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Briefing: EDF's¹ Appeal against the Environment Agency's Deemed Refusal to allow a permit variation relating to the installation of an Acoustic Fish Deterrent at Hinkley Point C.

EDF's Hinkley Point C nuclear power station, currently under construction in Somerset, is required in its Development Consent Order to meet a number of pre-conditions including the installation of an Acoustic Fish Deterrent (AFD).

In February 2018 EDF submitted an application to the Environment Agency to vary its Environment Permit to amend or remove conditions relating to the design and operation of the AFD system. (1) A public consultation was held from 15th March 2019 until 26th July 2019. (2)

In late November 2019 the EA advised EDF that its preliminary position was that it was unable to conclude removal of the AFD would have no adverse effect. On 4 August EDF served the EA with a deemed refusal notice. (3) In September 2020 EDF appealed to the Secretary of State against the Environment Agency's deemed refusal. The appeal will be heard by the Planning Inspectorate (PINS) and it is now planning to hold a public inquiry in the spring of 2021.

Stop Hinkley Katherine Attwater says: "EDF are up to their usual tricks of appearing to comply with Environmental Laws to get planning permission. They then renege on their commitments when the project is so far down the line they feel they can twist the arm of Government. This doesn't bode well for proposed plans at Sizewell and Bradwell or for the UK fishing industry."

Construction of two tunnels in the seabed adjacent to Hinkley Point C has already begun, each large enough to drive a double-decker bus through. The tunnels will suck in the equivalent weight in seawater of a dozen buses every second, and all sea life within it. EDF originally received permission in 2013 to construct the system, on the promise of installing Acoustic Fish Deterrent (AFD) speakers which would keep up to 90% of specialist hearing fish away from the intakes. However, it now says this has proved too costly and impractical a promise to keep. But rather than evaluating other methods to cool the power plant, EDF has instead reduced its original estimates of fish losses to suggest the AFD speakers wouldn't make much difference after all, so that construction should be allowed to

¹ Strictly speaking the company involved is Nuclear New Build Generation Company (NNB GenCo) which is a subsidiary created by EDF Energy set up to build and then operate two new nuclear power stations in the UK.

continue without them. It says the speakers would add a "minimal benefit" to wildlife and its construction would prove a "safety risk to workers ". (4)

In response to the 2019 public consultation, marine and conservation groups, including the Angling Trust, Blue Marine Foundation, Bristol Channel Federation of Sea Anglers, Severn Rivers Trust, Somerset Wildlife Trust and Wildfowl & Wetlands Trust, argued that up to half a million fish would be sucked into Hinkley Point C every day if the new "giant plughole" was installed without an AFD in one of the UK's heaviest protected marine areas, the Severn Estuary, to abstract water for cooling the reactors. It is estimated at least half of those will be killed outright. (5)

The Wildfowl and Wetlands Trust (WWT) also points out that the Environment Agency's original Environment Permit included a pre-condition to test and optimise the mitigation system in recognition of the fact that there is still scope for potential improvements to protect more fish. In contrast EDF's latest application expressly seeks to amend the system to protect less fish, in direct contravention of the EA's intention. Furthermore, the WWT accuses EDF of "altering the data in such a way as to make [removing the AFD] appear an inconsequential change." (6)

EDF claims the groups' figures are an overestimate and that an only estimated 650,000 fish would die every year. (7) EDF claims that the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) the government's marine and freshwater science expert body – is happy for them to go ahead without AFDs. The Wildfowl and Wetland Trust, however, points out that CEFAS's relationship as a paid contractor to EDF and an agent of Government raises unavoidable questions of conflict of interest. (8) The Environment Agency does not agree that the assessment by CEFAS is suitably precautionary or robustly evidenced. (9)

The environmental groups also believe EDF's figures "grossly underestimate" fish losses and have welcomed the Environment Agency's (deemed) rejection of EDF's application to remove the AFD speakers. Several groups have called for other cooling methods to be explored instead.

The Devon and Severn Inshore Fisheries Conservation Authority point to a number of ways that the abstraction for cooling water can negatively impact a fish community and ecosystem such as the differential mortality of different species of fish resulting in changes in competitive ability. The Authority says EDF's scaling of fish mortality from Hinkley Point B to C appears to include some major errors in its approach and does not consider the scaling to be sufficiently precautionary. There are large uncertainties, partly due to a very limited evidence base. The Authority does not believe that direct cooling of new nuclear power stations should be considered Best Available Technique in any coastal or estuarine areas. A review of best available technology in a US context argues that direct cooled power stations use such large volumes of water that there is no available suite of technologies that can be used to ensure that fish deaths and the impact on other aquatic life can be reduced to the levels that are achievable with less consumptive forms of closed-cycle cooling. The Authority believes that direct cooling new nuclear power stations are falling short of the environmental standards increasingly expected for new developments. (10)

Fisheries Scientist, Dr Andy Turnpenny, says: "*The Severn Estuary is a Special Area of Conservation important for its role as a fish nursery and migratory corridor. There is uncertainty over the exact impact Hinkley Point C will have on the fish assemblage that supports the complexity of bird species and commercial fish stocks ... the assessments made by Cefas ... carry a high degree of uncertainty. The acoustic fish deterrent is a keystone in the design to minimise harm to fish*" (11)

Turnpenny says EDF's case for removal of the AFD pre-condition contains a number of flaws. (12) In a 2011 paper Turnpenny said environmental law means new nuclear developments will necessitate much design innovation and elaboration by cooling water plant design engineers and much interaction with fisheries specialists. On the other hand, it provides an unprecedented window of opportunity to get it right. (13) It looks like EDF has failed to rise to this challenge.

In October 2020, the Environment Agency reiterated its provisional conclusion was that removal of the AFD, without additional mitigation measures, is unlikely to meet the requirements of the Habitats Regulations. The Agency says it does not accept the position in the CEFAS Report that not using an AFD would cause no negligible impact on fish stocks. (14)

EDF's appeal to the Secretary of State against the Environment Agency's deemed refusal of the application to vary its permit conditions at HPC will be heard by the Planning Inspectorate (PINS) which has powers delegated by the Secretary of State to deal with environmental permit appeals. The Planning Inspectorate will hold a public inquiry into the matter which is likely to take place around the spring of 2021.

References

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