

# UK set to be first country to legislate for safe and efficient rollout of fusion energy

The UK will become the first country in the world to detail how it would legislate to ensure the safe and effective rollout of fusion energy, outlined in a [Fusion Green Paper](#) launched by Science Minister George Freeman today (Friday 1 October).

Fusion energy research aims to capture the same energy process that powers the Sun, and forms part of the government's long-term plans to harness new technologies to build a strong, home-grown energy sector that reduces reliance on fossil fuels and exposure to volatile global gas prices. A fusion power plant would combine hydrogen atoms to generate energy without producing the carbon emissions that contribute to climate change.

Due to the expected low hazard of fusion power, the government is proposing the continuation of a proportionate 'non-nuclear' regulatory approach as laid out in regulatory consultation proposals published today. This will allow for the safe and efficient rollout of the technology through innovation-friendly regulation.

In addition, the [Fusion Strategy](#) published alongside the green paper sets out how the UK will leverage its leadership in fusion to deliver commercialisation of this potentially revolutionary technology.

Science Minister George Freeman said:

Fusion energy could be the ultimate power of the future – low carbon, safe and sustainable – and we want the UK to continue to lead the world as we work to unlock its potential and build back greener.

By putting in place the crucial foundations we're setting out today, we will ensure the UK is uniquely placed to capitalise on this innovative and revolutionary energy source in the years ahead – helping to tackle climate change and reduce our dependence on unreliable fossil fuels at the same time.

As set out in the Prime Minister's [Ten Point Plan for a Green Industrial Revolution](#), the government wants the UK to develop the cutting-edge technologies needed to end its contribution to climate change and level up economic growth across the UK.

As part of this, the government aims to demonstrate the commercial viability of fusion by building a prototype fusion power plant, STEP (Spherical Tokamak for Energy Production). The UK hopes to deliver the world's first prototype

fusion power plant by 2040.

The strategy also aims for the UK to build a world-leading fusion industry which can export fusion technology around the world in subsequent decades, securing the economic opportunities of a future, low carbon energy market. Harnessing fusion power could provide low-carbon, safe electricity, with the fuels used in fusion reactions effectively inexhaustible.

Under the [consultation published today](#), the government is asking for industry stakeholders and the public to have their say on fusion energy regulation. The consultation closes on 24 December 2021.