

## Fusion project decision delayed

### **ITER - NUCLEAR FUSION PROJECT**

The project is estimated to cost \$5bn over the next 10 years  
It will produce the first sustained fusion reactions  
Iter is the final stage before a commercial reactor is built

### **A decision on where to site the world's first big nuclear fusion reactor has been postponed, France has said.**

Delegates meeting in Washington were divided over France or Japan for the multi-billion dollar project.

The US has been against the French option because of France's opposition to the invasion of Iraq.

Nuclear fusion holds out the promise of virtually limitless pollution-free energy - but the reactor will take 10 years to build.

### **Pros and cons**

Member countries of the International Thermonuclear Experimental Reactor (Iter) project gathered in the US to try to make a final decision on the location of the project.

"At the end of the meeting...it was agreed by all parties present that no definite choice could be made at this stage," France's research ministry said in a statement.

A French Government envoy at the meeting, Pierre Lellouche, said the matter would be deferred until next year, probably mid-February, the French news agency reports.

The Japanese site of Rokkasho-mura has the advantages of proximity to a port, a ground of solid bedrock and a nearby US military base.

The French site at Cadarache offers an existing research facility and a more moderate climate.

### **Iter consortium**

European Union  
United States  
Russia  
China  
Canada  
Japan  
South Korea

The experts were supposed to reach a consensus based on objective criteria.

But BBC News Online science editor Dr David Whitehouse says the decision is highly political, involving huge amounts of horse-trading behind the scenes.

Delegates were hoping, he says, that one of the countries involved would drop out and so avoid the need for a vote.

The European Union is backing France - but Canada, China, Russia, South Korea, the United States and Tokyo itself are reported to be favouring Japan.

The US, in particular, has raised objections to the French option, citing its opposition to the Iraq invasion.

"We have the structure, scientific and technical environment to ensure that this scheme can start up with competence, expertise and solid safety guarantees," French Research Minister Claudie Haignere said.

"If our site is chosen, Japan will cover the costs that are needed," said Hidekazu Tanaka, a senior official of the Japanese Education, Culture, Sports, Science and Technology ministry.

### **Self-sustaining**

Iter is the boldest nuclear initiative since the Manhattan Project - the effort to build the first atom bomb, says BBC News Online's science editor David Whitehouse.

It would also be the world's largest international co-operative research and development project after the International Space Station.

Scientists say it will be the first fusion device to produce thermal energy at the level of an electricity-producing power station.

Its goal will be to produce 500 megawatts of fusion power for 500 seconds or longer during each individual fusion experiment and, in doing so, demonstrate essential technologies for a commercial reactor.

But they are all agreed that taming the power of the Sun will not be easy.

The superhot gas in which the fusion takes place is notoriously difficult to control.

The gas, termed a plasma, has to be kept hot and contained for fusion to take place. So far, no one has achieved a prolonged self-sustaining fusion event.

Advocates of fusion power point out that if they succeed, there is an almost limitless supply of power available because the deuterium atoms on which it would be based can be derived from seawater.

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