

Invest in the Future

Climate change affects us all... Increase in greenhouse gas emission (GHG), fossil fuels depletion, sea level rise, melting ice caps, species migration and rise in world population (currently 6.3 billion to 9 billion over the next 50 years) are just some of the terms now commonly used in everyday life. The global energy crisis is a great concern needing to be swiftly addressed and solved. Rapid depletion of oil reserves and the increases in oil prices together with environmental impact of vehicle emissions are urgent problems. In December 2008, the Climate Change Committee recommended a minimum 34% cut in GHG emissions by 2020, with a 42% cut in the UK. In the UK, indigenous primary energy resources are diminishing while demand is increasing. North sea oil and gas have peaked and are in decline. Alternative power sources for everyday life are therefore required.

The UK Government is committed to a substantial increase in renewable energy over the next decade as a major part of its programme to reduce carbon emissions. Currently 1.8% of energy used in the UK comes from renewable sources. The UK Government aims to increase this to 15% by 2020 in line with EC proposals. This implies a dash from 1.8% renewable energy now to a near-tenfold increase in the next decade!

The current focus is on the development of Hydrogen and Fuel Cell technologies and their associated supply chains that offer significant quantitative improvements in: a) lowering costs (by a factor of 10-100) and significantly improving reliability, durability and performance for the stationary, transport and portable markets; b) addressing the challenges related to hydrogen generation, storage and utilisation; and c) the acceleration of Hydrogen and Fuel Cell technologies deployment to various markets such as cars and buildings.

We, at The University of Birmingham centre for hydrogen and fuel cell research welcome investors to sponsor:

- Hydrogen and Fuel Cell projects
- Idea(s) related to Hydrogen production, hydrogen storage, HFC vehicles, Combined Heat and Power (CHP) and portable systems leading to possible commercialization.

The research centre is part of the School of Chemical Engineering within the College of Engineering & Physical Sciences at The University of Birmingham. It was formed in early 2000 by the director, Professor Kevin Kendall. The centre is nationally and internationally recognised for its dynamism and expertise in Fuel Cell Technologies. It is also part of the £6.5million Advantage West Midlands (AWM) Science City initiative, £1billion ETI Midlands Consortium and has been awarded £5million (EPSRC) for the creation and running of a Doctoral Training Centre (DTC) in Hydrogen, Fuel Cells and their Applications, the first of its kind in the UK. The group has also state-of-the-art facilities and is home to a hydrogen refuelling station (launched 17/04/08), a hydrogen powered house (launched 10/10/08), a hydrogen fuel cell Combined Heat and Power (CHP) and five hydrogen fuel cell vehicles.

Perhaps the most significant measure of the standing of the centre is the worldwide press and TV coverage that has been obtained during 2008. Editorials in the Times and The Guardian, pictures in The Sunday Times, discussions on Radio 4 Today Programme, coverage on Sky News, BBC News 24, BBC Breakfast, ITV News, Channel 4 News, Midlands Today, CNN, Al-Jazeera TV and the Gadget Show have indicated wide public interest.

For further information, please contact fuelcells@contacts.bham.ac.uk (<mailto:fuelcells@contacts.bham.ac.uk>).