



Impact of
withdrawal
from Euratom

LEAVING THE EUROPEAN UNION:

The ITER Fusion Project

“UK withdrawal would disrupt the EU’s contribution to the biggest science project mankind has ever undertaken”

Background information and context

Since the 1950’s all countries involved in fusion research have collaborated closely to ensure the most efficient, effective and rapid delivery of fusion power. These collaborations will continue to be important at least until the successful demonstration of the fusion process on the scale required for a powerplant, which is the purpose of ITER. ITER will test the immense potential of nuclear fusion as a power source and is the vital step between the laboratory experiments of today and the commercial fusion reactors of the future. If successful, it will open the way to fusion power stations and a new, virtually unlimited, low-carbon energy source for the world.

ITER is a global project that is now under construction at Cadarache in southern France and is a collaboration between seven international partners: China, the European Union, India, Japan, Korea, Russia and the United States. The EU, as the project’s host, is contributing the largest share of costs (~45%) and the other 6 partners are each contributing ~9%. The vast majority of the contributions are in the form of complete components built by industry. In addition, the partners provide funding for the ITER organisation.

The UK is involved in ITER through its membership of the Euratom treaty. As one of the global leaders in nuclear fusion research since the 1940s, it possesses great expertise that could be lost to the ITER project if the UK stops participating in the Euratom programme. Loss of access to ITER, either via Euratom or some other new arrangement, would also be a major loss to the UK fusion programme that could not credibly be replaced.

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EU scientists and engineers are preparing for ITER’s operation on national facilities and on JET, the world’s largest fusion device, which is a European fusion project operated by UKAEA. JET has unique capabilities to support ITER preparations – including an ITER like first wall structure, the ability to use tritium fuel and a robotic maintenance system. This crucial work on JET is threatened by the UK’s exit from Euratom, which provides the vast majority of the funding. Furthermore, JET relies on having access to the wide range of skills available in the EU fusion programme to design, run and interpret experiments, which could be more difficult in future.

Almost 40 British companies are involved in ITER, currently carrying out €500 million worth of contracts on the project. Some of these are in international partnerships responsible for delivering major work programmes, for example the main ITER Construction Management agent contract was, last year, awarded to Amec FW. In addition, UKAEA has direct contracts to design ITER equipment, that are vital to the working of the experiment.

Withdrawal from Euratom would put fulfilment of these contracts at risk, and endanger the participation of the UK in areas where it has unique capability. It would significantly disrupt the EU’s contribution to the biggest science project mankind has ever undertaken – and one that is already dealing with considerable schedule and budgetary issues.

KEY MESSAGES

The best scenario for the UK to stay in the ITER project, would be for it to continue to participate via a new arrangement with Euratom. Failing that, a separate agreement with ITER would be vital for ITER’s success and the UK fusion programme.