

**Joint Meeting of the
International Fusion Research Council (IFRC)
IEA Fusion Power Coordinating Committee (FPCC)**
24-25 February 2009

Opening Address

Neil Hirst

Director

IEA Office of Global Dialogue

I am very delighted to have the opportunity to welcome you and the representatives of the IEA and IAEA on what I believe to be the first joint meeting of the IAEA International Fusion Research Council on the IEA Fusion Power Coordinating Committee.

There are a lot of synergies between the work of the IFRC and the FPCC. We welcome the decision to hold this joint meeting and expect it to be highly productive.

The IEA is proud to host the Fusion Power Coordinating Committee as one of our most important senior Working Parties on Energy Technology, as well as the nine Implementing Agreements on specific fusion tasks that it co-ordinates. They play a crucial role, complementary to the ITER organisation in coordinating the global efforts to capture the power of nuclear fusion for the benefit of mankind. The IEA regards fission as a key energy technology for the future.

In many ways fusion represents a model for international collaboration on energy technology. The engagement of all major economies, the co-ordination of major national programmes, the extensive exchange of scientists, and the pooling of substantial international resources of expertise in one flagship project – ITER, all represent outstanding achievement of international co-operation.

Of course we are aware that immense challenges lie ahead: to deliver ITER on to time and to budget and to progress toward the demonstration stage through DEMO, while, at the same time, keeping in play a range of key fusion options with promise for the future. I know that these issues will be at the heart of your discussions over the next two days.

The IEA has been asked by the G8 to provide advice on global scenarios and strategies for a clean, clever, competitive energy future. A core part of this guidance is our lead energy technology publication, *Energy Technology Perspectives*. In the 2008 edition we began to look, for the first time, at the global energy outlook beyond the next few decades to the second half of the century.

It is clear that in order to meet the challenge of climate change, the progressive reduction in the CO₂ intensity of energy will need to continue until very low levels of emissions are achieved. Also we will inevitably see a continuing decline in the accessibility of fossil fuels.

We are also seeing a continuous shift towards electricity as a flexible, clean and convenient source of energy for many needs.

Carbon capture and storage will be a crucial technology in the coming decades to reconcile the continuing use of fossil fuels, especially coal, with the imperative of mitigating climate change. But it is possible that, with a longer term perspective, CCS will turn out to be a transitional technology.

It is also clear that we will eventually need an alternative to fossil fuels for transport. Bio-fuels have a significant contribution to make. But eventually we expect that our vehicles will need to be powered either by electricity or by hydrogen.

And this implies that in the clean, clever and competitive global energy economy of the second half of this century there will be immense demand for clean, non-fossil sources of electric power.

By that time, we hope and expect that fusion will be a commercially proven technology. And, provided that it is able to compete with other low-carbon fuel sources, it will have a crucial role to play.

Of course even if it turns out that hydrogen is the dominant energy source in transport, perhaps other sectors, fusion can provide the clean energy for hydrogen extraction.

So we at the IEA see an immense opportunity for fusion in our longer term energy outlook.

Finally, I would like to pay tribute to Mr. Masahiro Seki, who has provided distinguished leadership to the FPCC in the past four years. His dedication to fusion and to the work of the Committee and its Implementing Agreements has been widely appreciated.

And I would like to wish you every success in your efforts over the next two days in working towards the realisation of the immense potential of fusion technology.