

Low carbon energy

The University of Birmingham is a world leading specialist in low carbon energy, we are particularly strong in bio-fuels, bio waste to energy, supercritical fluids and hydrogen fuel cell development, testing and storage.

The Institute of Energy Research and Policy

The Institute for Energy Research and Policy was founded in 2005, recognising the wide range of high-quality research in energy, ongoing for more than fifty years, and the increasing importance of energy for our lives and our environment. The Institute brings together science and technology with the social sciences and policy and acts as a focus for the Universities work on Energy. **[Find out more about the Institute of Energy Research and Policy \(http://www.ierp.bham.ac.uk/\)](http://www.ierp.bham.ac.uk/)**

Energy Technologies Institute

Birmingham has been chose to establish the Energy Technologies Institute in collaboration with the universities of Nottingham and Loughborough. Potential funding of up to £1.1 billion will be provided by Government and industry, accelerating the development of low carbon technology. **[Find out more about the Energy Technologies Institute \(http://www.energytechnologies.co.uk/Home.aspx\)](http://www.energytechnologies.co.uk/Home.aspx)**

Find out more about:

- **[Hydrogen Technology \(http://www.hydrogen.bham.ac.uk/\)](http://www.hydrogen.bham.ac.uk/)**
- **[Alternative Vehicle Fuel \(http://www.eng.bham.ac.uk/mechanical/research/vtech.shtml\)](http://www.eng.bham.ac.uk/mechanical/research/vtech.shtml)**
- **[Supercritical fluid technology \(http://www.eng.bham.ac.uk/chemical/research/Supercritical.shtml\)](http://www.eng.bham.ac.uk/chemical/research/Supercritical.shtml)**

Case studies

Next generation bio-fuels

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Supported by the UK Government and the Technology Strategy Board in collaboration with Jaguar Cars, this work looks at new "next generation" bio-fuels for diesel cars. The project has a total budget £2.12 million and is supported by a range of industrial partners.

The technical approach of this project is based on the vision of the demand for diesel engines and of the capabilities of bio-diesel production within the next 2 decades and beyond.

While the next generation of cellulosic biomass-derived fuels will make an increasing impact, the first generation family of fatty acid esters will continue to be a major source of biofuel components. At the same time, the variety of fuel properties will become even wider as the decentralized production of biofuels continues to grow.

Partners for this project include, Jaguar/Land Rover, Green Fuels, Johnson Matthey and Shell.

The Hydrogen Fuel Powered Car

The Fuel Cell Group (FCG) has been working in the field of Solid Oxide Fuel Cells (SOFCs) for many years and is now commencing research and development in the field of Proton Exchange Membrane Fuel Cells (PEMFCs) and Membrane Electrode Assembly (MEA) technology.

The FCG is renowned for its work in this area and is currently undertaking a large number of commercial projects in relation to both the application of fuel cells and in hydrogen storage.

