

Terms of Reference for the Expert Group in work package 1 of the Research Councils' Energy Programme "Fusion for Energy Strategy 2009" project

The Expert Group is responsible for the production of the "20¹ year vision for UK fusion for energy"¹ document and providing assurance to the Project Board that the document produced has taken into account the views of all major relevant parties during its production. The Expert Group will be supported in this task by Andrew Wright and Jason Green (EPSRC). The 20+ year vision for UK fusion for energy will feed into development of a revised Research Councils' Energy Programme "Fusion for Energy" strategy which is scheduled to be presented to EPSRC and STFC Councils by December 2009.

Specifically the Expert Group is invited to:

1. Examine the current international pathway to fusion (both inertial and magnetic confinement fusion) as an energy source based on currently available national and international strategies, roadmaps etc.
2. Describe the potential opportunities and barriers for (i) UK research and (ii) UK business to play a **leading** role in the development of fusion as an energy source over the next 20 years.
3. Evaluate the disadvantages and risks to the UK of not being involved in the development phase of fusion as an energy source.
4. Using different levels of funding for illustration, provide a recommendation to the Research Councils on what the fusion for energy priorities should be for the UK over the next 20 years.
5. Ensure the quality of the 20 year vision for fusion as an energy source document prior to it being forwarded to the Project Manager for sign-off by the Project Board.

In order to do this, the Expert Group will:

- Review the information currently available relating to pathways to fusion for energy within the UK and internationally.
- Obtain input from those currently carrying out fusion research at both the Culham site and RAL (HiPER).
- Obtain input from other key players in the fusion for energy research arena both within the UK and internationally.

¹ The vision is for UK research for at least the next 20 years, set in the context of the longer term path to fusion energy.