

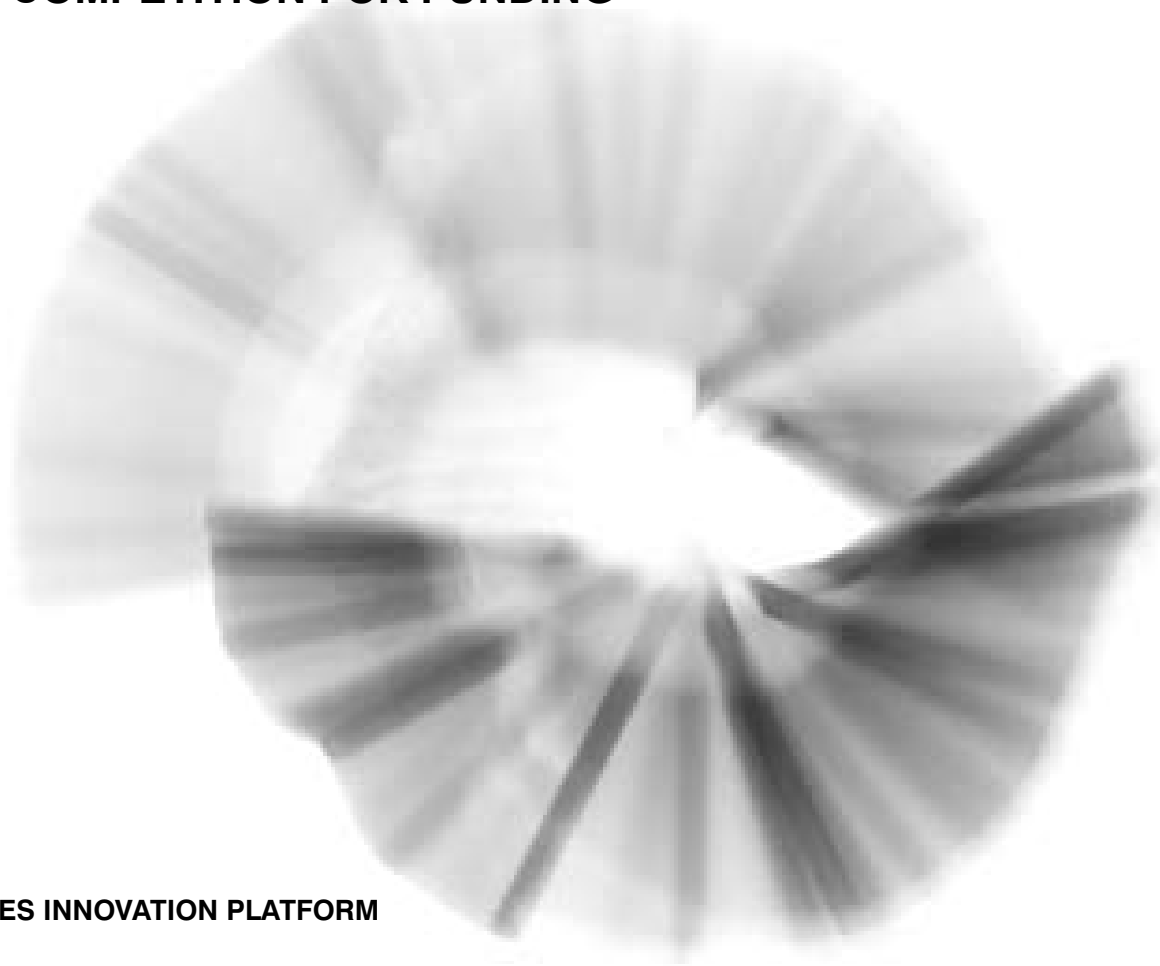
Technology Strategy Board

Driving Innovation



Ultra Low Carbon Vehicle Demonstrator

JANUARY 2009 COMPETITION FOR FUNDING



LOW CARBON VEHICLES INNOVATION PLATFORM

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Summary

As part of the Low Carbon Vehicles Innovation Platform, up to £10 million has been allocated to fund highly innovative, industry-led collaborative research projects in the field of ultra low carbon vehicle development and demonstration.

Funding is available for the rapid development, build and deployment of a credible fleet of ultra low carbon vehicles capable of achieving tailpipe emissions of less than 50g CO₂/km together with a significant zero-emission range.

This competition is focused on developing robust industry-led consortia that are capable of supplying significant numbers of vehicles towards the development of a UK-wide fleet of at least 100 passenger vehicles for delivery in late 2009/early 2010. These vehicles would then be used in a real world environment over a minimum period of 12 months.

Background and Challenge

The Technology Strategy Board's challenge-led innovation approach sees the societal, economic and environmental challenges of the future not as threats, but rather as opportunities for innovative solutions that enhance quality of life and increase wealth.

The Technology Strategy Board's Low Carbon Vehicles Innovation Platform was launched in September 2007. It is the key delivery agent for the Government's research and development funding on low carbon vehicles.

With initial funding from the Technology Strategy Board, the DfT and the Engineering & Physical Sciences Research Council (EPSRC), the Innovation Platform aims to promote low carbon vehicle research, development and demonstration in the UK to deliver:

- carbon reduction in domestic and international vehicle markets

- accelerated introduction of low carbon vehicle technology and vehicles (compared to a purely market driven process)
- a UK automotive sector benefiting from growing demand for low carbon vehicles – domestic and international

Ultra low carbon vehicles capable of delivering less than 50g CO₂/km with an extended zero emission range have been identified as priorities to contribute to tackling UK and EU climate change targets, whilst creating significant market opportunities for UK-based companies.

Scope

This competition aims to assist in the short-term development and delivery of a minimum of 100 ultra low carbon vehicles for passenger fleet operation by late 2009/early 2010. Each vehicle should be capable of achieving tailpipe emissions of less than 50g CO₂/km and a zero-emission range of more than 35km.

The competition will focus on electric vehicles or plug-in hybrid vehicles. However, alternative technologies capable of achieving the same CO₂ targets and the same extended zero emission range will be included in this competition.

Vehicles with performance marginally outside this range may be considered where there is additional utility, for example in the case of larger passenger vehicles.

This performance will be measured using UN-ECE Regulation 101 which defines standard test procedures for measuring the fuel consumption and CO₂ emissions of passenger cars (and light goods vehicles) including hybrids and plug-in hybrids. It also defines procedures for measuring the electrical energy consumption and electric range of electric vehicles and plug-in hybrids. The current text of the regulation is available at:

<http://www.unece.org/trans/main/wp29/wp29regs101-120.html>

For testing of plug-in hybrids the recent amendments adopted will also be used. These are set out in document ECE/TRANS/WP29/2008/113 available at:

<http://www.unece.org/trans/doc/2008/wp29/ECE-TRANS-WP29-2008-113e.pdf>

Applicants will be expected to provide independent data showing compliance to above prior to initial delivery.

Successful project consortia will be expected to contribute a minimum of circa 15 vehicles to the 100-vehicle target, along with any necessary infrastructure to support the vehicles' use (for example, charging points). The vehicles will then be used over a minimum period of 12 months to cover seasonal variations. All vehicles will be required to allow continuous in-use data collection, covering at a minimum –

- number of individual journeys
- length of individual journeys
- date and time of journey
- energy used per journey
- time and length of charging and energy transferred
- ambient external temperature

The data must be made available in an agreed format, at the end of each quarter during the 12-month usage period, to the Technology Strategy Board. It should be noted that the data and any subsequent analysis may be made publicly available and also used to inform future Innovation Platform activity.

Successful project consortia will also be responsible for identifying, recruiting and dealing with the users of the demonstration vehicles, who, it is anticipated, will be selected from a wide socio-economic background. The users of the demonstration vehicle fleet will be required to be part of a perceptions survey to be conducted by a third party.



All passenger vehicle classes will be included up to a maximum of 7 seats. Motorcycles, quadricycles and tricycles are specifically excluded from this competition. Appropriate certification will be required to allow the vehicles used in the demonstration to be operated on UK roads.

It is anticipated that each consortium consists of most, if not all, of the following partners:

- Vehicle manufacturer
- Infrastructure provider (e.g. charging equipment)
- Utility provider
- Local authority
- Technical institution/organisation for data logging and data analysis

(This list is for guidance only and is not exhaustive.)

The Technology Strategy Board encourages applicants to establish contact with their regional development agency (or devolved administration if applicable) to explore opportunities for additional funding.

Although the competition will focus on consortia including established volume vehicle manufacturers, consideration will be given to partnerships of small volume, experimental or demonstrator vehicle-manufacturers. Any such partnership will be required to operate under a single management umbrella and be capable of collectively demonstrating an ability to deliver to the same standards as an established volume manufacturer, whilst meeting the competition scope.

Funding Allocation and Project Details

Up to £10m has been allocated to support industry-led collaborative research projects that address the above challenge.

We expect projects to last for approximately two years and include the development and manufacture, with final vehicle delivery in late 2009/early 2010, immediately followed by a period of real world usage of at least 12 months.

Successful demonstrators will raise the profile of ultra low carbon vehicles whilst providing comprehensive customer feedback, which may inform future interventions in this area.

It is expected that, as a guide, each proposal will consist of the following elements.

- Development and manufacture of vehicles
- Development and installation of infrastructure
- Trial of vehicles
- Collection and analysis of data
- Final report and dissemination

It is anticipated that most of the funding will be allocated to proposals in the categories of applied research and development (attracting 50% public funding) and/or experimental development (25% public funding). A robust case must be made to support the requested level of funding against each element of the proposed project. The Guidance for Applicants defines these categories of research. See the Competitions link at www.innovateuk.org

Note: Any income raised from the demonstration of the vehicles must be deducted from the total eligible project costs.

Application Process

The competition will be launched on 19th December 2008. Consortia interested in participating are invited to submit Expressions of Interest (EoI) until midday on 28th January 2009. However, every consortium intending to submit an EoI and wishing to be considered in the competition must inform the Technology Strategy Board with a Registration of Intent to Submit an EoI no later than 21st January 2009.

A number of consortia will be invited to make a presentation to a judging panel in the week of 2nd February 2009. Feedback on the panel interview will be completed by the 10th February 2009, following which successful applicants will be invited to the full stage of the competition. All full stage applicants are required to submit a full stage application form, including a project business plan, no later than midday 11th March 2009. During this period, at least one representative from each consortium will be required to attend a compulsory application briefing event on 23rd February 2009. A final decision and feedback to applicants will be made no later than 30th March 2009.

We will also require all projects to produce non-commercially sensitive summaries at the start and at the end of the project.



Key Dates

Competition opens	19th December 2008
Registration of intent to submit an EoI	21st January 2009
Expressions of interest deadline	28th January 2009
EoI presentation and interview	in week of 2nd February 2009
Applicants' briefing (compulsory)	23rd February 2009
Deadline for receipt of full applications	11th March 2009
Decision and feedback to applicants	30th March 2009

More Information

For more information about this and other competitions and details of how to register and apply, please see Competitions at www.innovateuk.org.

Helpline:
01355 272155

Email:
competitions@tsb.gov.uk

The Technology Strategy Board is a business-led executive non-departmental public body, established by the Government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve quality of life.

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