



Press Information - 8th March 2022

Serious safety concerns about the Hinkley Point C Nuclear Reactor design

In the 1980s, Margaret Thatcher backed plans to build Hinkley Point C (HPC) in Somerset. A year-long public inquiry in 1989 resulted in permission to go ahead. However, the Chernobyl disaster and the failure to privatise nuclear electricity generation resulted in it being dropped.

Some 15 years later, EDF claimed that its first European (now 'Evolutionary') Pressurised Reactor (EPR) at Flamanville, France, was "on time and on budget". Tony Blair and Gordon Brown were convinced that EDF's 'miraculous' new EPR design would solve Britain's energy problems. EDF wanted to build and run two new EPR reactors on each of the existing nuclear sites at Hinkley Point (HPC) in Somerset and Sizewell in Suffolk. EDF claimed that the first HPC reactor could be operational by the end of 2017. It is now hoped by 2026. It has been plagued by delays.

In November 2009, the Health and Safety Executive (HSE) said "We have identified a significant number of issues with the safety features". The current EPR design was primarily designed and developed by Framatome (Areva), EDF in France, and Siemens in Germany. In December 2018, Taishan-1 in China was the first of these EPR units in the world to begin commercial operation. The second EPR in the world, Taishan-2, began commercial operation in September 2019.

In 2021, only 2.5 years after starting commercial operation, Taishan-1 reactor was shut down due to safety concerns regarding damage to the fuel cannisters in the reactor core.

It was first thought to only affect a few fuel rods, but it was later disclosed that at least 70 had been damaged by unexpected vibrations in the primary cooling system which is almost identical to the ones at Flamanville in France, Hinkley C and Sizewell C EPRs.

At Taishan, the fast, uneven, water flow was apparently causing vibrations and shocks to the fuel rod assemblies. The damage caused resulted in radioactive fuel leaking into the water of the primary cooling circuit. This causes extra types of radioactive gases (as well as the normal tritium) to be released inside the main pressure vessel. Tritium and other radioactive gases are collected in tanks that are normally vented to the atmosphere every two months, causing contamination.

in December 2021, France's nuclear energy regulator, ASN, announced that it had halted the development of the EPR reactor at Flamanville, pending detailed inquiries and conclusions regarding the cause of the malfunctions at Taishan-1.

A senior ASN spokesperson, Julien Collet, said that detailed feedback from investigation of the EPR problems at Taishan-1 in China must first be considered before completing the Flamanville reactor construction.

This safety problem should also halt further reactor construction at Hinkley C

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