

MULTILATERAL AGREEMENTS

Agreement on the International Thermonuclear Experimental Reactor (ITER) (2006)

On 24 May 2006, the European Union, the United States, the Russian Federation, Japan, India, China and the Republic of Korea initialed an agreement in Brussels to build the first nuclear fusion reactor. Negotiations on this project took place under the auspices of the International Atomic Energy Agency.

ITER will be an experimental reactor which will reproduce the physical reaction – fusion – that occurs in the sun and stars. Existing experiments have already shown that it is possible to replicate this process on Earth. ITER aims to do this at a scale and in conditions that will demonstrate the scientific and technological feasibility of fusion as an energy source. It is anticipated that fusion may well prove cheaper and safer than fission, the basis on which contemporary nuclear power plants operate. Like current nuclear installations, fusion power plants would operate without emitting gases that are responsible for global warming, like carbon dioxide.

The key advantages to fusion, as described by the European Union in its press release describing the finalisation of this agreement, are as follows:

- it could provide a large-scale energy source with basic fuels which are abundant and available everywhere;
- very low global impact on the environment – no CO₂ greenhouse gas emissions;
- day-to-day-operation of a fusion power station would not require the transport of radioactive materials;
- power stations would be inherently safe, with no possibility of “meltdown” or “runaway reactions”;
- there is no long-lasting radioactive waste to create a burden on future generations.

The project is estimated at more than EUR 10 billion over 40 years. The European Union is to pay 40% of the project’s construction costs (estimated at EUR 4.5 billion). France, as the host country of this installation at Cadarache, will split the remaining 60% with the non-EU signatories. Construction is due to commence in 2007 in Cadarache and is expected to last up to a decade.

The agreement also covers reactor operations, projected to cost EUR 5 billion over 25 years. Of the operating costs, the EU is to contribute 26%, the United States 13%, Japan 13%, China, India, Russia and South Korea 10% each and France the remaining 8%.

Following initialing of this agreement on 24 May, each party is required to submit the agreement and related documents to its respective authorities in order to secure the authorisation to sign the agreement. It is hoped that all parties will be able to sign the agreement on 29 November 2006 in order to allow construction commence in 2007.

The EU is establishing a new European organisation in Barcelona, in the form of a joint undertaking pursuant to the Euratom Treaty, which will be responsible for providing all of Europe's contributions to the ITER Organisation, including the procurement and transfer of contributions in kind, the assignment of qualified staff and financial contributions to the budget of the ITER Organisation.

The ITER Agreement, once finalised, will be open for accession by or co-operation with other countries which have demonstrated a capacity for specific technologies and knowledge and are ready to contribute to the project.