



What is Fusion for Energy?

Fusion for Energy (F4E) is the European Union's organisation responsible for Europe's contribution to ITER. The organisation was created by a decision of the Council of the European Union in order to meet three objectives:

Provide Europe's contribution to ITER

ITER is the world's largest scientific partnership aiming to demonstrate fusion as a viable and sustainable source of energy. F4E works together with European industry and research organisations to develop and manufacture the high technology components that Europe will provide to ITER via around 220 contracts. It also provides the EU's financial contribution to the project, which mostly comes from the European Community budget. Among its other tasks, F4E oversees the preparation of the site where ITER will be constructed and arranges for European staff to be available to the ITER International Organization. It also supports research and development for ITER. F4E plays an important role in preparing Europe's participation in the operation of ITER.

Support fusion research and development initiatives through the Broader Approach Agreement

F4E participates in the Broader Approach, an international agreement with Japan designed to accelerate the development of fusion energy by cooperating on a number of projects of mutual interest. These projects, including preparations for a new materials testing facility, are designed to run alongside and complement ITER by filling possible knowledge gaps. Through F4E, the European Union has agreed to provide components, equipment, materials and other resources for the Broader Approach, prepare and coordinate the European participation in the initiative, and make European staff and funding available.

Contribute towards the construction of demonstration fusion reactors (DEMO)

F4E has progressively started to implement a programme of activities to prepare for the first demonstration fusion reactors (DEMO) beyond ITER which could generate significant amounts of electricity. Other related projects include the International Fusion Materials Irradiation Facility (IFMIF) designed to develop materials that can withstand the conditions expected in a fusion reactor. By capitalising on the activities carried out for ITER and the Broader Approach, Europe is in an excellent position to carry fusion forward as a clean and sustainable energy source for the 21st century.