

U.S. Nuclear Regulatory Commission
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RE: Notice of Intent to Prepare an Environmental Impact Statement for the Subsequent License Renewal for a Renewed Facility Operating License Nos. DPR-38, DPR-47, and DPR-55, which authorizes Duke Energy Carolinas, LLC to operate the Oconee Nuclear Station Units 1, 2, and 3. Docket NRC-2021-0146

Dear Stacy Schumann:

The U.S. Environmental Protection Agency (EPA) has reviewed the Nuclear Regulatory Commission's (NRC) Notice of Intent (NOI) to prepare an Environmental Impact Statement for the Duke Energy's Oconee Facility subsequent license renewal, in accordance with Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The CAA Section 309 role is unique to EPA. It requires EPA to review and comment publicly on any proposed federal action subject to NEPA's environmental impact statement requirement. As stated in the NOI, the purpose of the proposed Environmental Impact Statement (EIS) is to address the environmental effects associated with obtaining relicensing renewals for the Oconee Nuclear Station (Oconee) Units 1, 2, and 3. The EIS should focus on, indirect and cumulative environmental impacts associated with operations of Oconee following NEPA regulations and guidance, environmental surface and groundwater discharges following Clean Water Act (CWA) regulations and guidance, nuclear waste storage and disposal following all federal and state regulations, environmental impacts associated with Climate Change, and conduct a meaningful Environmental Justice (EJ) analysis for potential and real impacts for surrounding communities with EJ concerns.

According to the NOI, the subsequent relicensing renewed (SLR) operating licenses would authorize the Duke Energy Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for Oconee, Units 1, 2, and 3, respectively, for an additional 20 years of operation. That submission initiated the NRC's proposed action of determining whether to grant the SLR application. The Oconee units are pressurized water reactors designed by Babcock & Wilcox and located in Seneca, South Carolina, approximately 30 miles west of Greenville, SC. The current renewed facility operating license for Units 1, 2, and 3 expires on February 6, 2033.

The EPA recommends that the EIS evaluate the proposed projects and describe efforts to address the following potential impacts in the proposed alternative analysis sections of the EIS.

(1) **National Environmental Policy Act** - Several potential, cumulative, and indirect project impacts are of particular concern at nuclear facilities. Most notably, Clean Water Act (CWA) issues for surface and groundwater discharges including the potential for releases of radionuclides and hyper-salinity in surface water and groundwater along with groundwater monitoring for radionuclides,

underground injection of effluent, spent nuclear fuel storage, contaminant transport and deposition should be address in the EIS. The EIS should also address potential and real impacts associated with direct, indirect, and cumulative impacts associated with future severe storm events including, but not limited to, tornados and hurricanes, along with increased storm intensity due to climate change, and analysis of these severe events on communities with Environmental Justice concerns.

- (2) **National Pollution Discharge Elimination System (NPDES)** -The EIS should include a water balance analysis and provide additional information from past studies, if any. In addition to the water balance calculation of the facility, the EPA also recommends the NRC address the structural integrity of any discharge structures. While the current NPDES permit requires monitoring to ensure that there are no point source discharges from the cooling structures to any adjacent surface waters, it is important for the facility to use relevant techniques to verify that all discharge structures are intact and able to retain nutrient-rich wastewater. The EPA recommends NRC consider this issue as part of the Aging Management Program or other relevant mechanism and include the potential discharges of increased peak storm events such as tropic storms and hurricanes.
- (3) **Wetlands and Streams** - To support wetland and stream mitigation decisions and to help South Carolina Department of Health and Environmental Control (SCDHEC) evaluate potential stream impact requirements for the Clean Water Act (CWA) Section 401 Water Quality Certification, information regarding CWA Section 404(b)(1) should be included in the EIS. Providing adequate wetland and stream information within the NEPA process can help to streamline the final environmental review and permitting processes for these resources.
- (4) **Waste Disposal** - The EIS should indicate if there will be any changes in the generation of waste including low-level radioactive waste, mixed low-level radioactive waste, transuranic waste, and hazardous and Toxic Substance Control Act wastes over the life of the program. The EIS should indicate where Duke Energy will send the spent nuclear fuel and spent fuel debris for storage pending long-term disposal options outside of the facility.
- (5) **Climate** - Climate change may impact the proposed project, posing threats to aging infrastructure, worker health and safety and the environment. We recommend that the EIS include an evaluation of climate-related impacts including discussions of frequency and severity of major storm events, wildfires, or drought that could lead to power disruptions or increased cooling demands in summer months. Efforts that Duke Energy is taking at Oconee to address and adapt to potential climate impacts should also be discussed in the EIS.
- (6) **Hurricane and Storm Impacts**- The EIS should explain the differences that result from using different storm prediction models as well as the validations of these models. Sea level rise should be incorporated into a discussion with a Sea, Lakes, Overland and Surge from Hurricane (SLOSH) model, which is also used by the National Weather Service and federal agencies when determining storm surge predictions. The EPA recommends that the EIS provide a detailed description of any other model used for determining storm surge and flooding, and the rationale for using another model over the SLOSH model.
- (7) **Environmental Justice** - Executive Order (E.O.) 12898 directs federal agencies to identify and address any disproportionately high and adverse human health or environmental effects of its

programs, policies and activities on minority, low-income, tribal, and indigenous populations. The EIS should include an analysis that is consistent with E.O. 12898. The analysis should indicate whether people of color, low income, tribal, and indigenous populations reside within the vicinity of the proposed project area. It would also be helpful to include a current map depicting the population demographics near the facility.

Assessing data using EJScreen (<https://www.epa.gov/ejscreen>), the EPA's nationally consistent environmental justice (EJ) screening and mapping tool, is a useful first step in understanding or highlighting geographic locations that may need further review or outreach. The tool provides information on environmental and socioeconomic indicators as well as pollution sources, health disparities, critical service gaps, and climate change data. The tool can help identify potential community vulnerabilities by calculating EJ Indexes and displaying other environmental and socioeconomic information in color-coded maps and standard data reports.

If communities with EJ concerns are located within the vicinity of the proposed project area or potentially affected by the proposed project, the EPA recommends the NRC meaningfully involve with direct communications with these communities throughout the decision-making process to help identify potential benefits and burdens associated with relicensing and permitting decisions. Adaptive and innovative approaches to both public outreach and community involvement regarding project issues should take place during the project planning.

The EPA appreciates the opportunity to provide comments on the proposed project. If you have any questions regarding our comments, please contact Mr. Larry Long, of the NEPA Section, at (404) 562-9460, or by e-mail at long.larry@epa.gov.