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Via Submission to TVANepaComments.com and Electronic Mail.

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Re: Scoping Comments for 2021 Environmental Impact Statement on Kingston Fossil Plant Retirement

Dear Ms. Williams,

On behalf of the Center for Biological Diversity ("Center"), we submit these scoping comments on the Tennessee Valley Authority's ("TVA") Notice of Intent to prepare an Environmental Impact Statement ("EIS") for the retirement of the Kingston Fossil Plant ("Kingston Plant"). We appreciate the opportunity to provide these comments on issues including the need for TVA to include a project alternative for the safe retirement of all Kingston Plant facilities much sooner than the proposed 2033 timeline without complete replacement by another energy source. Under the proposed scoping and its most recent Integrated Resource Plan ("IRP"), TVA assumes a high-growth forecast that would necessitate a complete replacement of Kingston's lost energy generation. However, given ongoing and already planned energy development, we are concerned that TVA is overcompensating for the agency's assumed energy demand.

Even more, with priority on new gas development, TVA is not only locking in fossil fuels for decades to come but contributing to even higher emissions through unnecessary additional fossil energy development. Indeed, a recent decision by the South Carolina Public Service Commission rejecting Duke Energy's proposed IRP is instructive regarding the analysis TVA must undertake here.[1] In that proceeding, South Carolina regulators emphasized the importance and value of evaluating future energy demand rather than assuming consistently high-growth forecasts. In particular, Duke's proposed IRP forecasted a more than 1% annual growth rate through 2035,[2] and Duke relied on this forecast to justify new generation resources with priority on Combined

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[1] S.C. Public Service Commission, Docket Nos. 2019-224-E & 2019-225-E, Order of June 17, 2021, available at https://dms.psc.sc.gov/Attachments/Matter/23971ba9-8352-440d-8516-cfc8d5a1ce93.

[2] Dennis Wamsted, *Key Shortcomings in Duke's North Carolina IRPs: Part 2*, Institute for Energy Economics and Financial Analysis (Feb. 2021), http://ieefa.org/wp-content/uploads/2021/02/Key-Shortcomings-in-Duke-North-Carolina-IRPs_Part-2_February-2021.pdf.

Cycle Combustion Turbine ("CC") and Simple Cycle Combustion Turbine ("CT") gas plants.[3] However, within the last decade residential demand has instead remained stagnant, calling into question the need to develop new generation resources.[4]

Applying that reasoning here, it is apparent that TVA cannot proceed with its EIS on the assumption that the generation lost from closing the Kingston Plant needs to be replaced. Rather, TVA needs to consider the extent to which – either as a result of affirmative TVA actions, changes in demands and markets, or some combination of both – demand for centralized TVA power may decline in coming years, making replacement of this generation unnecessary, in whole or in part.

We applaud TVA's decision to retire the Kingston Plant and encourage TVA to rapidly pursue retiring its other remaining coal plants. In doing so, TVA may not assume high-growth forecasts warrant centralized generation project alternatives. Thus, in all these analyses TVA must add a critical action alternative: accounting for declining demand, including offsetting TVA generation with distributed energy resources ("DER"), storage, and energy efficiency improvements.

At present TVA only intends to consider three action alternatives for the Kingston Plant's retirement, only one of which would replace the coal plant with renewable energy. The other two alternatives prioritize CC and CT gas plants. Both of these energy options fail to address the most pressing issue today: the urgent need for a rapid transition away from all fossil fuels toward a renewable and just energy economy in order to avoid the worst impacts of the climate emergency and address the disproportionate harm experienced by environmental justice communities from the fossil fuel economy. Given the most recent climate change science and the significant climate change harms already occurring in TVA's territory, TVA must consider alternatives that would have the agency do its requisite part to advance this necessary energy transition.[5]

Furthermore, given the Kingston Plant's legacy as the site of the country's largest industrial spill, TVA must also prioritize immediate remediation and adequate clean-up of the Kingston site. Retiring the Kingston Plant cannot be divorced from comprehensive action to address the harms done to communities in the Tennessee Valley – especially the Kingston coal ash workers – and the environment as a result of the 2008 coal ash spill. TVA must therefore also address its plans for expeditious remediation of the site in its upcoming EIS.

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[3] *See* Final 2020 Duke Energy Progress IRP, https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=7f4b3176-95d8-425d-a36b-390e1e57a175.

[4] Wamsted, *Key Shortcomings in Duke's North Carolina IRPs: Part 2.*

[5] *See* Center for Biological Diversity "Scoping Comments for 2021 Environmental Impact Statement on Cumberland Fossil Plant Retirement," (June 10, 2021), https://biologicaldiversity.org/programs/energy-justice/pdfs/2021-06-10-Center-Cumberland-Closure-Scoping-Comments-NEPA.pdf.

Moreover, earlier this year President Biden issued an Executive Order to transform the entire U.S. electricity sector to be carbon-free by 2035.[6] He emphasized the Administration's policy "to organize and deploy the *full capacity of its agencies* to combat the climate crisis."[7] As a federal agency and the country's largest public power provider, TVA must advance carbon-free electricity on a timeline consistent with climate science and the President's goal. The Kingston Plant EIS must therefore fully and fairly consider alternatives providing for the rapid retirement of the Plant and its replacement, to the extent necessary, with clean, renewable energy sources, including DER, storage and energy efficiency options, in order to comply with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321, *et seq*.

DISCUSSION

A. TVA's Existing Alternatives For The Kingston Plant Retirement Fail To Achieve The Rapid Greenhouse Gas Reductions That Are Critical To Addressing The Climate Crisis, And The EIS Must Fully Address The GHG Impacts Of All Reasonable Alternatives.

Given the climate crisis and the important role TVA plays as the nation's largest power provider, with massive GHG emissions, the Kingston EIS must center the replacement of the Kingston Plant with non-fossil fuel resources, including renewable energy and energy efficiency, to the extent replacement is necessary. At the moment, two of the three project alternatives consider CC and CT gas plants that would potentially contribute to, instead of reducing, TVA's already alarming GHG emissions through 2038. With increased reliance on gas as a replacement for coal, TVA *would still generate more than 34 million tons of CO_2 each year in 2038*.[8] This current emphasis on further gas expansion is simply unacceptable from the standpoint of what climate science and equity demand.

In addition, while TVA currently intends to consider one alternative prioritizing solar and storage facilities, the EIS must also account for the declining need for centralized TVA generation, including offsetting TVA generation with distributed energy resources ("DER"), storage, and energy efficiency improvements.

1. TVA must consider renewable energy alternatives aligned with a "path to zero emissions" that would also reduce energy demand.

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6 *See* President Biden Executive Order on Tackling the Climate Crisis at Home and Abroad, Sections 201 and 205(b)(i) ("Biden Order") (Jan. 27, 2021), https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/.

7 *Id.* (emphasis added).

8 TVA 2019 Environmental Impact Statement, Final EIS at 5-27.

The purpose of NEPA is to identify reasonable alternatives to an agency's proposed action, and then expose and discuss the multitude of public health, environmental, socio-economic, wildlife, and other impacts of those alternatives. However, regardless of the ultimate decisions made, NEPA does not permit an agency to refuse to even *consider* reasonable alternatives.[9] Accordingly, here TVA may not rely on contract terms or simple economic considerations to refuse to consider alternative scenarios for its power mix in the coming decades, including DER and storage alternatives.

This is particularly true given that TVA acknowledges that its statutory mandate under the TVA Act requires that it be a "leader in technology innovation, low-cost power and environmental stewardship."[10] TVA therefore should be looking for opportunities to invest in the renewable energy technologies that will help reduce electricity prices and make those technologies even more cost-competitive in the coming years.

Recent research demonstrates that replacing fossil fuel resources with DER, storage, and energy efficiency could provide significant financial benefits. One analysis in particular modeled the cost-effectiveness and impact of DERs and other clean energy resources on the electricity system. Under the examined scenarios, significant investment in DER would result in cumulative system-wide savings of $301 billion by 2050 compared to a business-as-usual energy system.[11] The same study showed that a clean electricity standard reducing emissions by 95 percent from 1990 levels by mid-century could save $473 billion.[12]

In addition to cost savings, DERs bring several additional benefits including grid management, demand response, and transmission benefits.[13] TVA has expressed concern that alternatives prioritizing renewables like solar as replacements to Kingston are incapable of addressing peak demand. But as the Vibrant Clean Energy report demonstrates, DER can actually *minimize peak demand by about 17 percent* and also effectively shift demand to meet variable supply rather than forcing supply to meet demand.[14]

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9 *See, e.g., Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 235 F. Supp. 2d 1143, 1154 (W.D. Wash. 2002) ("An agency may not reject a reasonable alternative because it is not within the jurisdiction of the lead agency").

10 *See* Final 2019 TVA IRP at 5-1

11 Clack et al., *Technical Report: Why Local Solar For All Costs Less- A New Roadmap for the Lowest Cost Grid*, Vibrant Clean Energy (2020), https://www.vibrantcleanenergy.com/wp-content/uploads/2020/12/WhyDERs_TR_Final.pdf

12 *Id*. at 3.

13 Armstrong et. al., Techno–Ecological Synergies of Solar Energy for Global Sustainability, 2 Nature Sustainability 560 (July 2019).

14 Vibrant Clean Energy Technical Report (2020) at 48 (emphasis added).

Additionally, distributed solar generation can provide benefits to communities and ecosystems including reduced water use, reduced land use, and even improved wildlife habitat, which are critically important to TVA's customers.[15]

Thus, TVA must consider a full range of renewable energy alternatives that would make replacement of TVA's coal power generation with other centralized energy systems, such as CC and CT gas plants, obsolete. TVA must compare the environmental impacts of investments that largely or completely rely on DER, storage and energy efficiency with the other options considered in the proposed EIS—including not only the cost of potential early retirement of fossil fuel resources and expansion of gas, but also the social cost of carbon associated with keeping them running for many years to come.

Instead of investing in risky alternatives based on an assumption of increasing energy demand, TVA should lead the way in investing in climate-friendly and just energy solutions, like distributed solar generation, that would both reduce consumption and TVA's GHG emissions. Renewable energy and energy efficiency alternatives are proven technologies that not only make financial sense, and can lower power bills for TVA customers, but will advance TVA's path to decarbonization.

In short, to meet its purpose of providing safe, clean, reliable, and affordable electricity to all its customers, TVA must add a critical action alternative accounting for declining demand for centralized TVA generation, including offsetting TVA generation with distributed energy resources ("DER"), storage, and energy efficiency improvements.

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15 Techno-Ecological Synergies of Solar energy for Global Sustainability (2019) at 563.

2. TVA must meaningfully assess the impacts of greenhouse gas emissions by comparing impacts between the existing alternatives and one or more alternatives that chart a path to zero emissions.

In other environmental reviews, TVA has refused to meaningfully consider its contributions to GHG emissions on the grounds that they are small relative to global emissions.[16] This approach violates NEPA.

It is well-established that NEPA requires a robust consideration of the impacts of a project's GHG emissions in terms of its relationship to climate change. Thus, although some "speculation is . . . implicit in NEPA," agencies may not "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry."[17]

Thus, TVA must add the necessary alternative(s) discussed above that will advance its rapid transition to zero emissions, all the while considering—and informing the public about—the likely environmental outcomes under the different alternatives. In particular, under two of the currently considered alternatives, which propose gas replacements, TVA will continue to be one of the largest contributors to the GHGs that are fueling the climate crisis, and thus will continue to be responsible for the devastating impacts that are certain to come in the country and around the world as we continue to increase the concentrations of GHGs in the atmosphere.

Alternatively, under a renewable energy alternative that maximizes DER, storage, and energy efficiency, and which would reduce demand for centralized and fossil fuel TVA power, TVA would not only carry out its requisite part in phasing out fossil fuels and lowering GHG emissions, but also in addressing environmental justice concerns associated with a reliance on false solutions like fossil gas.

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The urgency of the climate and energy crises demand that large utilities, especially TVA, step up and meet the moment. It is now on power providers to not only rapidly phase out their fossil fuel fleets but to replace that energy with genuinely renewable energy sources and energy efficiency. With the Kingston Plant retirement, TVA has an opportunity to be a model this country needs for what a just and truly renewable energy transition should look like. TVA can and should lay the groundwork for the very technological solutions that other utilities can deploy to meet President Biden's decarbonization goal.

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[16] TVA 2019 Environmental Impact Statement, Final EIS at 5-28.

[17] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011) (citation omitted).

We look forward to commenting on a Draft EIS for the Kingston Plant that fully addresses these concerns. In the meantime, please contact us should there be any further information we can provide.

Sincerely yours,

CENTER FOR BIOLOGICAL DIVERSITY

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