

Nuclear fusion project faces delay over US budget cuts: director

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ITER, a multi-national nuclear fusion project, has been plagued by delays and budget overruns

The head of the multinational nuclear fusion project known as ITER, in Washington for talks with President Donald Trump's administration, has warned US budget cuts could delay completion of the experimental reactor.

Launched a decade ago by seven partners—the European Union, the United States, China, Russia, Japan, India and South Korea—the [project](#) has been plagued by delays and budget overruns.

ITER Director-General Bernard Bigot has been in the US capital since Tuesday to urge top administration officials including Energy Secretary Rick Perry to uphold America's commitment.

Washington has so far spent some \$1 billion on the project, and had pledged to contribute a further \$1.5 billion by 2025, the first test date for the International Thermonuclear Experimental Reactor (ITER), which is located in France and currently half-finished.

But its annual contribution was reduced by around 50 percent in the 2017 and 2018 budgets, from \$105 to \$50 million and \$120 to \$63 million respectively—as a result of cuts to the overall Energy Department's budget.

Bigot told AFP late Wednesday he hoped to secure "a clear decision on American commitments, at least in the short term, on the supply of components, and to be sure that they will arrive in time for assembly."

"If the American components do not arrive in time, the whole project will be delayed," Bigot said.

ITER's member countries finance the manufacturing of project components via their own national companies, shipping the parts for assembly at the reactor's site at Cadarache, in southern France.

Bigot said that French President Emmanuel Macron had written to Trump last summer urging him to reconsider the [budget cuts](#).

"We hope for a decision very soon," he added.

More than 600 US companies, laboratories and universities are participating in the ITER project.

ITER's job is to build a testbed to see if nuclear fusion—the limitless energy source that powers the Sun—can be a realistic source of clean and cheap power for the 21st Century.

So far achieved in a handful of labs at great cost, the process entails fusing atoms together to generate energy, as opposed to fission, the atom-splitting process behind nuclear bombs and power stations, which carries the risk of costly accidents, theft of radioactive material and dealing with dangerous long-term waste.

For all its promise, nuclear fusion has proven elusive and highly costly to achieve.

The idea is to heat atoms to temperatures of more than 100 million degrees Celsius (180 million degrees Fahrenheit) so that their nuclei fuse.

To do so, ITER is building a doughnut-shaped containment vessel called a tokamak. But the project, whose overall [budget](#) was revised upward in 2017 from \$21 billion to \$26 billion, has yet to carry out its first experiment almost a decade after its launch.

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