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### **Ministers delay decision on site for 10-billion-dollar nuclear fusion reactor (20/12/2003)**

**WASHINGTON (AFP)** The European Union, the United States and four other countries failed in talks agree on a site for a 10-billion-dollar international nuclear fusion reactor.

Delegates from the European Union, the United States, China, Japan, South Korea and Russia met at a suburban Washington hotel in a bid to decide whether to build the reactor in the French town of Cadarache or the northern Japanese village of Rokkasho-mura.

The decision, expected Saturday, was postponed to February at the earliest.

Asked when a decision would be forthcoming, Chief EU negotiator Philippe Busquin replied: "It might be in February, but not before."

The European Union, Russia and China support the Cadarache site, while the United States, Japan and South Korea prefer the Japanese site, according to a delegate present at the meeting.

"We plan to hold a follow-up ministerial meeting to reach consensus as quickly as possible, likely to be in February," participants said in a joint communique.

No details were given to reporters on where the likely February meeting will occur.

The world's first nuclear fusion reactor will provide an economic boon to its chosen site: French officials estimate the project could bring 30 billion dollars to the economy of the chosen venue over 30 years.

It will cost five billion dollars to build the reactor, and five billion to run it for 10 to 20 years, according to project supporters.

The choice of the site must be made by consensus, and not by a simple majority, partly because all parties will be required to fund the project.

The multibillion-dollar project, known as ITER -- Latin for "the way" -- aims to be a test bed for what is being billed as the clean, safe, inexhaustible energy source of the future. The project is not expected to generate electricity however before 2050.

The Japanese site has many assets: the proximity of a port, a ground of solid bedrock and the close proximity of a US military base.

The French site offers an existing research facility and a better climate.

The ITER consortium -- which hopes to find a limitless energy source from nuclear fusion -- is made up of the European Union, Japan, Canada, China, Russia, South Korea and the United States.

Washington quit the project in 1998 but returned in January, as President George W. Bush changed his energy policy.

"Fusion power could well be one of these technologies that allows the world to leapfrog the enormous acceleration in future energy demand we know threatens economic growth in every corner of the world," US energy secretary Spencer Abraham said in a statement.

The European Union is backing France, after the Spanish town of Vandellos withdrew in November.

In the past, nuclear energy has derived from splitting atoms of radioactive material to unleash a controlled chain

reaction whose by-product is heat.

But more than half a century of experience in fission has thrown up serious problems, ranging from the nightmare of Chernobyl to the perils of transporting nuclear material and storing dangerous long-term radioactive waste.

Nuclear fusion takes the opposite approach, seeking to emulate the Sun.

The solar crucible takes the nuclei of two atoms of deuterium, which is the heavy form of hydrogen, and fuses them together to form tritium (the other isotope of hydrogen), and in so doing releases huge amounts of energy.

There is a virtually limitless source of deuterium in the world, because it can be derived from water; as for tritium, it is not a natural element, but can be easily made by irradiating it with lithium at high pressure.

That is the theory, and getting from there to a workable prototype plant of commercial size is what ITER is all about.

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