

News

Europe puts brakes on fusion project

Firing up ITER in 2018 is not feasible, warn council delegates.

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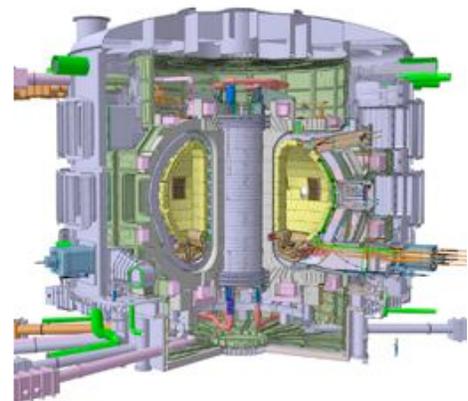
The European Union (EU) is backing away from a 2018 start date for ITER, a multi-billion-euro fusion reactor under construction in the south of France.

At an ITER council meeting on 18–19 November, which was held near the reactor's site in St Paul-lez-Durance, delegates from the EU told the project's six other member states that the start date was no longer realistic, according to a source close to the negotiations. The two-day meeting concluded earlier this afternoon.

Catherine Ray, a spokesperson on science and research for the European Commission in Brussels, declined to answer Nature's questions about changes in ITER's schedule, but reiterated Europe's support for the project. "Our guiding objective is to ensure a sustainable success for ITER at reasonable costs and with an acceptable level of risk," she says.

ITER is a massive experiment to prove the viability of nuclear fusion as a power source. When completed, superconducting magnets will squeeze a plasma of heavy hydrogen isotopes — deuterium and tritium — to temperatures in excess of 150 million °C. The resulting fusion reaction should produce ten times the power consumed in the process of creating the plasma.

The EU is by far the largest participant in the project. It will pay roughly 45% of the construction costs of ITER, while the other participants — China, India, Japan, Russia, South Korea and the United States — will each provide roughly 9%. The costs were originally budgeted at around €5 billion (US\$7.4 billion) when the agreement to build ITER was signed in 2006, but they are now expected to be roughly double that figure by the time the reactor is built.



Fusion dreams, delayed once more?

ITER Organization

Under a tentative agreement reached in June, ITER's council approved 2018 as the date for 'first plasma' being generated inside the giant device. But some had worried that the EU was having trouble coming up with the additional funds needed to start construction (see 'Fusion delays sow concern').

There is also concern among European's involved in the project that the present schedule might be risky, according to Günther Hasinger, the scientific director of the Max Planck Institute of Plasma Physics in Garching, Germany. The EU is responsible for buildings and other major infrastructure at the 180-hectare ITER site. "All the big European components are needed early on," he says, warning that the 2018 date leaves little margin for error. "It's an extremely risky schedule."

The reaction of the other member states to the EU announcement is likely to be mixed, says Stephen Dean, president of Fusion Power Associates, a fusion-advocacy group based in Gaithersburg, Maryland. Senior officials at the US Department of Energy, which is responsible for that country's contributions to ITER, have publicly complained about the long timeline of the project. But Dean says that many researchers in the United States who are involved in ITER have been worried that the project might not meet its current schedule.

ITER's council has now tasked the project with working out two possible start dates for the project: one early and one late, according to Neil Calder, chief spokesperson for ITER. Calder says that the organization should be able to deliver the new dates by February 2010, but could not say whether 2018 would be one of the options. Planning a project as complex as ITER is difficult, he says. "I think it is worth taking the time to get it right."

<http://www.nature.com/news/2009/091119/full/news.2009.1099.html>