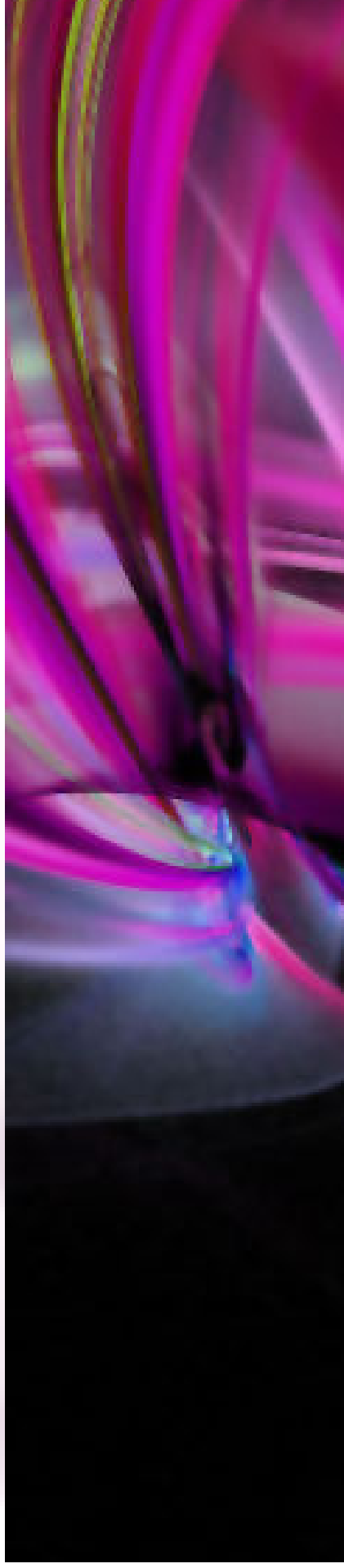


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Driving Innovation

Fuel cell vehicles and Hydrogen

Overview of January 2012 competition for funding



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What has been done?

- £10m Collaborative R&D programme March 2009
- £7m Demonstrator programme funded by DECC
- Investments through Low Carbon Vehicle Innovation Platform
- Materials for Energy competitions
- £65m of projects (including under LCV IP), £31m grant



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What are the results so far?

- A number of fuel cell systems demonstrated
 - Ceres Power CHP system, integrating fuel cells into homes
 - Diverse Energy Power Cube, stationary power for specific markets
 - ITM-Power HFuel electrolyser – linking the energy system and transport
 - Air Products – refuelling infrastructure
 - Intelligent Energy Taxi and Scooter – PEM fuel cell systems integration
 - Arcola Energy portable system – addressing specific market needs
 - ACAL Energy “Flow Cath” – next generation technology for system cost reduction



What else is going on?

- Regional demonstrators and facilities
 - London bus scheme and plans for taxis and refuelling, Hydrogen Office in Scotland, Hydrogen Centre in South Wales, new facility at Honda in Swindon
- Vehicle OEMs MoU – production fuel cell vehicles by 2015
- UK niche vehicle developments – scooter, taxi, buses, microcab and more
- Introduction of renewables into UK energy mix driving the need for energy storage



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What's next?

- Competition for funding £7.5m

“Whole system integration”

To integrate hydrogen and fuel cell technologies
into wider energy and transport systems
and tell the end-to-end story

- Aims
 - overcome the system integration challenges
 - to design complete solutions easily used by customers
 - gain an insight into the use of whole systems in realistic scenarios.
 - build on existing investments and strengthen UK capability
 - evidence base for further investment



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What are we looking for?

- Small number of large-scale and application-led projects
- Emphasis on system integration, not technology development
- Include trials of the resulting whole system
- Involve customers in examining the performance, design and user experience in realistic scenarios
- Transport and static applications, for example
 - Renewable hydrogen generation, logistics and use
 - Vehicles, hydrogen, refuelling and use
 - CHP building integration and feed in to grid
- Partnerships with broader industry sectors
- Regional capabilities linked within a national picture



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What about transport?

- Transport is one of the main application areas
- Tell the story of where the hydrogen comes from and how it can be delivered and used in vehicles
- Funding contribution from Low Carbon Vehicle IP to support inclusion of vehicles
- Some examples of possible integration areas
 - low-carbon hydrogen sources
 - managing the logistics of hydrogen delivery for refuelling
 - networking of hydrogen refuelling sites
 - a range of vehicles and different modes of use



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When is it?

- Competition opens: 9 January 2012
- Expressions of Interest deadline: 22 February 2012
- Second stage opens: 19 March 2012
- Deadline for receipt of Full Applications: 2 May 2012
- Networking and consortium building events
November 2012



Any questions?

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