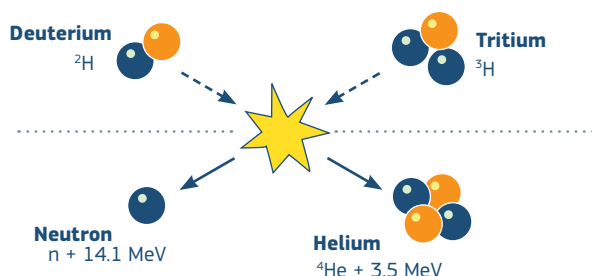


The ITER project

ITER is a unique project to build the biggest fusion device in history, with the goal of demonstrating the scientific and technological feasibility of fusion as a potential energy source for the future.

Fusion power

Fusion is the process that powers the sun and other stars. When light hydrogen atoms are heated at extremely high temperature **they merge together, releasing energy**. The most promising type of fusion for energy production is deuterium-tritium (D-T) fusion. Deuterium and tritium are types of hydrogen that will be the fuel for the reaction inside ITER.



EU at the forefront

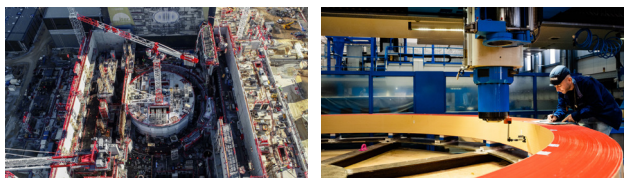
Formed in 2006, the **ITER project has strengthened EU leadership in fusion research** while also creating new skills, jobs and business opportunities for small and established companies in Europe. Participating in ITER also represents an investment in a disruptive technology that could form an integral part of the European energy mix in the second half of the century. As a low-carbon, climate-friendly solution, fusion could work in tandem with renewable energy sources to create a balanced and sustainable mix.

To further support fusion innovation and development, **the EU allocated €5.6 billion to the project in the EU budget for 2021-2027**.



A unique infrastructure

On earth, fusion can be reproduced in **devices called "tokamaks"**. There are several tokamaks currently operating or under construction all over the world, including the Joint European Torus (JET) in the United Kingdom, and the JT-60SA tokamak located in Japan.



ITER will be the largest tokamak in the world; approximately 30 meters high and 30 meters wide, weighing 23,000 tonnes. As an experimental device, it is not designed to produce electricity. It will, however, pave the way towards a demonstration fusion power plant in the second half of this century, which will produce electricity and serve as a precursor to commercial fusion power production.

An international collaboration

Seven international partners are collaborating to construct and operate ITER:

- the **People's Republic of China**
- **Euratom** (represented by the European Commission)
- the **Republic of India**
- **Japan**
- the **Republic of Korea**
- the **Russian Federation**
- the **United States of America**

This ambitious project is currently under construction in Cadarache, France.

