



Bringing the power of the sun to earth

- ABOUT F4E
- UNDERSTANDING FUSION
- PROCUREMENT AND GRANTS
- MEDIA CORNER
- CAREER OPPORTUNITIES

UNDERSTANDING FUSION

ITER-the way to sustainable energy

UNDERSTANDING FUSION

What is Fusion?

Technology

Merits

Fusion in Culture

ITER

Our contribution

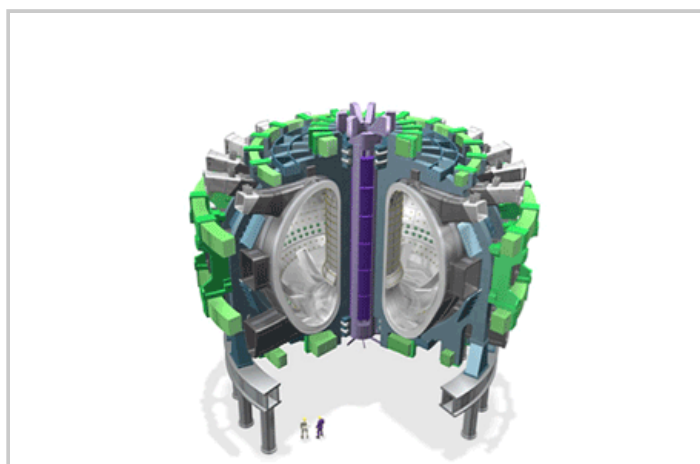
> **The ITER device**

Broader Approach

DEMO

Glossary of Terms

ITER - The ITER Device



A cutaway of the ITER machine (note the person shown at the bottom indicates the scale). (Courtesy: ITER)

The ITER experiment builds on the concept of the tokamak which was first conceived in Moscow back in the 1960s. A tokamak, is a torus or 'doughnut-shaped' continuous tube surrounded by coils that produce a magnetic cage to confine the high-energy plasma. In ITER, all the magnetic coils are superconducting and it is expected to bring together all necessary technology for a future fusion power station.

The ITER tokamak will measure 24 metres high and 30 metres wide. It will be smaller than a conventional power station but is expected to produce up to 500 MW of thermal power in a toroidal fusion plasma of 800m³ volume.

ITER will produce ten times more power than is necessary to maintain plasma at fusion temperatures demonstrating the feasibility of fusion power and allowing physicists to optimise the technology, components and control strategies for later fusion power stations. For the first time, scientists will be able to study the physics of a burning plasma – a plasma that is heated by internal fusion reactions rather than external heating. Engineers will test the heating, control, diagnostic and remote maintenance systems that will be needed in a real power station.

Share:

DISCOVER

> News

> Events



INDUSTRY AND FUSION LABORATORIES PORTAL



THE STARMAKERS WATCH THE VIDEO

