Europe prepares to go for fusion alone

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EU says it could build a new reactor without Japanese support.

European ministers today agreed to build the $6.1-billion ITER experimental nuclear-fusion reactor with less than all its international partners, if that proves necessary to secure a French site for the project.

ITER will try to prove the principle of creating fusion energy by heating plasma constrained by a magnetic field. But a deadlock among the project’s six partners over the choice of host has stalled it for more than a year.

China and Russia are backing the European Union’s Cadarache site in France, whereas the United States and Korea support Japan’s rival site at Rokkasho.

The latest international meeting, held on 9 November in Vienna, ended yet again without decision (see "Stalemate over fusion project threatens to provoke split").

On 26 November, the EU Competitiveness Council mandated the European Commission, the union’s executive arm, to start ITER with fewer international partners if no deal could be reached with Japan. It also stated that the commission should complete the legal agreements needed to build ITER by next June, meaning that it would need to close any deal by the end of the year.

Informed of the development by Nature, Satoru Ohtake, director of fusion energy at Japan’s science ministry, expressed doubts that Europe was committed to its declared stance, suggesting that the move might equally be intended to raise the stakes in the ITER negotiations. "If they think this will put pressure on us, they are wrong," he warns.

Ohtake argues that if Europe were to pursue this route, it would damage an important international scientific collaboration. "If they break the negotiations by pursuing their own desires, they will be the ones that break international mutual trust," he says. "This is divisive; it is not acceptable to us."

"The partners must remain united in the search for a compromise even if this takes time," he adds. "If both sides just insist on their own point of view, there is no way out."

The ITER fusion reactor could pave the way for a new source of energy.