Release: Immediate (21/03/2013)

Press Notice: Royal Academy of Engineering to host one-day conference on "Liquid Air Energy – A new industry for UK plc?"

A six-month study on the potential of liquid air as a new and sustainable energy vector, published by the Centre for Low Carbon Futures, will be presented at a one-day conference hosted by the Royal Academy of Engineering on the 9th May.

- Liquid air is an exciting new energy storage technology that many experts believe could help meet some of our toughest energy challenges, including energy security and zero-emission transport.
- The new white paper, *'Liquid Air in the future energy mix: A new industry for UK PLC,'* investigates whether liquid air could provide a credible alternative to existing energy storage systems and low carbon transport solutions to better harness renewables and deliver energy security. It also considers the potential economic value to UK PLC.
- The paper is based on contributions from a wide range of energy experts including world-class consultancies such as Arup , Poyry and Ricardo, the German industrial gases company Messer, and academics from the Universities of Leeds, Birmingham, Strathclyde, Brighton and Imperial College.
- Members of the press and the public are welcome to attend the conference.

"An urgent debate is needed around the opportunities that liquid air may offer in providing a step-change (down) in the cost of providing secure energy storage - especially as an alternative to battery technologies in vehicles - and to provide a real solution to the challenges of relying on renewable energy resources. Critically the UK has world class expertise in both mechanical engineering and cryogenics. There is a unique economic opportunity for us to develop a UK-centric industry, which requires limited investment in new expertise or manufacturing plant."

Professor Richard A Williams OBE, FREng, Pro Vice-Chancellor, University of Birmingham

Along with unveiling the new study, the conference also will cover the opportunities and potential impacts of liquid air for grid and infrastructure, industrial and transport applications. It will also address the manufacturing and industry opportunities, current initiatives, possible future actions, and challenges. There will be panel question and answer sessions throughout the day.

Date: 9th May 2013
Time: Registration from 8:30 – 9am, conference including lunch from 9am – 5pm. Champagne reception (sponsored by Ricardo) and networking from 5pm.
Venue: Royal Academy of Engineering, 3 Carlton House Terrace, London, SW1
Cost: £195 (student bursaries available)

The Royal Academy of Engineering and the Institution of Mechanical Engineers have been at the forefront of the debate on energy storage both in UK and internationally. The white paper has been supported by a series of round table industrial debates, the results of which will also be reported at the conference.

To register for this event please visit http://www.lowcarbonfutures.org/events/liquid-air-energy

The conference advisory team includes:

- Chair - Prof R A Williams OBE FREng (University of Birmingham)
- Prof Nigel Brandon OBE FREng (Imperial College)
- Dr Tim Fox FIMechE (Head of Energy & Environment, Institution of Mechanical Engineers)
- Prof Neville Jackson FREng (Chief Technology & Innovation Officer, Ricardo)
- Mr John Leggate CBE FREng (Quintal Partners / RAEng Clean Tech Advisory Council)
- Prof John Miles FREng (Arup/University of Cambridge)
- Mr Jon Price (Chief Executive, Centre for Low Carbon Futures)

About Liquid Air

The UK has world class expertise in both mechanical engineering and cryogenics. Exploiting Liquid air as a mainstream energy vector for use on the grid or in a vehicle presents major opportunities in terms of skills development, manufacturing and jobs, and represents a potentially major economic opportunity for Britain.

Although cryogenic liquids are widely used in industry, their adoption as an energy vector is only just beginning, and liquid air is not yet part of the mainstream energy debate. However the potential appears huge - Liquid air technology is uniquely able to recover low grade waste heat from sources such as thermal generation, data centres and industrial processes, as well as vehicle engines, and convert it into power. A number of British organisations are developing ways to exploit liquid air - or liquid nitrogen, its main component and a common industrial product - as a zero emission energy store and transport fuel.

With energy storage and zero, or reduced, emission powertrains for transport both identified as industries worth tens of billions of pounds and tens of thousands of jobs - but currently dominated by America and Asia - developing a UK-centric industry which requires limited investment in new expertise or manufacturing plant is a key economic opportunity for UK.

About the new white paper

The paper *'Liquid Air in the future energy mix: A new industry for UK PLC?'* considers the fundamental questions: is there a need for a new energy vector; how does liquid air technology work; how does it perform; is it economic; how does it compare with existing technologies; how quickly could a liquid air infrastructure be developed. The report will also consider the potential economic benefits of liquid air to the UK, its impact on climate emissions and energy security, and what is required from government to help it succeed.

The white paper will both summarise the development of liquid air so far, and break new ground by analysing the size of the potential market for liquid air services in areas such as grid balancing and transport. It will also explore opportunities to integrate liquid air production and consumption into existing fossil fuel and industrial processes to achieve major increases in efficiency by exploiting existing sources of waste heat and cold. It concludes by discussing the additional synergies that might be achieved through a joined-up 'nitrogen economy'.

About The Centre for Low Carbon Futures

The Centre for Low Carbon Futures is a collaborative membership organisation that focuses on sustainability for competitive advantage. Founded by the Universities of Hull, Leeds, Sheffield and York in 2009 and with the University of Birmingham joining in 2012, the organisation is led by Chief Executive Jon Price. It brings together multidisciplinary and evidence-based research to both inform policy making and to demonstrate low carbon innovations. Research themes are Smart Infrastructure, Energy Systems and Green Growth. Activities are focused on the needs of business in both the demonstration of innovation and the associated skills development.

Notes to Editors:-

Complementary tickets are available to members of the press.

Contact

For all media queries please contact Emily Hamilton at Westbourne Communications on 020 3397 0146 or Emily.hamilton@westbournecoms.com

For further information about the conference or the Centre for Low Carbon Futures, please contact Jonathan Radcliffe on jonathan.radcliffe@lowcarbonfutures.org

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