Press release

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UK industry needs to turn up heat on ITER fusion project

Culham / UKTI ITER event highlights opportunities for UK companies

UK industry has won well over £100M worth of contracts so far from construction of the ITER fusion project in France, but needs to do better if it is to benefit from the next construction phase, worth up to Euro 2Bn. That is one of the conclusions of a UK Trade & Investment (UKTI) sponsored event on 'Business Opportunities for UK plc for Fusion and ITER' held at Culham Centre for Fusion Energy (CCFE), Oxfordshire, on 23 September.

ITER will be the world's largest fusion energy experiment when it is completed in 2019. UK companies have fared well during the site preparation phase at Cadarache in the South of France. The next phase will see a large portion of the project's Euro 10Bn tokamak and buildings construction budget being spent. Over 100 companies attended the one-day conference at which representatives from ITER, Fusion for Energy (F4E) Europe's procurement agency for ITER, UKTI, CCFE engineers and UK companies working on ITER projects, reviewed the business opportunities and engineering challenges in the next phase of ITER construction, and described the procurement procedure and tendering process.

"The ITER project faces significant engineering and project management challenges where UK companies can compete effectively – either on their own or as part of a consortium. ITER is providing new business opportunities to companies who are keen to use their expertise in this prestigious programme," says Dan Mistry, Fusion and Industry Manager, CCFE.

"Currently UK is third in ranking (behind France and Italy) in contracts awarded but we want to be number one," adds Mistry. "The only way we're going to climb is if more companies take note of these opportunities and respond. F4E has nearly 2Bn Euros to spend in the next three years and we want to alert companies of these opportunities, so if you are interested please pre-qualify and register your details on ITER's, F4E's and our own database and join the list of successful companies – Atkins Global, Tessella, Halcrow, Jacobs, Oxford Technologies and Oxford Instruments to name but a few."

Companies wishing to find out more about ITER and how to register with ITER and F4E should contact Dan Mistry, Fusion and Industry manager, CCFE on 01235 466607 and email: dan.mistry@ccfe.ac.uk. They can also sign up for CCFE's industry database at: www.fusion-industry.org.uk. Details of ITER can be found at www.iter.org.

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For more information please contact Nick Holloway, CCFE Media Manager, on 01235 466232 or email nick.holloway@ccfe.ac.uk.

Notes for Editors

Culham Centre for Fusion Energy

- Culham Centre for Fusion Energy (CCFE) is home to the UK's fusion research programme, most notably the MAST (Mega Amp Spherical Tokamak) experiment. It also hosts the world's largest fusion facility, JET (Joint European Torus), which is operated for CCFE's European partners under the European Fusion Development Agreement.
- The work is funded by the Engineering and Physical Sciences Research Council (EPSRC – www.epsrc.ac.uk) and by the European Union under the EURATOM treaty.
- Further information is available at www.ccfe.ac.uk and www.jet.efda.org.

Fusion energy

- Fusion is the process which powers the Sun and stars. When light atomic nuclei fuse together to form heavier ones, a large amount of energy is released.
- To utilise fusion as an energy source on Earth, gas is heated to extreme temperatures, over 100 million degrees – hotter than the centre of the Sun. This creates a plasma in which fusion reactions take place. A commercial power station will use the energy produced by fusion reactions to generate electricity.
- Fusion will have major advantages as an energy source:
    - No atmospheric pollution: the fusion reaction produces helium, which is not a greenhouse gas;
    - Abundant fuels, found in seawater and the Earth's crust;
    - No long-lived radioactive waste;
    - An inherently safe system: even the worst conceivable accident would not require evacuation of the surrounding population.
- The fusion programme's objectives are to obtain and study conditions approaching those needed in a power plant, using the 'tokamak' machine concept – effectively a magnetic bottle which contains the hot plasma.
- The next step is ITER, an international tokamak experiment which should provide a full scientific demonstration of the feasibility of fusion in power plant-like conditions. ITER is now being constructed at Cadarache in the south of France. It is one of the largest ever international scientific collaborations, involving China, Europe, India, Japan, Korea, Russia, and the United States. ITER (www.iter.org) will be followed by a demonstration fusion power station, DEMO, and electricity from fusion is expected to be on the grid by 2040.

Fusion & Industry at CCFE

- CCFE's Fusion & Industry initiative, led by Dan Mistry, is assisting British firms in bidding for supply contracts in fusion – either individually or as part of pan-European consortia.
- With investment in fusion research increasing for construction of the multi-billion-Euro ITER project, there has never been a better time for engineering and technology companies to compete for fusion business. UK firms are already winning ITER contracts and many more opportunities are expected in areas from civil, mechanical and electrical engineering, design consultancy and project management, through to instrumentation, advanced materials, magnets, vacuum systems, nuclear technologies and precision engineering.
- The CCFE Fusion & Industry team also enables companies to utilise the problem-solving skills and advanced engineering techniques used in UK fusion research, through Culham Centre for Fusion Energy's technology transfer programme. Companies have used spin-off technologies from fusion in areas as diverse as space research, advanced braking systems and semi-conductor manufacture. Culham's on-site Innovation Centre offers start-up companies affordable business accommodation and access to expertise from fusion scientists through a Technical Support Package.
- More information is available at: www.fusion-industry.org.uk.