

2. Fusion for Energy (F4E)

MUNICIPALITY

Barcelona

HEADING

F4E is a dynamic organisation whose purpose is to promote the worldwide role of Europe in the development of fusion energy. This organisation, formally known as the European Union's Joint Undertaking for ITER and the Development of Fusion Energy, principally manages the European Union's contribution to the ITER international fusion project.

ECONOMIC AND TECHNICAL DETAILS

- F4E headquarters: District 22@ in Barcelona
- F4E personnel: 333 members
- Over 220 contacts, including collaborators from European industry and research organisations
- The organisation offers a multicultural environment that brings together different professional spheres such as engineering and physics, management, administration, law and communications.

PROJECT DESCRIPTION

Fusion for Energy (or F4E) is the European Union organisation responsible for Europe's contribution to the ITER project.

ITER, which means "path" in Latin, is the largest worldwide partnership of its kind and aims to demonstrate fusion's potential as an energy source. Its seven members represent half the world's population: the European Union, Russia, Japan, China, India, South Korea and the United States.

The ITER Project aims to demonstrate that fusion can be a viable energy source. Fusion is the energy source of the sun and the stars. When the nuclei of light atoms reach very high temperatures, they fuse and release enormous quantities of energy. To produce fusion on earth, gas must be heated to around 100 million degrees centigrade in a chamber formed by magnetic fields to prevent the gas escaping.

Fusion can provide a large-scale energy source with abundant fossil fuels without CO₂ greenhouse gas emissions or long-lasting radioactive waste. The day-to-day functioning of a fusion power station does not require any radioactive material to be transported.

F4E also gives support to R+D fusion initiatives via the Broader Approach Agreement, a fusion energy partnership agreement with a duration of ten years which represents around 340 million euros of European and Japanese investment. Spain is one of the countries providing financial support.

Ultimately, F4E will contribute to the construction of demonstration fusion reactors (DEMO).

F4E is an international centre of excellence for research into fusion that brings together the finest European talents and professionals, with major technological repercussions, while also laying the foundations for a new model of scientific cooperation.

PROJECT ADDRESS

www.fusionforenergy.europa.eu

RESPONSIBLE

Henrik Bindslev, Director of Fusion for Energy