

temperature of the water returned to the river cannot be absorbed by the river without killing the river ecology. To prevent this there are regulatory maximum temperature levels for the water returned to the river which if reached means the reactor has to shut down.

In France in particular it has meant increasing numbers of reactors having to be shut down each summer. Thus, in summer 2025, the Chooz nuclear plant faced potential output cuts due to low River Meuse river levels and other plants, like Golfech and Tricastin were forced to reduce output or shut down because the water was too hot on being ejected.

Similar reductions and shutdown occurred in Switzerland, the Czech Republic, Hungary and Slovakia.

All currently-operating UK nuclear reactors draw their cooling water from the sea so there is no risk of a shortage of cooling water; however the fact that they are beside the sea means that they are at risk from rising sea levels, storm surges and coastal erosion caused by global warming.

With temperatures rising rapidly in Europe, these problems can only get worse.

This there is increasing demand for electricity, itself driven by climate change, particularly from the installation of increasing amount of air-conditioning.

On the bright side we see a long-term decline in nuclear power worldwide coupled with increasing reliance on renewables. Indeed, according to nuclear expert Dr. Paul Dorfman, “94.2% of all new worldwide electricity capacity last year [2024] were renewables.”

## FT CRITIQUE OF SIZEWELL C

On September 17, the Financial Times published a stinging attack on plans for Sizewell C under the title, "Is the UK's giant new nuclear power station 'unbuildable'?" with the sub-heading "Meant to

withstand being hit by an aircraft, industry veterans warn of the Sizewell C design's "terrifying" complexity".

The piece quotes former EDF CEO Henri Proglio as saying “Being able to build an EPR in the time-frame, with the planned costs? I don't think so... The EPR is a machine that is phenomenally complex to build, with more rebar [a tension device added to concrete to form reinforced concrete and reinforced masonry structures to strengthen and aid the concrete under tension] than concrete, it is terrifying... it's almost unbuildable. As long as the design has not changed, the difficulty of building will not have changed either.”

## OTHER NUCLEAR NEWS

### *Lakes Against Nuclear Dump* win Judicial Review

That is of the *Environment Agency's* [EA] decision to rubber stamp Sellafield's abstraction of groundwater and dumping of that polluted water into the rivers Calder and Ehen - with no Environmental Impact or Hydrological Assessments carried out!

The argument is that the impact on Atlantic salmon that breed in the rivers should have been taken into account in particular, as well as other environmental impacts, by the EA in coming to its decision as to whether or not to allow the abstraction and dumping.

### *Together Against Sizewell C (TASC)* granted High Court hearing

TASC's call for a Judicial Review of its demand that Sizewell C's Development Consent Order be revoked or varied has been granted permission for a hearing at the High Court. A judge will hear why TASC consider it is unlawful to delay, for decades, assessment and public scrutiny of two huge additional flood barriers being planned but kept secret by EDF since 2015.

### *The cost of long-term nuclear waste storage*

As reported in *New Civil Engineer*, The construction of a “Geological Disposal facility” [GDF] for long-term deep storage of high-level nuclear waste could cost £54bn and “appears unachievable” according to a report *The National Infrastructure and Service*

*Transformation Authority* [NISA], a Treasury unit. NISA made this assessment in its Annual Report 2024-2025, published on 11 August.

The report says that A GDF represents a monumental undertaking, requiring an engineered vault placed between 200m and 1km underground, covering an area of approximately 1 km<sup>2</sup> on the surface.

*Nuclear Waste Services* claims that this method of storing the waste offers the most secure solution for managing the UK's nuclear waste over the thousands of years the GDF will be needed for.

### **Sizewell B using uranium sourced from Russia**

This has been confirmed by EDF, the now sole owner of Sizewell B.

The company claims that its current supply of enriched uranium comes from MSZJSC, a Russian entity not subject to sanctions, under long-term contracts dating back to 2008 when the deal was signed by British Energy, years before the war in Ukraine.

Critics, including nuclear policy consultant Dr David Lowry, argue that the supply chain ultimately begins with Rosatom, the Russian state-owned nuclear corporation sanctioned by the UK from February 2023. Lowry says Rosatom sends the uranium through its subsidiary TVEL to MSZJSC, before it is processed at a Framatome facility in Lingen, Germany, and supplied to Sizewell B.

Dr. Lowry adds, "It is sheer hypocrisy for energy ministers to say we need new nuclear to end dependence on Russian energy when our biggest and newest [as of 1996!] nuclear plant is fully fuelled by Putin's uranium" and "We're giving arms to Ukraine and giving Russia money for fuel, undermining our own efforts."

### **The cost of Fukushima plant decommissioning**

It was reported in August that the decommissioning will exceed its initial cost estimates, with over \$35 billion already committed and a total cost expected to surpass the original government projection of about \$54 billion. It is difficult to predict a precise final cost as the process of removing the fuel and debris is proving particularly complex and the overall cleanup is still expected to take decades.

# **KICK NUCLEAR**

**September 2025**

The monthly newsletter of the Kick Nuclear group.

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On Friday November 28 Kick Nuclear will be holding a **"Remember Fukushima – End Nuclear Power" vigil**, from 11am to 12.30pm, outside the Japanese Embassy at 101-104 Piccadilly, W1. All anti-nuclear welcome to join us!

## **THE CLIMATE MENACE!**

In August's Kick Nuclear I reported on "The Jellyfish Menace" to nuclear power.

This month I'm reporting on a much less less funny (except to jellyfish!) if much more serious, threat to nuclear power – that of climate change.

The following is based on an August 19 online article published by *AA*.

The article points out that Europe hosts around 166 operable nuclear reactors with a combined capacity of nearly 149 gigawatts (GW), approximately one-third of the global total. Of these France has most with 57 and the UK comes second with nine, with eight other European countries having smaller numbers.

Nuclear reactors rely on being able to draw in a continuous stream of water to prevent the fuel rods in the reactor from over-heating and ultimately melting-down to cause a nuclear disaster like at Fukushima causing. This water has to be drawn from rivers or the sea and be returned to them in a heated and now radioactive form.

Climate change has resulted in recent summers in rivers used for this cooling losing volume and becoming hotter, to the extent that the