

repair” and therefore would not re-open.

This means that the end of transport of highly radioactive “spent” fuel rods removed from power stations and sent by rail through London is in sight. It takes around five years for a power station to be defuelled, that is for all the spent fuel rods to be removed and sent up to Sellafield by train through London to be stored or reprocessed. So this last transport of spent nuclear fuel through London should cease around 2023.

At one time there were nuclear trains, usually weekly, carrying such spent fuel rods from four different places, running through London. They ran from Dungeness, Bradwell, Sizewell and from the Continent, primarily from Germany, but also from Switzerland and Belgium.

The trains carrying European waste were the first to stop running. After the train ferry from Dunkirk to Dover stopped in 1980, the Channel Tunnel refused to allow nuclear trains to use it. Continental spent fuel rods have since been sent by sea directly to Barrow for onward transport by train to Sellafield. The editor has been unable to find out whether this transport is still running, especially given that Germany is in the process of closing down all its nuclear power stations by the end of 2022.

The second nuclear train to cease running through London was the one coming from Bradwell power station in Essex which closed down in 2002 and was decommissioned by 2005. The third was the one from Sizewell A in Suffolk, which shut down in 2006, but was not fully defuelled till 2014. This meant that nuclear trains ceased running, at least regularly, along the North London line then.

It is not certain that nuclear waste trains still don’t occasionally run through London, or will not resume regularly some time in the future.

Sizewell B pressurized-water reactor (pwr), which started operating in 1997 is planned to go on operating until 2055. However it has always stored its spent fuel on-site, first in ponds and when existing ponds became full, in dry storage in casks. I assumed this meant that none of the spent fuel from Sizewell B was sent to Sellafield. However in research for this article, I read somewhere that “occasionally” nuclear trains travel from Sizewell B to Sellafield, though I now can’t find the reference for this.

It is also planned that at some indefinite point in the future a deep depository for all high-level nuclear waste in the UK will be built, so if such a plan is every carried out all such waste at Sellafield will be presumably be transported to it by train.

There are plans for two new pwr nuclear reactors each at Bradwell B and Sizewell C. However such plans have been in existence since at least 2010 and building has yet to start at either site, and there are reasons to doubt that the currently planned two reactors at Bradwell B will ever be built (see below)

It is planned that if built, the spent nuclear fuel rods from each station will be stored on site for at least 100 years to cool down (the two power stations would operate at a very high temperature) before being sent to the putative deep storage site, again presumably by train. So none of us will be alive to see such trains if they ever materialise!

BRADWELL B SECURITY CONCERNS

Current plans for Bradwell B are for the building of two Chinese-designed pressurized-water reactors, built by a consortium 80% owned by state-owned China General Nuclear (CGN) and 20% by French company, Electricité de France (EDF).

In the 27th July Guardian financial section says, “[CGN] may be blocked from building a nuclear reactor [actually two are planned at Bradwell] in the UK due to rising security concerns over Chinese involvement in critical national infrastructure.”

It reports “sources” as having warned that a Chinese nuclear plant within 30 miles of London [as Bradwell is] would be “politically unpalatable” and a “Whitehall source” as saying, “A minority Chinese interest in a nuclear project [as at Hinkley C and Sizewell C] could probably be tolerated, but



Artist's impression of never-to-be-built Hinkley C?

the direction of travel towards a Chinese-owned project at Bradwell is no longer tenable.

The alternative? The Guardian article says, “Ministers are reportedly looking for ways to move ahead with plans for EDF Energy to build the £20bn Sizewell C

nuclear plant without CGN, which owns a 20% stake.”

This idea is surely unrealistic. CGN has an agreement with EDF and the UK government that in return for being allowed to build two Chinese-designed reactors at Bradwell B it will invest 80% in this project, to EDF's 20%; and 20% each in the Hinkley C and Sizewell C projects.

Surely if the British withdraws permission for CGN to build Bradwell C, and thus breaks this agreement, CGN will not only withdraw its 80% stake in Bradwell C and its 20% stake in Sizewell C, but also its 20% stake in Hinkley C.

And it is not as if there is a queue of nuclear power companies willing to replace the CGN investments in these projects. Indeed plans for building five other new nuclear power stations in the UK have all fallen through because nuclear power companies have been unable to find other companies and indeed states prepared to share the heavy financial risk of investing in such projects.

And the likelihood of Bradwell B being built in any reasonable time frame becomes vanishingly small. EDF will certainly not be interested in building the planned Chinese-designed reactors at Bradwell, even if it was at all realistic for it to hope to find companies to take or share an 80% stake, so it would be a matter of starting from scratch with a new design and new investors. As if EDF didn't have enough financial problems with building Hinkley Point C and Sizewell C!

And surely the withdrawal of the 20% Chinese stake in Hinkley C in the midst of it being built would be a really serious problem for EDF. Already in serious financial problems and with little prospect of finding another investor won't it be forced to abandon the project, unless the UK government is to support the project with yet more money? Since the projected cost of building Hinkley C is currently estimated at £23bn, the shortfall is some £4.6bn

As a comparison, a 10% salary rise for NHS staff is estimated would cost £3.4bn annually, but 81% of this would be recouped in increased income from taxes, according to the London Economics consultancy.

HUNTERSTON AND HINKLEY B NEXT

In August 2020, EDF Energy announced that the two AGR reactors at Hunterston in Scotland, which have both been shut down for extended periods because of metal cracking will be permanently shut down in January 2022, with defuelling to start no later than 7th January 2022.

Next the two AGR reactors at Hinkley Point B is scheduled to close down in It is planned to close down in July 2022, leaving just 9 civil nuclear reactors continuing to operate in the UK.

KICK NUCLEAR

August 2021

The monthly newsletter of Kick Nuclear and the Nuclear Trains Action Group (NTAG)

Editor: David Polden, Mordechai Vanunu House, 162 Holloway Road N7 8DQ; davidpolden1@gmail.com

Kick Nuclear: www.kicknuclear.com

NTAG: www.nonucleartrains.or.uk

The “**Remember Fukushima – End Nuclear Power**” vigils we hold in London on Fridays outside the Japanese Embassy at 101-104 Piccadilly, from 11am to 12.30pm, followed by one outside the offices of the Tokyo Electric Power Company at Marlborough Court, 14-18 Holborn, from 1 to 1.30pm, have now resumed, currently **on the 2nd and last Fridays of each month.**

All anti-nuclear people welcome to join us.

NO MORE NUCLEAR TRAINS THROUGH LONDON?

As reported in the July edition of this newsletter, it was announced in June that both of Dungeness B's two “advanced gas-cooled reactors”, out of operation since September 2018, were “beyond



In London you soon won't be able to!