology reduces the load on the diesel engine, noise measurements will be used to evaluate the potential benefits to residents. This project will also evaluate the opportunity to optimise delivery routes and schedules to best-match the performance characteristics of the KERS system to give the greatest emissions and fuel consumption reductions.

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results

Innovate UK

Results of Competition: **OLEV Low Emission Freight Demonstration - Stream 1**
Competition Code: **1607_CRD_TRANS_OLEV_LEFD1**

Total available funding is £19m from OLEV (£1,309,000 non grant costs)

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
UPS Limited UK Power Networks (Operations) Ltd Westminster City Council	Smart Electric Urban Logistics	£2,597,644	£1,329,100
Project description - provided by applicants			
The global logistics company UPS is committed to greening its delivery fleet, but the lack of electric freight vehicles and electric infrastructure restrictions have held it back. Smart Electric Urban Logistics provides an innovative set of solutions which will support this change and make a vital contribution to cutting emissions in the key central London area. It will also provide a scalable set of outputs which other logistics and freight operators can implement to improve their vehicle fleets and ultimately the environment. A trial of electric vehicles forms the centre piece, with real duty cycles providing evidence for emissions reduction versus existing diesel fuel use. Instead of disruptive infrastructure improvement work, the project will focus on smart charging and making best use of existing supply through efficient use. An innovative time variance tool will provide a key mechanism for delivering efficiency, and this will help to create additional capacity in electrical supply with short lead-in times. A five year strategy for the electrification of UPS's entire central London fleet of 170 vehicles will result, moving the company towards its green objectives and providing an exemplar and real-world data for other UK organisations interested in the electrification of vehicles.			

Note: you can see all Innovate UK-funded projects here
https://www.gov.uk/government/publications/innovate-uk-funded-projects Use the Competition Code given above to search for this competition's results