



2. Fusion for Energy (F4E)

Town

Barcelona

Objectives

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

One of the main tasks of F4E is to work together with European industry, SMEs and research organisations to develop and provide a wide range of high technology components together with engineering, maintenance and support services for the ITER.

Highlight

The construction of the basemat of the Tokamak complex, where the ITER machine will be located, marked a landmark achievement. Manufacturing progressed in the area of magnets, further R&D was carried out in the field of diagnostics, multibillion contracts were signed in the areas of high-tech robotics. Finally, ENSA, a Spanish company, manufactured and delivered the first-ever European components.

Project's description:

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

ITER, which means "path" in Latin, is the largest partnership of its kind in the world, and is tasked with demonstrating 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. Fusion can provide a large-scale energy source with abundant fossil fuels, but 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 lends 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.

F4E was created by a decision of the Council of the European Union as an independent legal entity and was established in April 2007 for a period of 35 years.

Its offices are in Barcelona, Spain.

Technical or economic data

Europe is the biggest shareholder out of the seven parties contributing to ITER, the largest international scientific collaboration in the field of energy bringing together 80% of the global GDP and 50% of the world's population. Europe's contribution to ITER is nearly half of the overall cost of



the project, which is in the range of 6.6 billion €. Since 2008, F4E has awarded 400 industrial contracts with 250 companies and more than 50 laboratories for a value exceeding 3 billion €.

Project or institution website

www.fusionforenergy.europa.eu

Project manager

Pietro Barabaschi, director of Fusion for Energy