

Written Representation to Change Request 19

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Set out below are the reasons that we object to EDF's new water strategy proposal set out in its Change Request 19. It is our opinion that the DCO should not go forward on the basis that the development lacks a suitable and sustainable water strategy.

Our concerns with the new water strategy cover three periods of the proposed project --'early years', main construction and the period of operation.

Early years – Water Tankers

It is clear from EDF's strategy that there is no possibility of having the water it needs in the early years of construction and therefore they propose to bring in 40 tankers of water from an area north and west of the site, using local A and B roads and the A12/B1122 corridor to the construction site each day. In addition, EDF will be trucking in materials to build the proposed desalination plant and presumably trucking in diesel fuel to run it. Given that EDF's transport and housing strategies provide for no improvements to or mitigation measures to the local transport network during these same ill-defined 'early years', these additional movements will have to borne entirely by the existing road network and community.

EDF claims that these additional HGV movements will not impact the overall number of HGVs it has already predicted for this "early year" period. This simply cannot be correct as the number of tankers alone is more than 10% above EDF's stated HGV numbers in the 'early years'. Either EDF's current caps have been set excessively high or EDF is already planning on over-running its HGV movement numbers and have simply factored in these additional 40+ daily HGV movements into its calculations. We also note that the applicant has not provided any details of the cost overruns that will come with providing potable water by tanker and how these will be financed and/or how they will ultimately be passed on to the public through financing mechanisms and higher electric costs. Moreover, no details have been provided on how EDF proposes to bring water to its ancillary development sites.

Construction Period – Diesel Operated Desalination

After the first 1-2 years, the proposed water strategy then will be dependent on running a desalination plant. The lack of detail for something so material a change as a diesel powered desalination plant is not acceptable and it is not possible to understand with any degree of certainty, the claims by EDF that it will have no additional negative impacts on the cost and transport proposals nor on the marine environment, nor air and/or land environmental impact. EDF should be required to prove these statements with a full environmental impact assessment. This is even more essential since, if built, the desalination plant will operate for a minimum of 4 years using diesel and possibly much longer. With the uncertainty of ever having a water supply at site or a power source until the Sizewell C plant itself is operational, it could be for a period of 12 years or more.

Desalination is recognised as one of the most environmentally harmful, carbon intensive processes particularly when it is run on diesel generation. Based on analysis which we have had undertaken by an energy expert, the Sizewell Desalination plant will produce some 6 tons of CO2 everyday of its operation. That is nearly 2,200 tons of CO2 annually. Other additional harmful gases are also released from the desalination process which we have not tried to quantify. EDF should be required

to provide exact projections for CO2 and all other pollutants and greenhouse gas emissions prior to further consideration of its water strategy.

In addition to the carbon and other airborne pollutants, desalination is known for its detrimental impact on marine life. According to a report by the UNEP, in most desalination processes, for every litre of potable water produced, about 1.5 litres of liquid polluted with chlorine and copper are created. This wastewater “concentrate” is twice as saline as ocean water and if not properly diluted and dispersed, it may form a dense plume of toxic brine which can degrade coastal and marine ecosystems. Increased salinity and temperature can cause a decrease in the dissolved oxygen content and contribute to the formation of “dead zones” where very few marine animals can live. In addition, it is recognised that chemicals used in the pre-treatment and membrane cleaning processes are also harmful to the marine environment. Desalination plants are known to have significant negative impacts on marine life in terms of entrainment and entrapment of marine species, and heavy use of chemicals. Therefore, EDF’s statement that the operation of the desalination plant will have no additional impact is simply unbelievable. Given the severe impact that we already know the operation of the plant would have on the marine ecosystem, creating additional pollutants and dangers for marine life through desalination cannot represent an acceptable water strategy.

EDF claims that its desalination plant will result in no change in baseline assessment for noise and vibration and air pollution. How can that possibly be correct when diesel generators create a tremendous amount of noise, vibration, CO2 and other greenhouse gases? Whether people living near the site hear it or not is unknown given the absence of analysis and detail. There is also no mention about the impact that this will have on wildlife in the area. As with the marine environment, there are already strong indications that mitigation measures proposed for the development PRIOR to this change in the water strategy would be inadequate to address the harm, it is disingenuous for the applicant to claim that there are no additional impacts.

Finally, again linked to the transport strategy, the water strategy states that some of the most harmful slurry will be trucked out of the site every day. There is no analysis of how this will actually impact HGV movements nor analysis of risks associated with any run-off of this slurry and brine could have on the surrounding SSSI and AONB water quality.

The water strategy also is silent on how adequate amounts of water will be provided to ancillary sites including the workers campus and caravan sites. This needs to be fully explained, analysed and proven prior to any approval of the DCO. It is particularly essential to understand what will be the water source to the proposed Eastbridge campus, how will that be secured and what the impact could be on the availability of water for existing and proposed housing development in the surrounding areas.

During Operation

There is ample evidence that a potable water supply may never be available to Sizewell C and that it will have no identified source for the massive amounts of water needed for industrial and potable uses during the entire period of operation. This would be a catastrophic outcome for the marine and land environment, for all the communities in East Anglia in terms of access to water, and to the safe and sustainable operation of a £20 plus billion nuclear power station.

We heard at ISH 14 that were EDF to try to compel the water company to provide a pipeline and water to its site, this would almost certainly lead to excessive extraction and strain on existing water sources. Indications are that such extraction would be contrary to future environmental regulations and restraints on extraction. Given that this area of East Anglia is already water scarce, any attempt

therefore to get piped water to Sizewell C would require a diversion from consumer use. It is of note in the current shortage of Co2 afflicting the UK, according to an article in the Financial Times, the nuclear industry has exerted its priority need for Co2 over consumer uses. If this were to be repeated during the operation of the plant in terms of scarce water resources, it would have a catastrophic impact on water availability for domestic and other business uses for decades.

If, on the other hand, EDF was to plan to operate forever using desalination, the DCO is not for a 'temporary' desalination plant, and the environmental and financial impacts of a permanent desalination facility would have to be fully assessed. Unless another source of water is confirmed before the DCO moves forward, an assumption would have to be of a permanent desalination facility and this would have to be made a part of the proposed water strategy.

In conclusion, it appears very likely that there will be no piped water source for Sizewell C. Therefore, the new water strategy represented in Change 19 is inappropriate particularly for a project of such massive expense, impact on the local community and environmental impact. Until and unless the applicant can demonstrate exactly where its water will come from during construction and operation, what the impact of this would be on the marine, land and air, what impact it would have on local water supplies and the transport network, and indeed whether it can sustainably and safely operate a nuclear plant without a guaranteed potable water source, this DCO cannot go forward.

If EDF insists on building two EPR reactors, then they need to find a suitable site. As the absence of water demonstrates, the Suffolk coast is clearly not it.