

Public Comments on the Tennessee Valley Authority's Power Supply Flexibility Draft Environmental Assessment

TVA issued the draft EA on April 3, 2020, for public review. The compiled comments include letters submitted to TVA after the comment period ended on May 4, 2020. Certain information has been redacted, and attachments to letters are not included. For more information, please contact Matthew Higdon, NEPA Specialist, Tennessee Valley Authority by email at mshigdon@tva.gov.

From: [Peter Schleider](#)
To: [Higdon, Matthew Stephen](#)
Subject: TVA public input for local power generation
Date: Monday, April 06, 2020 12:06:58 PM
Attachments: [image001.png](#)

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Mr. Higdon,

As a greenfield developer in several states and in dealing with coops there is no question the demand for local generation is acute. Your suggestion that **5%** will be something that is of interest to the LPC's is not a serious offer. We have found that coops don't bother with bringing self-generation into their mix unless it can actually have a positive impact for their members. A local generation capability of **30%+** will impact end-user rates and that will get LPCs/member coops interested in that option.

Peter D. Schleider

RKB Energy LLC

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From: Steve Noe <*email redacted*>
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Cc: Betsey K. McCall <*email redacted*>; Clint Wilson <*email redacted*> Subject: TVA
Power Supply Flexibility Proposal Draft Environmental Assessment

Cass and Chris,

In reviewing in the Draft EA for the Power Supply Flexibility Proposal, I noted an inaccuracy. In the reference to the FRP there is no mention of the fact that this program was developed by and is jointly administered by TVPPA and was approved by the DER Council and the TVPPA Board. I believe the addition of these facts strengthens the assertions made and demonstrates that the precursor to the Flexibility Program was supported by TVA's Local Power Companies. Please consider including the addition below highlighted in yellow.

TVA has previously worked with LPCs to address the demand for flexible generation. TVA implemented a flexibility option consistent with the TVA public power model, known as the Flexibility Research Project (FRP). The FRP is a Tennessee Valley Public Power Association (TVPPA) program jointly administered by TVPPA and TVA to support the LPC community. It was approved by TVPPA's DER Council and Board of Directors as well as TVA's Board of Directors to meet consumer demand consistent with the all-requirements wholesale power contracts between TVA and LPCs on a demonstration basis, enabling both TVA and LPCs to evaluate the potential of such projects and assess system impacts. The FRP allows LPCs to build, own, and operate generation while maintaining buy-all/sell-all relationships. Up to 300 MW of flexible generation from solar, combined heat and power, and other applicable technologies is available to LPCs under the FRP. This option is open to all LPCs, regardless of whether they choose to become Valley Partners, until January 2021. The FRP does not provide the same reductions to monthly billing determinants as the Flexibility Proposal, but is instead a modified power purchase agreement under which TVA purchases the power generated by the LPCs. Agreements under the FRP have delivery durations limited to 20 years. To date, no FRP projects have been brought into operation.

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From: (b) (6)
To: [Higdon, Matthew Stephen](#)
Subject: FLEXIBILITY PROGRAM
Date: Saturday, April 18, 2020 10:26:11 AM

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You people need to ask two men you have repeatedly insulted: President Donald Trump and Senate Majority Leader Mitch McConnell. Perhaps next year they will vote you out of existence.

[Sent from Yahoo Mail on Android](#)



May 4, 2020

Mr. Matthew Higdon
NEPA Program
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Dear Mr. Higdon:

On behalf of the Tennessee Advanced Energy Business Council (TAEBC), I'd like to thank the Tennessee Valley Authority (TVA) for the opportunity to provide comments to the draft Environmental Assessment (EA) regarding the TVA Power Supply Flexibility Proposal. Attached herein are our collective comments to the EA, but first, here is some more information regarding TAEBBC and its membership.

TAEBBC champions advanced energy as a job creation and economic development strategy. No other entity in the state concentrates specifically on this robust sector. In fact, our definition of advanced energy is technology neutral and includes electricity and transportation. Anything that makes energy cleaner, safer, more secure or more efficient is in the tent. As TVA is aware, we've seen rapid innovation and growth in this market segment, and it is transforming how we think, use, and generate energy right here in the Valley.

Our 2018 release of the Tennessee Advanced Energy Impact Report put some real numbers to the growth – we found that the state's advanced energy economy outpaced the state's overall economy – employing nearly 360,000 Tennesseans at more than 18,000 businesses. Given this exciting growth, TAEBBC's commitment to our members are (1) help the state become the #1 location in the Southeast for high quality jobs, supporting economic development, (2) support TVA and its customer partners' efforts to become energy companies of the future, while maintaining its key position of being the local, trusted energy advisors in the Valley, (3) foster the growth of new advanced energy startup businesses, and (4) help inform the national energy agenda.

It is through the lens of this goal and mission that TAEBBC offers the following comments on this particular draft Environmental Assessment. A summary of the organization's general comments is located below.

General

Overall, TAEBC and its member companies and partners are in favor of the Proposed Action Alternative and are supportive and enthusiastic about the new Flexibility Proposal, which gives participating local power companies (LPCs) more “local control” in design of programmatic, community-led projects that assist in economic development, diversification of energy supply, and potentially lower rates through more economic distributed generation. In reviewing the materials provided and the draft EA, there are several detailed items that are unclear or provide for barriers to successful participation and implementation. Those are highlighted below:

- **Eligibility:** Are the directly-served customers of the Valley eligible to participate in addition to the LPC Partners? If not, what is the logical explanation as they are also TVA Partners and customers who could benefit from greater generation flexibility?
- **Location and Aggregation:** As stated in the draft EA, several LPCs (whether in an urban setting or mountainous/land-constrained area) may not have the same amount of viable local options for generation resources as others. Can LPCs aggregate their capacity allocation if the project(s) are still interconnected to a LPC distribution system?
- **Participation:** It is unlikely that 100% of LPC Partners who sign the Long Term Partnership Agreement will participate in flexibility. How will TVA ensure this capacity is not wasted and re-allocated to those LPC Partners who desire to achieve/procure greater than 5% flexibility?
- **Calculation:** We’ve observed a fairly high level of frustration or discouraging commentary about how the 5% calculation works. The calculation of capacity limits based on average LPC hourly demand over the past 5 years significantly limits true flexibility to more like 1-2% flexibility rather than the suggested 5%. Other national utility companies, G&T’s and cooperatives, have calculated power supply flexibility or breaks in all-requirements contracts based on the energy (i.e. MWh sales) usage across the distribution system. This arbitrary calculation appears to intentionally limit the amount of flexibility in the TVA PSA. Please explain or address the logic in this parameter and current design. Of particular concern is average LPC hourly demand is inequal to resource nameplate capacity if it is used for the 5% limit. This is truer for renewable resources that have a lower average hourly production (similar to capacity factor). It could encourage LPCs to favor generation with both a higher capacity factor and higher emissions. In this particular area, the calculation could encourage decisions that are contrary to TVA’s IRP and long-range plans.
- **Capacity:** TAEBC members have observed a lot of LPC excitement and enthusiasm for the Proposed Action Alternative. So much so that we anticipate requests for more flexibility. The draft EA states that 5% was chosen in order to maintain stability in revenue erosion and stay within the bounds of the long term financial plan. What is the process for expanding flexibility to a larger figure (10, 20%) in the future? What factors might trigger additional flexibility and capacity? What are the specific revenue requirements of TVA to avoid significant negative impacts to the financial plan? It appears the ~1-2% of LPC energy sales (or 5% capacity “flexibility”) proposal would not significantly impact the financial viability of the nation’s largest public power institution.
- **Calculation:** It is TAEBC’s understanding that the 5% of annual average demand does not apply to all of the LPC’s retail customer load. In fact, the 5% excludes large power users and is only applied to standard service customers – this arbitrarily continues to limit the capacity available, if

true. Can TVA clarify this calculation, methodology, and logic behind excluding LPC-served industrial customers?

- Technologies: TAEBC is supportive of TVA's clear and decisive path towards a cleaner energy future and excluding diesel and coal generation. To this end, we've observed an educational need around the state and Valley so that as LPC's choose various technologies to meet their 5% they 1) aren't investing in stranded assets; 2) select future proofing technology options and 3) stay in line with TVA's IRP to select the cleanest, most advanced technology options. TAEBC strongly encourages TVA to partner with an organization like ours to offer this kind of education and add more technology options to its existing scenarios in the EA (solar, CHP, natural gas). For example, power-to-gas (which creates renewable fuels from excess solar, hydro, wind or nuclear), fast start, flexible thermal plants, microgrids, hydrogen, battery storage, waste-to-energy, etc. While TAEBC is supportive of advanced nuclear and modular technologies, it does appear that this technology may not be commercially applicable on the scale of most LPCs' capacity limitations under the current draft EA/proposal.
- Project Review: TAEBC applauds TVA for giving its customer partners true flexibility which will allow for innovative local solutions. Additionally, giving LPC Partners the ability to select projects that meet the principles is an excellent step forward, while also not requiring individual TVA NEPA reviews for each project. It is understood that TVA Transmission will want to review the interconnection of each system in concurrence with its general business practices, and that is not perceived to be a barrier or issue.
- Overview: This proposal is a very positive step forward, but careful design, implementation, and management is key for effective results to help diversify the Valley's energy resource mix to meet the goals and objectives of the 2019 IRP and beyond.

Thank you again for the opportunity to evaluate the flexibility proposal and draft EA. This is directionally a very positive step forward in the Valley, but as stated above, there are serious and important concerns and questions that need to be addressed prior to rollout of flexibility, otherwise, TAEBC and its members, as well as LPCs, may experience the same results as the Flexibility Research Project (FRP), which as stated in the draft EA, has been poorly subscribed and unsuccessful to date.

TAEBC welcomes the opportunity to discuss further comments with TVA staff and appreciates the partnership and allowing for open stakeholder engagement.

Sincerely,



Cortney Piper
Executive Director, Tennessee Advanced Energy Business Council

Cc:

Trish Starkey
Matt Kisber
Chris Bowles
Jim DeMouy

Marc Gibson
Mary Beth Hudson
Jeff Kanel
Steve Seifried

May 4, 2020

Mr. Matthew Higdon
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Mr. Higdon:

Thank you for the opportunity to provide comments to the draft Environmental Assessment (EA) regarding the TVA Power Supply Flexibility Proposal. The following comments reflect the policy priorities of the national solar industry with an interest in providing reliable, low-cost solar energy to the Tennessee Valley. We consulted with our affiliate in the region, TenneSEIA, on the content of these comments.

The Solar Energy Industries Association (SEIA) is leading the transformation to a clean energy economy, creating the framework for solar to achieve 20% of U.S. electricity generation by 2030. SEIA works with its 1,000 member companies and other strategic partners to fight for policies that create jobs in every community and shape fair market rules that promote competition and the growth of reliable, low-cost solar power.

In SEIA and TenneSEIA's April 2019 joint comments on the proposed TVA Integrated Resource Plan (IRP), the organizations firmly recommended that TVA implement a customer-focused approach to provide the least-cost, most flexible, lowest risk energy to the system, and while also providing the maximum amount of environmental and economic benefit for the people of the Tennessee Valley.

SEIA is encouraged to see TVA act on some of our proposed recommendations through the Power Supply Flexibility Proposal.

SEIA's comments on the draft Environmental Assessment can be found on pages two and three of this document.

Background: SEIA understands that the foundation of this proposal lies upon the willingness of Local Power Companies (LPCs) to enter into long term contracts with the Tennessee Valley Authority (TVA) to be eligible to participate in the Power Supply Flexibility Proposal. We are encouraged to see that TVA has listened to the needs of LPCs to create an option for them to procure low-cost, clean energy. However, the premise of a 20-year wholesale generation commitment with a 20-year termination notice in exchange for up to 5% power supply flexibility should be seen as a first step toward a cleaner, more distributed TVA. While we are generally supportive of the Power Supply Flexibility Proposal, SEIA has provided further commentary and questions on specific items below.

Power Supply Flexibility Cap Calculation: In the draft Environmental Assessment, TVA states that the 3-5% power supply flexibility calculation was derived for each LPC using “average total hourly energy sales over the last five TVA fiscal years.” In consultation with partners in the region, SEIA believes there is too much ambiguity in the customer classes included in this calculation to support TVA’s methodology without further explanation.

Regionally, utilities have calculated renewable energy thresholds using an average of retail peak load. For example, in South Carolina’s Act 62 (2019), the statute states that utilities must interconnect legacy solar projects until they reach a limit defined as: “an aggregate nameplate capacity equal to twenty percent of the previous five-year average of the electrical utility’s South Carolina retail peak load.” SEIA recommends that TVA clarify this calculation and if necessary, modify it to ensure it reflects an accurate level of applicable load to be potentially served by this proposal.

Justification for 5% Cap: TVA states that it studied an alternative plan with a flexibility threshold beyond the contemplated 5%, but that higher levels of flexibility created revenue erosion and a “higher risk to the financial plan.” SEIA would like to note that TVA recently announced a Green Invest solar project of 212 MW capacity for an LPC, Knoxville Utilities Board (KUB). In its own press release, TVA boasts that the project will “produce carbon-free energy equivalent to 8% of KUB’s annual electric load.” While recognizing the Green Investment program is a different construct than what is contemplated in the Power Supply Flexibility Proposal, SEIA is interested in learning more about how the 8% number stated in the press release was calculated, how that compares to the methodology behind the proposal at hand, and how such a project of that size did not create revenue erosion for TVA.

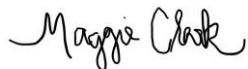
Aggregation: TVA states that each LPC has an opportunity to procure a minimum of 1 MW of capacity through the Power Supply Flexibility Proposal, with the largest LPCs able to procure 70-80 MW each. TVA states that the entire program can accommodate up to 800 MW of capacity. Notwithstanding SEIA’s previously stated questions around the 5% cap, SEIA would like to further understand if multiple LPCs are able to aggregate demand under the current

proposal. Aggregation of load can lead to greater economies of scale of qualifying projects, thus enabling TVA to help LPCs achieve desired long term cost savings. SEIA points to other regional programs that allow aggregation of load, including the North Carolina Green Source Advantage program which allows an aggregate of 5 MW or more of peak load across multiple locations.

Reallocation of Unused Capacity: SEIA joins with its affiliate, TenneSEIA, in its statement of interest around reallocation of unused program capacity. If TVA is expecting and thus modeling a program capacity of 800 MW total, SEIA would like further clarification on whether the remaining capacity of LPCs that do not choose to participate in the program will be made available until the 800 MW systemwide cap is reached.

Areas of Agreement: SEIA, echoing comments made by TenneSEIA, commends TVA on the autonomy granted to the LPCs with respect to eligible technologies and individual project selection to achieve the Power Supply Flexibility Proposal program goals.

Respectfully submitted,



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May 4, 2020

via email to mshigdon@tva.gov

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Re: SACE Comments on TVA POWER SUPPLY FLEXIBILITY PROPOSAL DRAFT ENVIRONMENTAL ASSESSMENT

Dear Mr. Higdon,

The Southern Alliance for Clean Energy (SACE) respectfully submits these comments in response to the Tennessee Valley Authority's (TVA) draft Environmental Assessment for its Flexibility Proposal (hereinafter referred to as "Draft EA").

SACE is a regional organization that promotes responsible energy choices to ensure clean, safe and healthy communities throughout the Southeast. SACE's members are concerned by the fact that the flexibility level proposed is lower than what appears in long-term contracts with LPCs, the short timeline for public input, and the lack of transparency.

SACE calls on TVA to withdraw the Draft EA and improve the program by allowing LPCs the full 5% flexibility, limiting eligible resources to renewables and CHP, and putting in place a mechanism to increase the flexibility level in the future.

Sincerely,

Stephen Smith
Executive Director

Maggie Shober
Utility Reform Director

Bryan Jacob
Solar Program Director

SACE calls on TVA to Improve the Flexibility Proposal

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I. Introduction

Across the country utilities are utilizing inexpensive clean energy resources like solar to provide clean, safe, affordable, and reliable electricity to their customers. The utility regulatory framework has shifted as customers and companies challenge the concept that monopoly utilities should be the only entities allowed to enter into power supply agreements. The result has been a patchwork of policies that vary by state and utility service territory. Until recently the Tennessee Valley has been left out of this discussion because TVA claims that the “fence line” set up by the TVA Act does not allow any ultimate TVA customer to receive power from anyone other than TVA, even if that power comes from a rooftop solar array located in the Valley.

TVA’s fence line was originally set up to keep TVA from encroaching on neighboring utilities’ customers because TVA originally had lower rates than its neighbors. However, today the fence line is being used to trap local power companies in long-term contracts that are not in the best interest of ultimate customers, the residents of the Tennessee Valley.

II. TVA’s proposed program limits LPCs to 1% flexibility

The long-term partnership agreements between TVA and numerous LPCs committed TVA to developing an option for power supply flexibility allowing LPCs to meet 3-5% of power needs with flexible power supply.¹ Instead, as shown below, TVA’s Flexibility Proposal limits Local Power Companies (LPCs) to meeting only 1% of energy needs. TVA does this by capping the capacity (not energy) that LPCs can use within the program, by using nameplate capacity to measure an LPC’s flexible supply against its cap, and by limiting the program to generation resources with capacity factors well below 50%.

Though TVA did not release the calculations it used to determine flexibility caps for LPCs under this program with its original Draft EA,² we attempted to recreate the calculations using TVA’s method described in the Draft EA.³

¹ Section 2(e) of Long-Term Agreement states that “TVA commits to collaborating with Distributor... to develop and provide enhanced power supply flexibility, with mutually agreed-upon pricing structures, for 3-5% of Distributor’s energy, by no later than October 1, 2021.” See Exhibit A of KUB Board Meeting Packet for March 12, 2020 meeting, available here: https://www.kub.org/uploads/March_12_2020_Board_Meeting_Packet.pdf.

² SACE submitted a request for these calculations under the National Environmental Policy Act (NEPA) process and under the Freedom of Information Act (FOIA) and received a table showing Flexibility Quantities from TVA just one business day before the end of the comment period. The table from TVA is shown in the appendix.

³ TVA Staff’s response to our request stated that they did not calculate the flexibility cap for each individual LPC, but instead performed the calculation for all LPCs at once. However, this would lead to an underestimation of the total cap because TVA’s Flexibility Program states that LPCs with calculated caps at less than 1 MW would have a cap of 1 MW. The total difference would be relatively small (790 MW vs. 801 MW by our calculations), but the exchange indicates that TVA is not being straightforward with the public about its Flexibility Program. See TVA’s response to question #2 in the document titled Submitted Questions and TVA Answers on the EA site, available here: https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/questions-submitted-to-tva-and-responses-april-27-2020.pdf?sfvrsn=f6f38e8b_3.

Calculation method:

1. Convert Total Demand (MWh) for calendar years 2014-2018⁴ for each LPC to Average Hourly Capacity (MW) by dividing the sum of all five years of demand by the sum of the number of hours in all five years to get Average Hourly Capacity.
2. Multiply each LPC's Average Hourly Capacity by 5%.
3. Round all values that are less than 1 MW to 1 MW.
4. Add all calculated flexibility caps for a total of 801 MW.⁵

In the Draft EA TVA states that generation resources eligible to participate with LPCs as flexible resources include solar, community solar, rooftop solar, solar with batteries co-located, gas-fired generators, and gas-fired combined heat and power projects. Any technologies that do not appear in TVA's 2019 IRP Target Power Supply Mix are ineligible, and TVA specifically states in the Draft EA that diesel-fired and coal-fired generation technologies are ineligible.

Based on the eligible technologies and the fact that the largest LPC cap is only 80 MW, LPCs are essentially limited to flexible supply from the various kinds of solar, combined heat and power systems, and gas peaking technologies. TVA's stance reflects our conclusion, stating on page 3-2 of the Draft EA that "Potential natural gas-fired generation installed under the Flexibility Agreements are expected to be stand-alone systems operated primarily during times of peak demand, or combined heat and power (CHP) systems. Stand-alone systems would likely be reciprocating internal combustion engine (RICE) generator sets, which are available in a range of sizes up to about 20 MW."

Compared to nameplate capacity, each of these technologies tend to have average capacity factors of less than 50%. Solar capacity factors can range from 18-30%, RICE generators are generally only used for peaking purposes so can have capacity factors in the 2-5% range, and the capacity factors of CHP systems can vary widely since their use also depend on the need for heat at the customer location where the project is sited.

Based on TVA's method for calculating flexibility caps, use of nameplate capacity to measure LPC limits under those caps, and limiting the program to low capacity factor resources, if all LPCs maximize their flexibility caps those resources would only meet 1% of total LPC demand.

⁴ Annual demand from LPCs was sourced from utility data submitted to the U.S. Energy Information Administration (EIA).

⁵ SACE's estimated calculations are included in a table in Appendix A.

Table 1. Percent of LPC Demand met with Flexible Resources by Deployment Scenario⁶

Scenario	Percent of Total LPC Demand met with Flexible Supply
100% Solar	1%
90% Solar, 10% Gas	1%
50% Solar, 50% Gas	1%
100% gas	1%

TVA should base its flexibility caps on energy instead of capacity. This is a method used across the country in states with Renewable Portfolio Standards (RPS) that require utilities to obtain a certain percentage of energy from renewable sources. Methods exist for calculating a generator’s contribution to a target that is based on a percent of annual demand that do not involve the use of the unusual metric of “average hourly capacity,” which is not a common metric used in utility regulation. Setting the flexibility cap at 5% of energy, on an energy basis, would allow LPCs to determine how much capacity of desired resources they can install.

If TVA decides to keep the current method for calculating flexibility, i.e. using average hourly capacity, it should credit resources the amount of capacity it uses in other venues. In its 2019 Integrated Resource Plan TVA discounted the nameplate capacity of uncontrolled solar to address its limited ability to be dispatched and its capacity factor. The same values should be used to calculate how much of an eligible resource counts against an LPC’s flexibility cap.

III. TVA does not provide evidence that its Flexibility Proposal is “sufficient”

In the Draft EA TVA claims “the five percent flexibility level would provide Valley Partners sufficient flexibility to meet their customers’ needs” though the document provides no indication that TVA sought to measure customer needs and thus cannot determine that the Flexibility Proposal meets those needs.⁷ The Draft EA also states that some customers of LPCs have turned to third-party providers for generation services because current contracts restrict LPCs from providing the same services.⁸ TVA is clear in the EA: residents and business of the Valley want local, clean generation and want the flexibility to pursue that themselves or through their local utility.⁹

⁶ Assumed capacity factors: solar = 20%, CHP = 38%, gas peaker = 3%; Assumed half of gas met as CHP and half as gas peaker; percent of total LPC demand based on total demand from all LPCs in 2018 as reported to the EIA.

⁷ Draft EA, page 1-1.

⁸ Draft EA, page 1-1.

⁹ A 2017 survey by North Star Opinion Research for Tennesseans for Solar Choice found that 88% of surveyed registered voters in Tennessee agreed with the statement that “I would use solar energy for my own home if it was available at the same or lower cost than conventional electricity.” From the same survey, 83% of surveyed Tennessee voters agreed that local power companies should have the ability to purchase energy from sources other than the TVA.

Without clear values around how many customers want flexible, clean generation from their LPC, and how much of LPC load those customers represent, TVA cannot state that its Flexibility Proposal provides “sufficient” flexibility to meet these customer needs, now or into the future.

IV. TVA does not provide evidence that more flexibility would harm TVA’s financial health

In the Draft EA TVA also claims that “the five percent flexibility level” ensures “that the financial health impact to TVA is at a level that fits within the current strategic financial plan.” However, TVA does not provide evidence that flexibility levels above those included in the Flexibility Proposal would harm TVA’s financial health, either in the Draft EA or in responses by TVA staff to questions. In fact, despite requests through NEPA and FOIA, TVA has not presented either its analysis of the financial impacts of the Flexibility Proposal on its Strategic Financial Plan, nor provided the detailed plan itself beyond the slides presented at the August 2019 TVA Board of Directors meeting, which provide a *summary* of the Strategic Financial Plan.

The Draft EA and materials presented by TVA include no evidence that allowing LPCs to source more than 1% of their energy needs would harm TVA’s financial health. TVA should perform the due diligence and present to the public the financial impacts of multiple levels of flexibility, on an energy basis, to ensure the transparency requirements of NEPA are met in this process.¹⁰

V. TVA’s program does not provide clear evidence of the emissions impact

TVA’s Flexibility Proposal allows LPCs to build or contract with generation technologies that emit carbon dioxide and other pollutants. However, the Draft EA and responses from TVA about the issue indicate that TVA staff has not fully evaluated the potential emissions impact of the program. The EA states that the proposal would result in a “negligible change in energy production and use due to the relatively small proportion of TVA’s overall generating capacity that would be provided by LPCs under the [Flexibility Proposal].”¹¹ Additionally, TVA staff did not consider capacity factors when analyzing the environmental impact of the Flexibility Proposal under the three development scenarios they compared to the no action alternative in the Draft EA.¹²

¹⁰ NEPA mandates that any incorporated material must be “reasonably available for inspection by potentially interested persons within the time allowed for comment,” and that any “[m]aterial based on proprietary data which is itself not available for review and comment shall not be incorporated by reference.” Id. § 1502.21.

¹¹ Draft EA, page 2-3.

¹² [Q&A submitted](#) to TVA by SACE

According to TVA, its overall system average carbon dioxide (CO₂) emission rate for 2018 was 825 lb/MWh, after adjustment from renewable energy credits.¹³ An Energy Department source shows that the CO₂ emission rate for RICE can range anywhere from 452 lb/MWh to 1,348 lb/MWh, depending on whether the generator is used for CHP or is stand-alone and how it is configured.¹⁴ These figures are indicative of the potential for the Flexibility Proposal to increase TVA's overall emissions, of CO₂ and other pollutants, if all LPCs maximize their flexibility caps with these CO₂ emitting technologies. While we share in TVA's expectation that most of the LPCs that participate in the program will employ some or all renewable resources as flexible resources, TVA still has the duty under NEPA to examine the potential emissions impact of deployment of these resources across the Valley.

To ensure that the program does not increase emissions of CO₂ or any other pollutant TVA should limit the resources eligible to participate in the program to renewable and CHP resources.

VI. TVA did not adequately present alternatives to its Flexibility Proposal

The Draft EA presents only one level of flexibility and one method for calculating how LPCs can participate in the program without violating the rules TVA has set up for the program. The EA mentions that TVA staff considered expansion of an existing program, the Flexibility Research Project option, but with little discussion in the EA decides it is not worth considering. The EA also states that alternatives with greater than 5% power supply flexibility "would impose a higher risk to the financial plan" and thus any alternative with more than 5% flexibility, as defined in the EA, was eliminated from further consideration.

As stated previously, the Flexibility Proposal provides LPCs with the ability to obtain 1% of power from flexible sources, not 5%, and TVA has not provided adequate evidence that flexibility greater than either of these levels (1% of energy, or 5% of energy) would harm TVA's financial health.

Therefore, TVA did not adequately evaluate alternatives to its Flexibility Proposal and should evaluate higher levels of flexibility in another EA for an improved Flexibility Proposal.

¹³ TVA website, <https://www.tva.com/environment/environmental-stewardship/air-quality/carbon-dioxide>.

¹⁴ U.S. Department of Energy, Energy Efficiency & Renewable Energy, *Combined Heat and Power Technology Fact Sheet Series: Reciprocating Engines*. Available online here: <https://www.energy.gov/sites/prod/files/2016/09/f33/CHP-Recip%20Engines.pdf>

VII. TVA made an error when calculating Flexibility Quantities

As outlined in the Section II, we disagree with the method TVA has chosen to calculate the definition of 5% flexibility for this program. However, we have also discovered that TVA made an error in calculations using its own methods. We point this out, not in support of TVA's method, but in support of a transparent and deliberative process where stakeholders can review TVA's policies and programs in detail. Without such a process TVA remains essentially unregulated.

In response to a document request from SACE via the Freedom of Information Act (FOIA), TVA released its calculations of the Flexibility Quantities (i.e. flexibility caps) for each LPC under the Flexibility Proposal as described in the Draft EA. The table provided by TVA is shown in the Appendix. The TVA calculations include annual kWh sales for each LPC for the years 2015-2019, these annual kWh values are then averaged over the five years and divided by the total number of hours in a year to get the hourly average. However, when TVA divided by the total number of hours in a year, it did not account for the fact that the 5-year range over which it was averaging (and any consecutive 5 years) contains at least one leap year. Therefore, TVA divided the average annual kWh figure by 8,760 (24×365) instead of by 8,764.8 ($(24 \times 365 + 24) / 5$).

The difference may appear small, but accuracy matters. Stakeholders should not have to rely on FOIA to get enough information about TVA's NEPA-related programs to be able to identify such errors, big or small.

VIII. TVA should improve the Flexibility Proposal

SACE is a regional organization that promotes responsible energy choices to ensure clean, safe and healthy communities throughout the Southeast. SACE's members are concerned by the short public input timeline, the lack of transparency and TVA's failure to consider meaningful alternatives when designing its Flexibility Proposal.

SACE calls on TVA to withdraw the Draft EA and improve the proposal in the following ways:

1. Allow LPCs the full 5% flexibility on an energy basis.
2. Limit eligible resources to renewable energy resources and combined heat-and-power.
3. Put in place a mechanism to increase the flexibility level in the future.

TVA should release another EA on this improved proposal and include in that EA the analysis that shows evaluation of flexibility levels greater than 5% (on an energy basis), shows that the proposal is sufficient to meet customer desires for clean and flexible electricity in the Valley, is transparent about the financial impact of such levels of flexibility, and fully evaluates the potential emissions impact of all alternatives considered.

Appendix A. SACE Calculation of Individual LPC Flexibility Caps using Annual Demand from Calendar Years 2014-2018

Local Power Company	5-year Average of Hourly Capacity (MW)	5% of 5-year Average Hourly Capacity (MW)	SACE Estimated Flexibility Cap (MW)
Aberdeen Electric Department (MS)	24	1.2	1.2
Albertville Municipal Utilities Board (AL)	69	3.5	3.5
Alcorn County Electric Power Association (MS)	74	3.7	3.7
City of Amory (MS)	16	0.8	1.0
City of Alcoa Utilities (TN)	75	3.7	3.7
Appalachian Electric Cooperative (TN)	113	5.7	5.7
Arab Electric Cooperative (AL)	39	1.9	1.9
City of Athens Electric Department (AL)	136	6.8	6.8
Athens Utility Board (TN)	75	3.7	3.7
Benton County Electric System (TN)	24	1.2	1.2
Benton Electric System (KY)	8	0.4	1.0
City of Bessemer Utilities (AL)	38	1.9	1.9
Blue Ridge Mountain Electric Member Corp (GA)	82	4.1	4.1
Bolivar Energy Authority (TN)	28	1.4	1.4
Bowling Green Municipal Utilities (KY)	106	5.3	5.3
Bristol Tennessee Essential Services	107	5.3	5.3
BVU Authority (VA)	61	3.1	3.1
Brownsville Utility Department (TN)	26	1.3	1.3
Central Electric Power Association (MS)	106	5.3	5.3
Caney Fork Electric Cooperative (TN)	75	3.8	3.8
Carroll County Electric Department (TN)	51	2.6	2.6
Electric Power Board of Chattanooga (TN)	683	34.2	34.2
Cherokee Electric Cooperative (AL)	60	3.0	3.0
Chickamauga Electric System (GA)	3	0.2	1.0
CDE Lightband (TN)	180	9.0	9.0
Cleveland Utilities (TN)	127	6.3	6.3
Clinton Utilities Board (TN)	96	4.8	4.8
Columbia Power & Water Systems (TN)	76	3.8	3.8
Columbus Light & Water (MS)	46	2.3	2.3
Cookeville Electric Department (TN)	66	3.3	3.3
Covington Electric System (TN)	28	1.4	1.4
Cullman Power Board (AL)	33	1.7	1.7
Cullman Electric Cooperative (AL)	127	6.3	6.3
Cumberland Electric Member Corp (TN)	311	15.5	15.5
City of Dayton Electric Department (TN)	35	1.8	1.8
Decatur Utilities (AL)	143	7.2	7.2
Dickson Electric Department (TN)	103	5.1	5.1
Duck River Electric Member Corp (TN)	220	11.0	11.0
Dyersburg Electric System (TN)	50	2.5	2.5
East Mississippi Electric Power Association	29	1.5	1.5
City of Elizabethton Electric Department (TN)	62	3.1	3.1

Erwin Utilities (TN)	26	1.3	1.3
Etowah Utilities (TN)	31	1.5	1.5
Fayetteville Public Utilities (TN)	55	2.7	2.7
Florence Utilities (AL)	147	7.4	7.4
Fort Loudoun Electric Cooperative (TN)	75	3.7	3.7
Fort Payne Improvement Authority (AL)	39	1.9	1.9
4-County Electric Power Association (MS)	126	6.3	6.3
Franklin Electric Cooperative (AL)	31	1.5	1.5
Franklin Electric Power Board (KY)	24	1.2	1.2
Fulton Electric System (KY)	7	0.3	1.0
Gallatin Department of Electricity (TN)	98	4.9	4.9
Gibson Electric Members Corp (TN)	99	4.9	4.9
Glasgow Electric Power Board (KY)	35	1.7	1.7
Greeneville Light & Power System (TN)	138	6.9	6.9
Electric Board of Guntersville (AL)	29	1.4	1.4
Harriman Utility Board (TN)	26	1.3	1.3
Hartselle Utilities (AL)	18	0.9	1.0
Hickman Electric System (KY)	2	0.1	1.0
Holly Springs Utility Department (MS)	29	1.4	1.4
Holston Electric Cooperative (TN)	97	4.8	4.8
Hopkinsville Electric System (KY)	44	2.2	2.2
Humboldt Utilities (TN)	18	0.9	1.0
Huntsville Utilities (AL)	621	31.0	31.0
Jackson Energy Authority (TN)	202	10.1	10.1
Jellico Electric & Water System (TN)	9	0.5	1.0
Joe Wheeler Electric Member Corp (AL)	200	10.0	10.0
BrightRidge (TN)	228	11.4	11.4
Knoxville Utilities Board (TN)	653	32.6	32.6
LaFollette Utilities Board (TN)	49	2.5	2.5
Lawrenceburg Electric System (TN)	58	2.9	2.9
Lenoir City Utilities Board (TN)	194	9.7	9.7
Lewisburg Electric System (TN)	40	2.0	2.0
Lexington Electric System (TN)	54	2.7	2.7
Loudon Utilities Board (TN)	71	3.6	3.6
Louisville Utilities (MS)	12	0.6	1.0
City of Macon Electric Department (MS)	3	0.2	1.0
Marshall-De Kalb Electric Cooperative (AL)	54	2.7	2.7
City of Maryville Electric Department (TN)	92	4.6	4.6
Mayfield Electric & Water System (KY)	17	0.9	1.0
McMinnville Electric System (TN)	24	1.2	1.2
Memphis Light, Gas and Water (TN)	1620	81.0	81.0
Meriwether Lewis Electric Cooperative (TN)	135	6.8	6.8
Middle Tennessee Electric Member Corp	703	35.1	35.1
Milan Department of Public Utilities (TN)	23	1.2	1.2
Morristown Utility Systems (TN)	109	5.5	5.5
Mountain Electric Cooperative (TN)	74	3.7	3.7
Mount Pleasant Power System (TN)	15	0.7	1.0
Murfreesboro Electric Department (TN)	207	10.3	10.3
Murray Electric System (KY)	35	1.8	1.8

Muscle Shoals Electric Board (AL)	37	1.9	1.9
Nashville Electric Service (TN)	1423	71.1	71.1
Natchez Trace Electric Power Association (MS)	39	2.0	2.0
New Albany Light, Gas & Water (MS)	40	2.0	2.0
Newbern Electric, Water & Gas (TN)	14	0.7	1.0
Newport Utilities (TN)	67	3.4	3.4
North Alabama Electric Cooperative	43	2.2	2.2
North Georgia Electric Member Corp	289	14.4	14.4
Northcentral Mississippi Electric Power Association	120	6.0	6.0
Oak Ridge Electric Department (TN)	61	3.1	3.1
City of Okolona Electric Department (MS)	12	0.6	1.0
City of Oxford Electric Department (MS)	27	1.3	1.3
Paris Board of Public Utilities (TN)	56	2.8	2.8
Pennyrile Rural Electric Cooperative (KY)	147	7.3	7.3
Philadelphia Utilities (MS)	15	0.7	1.0
Pickwick Electric Cooperative (TN)	45	2.3	2.3
Plateau Electric Cooperative (TN)	37	1.9	1.9
Pontotoc Electric Power Association (MS)	52	2.6	2.6
Powell Valley Electric Cooperative (TN)	67	3.4	3.4
Prentiss County Electric Power Association (MS)	42	2.1	2.1
Pulaski Electric System (TN)	55	2.8	2.8
Rockwood Electric Utility (TN)	38	1.9	1.9
Russellville Electric Board (AL)	17	0.8	1.0
Russellville Electric Plant Board (KY)	16	0.8	1.0
Sand Mountain Electric Cooperative (AL)	77	3.9	3.9
Scottsboro Electric Power Board (AL)	39	1.9	1.9
Sequachee Valley Electric Cooperative (TN)	98	4.9	4.9
Sevier County Electric System (TN)	175	8.8	8.8
Sheffield Utilities (AL)	87	4.3	4.3
Shelbyville Power System (TN)	45	2.3	2.3
Smithville Electric System (TN)	15	0.8	1.0
Southwest Tennessee Electric Member Corp	115	5.8	5.8
Sparta Electric & Public Works (TN)	15	0.7	1.0
Springfield Electric (TN)	44	2.2	2.2
Starkville Electric Department (MS)	51	2.6	2.6
Sweetwater Utilities Board (TN)	29	1.5	1.5
Tallahatchie Valley Electric Power Association (MS)	80	4.0	4.0
Tarrant Electric Department (AL)	8	0.4	1.0
Tennessee Valley Electric Cooperative	47	2.4	2.4
Tippah Electric Power Association (MS)	41	2.0	2.0
Tishomingo County Electric Power Association (MS)	34	1.7	1.7
Tombigbee Electric Power Association (MS)	136	6.8	6.8
Trenton Light & Water Department (TN)	8	0.4	1.0
Tri-State Electric Member Corp (GA)	34	1.7	1.7
Tri-County Electric Member Corp (TN)	144	7.2	7.2
Tullahoma Utilities Authority (TN)	36	1.8	1.8
City of Tupelo Water & Light Department (MS)	77	3.9	3.9
Tuscumbia Electricity Department (AL)	12	0.6	1.0

Union City Electric System (TN)	35	1.7	1.7
Upper Cumberland Electric Member Corp (TN)	125	6.2	6.2
Volunteer Electric Cooperative (TN)	281	14.0	14.0
Warren Rural Electric Cooperative Corp (KY)	241	12.0	12.0
City of Water Valley Electric Department (MS)	8	0.4	1.0
Weakley County Municipal Electric System (TN)	56	2.8	2.8
West Kentucky Rural Electric Cooperative	86	4.3	4.3
City of West Point Electric System (MS)	10	0.5	1.0
Winchester Utilities (TN)	22	1.1	1.1
Ripley Power & Light (TN)	24	1.2	1.2
Chickasaw Electric Cooperative (TN)	59	3.0	3.0
Forked Deer Electric Cooperative (TN)	21	1.0	1.0
North East Mississippi Electric Power Association	76	3.8	3.8
Monroe County Electric Power Association (MS)	25	1.3	1.3
HFC RECC (Merged into Gibson EMC) (KY)	9	0.5	1.0
City of Courtland (AL)	3	0.1	1.0
Murphy Electric Power Board (NC)	20	1.0	1.0
TOTAL			801

Appendix B. TVA Provided Flexibility Quantities with Fiscal Year kWh for 2015-2019

LOCAL POWER COMPANY	ANNUAL KWH SALES					FIVE-YEAR AVERAGE	HOURLY AVERAGE	FIVE PERCENT	FLEXIBILITY IN KW	FLEXIBILITY IN MW
	2015	2016	2017	2018	2019					
4-COUNTY ELECTRIC POWER ASSOCIATION	1,091,007,556	1,072,292,886	1,058,741,976	1,156,317,144	1,142,698,538	1,104,211,620	126,052	6,303	6,303	6
ABERDEEN ELECTRIC DEPARTMENT	205,910,868	204,732,602	204,778,224	211,773,079	211,315,173	207,701,989	23,710	1,186	1,186	1
ALBERTVILLE MUNICIPAL UTILITIES BOARD	587,349,083	597,134,962	599,221,278	622,887,177	625,524,391	606,423,378	69,226	3,461	3,461	3
ALCORN COUNTY ELECTRIC POWER ASSOCIATION	650,352,249	625,283,881	606,449,598	637,821,893	620,328,153	628,047,155	71,695	3,585	3,585	4
AMORY WATER & ELECTRIC	143,986,062	142,084,867	136,470,633	140,867,594	134,853,246	139,652,480	15,942	797	1,000	1
APPALACHIAN ELECTRIC COOPERATIVE	1,002,786,985	964,030,883	923,798,029	1,011,778,422	990,492,740	978,577,412	111,710	5,586	5,586	6
ARAB ELECTRIC COOPERATIVE INC	357,497,978	328,944,393	311,126,146	339,564,225	337,122,885	334,851,125	38,225	1,911	1,911	2
ATHENS ELECTRIC DEPARTMENT	1,161,786,285	1,139,740,172	1,134,903,534	1,277,600,819	1,302,178,397	1,203,241,841	137,356	6,868	6,868	7
ATHENS UTILITIES BOARD	629,111,984	638,082,153	646,684,941	680,746,412	673,527,978	653,630,694	74,615	3,731	3,731	4
BENTON COUNTY ELECTRIC SYSTEM	216,459,882	204,858,415	198,248,365	213,558,005	209,283,822	208,481,698	23,799	1,190	1,190	1
BENTON ELECTRIC SYSTEM	73,276,693	72,881,795	72,161,510	74,899,264	71,808,277	73,005,508	8,334	417	1,000	1
BESSEMER ELECTRIC SERVICE	346,660,776	336,750,576	307,266,139	322,119,511	319,134,130	326,386,226	37,259	1,863	1,863	2
BLUE RIDGE MOUNTAIN ELECTRIC MEMBERSHIP CORP	695,264,226	695,741,776	663,884,466	727,395,140	725,673,203	701,591,762	80,090	4,005	4,005	4
BOLIVAR ENERGY AUTHORITY	253,528,538	242,797,935	228,251,366	247,269,857	238,389,509	242,047,441	27,631	1,382	1,382	1
BOWLING GREEN MUNICIPAL UTILITIES	934,696,179	927,621,090	907,177,162	945,688,903	928,814,494	928,799,566	106,027	5,301	5,301	5
BRISTOL TENNESSEE ESSENTIAL SERVICES	954,441,926	926,626,246	886,438,281	963,340,291	926,358,575	931,441,064	106,329	5,316	5,316	5
BRISTOL VIRGINIA UTILITIES	565,463,629	541,490,451	500,996,886	523,043,381	484,586,070	523,116,083	59,716	2,986	2,986	3
BROWNSVILLE ENERGY AUTHORITY	221,318,666	219,589,737	213,024,807	221,424,871	213,182,481	217,708,112	24,853	1,243	1,243	1
CANEY FORK ELECTRIC COOPERATIVE	666,180,456	650,323,164	615,883,324	657,369,281	637,701,035	645,491,452	73,686	3,684	3,684	4
CARROLL COUNTY ELECTRIC DEPARTMENT	450,998,792	439,183,473	431,692,962	458,817,597	448,728,416	445,884,248	50,900	2,545	2,545	3
CENTRAL ELECTRIC POWER ASSOCIATION	948,013,610	898,908,063	866,503,064	927,932,226	922,019,444	912,675,281	104,187	5,209	5,209	5
CHEROKEE ELECTRIC COOPERATIVE	528,348,320	523,736,631	488,442,973	530,722,662	539,357,996	522,121,716	59,603	2,980	2,980	3
CHICKAMAUGA ELECTRIC SYSTEM	28,232,401	27,851,461	26,346,453	28,538,966	25,737,858	27,341,428	3,121	156	1,000	1
CHICKASAW ELECTRIC COOPERATIVE	525,889,014	520,610,596	499,928,520	516,078,963	527,330,940	517,967,607	59,129	2,956	2,956	3
CITY OF ALCOA	658,973,166	649,118,713	613,256,716	665,674,756	655,101,184	648,424,907	74,021	3,701	3,701	4
CITY OF DAYTON ELECTRIC DEPARTMENT	323,321,153	321,767,558	287,799,542	296,801,694	290,770,739	304,092,137	34,714	1,736	1,736	2
CITY OF FLORENCE UTILITIES	1,296,638,892	1,261,268,480	1,216,267,746	1,293,717,456	1,246,563,053	1,262,891,125	144,166	7,208	7,208	7
CITY OF MACON ELECTRIC DEPARTMENT	28,722,655	27,672,988	25,319,269	26,950,088	26,212,465	26,975,493	3,079	154	1,000	1
CITY OF MARYVILLE ELECTRIC DEPARTMENT	793,824,963	810,906,340	778,174,534	820,736,534	825,124,387	805,753,352	91,981	4,599	4,599	5
CITY OF OKOLONA ELECTRIC DEPARTMENT	101,793,532	100,843,305	96,318,026	104,088,858	101,775,757	100,963,896	11,526	576	1,000	1
CITY OF OXFORD ELECTRIC DEPARTMENT	232,578,492	235,666,707	231,827,592	237,223,454	231,457,622	233,750,773	26,684	1,334	1,334	1
CITY OF TUPELO LIGHT & WATER	675,063,746	675,293,945	644,000,173	651,240,630	644,440,405	658,007,780	75,115	3,756	3,756	4
CITY OF WATER VALLEY ELECTRIC DEPARTMENT	71,713,325	73,064,606	69,969,925	74,762,391	72,225,443	72,347,138	8,259	413	1,000	1
CITY OF WEST POINT ELECTRIC SYSTEM	92,475,431	88,352,349	82,879,128	88,027,099	86,839,659	87,714,733	10,013	501	1,000	1

LOCAL POWER COMPANY	ANNUAL KWH SALES					FIVE-YEAR AVERAGE	HOURLY AVERAGE	FIVE PERCENT	FLEXIBILITY IN KW	FLEXIBILITY IN MW
	2015	2016	2017	2018	2019					
CLARKSVILLE DEPARTMENT OF ELECTRICITY	1,560,967,752	1,517,547,200	1,495,934,047	1,656,333,002	1,633,307,337	1,572,817,868	179,545	8,977	8,977	9
CLEVELAND UTILITIES	1,126,988,877	1,116,839,874	1,065,130,260	1,092,385,324	1,074,152,525	1,095,099,372	125,011	6,251	6,251	6
CLINTON UTILITIES BOARD	823,717,120	825,014,205	790,415,835	843,403,533	829,468,194	822,403,777	93,882	4,694	4,694	5
COLUMBIA POWER & WATER SYSTEMS	650,509,759	649,477,675	634,887,965	693,459,090	695,710,525	664,809,003	75,891	3,795	3,795	4
COLUMBUS LIGHT & WATER DEPARTMENT	414,330,032	405,996,166	383,332,838	395,384,449	379,875,944	395,783,886	45,181	2,259	2,259	2
COOKEVILLE ELECTRIC DEPARTMENT	574,809,679	568,026,364	560,160,857	592,644,450	590,219,288	577,172,128	65,887	3,294	3,294	3
COURTLAND ELECTRIC DEPARTMENT	22,270,361	20,401,467	20,369,479	22,886,983	23,020,522	21,789,762	2,487	124	1,000	1
COVINGTON ELECTRIC SYSTEM	248,166,478	254,838,891	244,669,903	250,511,644	245,883,724	248,814,128	28,403	1,420	1,420	1
CULLMAN ELECTRIC COOPERATIVE	1,121,498,189	1,082,090,560	1,046,664,261	1,126,351,780	1,111,315,994	1,097,584,157	125,295	6,265	6,265	6
CULLMAN POWER BOARD	289,344,118	292,011,601	279,783,237	291,813,952	288,266,584	288,243,898	32,905	1,645	1,645	2
CUMBERLAND ELECTRIC MEMBERSHIP CORP	2,693,313,030	2,615,075,923	2,573,361,264	2,863,260,353	2,893,963,761	2,727,794,866	311,392	15,570	15,570	16
DECATUR UTILITIES	1,258,399,867	1,230,502,656	1,202,045,746	1,264,103,553	1,246,449,057	1,240,300,176	141,587	7,079	7,079	7
DICKSON ELECTRIC DEPARTMENT	882,043,471	869,063,276	871,817,604	930,329,702	919,778,501	894,606,511	102,124	5,106	5,106	5
DUCK RIVER ELECTRIC MEMBERSHIP CORP	1,943,187,335	1,890,854,618	1,804,287,969	1,982,743,313	1,972,734,055	1,918,761,458	219,037	10,952	10,952	11
DYERSBURG ELECTRIC SYSTEM	442,928,833	420,695,537	409,860,202	437,449,963	427,641,057	427,715,118	48,826	2,441	2,441	2
EAST MISSISSIPPI ELECTRIC POWER ASSOCIATION	259,992,596	248,742,601	233,927,655	249,781,041	244,437,474	247,376,273	28,239	1,412	1,412	1
ELECTRIC POWER BOARD OF CHATTANOOGA	6,037,671,140	6,041,040,564	5,752,547,191	6,032,354,882	6,002,775,726	5,973,277,901	681,881	34,094	34,094	34
ELIZABETHTON ELECTRIC SYSTEM	556,822,119	531,764,828	510,937,102	557,437,678	542,903,032	539,972,952	61,641	3,082	3,082	3
ERWIN UTILITIES	234,071,581	224,917,660	214,436,145	228,465,845	222,031,819	224,784,610	25,660	1,283	1,283	1
ETOWAH UTILITIES	278,700,326	273,693,508	242,169,540	259,216,872	267,854,675	264,326,984	30,174	1,509	1,509	2
FAYETTEVILLE PUBLIC UTILITIES	469,149,145	463,897,364	449,040,442	486,180,901	479,942,450	469,642,060	53,612	2,681	2,681	3
FORKED DEER ELECTRIC COOPERATIVE	180,990,238	171,255,747	168,511,304	197,177,692	212,531,263	186,093,249	21,244	1,062	1,062	1
FORT LOUDOUN ELECTRIC COOPERATIVE	663,488,157	640,135,790	601,113,139	664,510,468	662,957,121	646,440,935	73,795	3,690	3,690	4
FORT PAYNE IMPROVEMENT AUTHORITY	334,884,735	322,566,287	309,622,771	332,709,849	335,885,095	327,133,747	37,344	1,867	1,867	2
FRANKLIN ELECTRIC COOPERATIVE	245,185,071	291,028,459	225,470,751	329,166,871	296,129,584	277,396,147	31,666	1,583	1,583	2
FRANKLIN ELECTRIC PLANT BOARD	202,638,466	203,800,758	194,930,372	204,184,129	182,530,223	197,616,790	22,559	1,128	1,128	1
FULTON ELECTRIC SYSTEM	57,214,007	57,521,990	54,154,795	55,463,607	53,531,447	55,577,169	6,344	317	1,000	1
GALLATIN DEPARTMENT OF ELECTRICITY	815,403,675	848,502,778	837,478,826	872,836,744	842,990,558	843,442,516	96,283	4,814	4,814	5
GIBSON ELECTRIC MEMBERSHIP CORP	960,470,971	924,023,891	887,766,032	962,186,944	933,090,785	933,507,725	106,565	5,328	5,328	5
GLASGOW ELECTRIC PLANT BOARD	307,287,773	300,724,545	289,011,328	293,581,699	277,466,845	293,614,438	33,518	1,676	1,676	2
GREENEVILLE LIGHT & POWER SYSTEM	1,194,482,909	1,153,702,738	1,170,982,263	1,262,393,609	1,225,356,281	1,201,383,560	137,144	6,857	6,857	7
GUNTERSVILLE ELECTRIC BOARD	247,016,540	247,542,175	240,087,201	256,466,486	255,995,318	249,421,544	28,473	1,424	1,424	1
HARRIMAN UTILITY BOARD	233,236,585	227,481,171	211,491,747	228,037,783	223,656,928	224,780,843	25,660	1,283	1,283	1
HARTSELLE UTILITIES	149,175,938	152,713,831	146,406,041	153,723,598	151,307,428	150,665,367	17,199	860	1,000	1

LOCAL POWER COMPANY	ANNUAL KWH SALES					FIVE-YEAR AVERAGE	HOURLY AVERAGE	FIVE PERCENT	FLEXIBILITY IN KW	FLEXIBILITY IN MW
	2015	2016	2017	2018	2019					
HICKMAN ELECTRIC PLANT BOARD	20,571,362	19,406,528	18,361,265	19,405,359	18,733,296	19,295,562	2,203	110	1,000	1
HOLLY SPRINGS ELECTRIC DEPARTMENT	254,927,708	246,139,537	238,266,404	255,704,043	249,919,262	248,991,391	28,424	1,421	1,421	1
HOLSTON ELECTRIC COOPERATIVE	846,732,306	829,231,212	797,562,490	853,430,720	832,879,096	831,967,165	94,973	4,749	4,749	5
HOPKINSVILLE ELECTRIC SYSTEM	384,530,103	377,377,954	365,080,247	373,310,028	352,781,410	370,615,948	42,308	2,115	2,115	2
HUMBOLDT UTILITIES	159,892,202	151,117,557	149,603,377	159,734,341	161,615,668	156,392,629	17,853	893	1,000	1
HUNTSVILLE UTILITIES	5,459,479,974	5,345,903,020	5,143,932,424	5,520,315,025	5,450,474,827	5,384,021,054	614,614	30,731	30,731	31
JACKSON ENERGY AUTHORITY	1,733,809,206	1,747,096,270	1,729,001,231	1,755,890,418	1,732,225,903	1,739,604,606	198,585	9,929	9,929	10
JELICO ELECTRIC AND WATER SYSTEMS	83,971,056	78,356,686	73,641,837	79,353,947	76,829,864	78,430,678	8,953	448	1,000	1
JOE WHEELER ELECTRIC MEMBERSHIP CORP	1,731,885,349	1,725,173,075	1,667,090,689	1,785,258,265	1,767,373,086	1,735,356,093	198,100	9,905	9,905	10
JOHNSON CITY POWER BOARD	2,027,176,212	1,969,027,859	1,866,937,046	1,985,402,663	1,951,214,514	1,959,951,659	223,739	11,187	11,187	11
KNOXVILLE UTILITIES BOARD	5,762,861,495	5,660,018,006	5,369,663,713	5,725,732,190	5,556,610,096	5,614,977,100	640,979	32,049	32,049	32
LAFOLLETTE UTILITIES BOARD	436,172,347	414,410,034	401,731,163	437,015,779	423,362,573	422,538,379	48,235	2,412	2,412	2
LAWRENCEBURG UTILITY SYSTEMS	504,785,465	488,625,232	476,954,544	518,862,416	516,909,974	501,227,526	57,218	2,861	2,861	3
LENOIR CITY UTILITIES BOARD	1,693,557,877	1,704,575,485	1,635,288,916	1,747,562,230	1,743,044,506	1,704,805,803	194,613	9,731	9,731	10
LEWISBURG ELECTRIC SYSTEM	347,875,451	342,075,904	337,413,063	349,359,015	339,871,161	343,318,919	39,192	1,960	1,960	2
LEXINGTON ELECTRIC SYSTEM	474,072,023	460,619,852	440,712,228	466,825,410	458,731,029	460,192,108	52,533	2,627	2,627	3
LOUDON UTILITIES	586,326,776	605,883,512	625,440,809	654,440,864	652,744,462	624,967,285	71,343	3,567	3,567	4
LOUISVILLE UTILITIES	91,015,852	95,124,446	120,593,529	133,146,645	135,030,434	114,982,181	13,126	656	1,000	1
MARSHALL-DEKALB ELECTRIC COOPERATIVE	486,231,660	455,509,931	421,206,829	468,084,008	476,860,038	461,578,493	52,692	2,635	2,635	3
MAYFIELD ELECTRIC & WATER SYSTEM	149,487,278	149,198,782	144,176,203	149,637,366	145,770,701	147,654,066	16,855	843	1,000	1
MCMINNVILLE ELECTRIC SYSTEM	215,300,646	209,116,384	197,735,562	207,255,129	199,982,960	205,878,136	23,502	1,175	1,175	1
MEMPHIS LIGHT GAS & WATER DIVISION	14,354,282,058	14,148,376,115	13,736,541,123	14,305,112,372	14,016,115,539	14,112,085,441	1,610,969	80,548	80,548	81
MERIWETHER LEWIS ELECTRIC COOPERATIVE	1,186,965,823	1,195,553,520	1,188,743,689	1,196,205,468	1,138,326,100	1,181,158,920	134,835	6,742	6,742	7
MIDDLE TENNESSEE ELECTRIC MEMBERSHIP CORP	6,031,812,195	5,969,239,666	5,858,904,775	6,481,801,958	6,458,571,513	6,160,066,021	703,204	35,160	35,160	35
MILAN DEPARTMENT OF PUBLIC UTILITIES	207,399,800	202,059,285	192,974,421	204,064,330	193,498,894	199,999,346	22,831	1,142	1,142	1
MONROE COUNTY ELECTRIC POWER ASSOCIATION	225,238,073	217,737,219	207,876,510	227,143,088	222,746,343	220,148,247	25,131	1,257	1,257	1
MORRISTOWN UTILITY COMMISSION	937,910,293	948,027,703	930,233,079	961,358,587	951,414,826	945,788,898	107,967	5,398	5,398	5
MOUNT PLEASANT POWER SYSTEM	120,642,411	122,034,264	126,241,571	135,649,905	136,873,038	128,288,238	14,645	732	1,000	1
MOUNTAIN ELECTRIC COOPERATIVE	635,549,818	600,569,299	628,995,644	678,536,443	671,281,577	642,986,556	73,400	3,670	3,670	4
MURFREESBORO ELECTRIC DEPARTMENT	1,771,944,277	1,789,427,465	1,759,819,969	1,872,274,306	1,889,211,566	1,816,535,517	207,367	10,368	10,368	10
MURPHY POWER BOARD	144,020,839	154,213,348	136,613,740	227,604,744	427,681,029	218,026,740	24,889	1,244	1,244	1
MURRAY ELECTRIC SYSTEM	315,188,084	301,770,325	287,836,481	318,385,745	298,417,562	304,319,639	34,740	1,737	1,737	2
MUSCLE SHOALS ELECTRIC BOARD	319,913,306	322,201,185	314,757,282	327,292,578	318,446,770	320,522,224	36,589	1,829	1,829	2
NASHVILLE ELECTRIC SERVICE	12,479,496,442	12,184,242,225	11,927,079,547	12,617,283,536	12,428,358,549	12,327,292,060	1,407,225	70,361	70,361	70

LOCAL POWER COMPANY	ANNUAL KWH SALES					FIVE-YEAR AVERAGE	HOURLY AVERAGE	FIVE PERCENT	FLEXIBILITY IN KW	FLEXIBILITY IN MW
	2015	2016	2017	2018	2019					
NATCHEZ TRACE ELECTRIC POWER ASSOCIATION	344,156,171	340,817,257	329,659,207	353,838,692	342,790,205	342,252,306	39,070	1,954	1,954	2
NEW ALBANY LIGHT GAS & WATER	349,770,938	348,660,904	334,510,160	351,632,198	354,841,741	347,883,188	39,713	1,986	1,986	2
NEWBERN ELECTRIC WATER & GAS	130,386,851	126,810,450	112,357,335	111,944,697	109,376,219	118,175,110	13,490	675	1,000	1
NEWPORT UTILITIES BOARD	581,954,859	568,945,775	556,761,223	602,103,919	580,466,182	578,046,392	65,987	3,299	3,299	3
NORTH ALABAMA ELECTRIC COOPERATIVE	355,802,977	336,931,640	357,089,071	448,339,780	440,760,841	387,784,862	44,268	2,213	2,213	2
NORTH EAST MISSISSIPPI ELECTRIC POWER ASSOCIATION	649,112,020	656,723,957	649,986,089	706,480,034	700,105,498	672,481,520	76,767	3,838	3,838	4
NORTH GEORGIA ELECTRIC MEMBERSHIP CORP	2,602,474,214	2,520,861,058	2,377,423,858	2,531,546,933	2,508,574,202	2,508,176,053	286,321	14,316	14,316	14
NORTHCENTRAL MISSISSIPPI ELECTRIC POWER ASSOCIATION	1,017,880,317	1,030,383,930	1,035,325,677	1,112,308,389	1,106,718,734	1,060,523,409	121,064	6,053	6,053	6
OAK RIDGE ELECTRIC DEPARTMENT	549,350,881	544,167,632	516,513,154	539,884,490	522,641,666	534,511,565	61,017	3,051	3,051	3
PARIS BOARD OF PUBLIC UTILITIES	498,922,191	479,127,590	467,037,833	501,012,557	484,255,031	486,071,040	55,488	2,774	2,774	3
PENNYRILE RURAL ELECTRIC COOPERATIVE CORP	1,283,077,386	1,236,160,090	1,207,443,105	1,314,281,268	1,286,063,803	1,265,405,130	144,453	7,223	7,223	7
PHILADELPHIA UTILITIES	128,770,678	128,584,760	123,807,127	129,247,588	124,155,255	126,913,082	14,488	724	1,000	1
PICKWICK ELECTRIC COOPERATIVE	399,721,908	389,894,961	368,975,813	403,172,492	393,123,659	390,977,767	44,632	2,232	2,232	2
PLATEAU ELECTRIC COOPERATIVE	327,253,480	323,064,816	308,114,460	333,321,090	327,398,548	323,830,479	36,967	1,848	1,848	2
PONTOTOC ELECTRIC POWER ASSOCIATION	451,311,982	448,546,535	435,355,671	463,432,901	457,174,013	451,164,220	51,503	2,575	2,575	3
POWELL VALLEY ELECTRIC COOPERATIVE	604,717,622	576,141,028	548,260,415	595,545,382	580,178,442	580,968,578	66,321	3,316	3,316	3
PRENTISS COUNTY ELECTRIC POWER ASSOCIATION	369,370,087	364,864,595	351,689,959	374,351,724	361,540,334	364,363,340	41,594	2,080	2,080	2
PULASKI ELECTRIC SYSTEM	472,839,474	475,542,611	463,414,688	480,134,010	452,680,006	468,922,158	53,530	2,677	2,677	3
RIPLEY POWER AND LIGHT	206,643,846	202,097,312	195,095,014	202,807,491	200,063,220	201,341,377	22,984	1,149	1,149	1
ROCKWOOD ELECTRIC UTILITY	335,213,937	326,342,428	308,632,856	332,363,229	325,511,142	325,612,718	37,170	1,859	1,859	2
RUSSELLVILLE ELECTRIC BOARD	141,643,938	145,571,011	142,749,707	149,430,915	145,836,567	145,046,428	16,558	828	1,000	1
RUSSELLVILLE ELECTRIC PLANT BOARD	138,677,024	136,669,438	131,756,840	135,486,343	131,718,001	134,861,529	15,395	770	1,000	1
SAND MOUNTAIN ELECTRIC COOPERATIVE	695,861,187	659,237,482	618,766,470	667,722,407	663,823,295	661,082,168	75,466	3,773	3,773	4
SCOTTSBORO ELECTRIC POWER BOARD	338,121,429	337,650,956	324,458,804	341,983,953	343,779,201	337,198,869	38,493	1,925	1,925	2
SEQUACHEE VALLEY ELECTRIC COOPERATIVE	860,263,526	844,740,504	804,227,977	878,821,968	865,675,532	850,745,901	97,117	4,856	4,856	5
SEVIER COUNTY ELECTRIC SYSTEM	1,561,358,690	1,532,848,093	1,427,999,833	1,555,850,970	1,548,921,198	1,525,395,757	174,132	8,707	8,707	9
SHEFFIELD UTILITIES	760,630,803	752,650,721	733,706,538	771,093,904	760,049,780	755,626,349	86,259	4,313	4,313	4
SHELBYVILLE POWER SYSTEM	396,354,580	391,963,896	379,490,561	396,625,561	382,085,812	389,304,082	44,441	2,222	2,222	2
SMITHVILLE ELECTRIC SYSTEM	127,972,174	134,533,256	135,571,397	134,678,876	133,247,986	133,200,738	15,206	760	1,000	1
SOUTHWEST TENNESSEE ELECTRIC MEMBERSHIP CORP	1,026,799,331	992,517,910	954,218,534	1,026,224,942	996,705,114	999,293,166	114,075	5,704	5,704	6
SPARTA ELECTRIC & WATER SYSTEM	127,440,072	128,111,486	123,170,330	128,499,106	128,813,140	127,206,827	14,521	726	1,000	1
SPRINGFIELD DEPARTMENT OF ELECTRICITY	342,688,593	332,479,214	319,413,574	321,652,589	305,281,986	324,303,191	37,021	1,851	1,851	2
STARKVILLE ELECTRIC SYSTEM	438,840,246	441,124,798	430,322,982	450,708,512	449,561,586	442,111,625	50,469	2,523	2,523	3
SWEETWATER UTILITIES BOARD	256,932,565	249,579,611	237,174,921	255,962,974	256,192,671	251,168,548	28,672	1,434	1,434	1

LOCAL POWER COMPANY	ANNUAL KWH SALES					FIVE-YEAR AVERAGE	HOURLY AVERAGE	FIVE PERCENT	FLEXIBILITY IN KW	FLEXIBILITY IN MW
	2015	2016	2017	2018	2019					
TALLAHATCHIE VALLEY ELECTRIC POWER ASSOCIATION	707,053,665	688,830,404	667,888,963	698,790,641	691,270,080	690,766,751	78,855	3,943	3,943	4
TARRANT ELECTRIC DEPARTMENT	69,756,342	68,347,927	63,067,769	67,904,871	68,064,003	67,428,182	7,697	385	1,000	1
TENNESSEE VALLEY ELECTRIC COOPERATIVE	417,752,886	407,689,207	388,815,509	415,275,265	407,133,618	407,333,297	46,499	2,325	2,325	2
TIPPAH ELECTRIC POWER ASSOCIATION	353,699,510	352,934,886	340,690,890	365,358,220	363,554,996	355,247,700	40,553	2,028	2,028	2
TISHOMINGO COUNTY ELECTRIC POWER ASSOCIATION	302,826,213	297,423,854	281,172,161	303,008,158	298,884,776	296,663,032	33,866	1,693	1,693	2
TOMBIGBEE ELECTRIC POWER ASSOCIATION	1,187,706,008	1,180,103,477	1,138,237,911	1,207,203,361	1,193,963,048	1,181,442,761	134,868	6,743	6,743	7
TRENTON LIGHT & WATER DEPARTMENT	71,960,938	70,208,474	69,163,864	74,356,293	70,426,758	71,223,265	8,131	407	1,000	1
TRI-COUNTY ELECTRIC MEMBERSHIP CORP	1,156,916,028	1,297,721,110	1,264,677,685	1,362,886,290	1,240,296,367	1,264,499,496	144,349	7,217	7,217	7
TRI-STATE ELECTRIC MEMBERSHIP CORP	302,326,281	298,313,068	284,042,479	308,928,010	308,680,061	300,457,980	34,299	1,715	1,715	2
TULLAHOMA BOARD OF PUBLIC UTILITIES	319,441,821	311,959,671	295,543,728	307,947,633	297,216,355	306,421,842	34,980	1,749	1,749	2
TUSCUMBIA ELECTRICITY DEPARTMENT	102,988,875	102,527,528	97,404,213	104,340,308	102,315,577	101,915,300	11,634	582	1,000	1
UNION CITY ELECTRIC SYSTEM	303,735,412	293,697,213	289,358,083	306,045,937	306,809,959	299,929,321	34,239	1,712	1,712	2
UPPER CUMBERLAND ELECTRIC MEMBERSHIP CORP	1,111,088,789	1,039,978,468	1,009,321,897	1,143,345,415	1,119,967,474	1,084,740,409	123,829	6,191	6,191	6
VOLUNTEER ENERGY COOPERATIVE	2,469,355,579	2,396,351,756	2,264,690,900	2,474,293,304	2,486,283,777	2,418,195,063	276,050	13,803	13,803	14
WARREN RURAL ELECTRIC COOPERATIVE CORP	2,014,611,248	2,009,494,646	2,041,182,681	2,220,521,212	2,213,823,739	2,099,926,705	239,718	11,986	11,986	12
WEAKLEY COUNTY MUNICIPAL ELECTRIC SYSTEM	504,317,056	479,660,895	461,848,925	502,066,458	490,655,634	487,709,794	55,675	2,784	2,784	3
WEST KENTUCKY RURAL ELECTRIC COOPERATIVE CORP	756,602,289	724,002,107	688,367,542	757,126,791	734,437,854	732,107,317	83,574	4,179	4,179	4
WINCHESTER UTILITIES	194,779,099	191,059,531	179,007,875	186,765,792	188,468,147	188,016,089	21,463	1,073	1,073	1



May 4, 2020

Mr. Matthew Higdon
NEPA Program
Tennessee Valley Authority
400 W. Summit Hill Drive WT 11-B
Knoxville, Tennessee 37902-1499
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Dear Mr. Higdon:

The Tennessee Solar Energy Industries Association (TenneSEIA) would like to thank the Tennessee Valley Authority (TVA) for the opportunity to provide comments to the draft Environmental Assessment (EA) regarding the TVA Power Supply Flexibility Proposal.

TenneSEIA's mission is to promote the development of solar energy and complementary technologies, including storage, positioning the Tennessee Valley's residents and businesses as leaders in clean energy deployment and economic development. With dozens of member companies and thousands of employees working in the solar supply chain locally, we strive to be a trusted, strategic partner to both TVA and its Valley Partners to ensure quality, reliable, safe, and economic solar solutions for the communities in which we operate in the state and region. In addition, our members are continually adapting to new business models and technologies (i.e. storage, grid services, etc.) that add additional value to the grid, utility companies, and end-use customers.

TVA has been and continues to be collaborative in stakeholder meetings and discussions to work together with the solar industry on mutually beneficial programs and solutions. While we do not always agree on the right path forward, we do agree it is better to work together and be partners.

It is TenneSEIA's desired goal to continue to be a sounding board and helpful resource for both TVA and its 154 Valley Partners, when developing, designing, and implementing solar and renewable energy products. It is through the lens of this goal and mission that TenneSEIA offers the following comments on this particular draft Environmental Assessment.

General Comments

Overall, TenneSEIA and its member companies and partners are generally in favor of the Proposed Action Alternative and are supportive and enthusiastic about the new Flexibility Proposal, which gives participating local power companies (LPCs) more "local control" in the design of programmatic, community-led projects that assist in economic development, diversification of energy supply, and potentially lower rates through more economic distributed solar generation. As described in more detail below, TenneSEIA is concerned that the Proposed Action Alternative discriminates against lower-emission sources like solar by failing to account for the differences in capacity factors between different generation resources. The EA should have considered a source-neutral alternative in addition to the

Proposed Action Alternative. In addition to our concerns over the calculation methodology, our comments below identify several items that are unclear and/or create barriers to successful participation and implementation.

Capacity Calculation Discriminates Between Generation Sources

TVA's stated methodology for calculating each Valley Partner's flexibility is discriminatory because it compares the LPC's volume of sales to the nameplate capacity of a generation resource, as opposed to the volume of energy produced by that resource. The EA states that the Proposed Action Alternative calculates a Valley Partner's flexibility based on the average total hourly energy sales by that Valley Partner over the last five TVA fiscal years, which is converted to capacity by reducing the volume of sales to an hourly average (e.g., an average of 100 MWh in sales per hour equals 100 MW of total capacity and 5 MW of flexibility). Although it is not stated explicitly in the EA, TVA's supporting documentation make it clear that TVA intends to compare this energy-based calculation to the nameplate capacity of generation resources to determine whether a Valley Partner has met its flexibility cap. The logic gap is like comparing the maximum speed of a racecar to its average miles per hour over the course of a year, including when it is idle, and treating those numbers as equivalent.

The result of this inconsistent calculation is a program in which the amount of energy produced or procured by a Valley Partner under the flexibility program could vary wildly depending on the capacity factor of its generation resources. Because fossil fuel-based sources, like natural gas generators, have higher capacity factors than intermittent resources like solar, a Valley Partner would have the flexibility to procure significantly more energy (MWh) by choosing a natural gas plant over solar. An action alternative that took capacity factor of generation sources into account, or based its comparison on actual energy produced rather than capacity, should have been considered in the EA. As it stands, the Proposed Action Alternative penalizes the cleanest energy sources without discussion or disclosure of that fact.

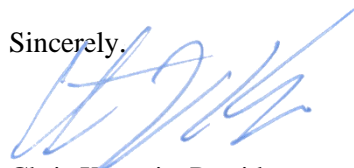
Additional Comments

- **Eligibility:** Are the directly-served customers of the Valley eligible to participate in addition to the Valley Partners? If not, what is the justification for the exclusion, as they are also TVA Partners and customers who could benefit from greater generation flexibility?
- **Location and Aggregation:** as stated in the draft EA, several LPCs (whether in an urban setting or mountainous/land-constrained area) may not have the same amount of viable local options for generation resources as others. Can LPCs aggregate their capacity allocation if the project(s) are still interconnected to a LPC's distribution system?
- **Participation:** It seems unlikely that 100% of Valley Partners will participate in the proposed flexibility program. How will TVA ensure the environmental benefits of the proposed 5% capacity, as proposed in the EA, are realized? Will TVA re-allocate that capacity to Valley Partners who desire to procure or generate greater than 5% flexibility?
- **Flexibility Cap:** Many Valley Partners are already designing programs/solutions to meet the 5% target and are asking TVA executives for more flexibility and capacity. The draft EA states that 5% was chosen in order to maintain stability in revenue erosion and stay within the bounds of the long-term financial plan. What is the process for expanding flexibility to a larger figure in the future? What are the specific revenue requirements of TVA to avoid significant negative impacts to the financial plan?

- **Calculation:** It has been reported by some Valley Partners that the 5% of annual average demand does not even apply to all of the LPC's retail customer load. Valley Partners have been told that the 5% excludes large power users and is only applied to standard service customers. This would arbitrarily put further limits on the capacity available. Can TVA please clarify this calculation, methodology, and logic behind excluding LPC-served industrial customers if this is true?
- **Technologies:** TenneSEIA is supportive of TVA's path towards a cleaner energy future, where solar and energy storage technologies will play an integral role. The region's solar industry stands ready to serve Valley Partners to assist with design, development, construction, financing, owning, and maintaining world-class solar energy facilities across the TVA as solar is likely to be the most commercially-proven, distributed, applicable technology for communities across the Valley. To that end, please understand that fair deployment of solar through this program will require a more sophisticated accounting of generation resources than nameplate capacity alone.
- **Project Review:** TenneSEIA applauds TVA for giving its LPCs flexibility options which allow for innovative local solutions. Additionally, giving Valley Partners the ability to select projects that meet the principles is an excellent step forward, while also not requiring individual TVA NEPA reviews for each project.

Thank you again for the opportunity to evaluate the flexibility proposal and draft EA. This is a very positive step forward in the Valley, but as stated above, there are critical concerns and questions that need to be addressed prior to rollout of Flexibility to ensure better results than the Flexibility Research Project (FRP), which as stated in the draft EA, has been poorly subscribed and unsuccessful to date. TenneSEIA welcomes the opportunity to be a trusted partner to the TVA staff and is committed to helping the TVA and Valley Partners successfully implement Flexibility across the valley.

Sincerely,



Chris Koczaja, President
Tennessee Solar Energy Industries Association
PO Box 330478
Nashville, TN 37203

Matthew Higdon NEPA Program
Tennessee Valley Authority
400 W. Summit Hill Drive WT-11B
Knoxville, Tennessee 37902-1499
Email: mshigdon@tva.gov

May 1st, 2020

Subject: Draft EA: TVA Flexibility Proposal Project Number: 2019-28 Public Comments

Thank you for this opportunity to provide comments on this Draft Environmental Assessment (EA) of the flexibility proposal, which is a provision of the new 20-year Partnership contracts. I want to note that self-generation of clean energy that is consistent with the 2019 Integrated Resource Plan (IRP) would result in a beneficial environmental impact.

My comments focus on inconsistent and confusing language and calculations that make the Scope and review of environmental impacts in this Draft Environmental Assessment (EA) inconsistent with National Environmental Policy Act (NEPA) and needs to be corrected for the final EA.

To make these clarifications clear, I will list number my 3 comments of the Draft EA and quote the referenced section in *“italics”* of the draft Environmental Assessment, followed by a recommendation of corrective action for the final EA.

Comment #1. Scope of the Environmental Assessment being limited to only Valley Partners is inconsistent with NEPA and the TVA Mission

On-Page 7 of the EA Chapter 1–Purpose and Need for Action Draft Environmental Assessment Section quote, *“1.1 Proposed Action The Tennessee Valley Authority (TVA), is proposing to provide enhanced power supply flexibility to local power companies (LPCs) within their respective Power Service Area (PSA; Figure 1) that have entered into Long-Term Partnership (LTP) agreements with TVA. Under the terms of the LTP resolution approved by the TVA Board of Directors in August 2019, LPCs that enter into an LTP agreement (“Valley Partners”) would be offered the option to generate a portion of their customers’ power requirements.”*

TVA serves as both the public regulatory body over the Local Power Companies (LPCs) and the Generation and Transmission entity for wholesale power sales for the Local Power Companies (LPCs) and Direct Serve Customers. It is inconsistent with the TVA act and the TVA mission to only allow LPCs that bind themselves into Long-Term Partnerships (LTP) agreements to enjoy self-generation and not offer the same benefits to all its customers. This bifurcation of benefits to only a set of LPCs, and not include the 58 directly served customers, is never explained nor reviewed as an Alternative Action option in the EA.

This bifurcation of benefits and responsibilities to the people of the valley is inconsistent with the TVA mission as set in federal law. The Draft EA does not explain or evaluate the impact on a specific set of LPCs having a different set of benefits and generation options and not other non-

partnership LPC or the 58 Directly Served customers. This is a major action with significant environmental and legal questions that are not covered in the draft EA, nor reviewed as a viable Alternative Action option in the EA.

The final EA should include an Alternative Action option where 5 percent of energy can be self-generated by all costumers consistent with the TVA mission. This assessment is especially important as TVA is mandated to provide power at rates as low as feasible. It is likely that self-generation would be at a lower cost to the ratepayer than what is provided by TVA.

Recommendation 1: The EA should explain how bifurcating the benefits of its customers is within the TVA mission and the potential difference in the environmental impact of that decision

Recommendation 2: Final EA should include an Action Alternative option that includes all TVA LPCs and Direct Serve customers in the 5 percent of energy flexibility

Comment #2. There is an obvious Scoping problem with the Draft EA for reviewing environmental impact with the confusing and inconsistent manner that TVA defines and calculates the terms ‘percent of energy’.

The Long-Term Partnership (LTP) agreements language states the amount of flexibility as 5 percent of energy, this is also what was passed by the August 2019 TVA Board Resolution and referenced in the EA on page 9 section 1.3 Background. On the fifth bullet. Quote, “*TVA committed to delivering an option for power supply flexibility for Valley Partners to generate up to five percent of energy by October 1, 2021.*”

Contrary to the Long-Term Partnership (LTP) agreements and the TVA Board resolution, the Scope of this EA adds a radical new definition on the percent of energy covered by the Draft EA, on page 13, quote, “*2.1.2 Proposed Action Alternative.:• Valley Partners could have flexible generation of up to five percent of their average total hourly energy sales over the last five TVA fiscal years (FY 2015 to 2019), converted to capacity basis with a minimum availability of one MW per Valley Partner.*”

This radical reinterpretation of the definition of percent of energy is never explained nor sourced. Re-defining “5 percent of energy” as “five percent of their average total hourly energy sales over the last five TVA fiscal years (FY 2015 to 2019), converted to capacity basis,” is a radical departure of norms and commonly held definitions. The Scope of the EA, therefore, seems inconsistent with the action being taken. This definition of percent of energy also is contrary to how TVA 2019 IRP, which is referenced multiple times in the Draft, uses the term of percent of energy. The reviewer is unaware of anyone that has used this as a definition of percent of energy.

The percent of energy has a simple and clear definition. The U.S. Energy Information Administration glossy, which can be found at <https://www.eia.gov/tools/glossary/?id=electricity> defines, “*Electricity generation: The process of producing electric energy or the amount of electric energy produced by transforming other*

forms of energy, commonly expressed in kilowatt-hours (kWh) or megawatt-hours (MWh).” The Merriam-Webster dictionary defines a percent as “*a part of a whole expressed in hundredths.*”

For a clear example of how this inconstant use of definitions is confusing, let us use a recent example. When the Knoxville Utility Board (KUB) agreed to sign the Long-Term Partnership Agreement, they included negotiations for 212 MW of solar under TVA’s Green Connect program which would generate 8 percent of their energy with solar energy.

<https://www.kub.org/about/environment/renewable-energy>

But, if you looked at 5 percent of energy under the new flexibility, as shared by TVA in the document “Flexibility Qualities with Fiscal year kWh” you get a 32 MW for KUB. This is a much smaller number than you would assume from KUB and TVA Green Connect example. Why? Because this is not five percent of energy, it is five percent of an hourly average calculation. This is both confusing to the rate payers and customers and has the result of making it impossible for the public to provide comment on this EA. It is the equivalent of doctor asking you how much you weigh, and you responding that, over the last 5 years you have averaged 165 lbs., even though you presently weigh over 200 lbs. The answer needs to respond to the actual question.

Using this confusing and non-standard use of the definition of percent of energy leaves this Draft EA open to a critique of a “bait and switch”, with TVA’s LPCs and ratepayers thinking they are getting one thing and then getting something much smaller. This could lead to accusations of TVA ‘cherry-picking’ definitions for its self-interest and would leave the final EA open to legal challenge.

Recommendation: The Scope of the final EA and the review of environmental impacts should switch from this new definition of percent of energy, to what was agreed upon by the LPCs in their new Long-Term Partnership contract and passed by the TVA Board of Directors in their Principals of Flexibility. The final EA should refer to the percent of energy as the term is widely defined, with the simple E.I.A. definition of energy being the obvious option.

Comment #3. Clarification of self-generation or full requirements in Draft EA Scope

On page 7, in the last paragraph the Draft EA states, “*Under the Flexibility Proposal, TVA would remain the full requirements provider, but Valley Partners would be allowed to provide generation services to their retail customers so as to remain their customers’ trusted energy advisor and comprehensive power supplier.*”

The meaning of the Statement that, “*under this Flexibility Proposal, TVA would remain the full requirements provider,*” is unclear and appears inaccurate. If the LPCs can self-generate their power and not buy power from TVA, then TVA will have no contractual relationship with those generation resources. The only role that TVA would have with self-generation would be its role as a federal regulator. If that is the case, TVA is not the “*full requirements provider.*”

The potential Scope of this EA will be drastically different if TVA is, or is not, the full requirements provider. Either the LPCs have the right to self-generate 5 percent of energy

without TVA, or they don't. If TVA is using a new definition of all requirements, that definition needs to be spelled out in the final EA.

Recommendation: The draft EA needs to clarify if LPCs have the right to self-generate, or if they are still bound to TVA as the full requirements provider.

Thank you for this opportunity to provide comments on this Draft Environmental Assessment of the flexibility proposal

Sincerely,

Gil Hough

(b) (6)

Knoxville TN 37914

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STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

DAVID W. SALYERS, P.E.
COMMISSIONER

BILL LEE
GOVERNOR

May 4, 2020

Via Electronic Mail to mshigdon@tva.com

Attn: Matthew Higdon, NEPA Program
400 West Summit Hill Drive, WT-11B
Knoxville, TN 37902

Dear Mr. Higdon:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) Power Supply Flexibility *Draft Environmental Assessment* (EA), which considers potential impacts associated with providing flexible power generation options to TVA Local Power Companies (LPC) that have entered into Long-Term Partnership (LTP) agreements. TVA is proposing to provide enhanced power supply flexibility to LPCs within their respective Power Service Area (PSA) that have entered LTP agreements with TVA. Under the terms of the LTP resolution approved by the TVA Board of Directors in August 2019, LPCs that enter into an LTP agreement (“Valley Partners”) would be offered the option to generate a portion of their customers’ power requirements. Actions considered in detail within the Draft EA include:

- **No Action Alternative** –Under the No Action Alternative, TVA would continue to implement the LTP agreements and would continue to offer the FRP as a flexibility option until January 2021. To date, no FRP projects have been brought into operation. Valley Partners would continue to rely on TVA for their entire power requirements. The Valley Partners would have the contractual option to terminate their LTP agreements after October 1, 2021.
- **Proposed Action Alternative** – Under the Proposed Action Alternative, TVA would establish new agreements (“Flexibility Agreements”) with LPCs that are Valley Partners to provide power supply flexibility, based on the following principles:
 - Valley Partners could have flexible generation of up to five percent of their average total hourly energy sales over the last five TVA fiscal years (FY 2015 to 2019), converted to capacity basis with a minimum availability of one MW per Valley Partner. TVA would calculate each LPC’s average hourly wholesale load over the last five TVA fiscal years, multiplied by five percent. The calculated amount would never decrease for Valley Partners. A total of approximately 800 MW could be developed if all 154 LPCs across the Valley

participate and develop their maximum allowable capacity. The largest LPCs have potential flexible generation of 70 to 80 MW, while 24 small LPCs have potential flexible generation of the 1 MW minimum.

- Flexible generation would be distribution scale and located within the LPC service territory, except when circumstances such as restrictive siting can be demonstrated. Valley Partners would not be required to own or operate flexible generation assets themselves. LPCs could use a combination of different forms of generation.
- Flexible generation would be documented, metered, operated, and connected in a manner consistent with TVA standards. The Valley Partner would provide the location, fuel source, operating characteristics, and the maximum net capability of the flexible generators to TVA. TVA and Valley Partners would ensure the flexible generation projects are interconnected in a safe and reliable manner.
- Flexible generation would reduce monthly demand and energy billing determinants or would be treated in accordance with an economically equivalent crediting mechanism; generation would only serve to reduce the amount of power and energy that would have otherwise been supplied to the LPC by TVA, but TVA will remain obligated to provide the full power requirements of the Valley Partner. The flexible generation would reduce monthly wholesale billing determinants during the month of generation for the term of the Flexibility Agreement. The pricing of flexible generation would be the prevailing wholesale rate.
- Flexible generation would be consistent with TVA's Integrated Resource Plan (IRP) to ensure that TVA's carbon position is improved. Consistent with DER identified in the 2019 IRP, community solar, rooftop solar, co-located solar and battery installations, natural gas-fired generators, and high efficiency natural gas-fired combined heat and power projects would be eligible. Diesel-fired or coal-fired generation technologies would not be eligible, due to their omission from the Target Power Supply Mix identified in the 2019 IRP.

As long as Valley Partners adhere to the above principles and the contract, which is built around these principles, TVA would not oversee or have approval authority over the generation resources acquired or constructed by Valley Partners. TVA would not conduct additional site-specific review of new facilities.

TDEC has reviewed the Draft EA and provides the following comments:

General Comments

TDEC is encouraged to see TVA provide new options for Tennesseans to meet their individual energy needs, including on-site power generation for energy resilience and in support of local renewable efforts.

Energy

When designed intentionally for backup purposes, distributed energy resources (DER), combined heat and power (CHP), and microgrid projects can contribute to the energy resilience of critical community facilities such as hospitals, water/wastewater facilities, government buildings, prisons, nursing homes, and utility infrastructure which may experience disruptions due to natural and human-caused disasters.

The TVA and LPC response to recent tornado-related outages in Middle and East Tennessee was swift; however, the unprecedented level of damage caused certain customers, including critical fuel terminals, to be without power for over a week. TDEC encourages TVA and LPCs to provide technical assistance to end-use customers to deploy these additional measures in their communities. It will enhance the energy resilience of communities and promote energy security in Tennessee.

The current arrangement in Tennessee allows each LPC to set their own interconnection fees and processes. While this arrangement respects local control of LPCs, it at times presents challenges for end-use customers and impacts customers with smaller installations, as the interconnection processes are often inconsistent and sometimes cumbersome. In addition, the fees are sometimes prohibitively expensive, especially for residential installations. With the anticipated rise in DER deployments associated with the Flexibility Proposal, TDEC encourages TVA to work with LPCs to streamline interconnection processes and make interconnection fees reasonable and consistent.

Air Resources

TDEC concurs with the Draft EA that the emissions impacts would likely be minimal for both the construction and operation of smaller unit generation capacity. The inclusion of solar generation options also increases the use of renewable energy sources and potentially helps to improve air quality through lowered air emissions. TDEC encourages the Flexibility Agreements to consider the inclusion of provisions relating to the mitigation of fugitive dust and construction related emissions for any new generation capacity likely to be built at the direction of the LPCs and utilized in meeting their contracted consumption and or distribution commitments.

TDEC appreciates the opportunity to comment on this Draft EA. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,



Matthew Taylor

Senior Policy Analyst, Office of Policy and Sustainable Practices

Tennessee Department of Environment and Conservation

[\[email redacted\]](#)

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cc: Kendra Abkowitz, PhD, TDEC, OPSP

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May 4, 2020

Submitted via Email to mshigdon@tva.gov

Matthew Higdon
NEPA Program
Tennessee Valley Authority
400 W. Summit Hill Drive WT-11B
Knoxville, TN 37902

RE: TVA Power Supply Flexibility Proposal Draft Environmental Assessment

Dear Mr. Higdon:

The Southern Environmental Law Center (“SELC”) and our undersigned partners submit these comments on the draft environmental assessment (“Draft EA”) for the Tennessee Valley Authority’s (“TVA”) Power Supply Flexibility Proposal (“Flexibility Proposal”).¹ We thank TVA for considering these comments. We look forward to working with TVA to address the issues discussed below and move towards a brighter, cleaner future for the Valley.

This comment letter highlights numerous legal and policy problems with the Draft EA. As explained further below, the root cause of these problems is TVA’s decision not to conduct an environmental review of its decision in August 2019 to adopt its long-term agreement contract option (“Long-term Contract”) for local power companies. Adopting the Long-term Contract was a major federal action with significant environmental impacts and it was in no way exempt from environmental review under the National Environmental Policy Act (“NEPA”). The Long-term Contract locks in TVA’s local power company customers for twenty years in perpetuity, generally barring them from seeking cheaper and cleaner power from other utilities and independent power producers and guaranteeing TVA’s customer base for the foreseeable future. The Long-term Contract has potentially significant effects on the environment, including, among other things, altering TVA’s pattern of energy resource investment, increasing greenhouse gas and other air pollution, and creating disparate energy burdens.

By unlawfully foregoing any environmental review of the decision to adopt the Long-term Contract, TVA made it essentially impossible to prepare an adequate Draft EA for the Flexibility Proposal. Because TVA had already adopted the Long-term Contract, the outcome of its alternatives analysis in the Draft EA was predetermined; it would develop the Flexibility

¹ TENN. VALLEY AUTH., TVA POWER SUPPLY FLEXIBILITY PROPOSAL DRAFT ENVIRONMENTAL ASSESSMENT (2020), https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/environmental-stewardship/nepa-environmental-reviews/tva-power-supply-flexibility-proposal-draft-ea-april-3-2020.pdf?sfvrsn=f364ba4_5 [hereinafter “Draft EA”].

Proposal. Similarly, TVA adopted the Flexibility Proposal specifically to implement a provision in the Long-term Contract, making the two actions inextricably connected for the purpose of environmental analysis. Regardless of their origins, of course, the Draft EA's narrow scope and predetermined result are flaws in their own right.

The Draft EA also contains multiple serious flaws that do not derive directly from the failure to conduct environmental review of the decision to adopt the Long-term Contract. First and foremost, the decision to adopt the Flexibility Proposal is a major federal action and requires full analysis in an environmental impact statement ("EIS"). This is no less the case to the extent that the Draft EA may purport to tier to analysis in the EIS prepared for TVA's 2019 Integrated Resources Plan ("IRP"). The more appropriate analysis to tier to would be the EIS—had it been prepared—for TVA's decision to adopt the Long-term Contract. Furthermore, the Draft EA relies on an impermissibly narrow statement of purpose and need and a flawed and inaccurate No Action Alternative, both of which undermine the reliability of TVA's alternatives analysis. The Draft EA also fails to even consider reasonable alternatives to the Proposed Action, such as a Zero Carbon alternative, which better meet TVA's statement of purpose and need; and inadequately supports TVA's decision to eliminate the Flexible Generation of Greater than Five Percent Alternative from consideration. Finally, the Draft EA fails to fully consider the impacts associated with adoption of the Proposed Action.

TVA cannot lawfully implement the Long-Term Contract and Flexibility Proposal without first complying with NEPA. TVA must prepare an EIS that considers the impacts of these connected actions. We recommend that TVA resolve the issues outlined in these comments before proceeding to implement the Flexibility Proposal.

I. FACTUAL BACKGROUND

TVA is a federal agency and instrumentality of the United States, established by an act of Congress in 1933, to foster the social and economic welfare of the people of the Tennessee Valley region and to promote the proper use and conservation of the region's natural resources.²

TVA posted the final Record of Decision ("ROD") on its 2019 IRP in the Federal Register on September 17, 2019.³ In the 2019 IRP, TVA studied a strategy that would have promoted distributed energy resources ("DER"), a broad set of customer-sited energy generation and management tools including solar, energy efficiency and demand response.⁴ Although the DER strategy performed similarly to TVA's business-as-usual strategy,⁵ TVA concluded in the 2019 IRP that it would focus on how best to maintain its existing monopoly business model,

² 16 U.S.C. § 831c (1933).

³ 84 Fed. Reg. 48,987.

⁴ Att. 1, TENN. VALLEY AUTH., 2019 INTEGRATED RESOURCE PLAN VOLUME I - FINAL RESOURCE PLAN, 6-7 to 6-9, https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/default-document-library/site-content/environment/environmental-stewardship/irp/2019-documents/tva-2019-integrated-resource-plan-volume-i-final-resource-plan.pdf?sfvrsn=44251e0a_2 [hereinafter "2019 IRP"].

⁵ *Id.* at 7-1 – 7-3.

rather than adapting and changing to the benefit of ratepayers and communities. As a result, the 2019 IRP largely explored how to absorb or stifle the effects of DER, rather than on how to best deploy them to provide least-cost power to the Valley. Having narrowed its focus to utility-scale resources controlled by TVA, the federal utility then identified a broad range of potential resource retirements and additions over the next twenty years, without committing itself to any of them in any particular amount. For example, TVA stated that it might retire anywhere from zero to 2200 MW of coal, build or acquire anywhere from 800 and 5,700 MW of natural gas combined cycle by 2028, and build or acquire anywhere from 1,500 and 8,000 MW of solar by 2028.⁶

On August 22, 2019, the TVA Board approved the Long-Term Partnership Agreement Resolution (“LTP Resolution”).⁷ The LTP Resolution provided that, contingent upon completion of required environmental reviews, the Board approved the implementation of a standard long-term agreement consistent with the Standard Elements described in a July 31, 2019 Memorandum.⁸

Through its contracts, TVA requires local power companies in its territory to purchase all of their electricity requirements from TVA.⁹ The average length of commitment by local power companies in these “all-requirements” contracts prior to implementation of the Long-term Contract was seven years.¹⁰ The Long-term Contract provides that TVA and the contracting local power company commit to an initial term of *twenty years* from the date the contract is signed.¹¹ The Long-term Contract further provides that “beginning on the first anniversary of said effective date, and on each subsequent anniversary thereof ... this contract shall be extended automatically without further action of the parties for an additional 1-year renewal term beyond its then-existing time of expiration.¹² If a local power company wishes to terminate the Long-term Contract, it must give TVA 20 years prior written notice, and TVA will have no obligation to make or complete any additions to or changes in any transformation or transmission facilities to service the local power company unless it agrees to reimburse TVA for its non-recoverable costs in connection with the making or completion of such additions or changes.¹³ Thus, the Long-term Contract locks in TVA’s local power company customers for twenty years in perpetuity, generally barring them from seeking cheaper and cleaner power from other utilities and independent power producers. The lock-in provision guarantees TVA’s customer base for the foreseeable future.

⁶ *Id.* at 9-3 to 9-4.

⁷ Draft EA at 1-1, 1-3; Att. 2, Minutes of Meetings of the Board of Directors Tennessee Valley Authority August 22, 2019, 28-29, https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/tva_board_presentation_august_22_2019.pdf?sfvrsn=e22f3b54_5.

⁸ *Id.*

⁹ Att. 1, 2019 IRP 4-2.

¹⁰ Att. 3, TVA Board Exhibit 8-22-19J, Proposed Board Resolution accompanying Memorandum from John M. Thomas, III, EVP, Financial Services and Chief Financial Officer, Tenn. Valley Auth., to Board of Directors of Tenn. Valley Auth. in support of Board resolution approving the Long-term Contract (July 31, 2019).

¹¹ Att. 3, TVA, Board Exhibit 8-22-19J, Long-term Agreement § 1.

¹² *Id.*

¹³ *Id.*

In exchange for the perpetual twenty year lock-in provision, the Long-term Contract provides that TVA will apply a wholesale monthly credit equal to 3.1 percent of the amount a distributing local power company pays TVA through wholesale rates.¹⁴ The Long-term Contract also includes the following provision:

TVA commits to collaborating with Distributor [local power company] to develop and provide enhanced power supply flexibility, with mutually agreed-upon pricing structures, for 3-5% of Distributor's energy, by no later than October 1, 2021. If in either of the following cases: (I) TVA does not fulfill its commitment to propose a power supply flexibility solution by the date stated above; or (II) Distributor does not agree to the TVA-proposed power supply flexibility solution, then Distributor may elect, by written notice to TVA not later than 90 days from the TVA Board-approved implementation date, to terminate this agreement. Upon Distributor's payment to TVA of an amount equal to 50% of the sum of all Wholesale Credit amounts received by Distributor ... this agreement terminates.¹⁵

TVA has no NEPA documentation relating to the Board's adoption of the Long-term Contract option in August 2019 because it determined that "the Board's action was not subject to NEPA review."¹⁶

Almost immediately, TVA began entering into the Long-term Contract with local power companies. For example, TVA's second largest customer, Nashville Electric Service, agreed to the Long-term Contract six days after the Board adopted the Long-term Contract.¹⁷ As of April 3, 2020, 138 local power companies had adopted the Long-term Contract¹⁸—which requires them to accept TVA's Flexibility Proposal or terminate the Agreement and pay back 50 percent of the wholesale credit the local power company received pursuant to the contract.

At its February 2020 Board meeting, the TVA Board approved a second resolution, authorizing TVA to "approve implementation of a power supply flexibility option."¹⁹ However, the resolution approving the Long-term Contract had already "delegate[d] authorities to the Chief Executive Officer to implement and change, with oversight, the Standard Elements for such

¹⁴ *Id.* § 2.

¹⁵ *Id.*

¹⁶ Att. 4, E-mail from Matthew Stephen Higdon, NEPA Specialist, Environmental Compliance & Operations, Tennessee Valley Authority to Amanda Garcia (April 10, 2020, 3:06 pm); *see also* Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (April 24, 2020).

¹⁷ Att. 6, NES Contract No. 19-72-316 (executed August 28, 2019).

¹⁸ Att. 7, Environmental Reviews, TVA <https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Flexibility-Proposal> (last visited April 22, 2020).

¹⁹ Att. 8, Memorandum from John M. Thomas, III, EVP, Financial Services and Chief Financial Officer, Tenn. Valley Auth., to Board of Directors of Tenn. Valley Auth. in support of Board resolution approving Flexibility Option (January 29, 2020). As of the date of submission of these comments, TVA has not yet approved the minutes of the February 2020 Board meeting, which will document approval of the Flexibility Option resolution.

SELC et al. Comments on TVA Power Supply Flexibility Proposal Draft EA

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agreements as described in the Memorandum.”²⁰ Because the Board had already approved implementation of a power supply flexibility option as a standard element of the Long-term Contract, it is unclear why this action was taken in February 2020—a full six months after TVA had begun implementing the Long-term Contract.

On April 3, 2020, TVA made available for public comment the TVA Power Supply Flexibility Proposal Draft Environmental Assessment, which evaluates the flexible power generation options that would be available to local power companies that enter into a Long-term Contract with TVA.²¹ The Draft EA purports to tier to TVA’s 2019 IRP and relies in part on that EIS analysis.²² TVA’s Proposed Action Alternative allows local power companies to have flexible generation of up to five percent of their average hourly total and use a combination of different forms of generation including natural gas generation and solar.²³ The Proposed Action Alternative would allow generation by local power companies to “reduce monthly demand and energy billing determinants or [] be treated in accordance with an economically equivalent crediting mechanism.”²⁴

The EA briefly discusses a No Action Alternative; an alternative allowing flexible generation of greater than five percent; and an alternative expanding TVA’s Flexibility Research Project, which to date has not seen any projects brought into operation.²⁵ TVA eliminated the alternative that allowed flexible generation of greater than five percent without providing any qualitative analysis justifying the conclusion it would not be reasonable. The EA does not evaluate any other alternatives.

In addition, the Draft EA states that “Valley Partners”—local power companies that have signed the Long-term Contract—“generally receive commercial terms reflective of the long-term commitment they have made to the Valley, resulting in more favorable solutions for their customers.”²⁶

²⁰ Att. 3, Board Exhibit 8-22-19J, Proposed Board Resolution; *see id.* at Memorandum, p. 3 (identifying power supply flexibility option as “Standard Element”); *see id.* (attaching for reference “a version of such a long-term agreement developed by Management that would be consistent with the Standard Elements listed above”); *see id.* Long-term Contract § 2.e (power supply flexibility provision).

²¹ Draft EA at 1-5.

²² *Id.* at 1-4.

²³ *Id.* at 2-1; 2-2.

²⁴ *Id.* at 2-1.

²⁵ *Id.* at 2-2.

²⁶ *Id.*; *see, e.g.*, Att. 9, Vanderbilt, NES, TVA and Silicon Ranch Partner on Landmark Renewable Energy Deal, TVA (Jan. 22, 2020), <https://www.tva.com/newsroom/press-releases/vanderbilt-nes-tva-and-silicon-ranch-partner-on-landmark-renewable-energy-deal> (“NES’ recent 20-year commitment to public power in the region enabled them to meet the sustainability needs of their largest customer with affordable renewable energy through this new program,” said Doug Perry, TVA vice president of Commercial Energy Solutions”).

II. LEGAL BACKGROUND

The National Environmental Policy Act (“NEPA”) is “our basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a); *see* 42 U.S.C. § 4321 (NEPA promotes efforts which “will prevent or eliminate damage to the environment.”). NEPA has “twin aims”: first, it places upon federal entities the obligation to consider every significant aspect of the environmental impact of a proposed action; second, it ensures that a federal entity will inform the public that it has indeed considered environmental concerns in its decision making process, providing a springboard for public comment on the agency’s decision. *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004); *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983); *see* 40 C.F.R. § 1502.1(a), (d); *id.* § 1501.2. NEPA accomplishes these goals by requiring federal entities to take a “hard look” at the potential environmental effects through three levels of review. *Marsh v. Oregon Natural Res. Council*, 490 U.S. 360, 374 (1989).

First, if a proposed action fits within a category “which do[es] not individually or cumulatively have a significant impact on the human environment and which ha[s] been found to have no such effect in procedures adopted by a Federal agency,” the action is categorically excluded from NEPA analysis. 40 C.F.R. § 1508.4; *Sierra Club v. U.S. Forest Serv.*, 828 F.3d 402, 408 (6th Cir. 2016). If an agency wishes to invoke a categorical exclusion it must do so explicitly. *Oak Ridge Envtl. Peace All. v. Perry*, 412 F. Supp. 3d 786, 842 (E.D. Tenn. 2019) (citation omitted); *see Ctr. For Food Safety v. Johanns*, 451 F. Supp. 2d 1165, 1175–76 (D. Haw. 2006). “Post-hoc invocation of a categorical exclusion does not provide assurance that the agency considered the effects of its action before deciding to pursue it” and therefore does not satisfy NEPA. *Wilderness Watch, Inc. v. Creachbaum*, 225 F. Supp. 3d 1192, 1209 (W.D. Wash. 2016), *aff’d*, 731 F. App’x 709 (9th Cir. 2018). Furthermore, even actions that ordinarily would fall into categorical exclusions are subject to exceptions for extraordinary circumstances “in which a normally excluded action may have a significant environmental effect.” 40 C.F.R. § 1508.4; *see Sierra Club v. United States Forest Serv.*, 828 F.3d 402, 408 (6th Cir. 2016); *Alaska Ctr. For Env’t v. U.S. Forest Serv.*, 189 F.3d 851, 858–59 (9th Cir. 1999).

Second, an agency may prepare an environmental assessment (“EA”), which is a “concise public document” intended to help the agency determine whether to prepare an EIS or finding of no significant impact (“FONSI”). 40 C.F.R. § 1508.9. An EA must include a discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed action and alternatives in accordance with NEPA § 102(2)(E). 42 U.S.C. § 4332(E); 40 C.F.R. § 1508.9. Although the discussions in an EA may be “brief,” the agency must still take a “hard look” at the environmental consequences of a proposed action. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1211 (9th Cir. 1998). If an EA establishes that an agency’s action may have a significant effect upon the environment, an EIS must be prepared. *House v. U.S. Forest Service, U.S. Dept. of Agriculture*, 974 F. Supp. 1022, 1035 (E.D. Ky. 1997) (citing *Foundation for N. Am. Wild Sheep v. U.S. Dep’t of Agric.*, 681 F.2d 1172, 1178 (9th Cir. 1982)).

The alternatives analysis is the heart of NEPA. 40 C.F.R. § 1502.14. Federal entities must “[r]igorously explore” and “objectively evaluate” all reasonable alternatives including a no action alternative. *Id.* § 1502.14, (a), (d). The alternative analysis requires disclosure and analysis

of direct and indirect individual and cumulative effects of each alternative. *Id.* § 1502.16. Direct effects “are caused by the action and occur at the same time and place.” *Id.* § 1508.8(a). Indirect effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* § 1508.8(a). “Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over time.” *Id.* § 1508.7.

Third, if a proposal constitutes a “major federal action[] significantly affecting the quality of the human environment,” an agency must prepare an EIS. 42 U.S.C. § 4332(c). A “major federal action” includes an action with effects that may be significant and which are potentially subject to Federal control and responsibility. 40 C.F.R. § 1508.18. The term “major” reinforces but does not have a meaning independent of significantly. *Id.* § 1508.18. To determine significance, an agency must consider both context and intensity. *Id.* § 1508.27. Context means the significance of an action in the context of “society as a whole (human, national), the affected region, the affected interests, and the locality.” *Id.* § 1508.27(a). Intensity requires consideration of the following factors, among others:

- (1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
- (2) The degree to which the proposed action affects public health or safety.
- (3) The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- (4) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- (5) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- (6) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

Id. § 1508.27(b).

An action may be significant if any one of the factors identified in the regulations is met. *Ocean Advocates v. U.S. Army Corps of Eng’rs*, 361 F.3d 1108, 1125 (9th Cir. 2004). If an agency must complete an EIS, it must also “[r]igorously explore” and “objectively evaluate” reasonable alternatives, including a no action alternative, and must analyze the direct and indirect individual and cumulative effects of those alternatives. 40 C.F.R. § 1502.14(a), (d); *id.* § 1508.8(a). 40 C.F.R. § 15-8.25(a) applies to EIS and EA analyses. *Del. Riverkeeper Network v.*

FERC, 753 F.3d 1304, 1314 (D.C. Cir. 2014). The agency must “devote substantial treatment” to each alternative “so that reviewers may evaluate their comparative merits.” *Id.* § 1502.14(b).

A. Segmentation

Agencies “cannot evade [their] responsibilities under [NEPA] by artificially dividing a major federal action into smaller components, each without a significant impact.” *PEACH v. U.S. Army Corps of Eng’rs*, 87 F.3d 1242, 1247 (11th Cir. 1996). This prohibition, known as NEPA’s anti-segmentation rule, arises from CEQ’s regulations requiring that agencies consider all “connected actions,” “cumulative actions,” and “similar actions” within a single EIS. 40 C.F.R. § 1508.25(a); *see Del. Riverkeeper Network*, 753 F.3d at 1313-14 (NEPA does not permit agencies to divide “one project into multiple individual actions ...”); *Tenn. Env’tl. Council v. TVA*, 32 F. Supp. 3d 876, 890 (E.D. Tenn. 2014). As explained by the District of Columbia Court of Appeals:

An agency impermissibly segments NEPA review when it divides connected, cumulative, or similar federal actions into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration; this rule ensures that an agency considers the full environmental impact of connected, cumulative, or similar actions before they are undertaken, so that it can assess the true costs of an integrated project when it is best situated to evaluate different courses of action and mitigate anticipated effects.

City of Boston Delegation v. FERC, 897 F.3d 241, 252 (D.C. Cir. 2018).

Connected actions are those that “(i) automatically trigger other actions which may require [an EIS]; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; or (iii) are interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1); *see Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 301 F. Supp. 3d 50, 67 (D.D.C. 2018). Projects that are “connected and interrelated” and “functionally and financially interdependent,” or have a significant “temporal overlap” should not be segmented. *Standing Rock Sioux Tribe*, 301 F. Supp. 3d at 67. In determining whether projects are “functionally and financially interdependent” courts consider “whether one project will serve a significant purpose even if a second related project is not built” and look at the “commercial and financial viability of a project when considered in isolation from other actions.” *Id.*

B. Tiering

Agencies may tier environmental reviews when appropriate. “Tiering” involves covering broader environmental effects in a programmatic EIS, followed by detailed site-specific assessments in narrower NEPA analyses that incorporate by reference discussions contained in the programmatic EIS and concentrate solely on the issues specific to the later, site-specific EIS. 40 C.F.R. § 1508.28; *see Oak Ridge Env’tl Peace All.*, 412 F. Supp. 3d at 805. Tiering is appropriate when the sequence of statement of analyses is:

(a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis.

(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.

40 C.F.R. § 1508.28.

C. Timing

“NEPA’s effectiveness depends entirely on involving environmental consideration in the initial decision[-]making process.” *Metcalf v. Daley*, 214 F.3d 1135, 1145 (9th Cir. 2000) (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). Therefore, Federal entities are required to integrate the NEPA process with other planning at the “earliest possible time.” 40 C.F.R. § 1501.2. By complying with this requirement, the agency will be able to “[i]dentify environmental effects and values in adequate detail so they can be compared to economic and technical analyses.” *Id.* § 1501.2(b).

Accordingly, federal agencies are prohibited from taking any action that would “have an adverse environmental impact or limit the choice of reasonable alternatives” before NEPA analysis is complete. *Id.* § 1506.1(a). If a federal agency “irreversibly and irretrievably commits itself to a plan of action that is dependent upon the NEPA environmental analysis producing a certain outcome, before the agency has completed that environmental analysis[,]” the agency has impermissibly predetermined the outcome of the analysis and therefore violated NEPA. *Tenn. Envtl. Council*, 32 F. Supp. 3d at 884.

III. TVA HAS FAILED TO MEANINGFULLY ENGAGE THE PUBLIC AS REQUIRED BY NEPA.

Public participation and transparency are crucial aspects of the NEPA process. *See* 40 C.F.R. § 1500.2(d) (requiring agencies to “[e]ncourage and facilitate public involvement in decisions which affect the quality of the human environment”); *id.* § 1506.6(a) (requiring agencies to “[m]ake diligent efforts to involve the public in preparing and implementing their NEPA procedures”); *id.* § 1506.6(d) (requiring agencies to “[s]olicit information from the public”). The “touchstone of NEPA compliance is whether an EA’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” *California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982) (internal citations omitted); *see Nat’l Audubon Soc. v. Dep’t of the Navy*, 422 F.3d 174, 184 (4th Cir. 2005) (By requiring agencies to make public the environmental impact of its actions, NEPA “ensures that the public and government agencies will be able to analyze and comment on the action’s environmental implications.”). Here, TVA

issued—and refused to extend the brief comment period for—the Draft EA during an unprecedented public health crisis that limits advocates’ ability to participate in the NEPA process; failed to give the public an opportunity to comment on the Long-term Contract before implementing the Agreement; and refused to produce requested public documents necessary for the public to fully and meaningfully comment on the Draft EA.

TVA made members of the public aware of the opportunity to comment on the Draft EA on April 3, 2020.²⁷ The public comment periods ends on May 4, 2020.²⁸ This brief 30-day public comment period coincides with the peak of the COVID-19 pandemic currently impacting the United States.²⁹ The pandemic has hit the Southeast United States—including TVA territory—particularly hard.³⁰ On April 2, 2020, Tennessee Governor Bill Lee issued an executive order requiring residents to stay home except for essential business.³¹ In spite of this unprecedented health crisis, TVA has refused to extend the public comment period for the Draft EA.³² Limiting public comment on a major federal action to a period of time when most residents are unable to leave their homes, and thousands more are ill or caring for family and friends is antithetical to NEPA’s purpose. *See Western Watersheds Project*, 336 F. Supp. 3d 1204, 1239 (D. Idaho 2018) (When the public is “not being allowed to participate... or has to hurriedly clamber to do so because of ... the limited time frame and other constraints upon public participation” decisions are made “without the full benefit of public input.”).

While the Flexibility Proposal Draft EA was at least made available for public notice and comment, TVA altogether failed to conduct NEPA analysis or involve the public in the development and adoption of the Long-term Contract. Instead, TVA developed the Long-term Contract terms behind closed doors, adopted the Long-term Contract at a board meeting without any public input or involvement, and immediately began entering into Long-term Contract deals with local power companies. As discussed below, TVA’s failure to analyze the environmental impacts of the Long-term Contract violates NEPA’s substantive provisions.³³ But as importantly, TVA’s decision to spring a brand new long-term contract that significantly impacts the potential for renewable energy development in the Tennessee Valley runs afoul of NEPA’s transparency mandate.

Finally, on April 13, 2020, SELC submitted a Freedom of Information Act (“FOIA”) request seeking documents TVA prepared for the purpose of developing and evaluating the

²⁷ Att. 10, Email from TVA Stakeholder Relations Team to Amanda Garcia, SELC (April 3, 2020, 9:59 AM EST).

²⁸ Att. 11, Flexibility Proposal, TVA <https://www.tva.com/environment/environmental-stewardship/environmental-reviews/nepa-detail/flexibility-proposal> (last visited May 1, 2020).

²⁹ Att. 12, *Coronavirus in the U.S.: Latest Map and Case Count*, N.Y. TIMES

<https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html> (Updated May 1, 2020).

³⁰ *See* Att. 13, Richard Fausset and Rick Rojas, *Across the South, ‘Walking a Tightrope’ While Awaiting the Worst*, N.Y. TIMES, (April 8, 2020) <https://www.nytimes.com/2020/04/09/us/coronavirus-american-south.html>.

³¹ Att. 14, Samantha Max, *Tennessee Orders Residents to Remain Home*, NPR, (April 2, 2020)

<https://www.npr.org/sections/coronavirus-live-updates/2020/04/02/826274244/tennessee-orders-residents-to-remain-home>.

³² Att. 15, E-mail from Matthew Higdon, TVA to Amanda Garcia, SELC (April 24, 2020 4:18 PM EST).

³³ *See infra* pp. 11-46.

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Long-term Contract, Flexibility Proposal, and the Draft EA.³⁴ In particular, SELC sought documents regarding the impact of the 3.1% credit provided by the Long-term Contract on electricity demand, sales, and levels of penetration of distributed energy resources.³⁵ SELC also requested documents supporting TVA's assertion in the Draft EA that "the range of three to five percent [flexible generation] balanced the risk of revenue erosion with the expected benefits of rate and financial stability from longer commitment periods."³⁶ On April 24, 2020, TVA responded to SELC's FOIA request with an extremely small number of documents—some of which were already available on TVA's website—and that failed to answer many of SELC's questions regarding TVA's claim that a five percent flexible generation cap was necessary or the impact of the wholesale credit on wholesale or retail electricity demand and sales or on levels of penetration of distributed energy resources.³⁷ On April 27, 2020, SELC sent a letter to TVA asking for clarification as to whether the April 24, 2020 response was complete.³⁸ Although SELC reminded TVA of the impending comment deadline and its rejection of an extension request based in part on its prompt response to SELC's FOIA,³⁹ TVA did not provide clarification or additional documents before Conservation Groups submitted these comments on May 4, 2020, the unchanged comment period end date. TVA's failure to provide documents justifying basic assumptions in the EA violates NEPA and prevents SELC from submitting comments that are as detailed and meaningful as they would be with full information. *U.S. v. Nova Scotia Food Products Corp.*, 586 F.2d 240, 252 (2d Cir. 1977) ("To suppress meaningful comment by failure to disclose the basic data relied upon is akin to rejecting comment altogether.").

IV. TVA MUST PREPARE AN EIS.

TVA is required to prepare a full EIS for the Flexibility Proposal; an EA is insufficient. First, the Board's adoption of the Long-term Contract option is a major federal action with potentially significant environmental impacts that must be, and never was, reviewed under NEPA. Second, the Long-term Contract and Flexibility Proposal are connected actions that must be analyzed in the same EIS under the rule against artificially segmenting actions to avoid NEPA review. Third, TVA's action adopting the Long-term Contract option is not eligible for a categorical exclusion and likely requires an EIS. Fourth, the Flexibility Proposal will have a significant effect on the human environment in its own right. Finally, tiering to the EIS for the 2019 IRP is inappropriate because the 2019 IRP did not analyze the environmental impacts of the Long-term Contract and did not consider the demand impacts of the Long-term Contract's 3.1% rate discount for local power companies that sign the Contract.

³⁴ Att. 16, Letter from Amanda Garcia, SELC, to Denise Smith, TVA 1 (April 13, 2020).

³⁵ *Id.*

³⁶ *Id.* at 2.

³⁷ Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (April 24, 2020).

³⁸ Att. 17, Letter from Amanda Garcia, SELC, to Denise Smith, TVA 1 (April 27, 2020).

³⁹ Att. 18, Email from Denise Smith, TVA, to Amanda Garcia, SELC (April 30, 2020).

A. NEPA review was required for TVA’s decision to adopt the Long-term Contract option.

Although TVA recognized the possibility that the Long-term Contract might be subject to environmental review,⁴⁰ it has no NEPA documentation relating to the Board’s adoption of the Long-term Contract option in August 2019 because it determined that the action was not subject to NEPA review.⁴¹ This conclusion is incorrect.

1. The Long-term Contract is a major federal action.

TVA’s decision to adopt the Long-term Contract option is a major federal action that will significantly affect the quality of the human environment. *See* 42 U.S.C. § 4332(2)(C). “NEPA regulations define ‘major federal action’ broadly: ‘Major Federal action includes actions with effects that may be major and which are potentially subject to Federal control and responsibility.’” *Sherwood v. Tennessee Valley Auth.*, 590 F. App’x 451, 457 (6th Cir. 2014) (quoting 40 C.F.R. § 1508.18). Major federal actions also include “new and continuing activities, including . . . new or revised agency rules, regulations, plans, policies, or procedures.” 40 C.F.R. § 1508.18(a). Furthermore, typical categories of major federal actions include “official policy,” “formal plans” that will guide how an agency uses resources, and “programs, such as a group of concerted actions to implement a specific policy or plan.” 40 C.F.R. § 1508.18(b)(1), (2), (3). TVA’s decision to adopt the Long-term Contract option is precisely this sort of action: it is an official policy that now governs TVA’s business with at least 138 local power companies.⁴²

TVA should be aware that policy changes like adopting the Long-term Contract option are major federal actions. In *Sherwood*, TVA unsuccessfully argued that its “15-foot policy” concerning tree removal from power-line rights of way was not a new policy but merely a continuation of its existing vegetation management policy. 590 F. App’x at 460. The Sixth Circuit rejected this argument and held, on the basis of public statements and other documents in the record, that TVA had established a new policy and was required to take a “hard look” at its environmental consequences pursuant to NEPA. *Id.* In a subsequent appeal, the court rejected TVA’s argument that the case was moot after it voluntarily abandoned the policy yet continued to apply it in practice. *Sherwood v. Tenn. Valley Auth.*, 842 F.3d 400, 406 (6th Cir. 2016). Furthermore, TVA must conduct at least a programmatic NEPA review of its decisions to enter into coal contracts. *Nat. Res. Def. Council, Inc. v. Tenn. Valley Auth.*, 367 F. Supp. 128, 131 (E.D. Tenn. 1973), *aff’d*, 502 F.2d 852 (6th Cir. 1974).

⁴⁰ Att. 3 TVA, Exhibit 8-22-19J, Memorandum at 2 (stating that “implementation of the proposed long-term agreement would be contingent upon satisfactory completion of any required environmental reviews”).

⁴¹ Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (April 24, 2020); Att. 4, E-mail from Matthew Stephen Higdon, TVA, to Amanda Garcia, SELC (April 10, 2020, 3:06 pm).

⁴² Att. 7, *Environmental Reviews*, TENN. VALLEY AUTH., <https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Flexibility-Proposal> (last visited Apr. 22, 2020) (giving statistic as of April 3, 2020).

2. *The Long-term Contract will significantly affect the quality of the human environment.*

The decision to adopt the Long-term Contract option will have significant environmental consequences, completing the “major federal action” test. 40 C.F.R. § 1508.27; *see* 40 C.F.R. § 1508.18 (“Major reinforces but does not have a meaning independent of significantly (§ 1508.27).”); *Minn. Pub. Interest Research Grp. v. Butz*, 498 F.2d 1314, 1321–22 (8th Cir. 1974). The analysis proceeds in two steps. First, “the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.” 40 C.F.R. § 1508.27(a). Here, the Long-term Contract will affect TVA’s entire region. Currently at least 138 of the 154 local power companies in TVA territory have signed the Long-term Contract.⁴³ It will affect residents of TVA’s region in terms of air quality, public health, and clean-energy jobs; and it will affect the customers of these local power companies through its impact on their bills. Second, the “intensity” or “the severity of impact” of the action must be analyzed. *Id.* § 1508.27(b). NEPA regulations provide ten factors to consider when evaluating intensity. The first is simply environmental impacts. *Id.* § 1508.27(b)(1). Additional factors include impacts to public health, *id.* § 1508.27(b)(2), “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial,” *id.* § 1508.27(b)(4), “[t]he degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration,” *id.* § 1508.27(b)(6), and cumulative impacts, *id.* § 1508.27(b)(7). As described below, the Long-term Contract will have these impacts and more.

The Long-term Contract commits local power companies that sign it to an exclusive contract with TVA to supply all power to the local power companies’ customers⁴⁴ in perpetuity with the requirement of twenty years’ notice before the local power companies may terminate the agreement.⁴⁵ Before the Long-term Contract option was adopted, the weighted average length of the termination notice that was required under TVA’s wholesale power contracts with local power companies that distribute TVA power was less than seven years.⁴⁶ TVA itself does not enter contracts with terms longer than twenty years for energy or twenty-five years for forward capacity.⁴⁷ Whereas previously TVA would be required to compete with other power suppliers at regular intervals more often than every seven years, under the new contract it will be insulated from competition indefinitely.

⁴³ Draft EA at 1-1.

⁴⁴ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 1 (“TVA commits to produce and deliver, and Distributor agrees to take and distribute, all of the power supplied to consumers in the Distributor’s service area.”).

⁴⁵ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 1 (replacing “term of contract” section of power contract entirely with new section that specifies, “beginning on the first anniversary of said effective date, and on each subsequent anniversary thereof . . . this contract shall be extended automatically without further action of the parties for an additional 1-year renewal term . . . [LPC] may terminate this contract at any time upon not less than 20 years’ prior written notice . . .”).

⁴⁶ Att. 3, TVA, Exhibit 8-22-19J, Board Resolution.

⁴⁷ Att. 2, Minutes of Meeting of the Board of Directors, Tenn. Valley Auth. 12-13 (Aug. 22, 2019).

This insulation is valuable to TVA.⁴⁸ Although a local power company technically may terminate the contract, the twenty-year notice requirement makes it nearly impossible for a competitor to compete for an local power company's business; to do so, it would need to make the local power company an offer superior to TVA's and then be willing to wait for twenty years before gaining its client. Of course, the business cycle makes this all but impossible. Furthermore, the local power company would immediately begin to lose the 3.1 percent rate credit established under the Long-term Contract, which would be phased out in equal percentages over the following ten years, leaving the last ten years at the full wholesale rate.⁴⁹ As a result, the potential competitor's offer would need not only to beat TVA but also compensate the local power company for this difference. All of this, of course, is the purpose of the Long-term Contract—effectively to lock in local power companies in perpetuity.

The Long-term Contract will have the effect of constraining the development of renewable energy in the TVA region and likely constraining the percentage of TVA's generation that comes from renewable energy, thus resulting in greater emissions of greenhouse gases ("GHG") and other air pollutants than the baseline of extending TVA's existing shorter-term contracts. The Long-term Contract does not give local power companies an opportunity to negotiate with TVA about the sources of its generation. Local power companies may terminate the Long-term Contract early only if TVA raises rates by set percentages and renegotiation fails, and then they may terminate only ten years early.⁵⁰ The one provision that allows a local power company potentially to negotiate with TVA to increase the percentage of renewable generating serving the local power company (provided by the local power company, TVA, or a third party) commits TVA only to "develop and provide enhanced power supply flexibility, with mutually agreed-upon pricing structures, for 3-5% of Distributor's energy"⁵¹ TVA has proposed the Flexibility Proposal to comply with this section. However, nothing in this section requires the "flexible" power supply to be low-carbon and in the end TVA's proposed Flexibility Proposal could result entirely in new fossil gas generation.⁵²

Local power companies that sign the Long-term Contract will be constrained to TVA's generation portfolio, as modified by any "flexible" generation that a local power company chooses to develop under the Flexibility Proposal, in perpetuity. The result will very likely be

⁴⁸ Att. 3, TVA, Exhibit 8-22-19J, Tenn. Valley Auth., Board Resolution (stating that "increasing the length of TVA's wholesale power contracts with its LPCs provides the best opportunity (i) to ensure that TVA has the revenue necessary to satisfy its long-term financial obligations as they come due and (ii) to provide more certainty in TVA's long-term generation and financial planning"); *see also* Att. 19, Tenn. Valley Auth., Sec. Exchange Comm'n Form 10-K/A, Am. No. 1 at 11 (Nov. 15, 2019), <https://www.sec.gov/Archives/edgar/data/1376986/000137698619000040/tve-10xka09302019.htm> [hereinafter "TVA SEC Form 10-K/A"] (stating that "Revenues from LPCs accounted for approximately 91 percent of TVA's total operating revenues in 2019.").

⁴⁹ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 2(c).

⁵⁰ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 2(a).

⁵¹ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 2(3).

⁵² Draft EA at 2 ("Consistent with DER identified in the 2019 IRP, community solar, rooftop solar, co-located solar and battery installations, natural gas-fired generators, and high efficiency natural gas-fired combined heat and power projects would be eligible.").

more pollution and higher costs for the local power companies' customers compared to a future in which the local power companies renegotiated their contracts with TVA more often than every seven years.

- a) *Memphis' exploration of alternative power suppliers illustrates the Long-term Contract's environmental impacts.*

Memphis is the case in point. Memphis Light, Gas & Water (“MLGW”), the municipal utility serving Memphis and parts of Shelby County, is TVA's largest customer, constituting between nine and eleven percent of the load TVA serves.⁵³ Under its existing contract with TVA, MLGW must give TVA five years' notice before terminating its purchases.⁵⁴ In 2016, TVA sold its unfinished Bellefonte Nuclear Power Plant to developer Franklin Haney's Nuclear Development LLC at auction.⁵⁵ Haney planned to complete the plant and sell its power to MLGW.⁵⁶ After he made an offer, notwithstanding its eighty-year relationship with TVA, MLGW decided to evaluate its options.⁵⁷ As we file these comments, MLGW has not yet signed the Long-Term Contract.

Memphis' power supply alternatives evaluation is ongoing,⁵⁸ but the studies prepared have been revealing. A study prepared by the Brattle Group for Friends of the Earth evaluated three alternative portfolios meant to typify a range of options for 2024 (after the five-year notice period): a “Cost-Minimizing” portfolio comprising fossil gas generators and solar, a “Local + RE” portfolio that substitutes 500MW of wind and 500 of four-hour-duration battery storage for one combustion turbine, and a “Higher RE” portfolio that also imports wind generation from the

⁵³ Att. 20, *About*, MLGW, <http://www.mlgw.com/about> (last visited Apr. 23, 2020) (stating 11% of TVA's load); Att. 21, MEMPHIS LIGHT GAS AND WATER DIVISION, INTEGRATED RESOURCE PLAN AND TRANSMISSION ANALYSIS – REQUEST FOR PROPOSAL (RFP) 2 (2019), http://www.mlgw.com/images/content/files/pdf/Integrated%20Resource%20Plan_RFP_Memphis%20Light%20Gas%20and%20Water%20Division_04-03-19.pdf (stating approximately 10% of TVA's load); see Att. 19, *TVA SEC Form 10-K/A supra* note 48 at 125 (“Sales to MLGW and NES accounted for nine percent and eight percent, respectively, of TVA's total operating revenues in 2019.”).

⁵⁴ Att. 22, MLGW Power Supply Advisory Team (PSAT), Presentation: Orientation Meeting at 31 (April 30, 2019), http://www.mlgw.com/images/content/files/pdf/PSAT%20Orientation%20Meeting_Final%20Formatted5_jty.pdf.

⁵⁵ Att. 23, Darrell Proctor, *Judge: TVA Deal for Bellefonte Nuclear Plant Stays in Place*, POWER (May 17, 2019), <https://www.powermag.com/judge-tva-deal-for-bellefonte-nuclear-plant-stays-in-place/>.

⁵⁶ Att. 24, Marc Perrusquia, *POWER BROKER: SPECIAL REPORT: Inside a long-shot plan to buy a never-opened nuclear plant and sell its power to a single customer: MLGW*, DAILY MEMPHIAN (May 17, 2019 12:35 AM CT), <https://dailymemphian.com/article/1174/POWER-BROKER>.

⁵⁷ Att. 25, Dave Flessner, *Memphis Light Gas & Water studies leaving TVA, eyes energy options*, CHATTANOOGA TIMES FREE PRESS (Feb. 24, 2019), <https://www.timesfreepress.com/news/business/aroundregion/story/2019/feb/24/memphstudies-leaving-tvamlgw-eyes-energy-opti/489158/>.

⁵⁸ See Att. 26, Mike Suriani, *MLGW officials consider ending power supply relationship with TVA*, NEWS CHANNEL 3 WREG MEMPHIS (Feb. 27, 2020 / 06:56 PM CST), <https://wreg.com/news/mlgw-officials-considers-ending-power-supply-relationship-with-tva/> (stating that draft report expected mid-April and final plan summer 2020).

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Midcontinent Independent System Operator (“MISO”) and the Southwest Power Pool (“SPP”).⁵⁹ The percentage of Memphis load served by renewable generation increased by three percent, seventeen percent, and twenty-six or thirty-two percent, respectively, under these alternative portfolios.⁶⁰ At the same time, these portfolios would save approximately \$200 million to \$333 million annually.⁶¹

Similarly, a study prepared by ACES estimated that by joining MISO, MLGW could save \$9.2 billion between 2024 and 2038, while serving fully twenty-five percent of its load with renewable generation.⁶²

ICF Resources LLC (“ICF”) prepared a study for FLH Company, the parent company of Nuclear Development LLC, to evaluate the effect of purchasing power from the Bellefonte plant.⁶³ ICF concluded that the Bellefonte plant would meet approximately seventy percent of MLGW’s load while the remaining “incremental power” and capacity could be purchased in a variety of way such as through a partial requirements contract with TVA, from other utilities, or on the spot market.⁶⁴ ICF estimated savings of \$335 million in the first year and \$7.9 billion over the twenty-year term of a power purchase agreement (“PPA”).⁶⁵ Setting aside some lifecycle costs, and although it raises other environmental concerns, nuclear generation is carbon-free.⁶⁶

Finally, a study by GDS Associates, Inc. looked at four alternative scenarios: MLGW as its own balancing authority, supplied by the Bellefonte plant and either MISO or new resources; and MLGW within MISO, with or without power from Bellefonte.⁶⁷ Although the study did not consider the cost of capital expansion such as new transmission to join MISO, it projected significant savings compared to remaining with TVA.⁶⁸ The study included a sensitivity for each scenario based on importing wind power from MISO and concluded that this could be done for

⁵⁹ Att. 27, JURGEN WEISS, ET AL., THE BRATTLE GROUP, POWER TO MEMPHIS: OPTIONS FOR A RELIABLE, AFFORDABLE AND GREENER FUTURE 8-9 (2019), <http://www.mlwg.com/images/content/files/pdf/Brattle%20Study.pdf>.

⁶⁰ *Id.* at 11-12.

⁶¹ *Id.* at 16.

⁶² Att. 28, ACES, MEMPHIS LIGHT, GAS AND WATER LONG-TERM PORTFOLIO CONSIDERATIONS 3, 7 (2019), <http://www.mlwg.com/images/content/files/pdf/ACES%20Supply%20Study.pdf>.

⁶³ Att. 29, JUDAH ROSE, ET AL., ICF RESOURCES LLC, ASSESSMENT OF WHOLESALE POWER OPTIONS FOR MEMPHIS LIGHT, GAS AND WATER: PRELIMINARY DRAFT (2018), <http://www.mlwg.com/images/content/files/pdf/ICF%20very%20clean.pdf>.

⁶⁴ *Id.* at 4-6.

⁶⁵ *Id.* at 3-4.

⁶⁶ See Att. 30, Nuclear, TENN. VALLEY AUTH., <https://www.tva.com/energy/our-power-system/nuclear> (last visited Apr. 23, 2020).

⁶⁷ See Att. 31, SETH BROWN, GDS ASSOCIATES, INC., EVALUATION OF LONG-TERM POWER SUPPLY ALTERNATIVES: MEMPHIS LIGHT GAS & WATER (MLGW) (Draft as of January 28, 2019), http://www.mlwg.com/images/content/files/pdf/MLGW%20Long%20Term%20Power%20Supply%20Alts%20draft_V0_7%20202-1-2019.pdf.

⁶⁸ *Id.* at 3-4.

little additional cost.⁶⁹ It recommended MLGW commission an integrated resources plan (“IRP”).⁷⁰

Following these studies, MLGW decided to commission an IRP looking out twenty years to fully evaluate its options outside of renewing its contract with TVA.⁷¹ It selected Siemens to prepare the IRP.⁷² As noted, Siemens has not finished the IRP but expects to have a draft completed soon and a plan this summer. However, preliminary results are very promising. According to a recent presentation the reference case includes 2.55 gigawatts (“GW”) of renewable generation.⁷³ Further, renewable generation is the most economic option and exceeds targets.⁷⁴ Renewable generation is expected to meet twenty-five to fifty percent of demand.⁷⁵

This compares favorably to TVA’s plans. For example, if MLGW develops 2.55GW of renewable generation in the coming twenty years, that is more than the minimum total renewable generation that TVA itself anticipates bringing online in about the same timeframe, to serve ten times the load.⁷⁶ It is difficult to draw conclusions about TVA’s future generation portfolio from its 2019 IRP because the document gives its recommendation as a series of wide ranges;⁷⁷ nevertheless, what the Memphis example makes abundantly clear is that the Long-term Contract lock-in provision would inhibit the growth of renewables relative to the baseline contract length. In addition to environmental benefits, a recent study by Synapse Energy Economics, Inc. concludes that TVA presents an ongoing risk of rate increases, driven substantially by its plan to continue to rely on fossil fuel generation.⁷⁸ Rate increases could also result in significant socioeconomic, energy, air, climate and other impacts.

⁶⁹ *Id.* at 4, 15-24.

⁷⁰ *Id.* at 45.

⁷¹ Att. 21, MEMPHIS LIGHT GAS AND WATER DIVISION, INTEGRATED RESOURCE PLAN AND TRANSMISSION ANALYSIS – REQUEST FOR PROPOSAL (RFP) (2019), http://www.mlgw.com/images/content/files/pdf/Integrated%20Resource%20Plan_RFP_Memphis%20Light%20Gas%20and%20Water%20Division_04-03-19.pdf.

⁷² Att. 32, Press Release: MLGW selects consultant for Integrated Resource Plan, MLGW (July 22, 2019), http://www.mlgw.com/news/news_22719.

⁷³ Att. 33, Siemens, Presentation: Integrated Resource Plan and Transmission Analysis 13 (Feb. 27, 2020) http://www.mlgw.com/images/content/files/pdf/PSAT_Siemens%20Presentation_02-27-2020.pdf.

⁷⁴ *Id.* at 16.

⁷⁵ *Id.* at 16-17.

⁷⁶ Att. 1, 2019 IRP 9-3 to 9-4, https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/default-document-library/site-content/environmental-stewardship/irp/2019-documents/tva-2019-integrated-resource-plan-volume-i-final-resource-plan.pdf?sfvrsn=44251e0a_2.

⁷⁷ *Id.*; see Att. 2, Minutes of Meeting of the Board of Directors, Tennessee Valley Authority 10 (Aug. 22, 2019) (resolving to affirm “the merits of a diverse energy resource portfolio and of maintaining the flexibility to make energy resource decisions consistent with least-cost planning that fall within the resource ranges depicted in Figure 9-1 of the Final 2019 IRP”); Att. 34, Maggie Shober, *TVA releases final long-term resource plan, and we are underwhelmed*, SOUTHERN ALL. FOR CLEAN ENERGY (June 29, 2019), <https://cleanenergy.org/blog/tva-releases-final-long-term-resource-plan-and-we-are-underwhelmed/>.

⁷⁸ Att. 35, DAVID WHITE, ET AL., SYNAPSE ENERGY ECONOMICS, INC., MEMPHIS AND TENNESSEE VALLEY AUTHORITY: RISK ANALYSIS OF FUTURE TVA RATES FOR MEMPHIS 5-17 (2019),

Memphis is perhaps the most developed case, but it is not alone. Multiple cities in TVA's region have more ambitious GHG-reduction and renewable generation goals.⁷⁹ In eastern Tennessee, Volunteer Energy Cooperative has expressed opposition to TVA's rate hikes⁸⁰ and cited a desire to purchase generation from renewable sources when explaining its decision not to execute the Long-term Contract.⁸¹ In comments on TVA's draft 2019 IRP, the City of Knoxville expressed its strong desire to see TVA reduce GHG emissions and increase its support for renewable generation and other low-carbon technology.⁸²

- b) *By locking local power companies into perpetual service, the Long-term Contract insulates TVA from competitive pressure to provide more access to renewables and DERs.*

What the Memphis example clearly shows is that TVA's decision to adopt the Long-term Contract option very likely will significantly affect the environment by locking in TVA's customers and limiting access to renewables, and is therefore a major federal action that requires NEPA review. The Long-term Contract will have the direct effect of locking local power companies into TVA's generation load, meaning that one way to measure its environmental impact is to compare TVA's generation portfolio and its likely future portfolio—best sketched out by TVA's 2019 IRP—against the generation resources that local power companies would procure if independent. Different local power companies will be differently situated; for example, Memphis benefits in its negotiations with TVA by being located near the edge of TVA's territory with the ability to connect to MISO and SPP. But Memphis could also be served by the Bellefonte plant over two hundred miles away. The Memphis example sufficiently illustrates the potential environmental effects of TVA's decision. *See Sherwood*, 590 F. App'x at 456 (discussing plaintiffs' evidence of trees to be removed, tracts of land containing trees that would be removed under policy, and environmental consequences of removing trees).

The Long-term Contract likely will also have an environmental impact in terms of its indirect effect on TVA's own activities. TVA acknowledges as much by tiering to its EIS for its 2019 IRP in the Draft EA and asserting that the environmental impacts resulting from changes to

<https://1bps6437gg8c169i0y1drtgz-wpengine.netdna-ssl.com/wp-content/uploads/2019/12/Synapse-2019-Memphis-TVA-Report-Final-2019.12.11.pdf>.

⁷⁹ Att. 36, James Bruggers, *Southern Cities' Renewable Energy Push Could Be Stifled as Utility Locks Them Into Longer Contracts*, INSIDE CLIMATE NEWS (Dec. 16, 2019), <https://insideclimatenews.org/news/15122019/tva-rate-lock-in-renewable-energy-cities-nashville-memphis-knoxville>; Att. 37, James Bruggers, *Cities Pressure TVA to Boost Renewable Energy as Memphis Weighs Breaking Away*, INSIDE CLIMATE NEWS (Apr. 30, 2019), <https://insideclimatenews.org/news/30042019/tva-renewable-energy-memphis-nashville-knoxville-climate-change-coal-costs>.

⁸⁰ *See* Att. 38, Volunteer Elec. Coop., Press Release: TVA Board Approves Rate Increase, Passed Through by VEC Board (Oct. 1, 2018), <https://vec.org/tva-board-approves-rate-increase-passed-through-by-vec-board/>; Att. 39, Volunteer Elec. Coop., Press Release: TVA Rates Increased in October (Dec. 21, 2017), <https://vec.org/tva-rates-increased-october/>.

⁸¹ Att. 36, Bruggers, *Southern Cities' Renewable Energy Push Could Be Stifled*.

⁸² Att. 40, Letter from Medline Rogero, Mayor, City of Knoxville to Hunter Hydas, IRP Program Manager, TVA (Apr. 8, 2019), <http://www.tvanepacomments.com/Attachments/92-Rogero-Madeline-20190404112920.pdf>.

TVA's system would be within the range discussed in the EIS.⁸³ But the Long-term Contract will have indirect effects beyond any articulated in the EIS for the 2019 IRP or Draft EA, neither of which examine the effects of the Long-term Contract as a whole or its lock-in provision. Local power companies that are locked into service through the Long-term Contract have lost much of their leverage to negotiate with TVA for pro-environment and pro-end use customer policies, whether it be increased renewable generation, support for energy-efficiency programs, or more favorable policies for distributed energy resources.⁸⁴ This is particularly concerning because as noted above, TVA does not commit to a particular level of renewable growth in the 2019 IRP.

Moreover, in recent years, TVA has largely abandoned its energy efficiency and distributed energy programs, with the exception of some scattered low-income energy efficiency efforts. For example, in 2018 TVA adopted an unjustified rate structure change that was specifically intended to obstruct the growth of DER in its service territory.⁸⁵ The 2019 IRP itself focused on how to absorb or stifle the effects of DER, rather than on how to best deploy them to provide least-cost power to the Valley.⁸⁶ And, in 2019, TVA terminated its Green Power Providers program, a rooftop solar program that compensated customers who generate their own solar for the value they provide to the grid and to the Valley.⁸⁷ TVA has similarly walked back its energy efficiency programs: as the 2019 IRP itself acknowledges, TVA has “reduced”⁸⁸ energy incentives and instead implements the eScore system for residential customers, which provides advice but no rebates or incentives.⁸⁹ In commercial and industrial sectors, TVA includes “some standard rebates” but focuses on “customized solutions” such as Strategic Energy Management, which is a platform for industrial and commercial customers to talk about efficiency options but does not incentivize adopting those options.⁹⁰

⁸³ See, e.g., Draft EA at 3-10.

⁸⁴ See Att. 36, Bruggers, *Southern Cities' Renewable Energy Push Could Be Stifled*, *supra* note 79.

⁸⁵ Att. 41, TVA, 2018 Wholesale Rate Change, Draft Environmental Assessment, i (March 2018) (asserting that “TVA’s current energy prices over-incentivize consumer installation of DER” and that rate change is needed to “mitigate[e] the effects”) [hereinafter “2018 Rate Change EA”]; Att. 42, TVA, 2018 Wholesale Rate Change, Final Environmental Assessment, I, (May 2018).

⁸⁶ Att. 1, TENN. VALLEY AUTH., 2019 INTEGRATED RESOURCE PLAN, VOLUME I, :—FINAL RESOURCE PLAN (2019), https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/default-document-library/site-content/environment/environmental-stewardship/irp/2019-documents/tva-2019-integrated-resource-plan-volume-i-final-resource-plan.pdf?sfvrsn=44251e0a_2; Att. 43, TENN. VALLEY AUTH., 2019 INTEGRATED RESOURCE PLAN, VOLUME II - FINAL ENVIRONMENTAL IMPACT STATEMENT, https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/default-document-library/site-content/environment/environmental-stewardship/irp/2019-documents/tva-2019-integrated-resource-plan-volume-ii-final-eis.pdf?sfvrsn=99a30a7d_2 [hereinafter “2019 IRP EIS”].

⁸⁷ Att. 44, Tenn. Valley Auth., CHANGES TO GREEN POWER PROVIDERS PROGRAM FINAL ENVIRONMENTAL ASSESSMENT (Dec. 2019) <https://www.tva.com/energy/valley-renewable-energy/green-power-providers>; Att. 45, SELC et al. Comments on Changes to Green Power Providers Program Draft Environmental Assessment (November 8, 2019).

⁸⁸ 2019 IRP at B-1.

⁸⁹ *Id.* at B-4.

⁹⁰ *Id.* at B-6.

TVA has acknowledged in filings with the Securities Exchange Commission (“SEC”) that its customers’ growing preference for renewable and other DERs is a key challenge.⁹¹ Further, it has specifically identified it as a competitive challenge:

TVA also faces competition in the form of emerging technologies. Improvements in energy efficiency technologies, smart technologies, and energy storage technologies may reduce the demand for centrally provided power. The growing interest by customers in generating their own power through DER has the potential to lead to a reduction in the load served by TVA as well as cause TVA to re-evaluate how it operates the overall grid system to continue to provide highly reliable power at affordable rates. See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations — *Key Initiatives and Challenges — Distributed Energy Resources*.⁹²

TVA has also identified it as a general business risk:

TVA may have difficulty in adapting its business model to changes in the utility industry and customer preferences.

The traditional business model for power production, selling power from centrally located plants, is facing pressure from a variety of sources, including the potential for self-generation by current or potential customers, new technologies such as energy storage, and increased energy efficiency. These pressures may reduce the demand for TVA power. If TVA does not or cannot adapt to this pressure by adequately changing its business model, TVA's financial condition and results of operations could be negatively affected.⁹³

To address this challenge, TVA appears to have responded in at least two ways. One response was to begin work on its 2019 IRP “sooner than originally planned,”⁹⁴ and include a focus on distributed energy resources. As mentioned, the 2019 IRP’s recommendations are ambiguous but it proposes possibly increasing its own renewable portfolio, while rejecting a strategy that would have a similar cost profile but promote distributed energy resources owned and controlled by others.⁹⁵ In other words, one response was to compete by indicating that the federal utility might develop new renewable projects while making clear that it would continue to emphasize utility-scale resources under its control.

⁹¹ See Att. 19, TVA SEC Form 10-K/A, *supra* note 48, at 64 (listing “Distributed Energy Resources” and “Changing Customer Preferences” first among key initiatives and challenges).

⁹² *Id.*

⁹³ *Id.* at 41.

⁹⁴ *Id.* at 65.

⁹⁵ Att. 1, 2019 IRP Vol. I; Att. 43, 2019 IRP Vol. II; Att. 46, SELC et al. Comments on TVA’s Draft Integrated Resource Plan and Draft Environmental Impact Statement (April 7, 2019).

The other side of TVA's response is the Long-term Contract: more firmly locking local power companies into their all-requirements contracts with TVA and insulating TVA from the need to adapt and compete.⁹⁶ To be sure, TVA's stated purpose for developing the Long-term Contract was to improve TVA's financial position by guaranteeing customers, thereby reducing the risk that TVA would be unable to pay for its long-term capital investments and reducing the cost of capital on those investments.⁹⁷ But the question is not whether TVA adopted the Long-term Contract option *for the purpose* of preventing local power companies from seeking environmentally superior generation sources or for the purpose of avoiding environmentally beneficial changes to TVA's own operations. For the purpose of NEPA review, the question is whether adopting the Long-term Contract option would have these or other significant impacts on the quality of the human environment. Regardless of TVA's intent, TVA should have been aware that it would. What NEPA requires is simply recognizing the range of potential significant impacts and evaluating them: look before you leap.

Adopting the Long-term Contract would have other foreseeable environmental impacts as well. For example, the 3.1 percent discount of wholesale rates that local power companies receive under the Long-term Contract, assuming it is passed on to customers, will increase demand.⁹⁸ Residential customers in TVA's region have been found to be the most responsive to electricity prices in the United States in the long term, and second-most responsive in the short term.⁹⁹ As more local power companies execute the Long-term Contract, TVA may be forced to raise prices to compensate,¹⁰⁰ but even then this effect is likely to remain in force to some

⁹⁶ See Att. 19, TVA SEC Form 10-K/A, at 11 (stating that TVA receives ninety-one percent of its revenue from LPCs, the twenty-year rolling Long-term Contract "better aligns the length of LPC contracts with TVA's long-term commitments" and "enables TVA to recover its long-term financial commitments over a commensurate period," noting that 131 LPCs had signed the agreement, representing fifty-six percent of TVA's operating revenues in 2019); *id.* at 50 (same), 53 (same), 70 (same, noting that agreement is automatically extended indefinitely), 125 (same); see also Att. 47, MarketWatch, Press Release: 10-Q: TENNESSEE VALLEY AUTHORITY (Feb. 5, 2020), https://www.marketwatch.com/press-release/10-q-tennessee-valley-authority-2020-02-05?mod=mw_quote_news (explaining that Long-term Contract is part of "Strategic Financial Plan" approved by TVA board in 2019 to "maintaining rates as low as feasible, establishing better alignment between the length of local power company customer ('LPC') contracts and TVA's long-term commitments, stabilizing debt, and pursuing operational efficiencies"); Att. 48, Tenn. Valley Auth., Presentation: Board Meeting, August 22, 2019, Knoxville, Tennessee at 91, <http://www.sn1.com/Cache/IRCache/cc8bcfa4-a1a4-87ee-3251-27b329f6484a.PDF?O=PDF&T=&Y=&D=&FID=cc8bcfa4-a1a4-87ee-3251-27b329f6484a&iid=4063363> (listing "inconsistent contract length v. asset obligations" among benefits of Long-term Contract identified by TVA).

⁹⁷ See Att. 19, TVA SEC Form 10-K/A, at 11 (Nov. 15, 2019), Att. 3, TVA, Exhibit 8-22-19J, Memorandum at 2 (stating that "benefits to TVA's financial risk profile by the existence of such long-term relationships would be shared with participating LPCs in the form of a wholesale bill credit").

⁹⁸ See Att. 49, Greenlink Analytics, Evaluating TVA's Newly Proposed Wholesale Reductions and Capacity Additions, Table 1 and accompanying text (May 2020); Att. 50, TATYANA DERYUGINA, ET AL., THE LONG-RUN ELASTICITY OF ELECTRICITY DEMAND: EVIDENCE FROM MUNICIPAL ELECTRIC AGGREGATION 25 (2017), <https://www.econ.pitt.edu/sites/default/files/Deryugina.Electricity%20Aggregation.pdf> (concluding that residential electricity demand is responsive to price and approximately twice as responsive in the long term).

⁹⁹ Att. 51, M.A. Bernstein and J. Griffin, RAND Corporation, Regional Differences in the Price-Elasticity of Demand for Energy 24, 29 (2006), <https://www.nrel.gov/docs/fy06osti/39512.pdf>.

¹⁰⁰ See Att. 3, Board Exhibit 8-22-19J, Memorandum at 4 (stating that a credit higher than 3.1% would require TVA to raise rates); Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC 2 (Apr. 24, 2020) (acknowledging that TVA did not estimate the effect of 3.1% credit on demand).

degree. Similarly, the Long-term Contract constrains TVA's ability to raise rates if necessary through the provision allowing local power companies to renegotiate or, eventually, leave if TVA raises rates more than ten percent during any five-year period or five percent from 2019 levels before 2024.¹⁰¹ This constraint could have a negative impact on the environment, for example, if it makes it more difficult for TVA to retire existing fossil generation, to install pollution controls, or to fund various beneficial programs.

At the same time, the Long-term Contract will have significant socio-economic impacts that must be analyzed under NEPA. As the Memphis example shows, local power companies may be able to reduce rates substantially by seeking power elsewhere. Although MLGW customers pay low bills compared to customers in other parts of the country,¹⁰² nevertheless Memphians experience the worst energy burden in the nation.¹⁰³ When economic and social impacts of a proposed action are interrelated with its environmental impacts they must be analyzed. 40 C.F.R. § 1508.14; *Highland Co-op. v. City of Lansing*, 492 F. Supp. 1372, 1380 (W.D. Mich. 1980); *see also* 40 C.F.R. § 1502.16(g).

Accordingly, TVA's decision to adopt the Long-term Contract is a major federal action that will significantly affect the quality of the human environment and likely already has done so, thus requiring a full EIS under NEPA. It will have a range of environmental impacts, primarily through hindering renewable generation. 40 C.F.R. § 1508.27(b)(1). This will result in poorer air quality, impacting public health. *Id.* § 1508.27(b)(2). The contract has proven highly controversial, not least in the case of Memphis. *Id.* § 1508.27(b)(4). The contract plainly established a precedent for future action, foremost among them entering into the Long-term Contract with 138 local power companies, and, now, offering the Flexibility Proposal. *Id.* § 1508.27(b)(6). It also has cumulative impacts, adding to a number of TVA's previous actions that also hamper renewable generation. *Id.* § 1508.27(b)(7). At the very least, TVA should have prepared an EA to determine whether an EIS was necessary. *See* 40 C.F.R. § 1508.9; *Sherwood*, 590 F. App'x at 457 (explaining use of EA as screening device).

B. The Long-term Contract and the Flexibility Proposal are connected actions that must be analyzed in the same NEPA document.

It is a "fundamental NEPA principle ... that connected actions must be analyzed together[.]" *Defenders of Wildlife v. U.S. Dep't of Navy*, 733 F.3d 1106, 1116 (11th Cir. 2013); *Am. Rivers & Ala. Rivers All. v. FERC*, 895 F.3d 32, 55 (D.C. Cir. 2018) (NEPA document must address "the total impacts and cannot isolate a proposed project, viewing it in a vacuum."); *see Oak Ridge Env'tl. Peace All.*, 412 F. Supp. 3d at 805 ("The rule against segmentation prevents

¹⁰¹ Att. 3, TVA, Exhibit 8-22-19J, Long-term Agreement § 2(a).

¹⁰² Att. 22, MLGW Power Supply Advisory Team (PSAT), Presentation: Orientation Meeting at 26-29 (April 30, 2019),

http://www.mlgw.com/images/content/files/pdf/PSAT%20Orientation%20Meeting_Final%20Formatted5_jty.pdf.

¹⁰³ Att. 52, Am. Council for an Energy-Efficient Econ., Press Release: Report: "Energy Burden" on Low-Income, African American, & Latino Households up to Three Times as High as Other Homes, More Energy Efficiency Needed (Apr. 20, 2016), <https://www.aceee.org/press/2016/04/report-energy-burden-low-income>.

agencies from evading their responsibilities under NEPA by artificially dividing a federal action into smaller components so the action would no longer be considered ‘major,’ or so that no significant environmental impacts would be detected.”). TVA violated this principle by considering the environmental impacts of the Flexibility Proposal separately from the impacts of the Long-term Contract.

The Flexibility Proposal and the Long-term Contract are connected actions. In fact, they fulfill all three definitions of connected actions set forth in CEQ’s NEPA regulations. First and foremost, the Flexibility Proposal “cannot or will not proceed unless other actions are taken previously or simultaneously,” because the Flexibility Proposal is only available to local power companies that have signed the Long-term Contract. 40 C.F.R. § 1508.25(a)(1); *see Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 301 F. Supp. 3d 50, 67 (D.D.C. 2018).¹⁰⁴ Second, the Long-term Contract “automatically trigger[s]” the Flexibility Proposal because the development and implementation of the Flexibility Proposal is a *term* of the Long-term Contract.¹⁰⁵ 40 C.F.R. § 1508.25(a)(1). Third, the Long-term Contract and Flexibility Proposal are properly viewed as “interdependent parts of a larger action” that “depend on the larger action for their justification.” *Id.* The Flexibility Proposal would serve no “significant purpose” without the Long-term Contract—it would not be applicable to any of TVA’s customers. Therefore, the Flexibility Proposal and the Long-term Contract are “connected and interrelated” and “functionally and financially interdependent” and may not be considered in isolation from one another. *Standing Rock Sioux Tribe*, 301 F. Supp. 3d at 67.

In spite of these well-established principles of NEPA compliance, TVA has failed to examine the environmental impacts of the Long-term Contract at all, and has evaluated the Flexibility Proposal’s impacts in an EA that omits any consideration of how the Long-term Contract—through which the Flexibility Proposal would be implemented—affects the environment. TVA has overlooked the environmental impacts of the Long-term Contract and impermissibly narrowed the scope of its environmental analysis to the Flexibility Proposal, despite the fact that the Flexibility Proposal cannot—and as matter of fact does not—exist separately from the Long-term Contract. TVA’s artificial division of these connected actions violates NEPA. *See PEACH v. U.S. Army Corps of Eng’rs*, 87 F.3d at 1247.

C. TVA’s decision to adopt and implement the Long-term Contract is not categorically excluded from the obligation to prepare an EA or EIS.

TVA has not invoked any categorical exclusion for its decision to adopt the Long-term Contract without analyzing its environmental impacts, and this alone rules out applicability of any categorical exclusion to its decision. As noted, TVA has explained that it does not have

¹⁰⁴ Draft EA at 1-1 (“[TVA] is proposing to provide enhanced power supply flexibility to local power companies... that have entered in to Long-Term Partnership (LTP) agreements with TVA”).

¹⁰⁵ Att. 3, Board Exhibit 8-22-19J, Long-term Agreement § 2; *see* Draft EA at 1-1 (“TVA committed to develop an option for power supply flexibility for Valley Partners to generate up to five percent of energy, by October 1, 2021. If TVA does not provide an agreeable power supply flexibility option by the specified date, LPCs have the option to terminate their LTP agreement.”).

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NEPA documentation for the decision because it determined that NEPA did not apply.¹⁰⁶ However, by issuing an EA on the Flexibility Proposal, TVA has essentially conceded that the Long-term Contract—of which the Flexibility Proposal is an express term—required NEPA review before implementation. In any event, when an action is covered by a categorical exclusion that does not mean that NEPA does not apply. “Categorical exclusions are not exemptions or waivers of NEPA review; they are simply one type of NEPA review.” *United Keetoowah Band of Cherokee Indians in Okl. v. Fed. Commc'ns Comm'n*, 933 F.3d 728, 735 (D.C. Cir. 2019) (quoting Council on Environmental Quality, Memorandum for Heads of Federal Dep'ts and Agencies: Establishing, Applying & Revising Categorical Exclusions under [NEPA] 2 (2010)); see *Oak Ridge Envtl. Peace All.*, 412 F. Supp. 3d at 826 (explaining that applying categorical exclusion exempts action from *further* NEPA review). Accordingly, TVA's explanation is not an invocation of a categorical exclusion but a bare assertion that NEPA does not apply. As explained above, that is incorrect.

Were TVA to invoke a categorical exclusion now, it would be too late. “There does not appear to be any specific process an agency must follow in determining that a categorical exclusion applies and that an exception to that exclusion does not apply; the agency must simply explain its decision in a reasoned manner.” *Ctr. For Food Safety v. Johanns*, 451 F. Supp. 2d 1165, 1175–76 (D. Haw. 2006). At a minimum, however, an agency must invoke a categorical exclusion explicitly. *Oak Ridge Envtl. Peace All.*, 412 F. Supp. 3d at 842 (citation omitted). “Post-hoc invocation of a categorical exclusion does not provide assurance that the agency considered the effects of its action before deciding to pursue it.” *Wilderness Watch, Inc. v. Creachbaum*, 225 F. Supp. 3d 1192, 1209 (W.D. Wash. 2016), *aff'd*, 731 F. App'x 709 (9th Cir. 2018); see *Sherwood*, 590 F. App'x at 459 (rejecting post-hoc invocation of categorical exclusions).

The decision to adopt the Long-term Contract would not have been eligible for a categorical exclusion had TVA chosen to invoke one. Categorical exclusions apply to actions that do not “normally” require an EA or EIS, 40 C.F.R. § 1507.3(b)(2)(ii); 40 C.F.R. § 1501.4(a), and which “do not individually or cumulatively have a significant effect on the human environment,” 40 C.F.R. § 1508.4. Agencies must identify categorical exclusions in their NEPA procedures. *Id.* They must also identify the “extraordinary circumstances” under which “a normally excluded action may have a significant environmental effect.” 40 C.F.R. § 1508.4.

The TVA's NEPA procedures include twenty-eight categorical exclusions, subject to just two extraordinary circumstances, identified in bold text:

Categories of actions listed in this section are those which do not normally have, either individually or cumulatively, a significant impact on the quality of the human environment and require neither the preparation of an EA nor an EIS. The office proposing to initiate an action shall determine, in consultation with the

¹⁰⁶ See Att. 4, E-mail from Matthew Stephen Higdon (April 10, 2020, 3:06 pm).

Environmental Quality Staff as appropriate, whether or not the proposed action is categorically excluded. **An action which would normally qualify as a categorical exclusion shall not be so classified if: (1) the proposed action could have a potentially significant impact on a threatened or endangered species, wetland or floodplain, cultural or historical resource, important farmland, or other environmentally significant resource; or (2) substantial controversy over the significance of the environmental impacts associated with the proposed action has developed or is likely to develop.** Categorical exclusion actions are:

...

6. Contracts or agreements for the sale, purchase, or interchange of electricity.

....

Proposed Revisions to Procedures Implementing the National Environmental Policy Act (NEPA) and Executive Order Nos. 11988 (Floodplain Management) and 11990 (Protection of Wetlands), 47 Fed. Reg. 54,586-01 (1982), adopted in 48 Fed. Reg. 19,264 (1983).

TVA has finalized new NEPA procedures,¹⁰⁷ which became effective April 27, 2020. Procedures for Implementing the National Environmental Policy Act, 85 Fed. Reg. 17,434-01 (Mar. 27, 2020). The new regulations dramatically expand the number of categorical exclusions that the agency recognizes. 85 Fed. Reg. at 17,460-63. They preserve the categorical exclusion for contracts for the sale of electricity. *Id.* They also preserve the extraordinary circumstances from the previous iteration in much the same form, including actions that have “the potential to significantly impact environmental resources” or where the “significance of the environmental impacts associated with the proposed action is or may be highly controversial.” 85 Fed. Reg. at 17,460. In the new NEPA procedures, TVA redefined “controversial” to mean “scientifically supported commentary that casts substantial doubt on the agency’s methodology or data, but does not mean commentary expressing mere opposition.” 85 Fed. Reg. at 17,459. This definition is overly narrow and likely violates NEPA. *See* 40 C.F.R. § 1508.27(b)(4). Here, TVA has so far failed to provide its own relevant technical analyses supporting the Long Term Contract and the Flexibility Proposal. TVA may not simultaneously withhold its technical analyses and demand that the public comply with its narrow definition of “controversial.” Furthermore, the definition is too narrow to capture relevant aspects of the ongoing controversy.

Under either version of the regulations, the TVA categorical exclusion most likely to apply to the decision to adopt the Long-term Contract option is No. 6, quoted above. However, as TVA made clear in response to comments on No. 6, that categorical exclusion does not apply to electricity contracts that would “spur expansion or development of facilities and/or transmission infrastructure . . .”¹⁰⁸ The Long-term Contract would spur development of facilities

¹⁰⁷ For a summary of rulemaking actions, *see* Att. 53, *Changes to TVA’s NEPA Procedures*, TENN. VALLEY AUTH, <https://www.tva.com/environment/environmental-stewardship/environmental-reviews/nepa-detail/Proposed-Changes-to-TVAs-NEPA-Procedures> (last visited Apr. 20, 2020).

¹⁰⁸ Att. 54, TENN. VALLEY AUTH., RESPONSE TO PUBLIC COMMENTS: PUBLIC REVIEW OF TVA’S PROPOSED AMENDMENTS TO PROCEDURES FOR IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT (June to

and infrastructure in at least three ways: increasing demand, limiting exit, and providing the option for local power companies to obtain 3-5 percent of their generation from non-TVA sources, including new renewable and gas generation. Accordingly, by TVA's own terms, No. 6 would not apply.

Even if adopting the Long-term Contract did fall within categorical exclusion No. 6, both of the extraordinary circumstances that TVA has identified pertain and it could not be used. As described above, the Long-term Contract option is likely to have significant impacts on environmentally significant resources such as the air quality in the TVA region and global atmospheric GHG concentrations. Furthermore, substantial controversy over the environmental impacts of the Long-term Contract option has developed and is likely to develop further.¹⁰⁹ As demonstrated throughout these comments, this is true even under the new unreasonably narrow definition of "controversy." Because there is substantial evidence of extraordinary circumstances TVA would be required to have provided more than a bare invocation of a categorical exclusion were it to invoke one. *Oak Ridge Env'tl. Peace All.*, 412 F. Supp. 3d at 842.

Accordingly, TVA's decision to adopt the Long-term Contract option is not categorically excluded from the NEPA requirement to prepare an EA or EIS. TVA did not invoke a categorical exclusion; it is too late to invoke one now; no categorical exclusion under either version of TVA's NEPA procedures applies; and even if one did, under either version there are extraordinary circumstances precluding the use of a categorical exclusion.

September 2017), (March 2020) https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/environmental-stewardship/nepa-environmental-reviews/tva_nepa_procedures_comment_response_report_3-25-2020_final.pdf?sfvrsn=8622d330_3 ("The proposed revision to the CE established by TVA in 1980 was intended to clarify that transactions that spur expansion or development of facilities and/or transmission infrastructure are not covered under the CE. Upon further internal deliberation, however, TVA determined that no clarification was needed to the CE, as staff shared that understanding of the existing CE. In the final rule, TVA carries forward the existing CE without revision as CE 6.")¹⁰⁹ See, e.g., Att. 55, James Bruggers for Inside Climate News, *TVA's push for lengthy utility deals could set back green initiatives in Tennessee cities*, KNOX NEWS (5:00 a.m. ET Jan. 8, 2020), <https://www.knoxnews.com/story/news/local/tennessee/2020/01/08/tva-trying-lock-tennessee-cities-into-lengthy-utility-deals/2698982001/>; Att. 56, Daniel Tait & Joe Smyth, *TVA attempts to chain local power companies to longer contracts in effort to prevent defection risk: New TVA contract could prevent municipal utilities, co-ops from pursuing local renewable energy, storage*, ENERGY & POL'Y INST. (Sept. 22, 2019), <https://www.energyandpolicy.org/tva-local-power-companies-defection/>; Att. 57, Samuel Hardiman for The Commercial Appeal, *Here's TVA's final offer to Memphis*, ENERGY CENTRAL (Jan 3, 2020 6:53 am GMT) ("Outside experts from renewable energy lobbyist groups have blasted the 20-year offer as a lopsided one that keeps local utilities buying fossil-fuel generated power, slows the transition to renewable energy and cements TVA's monopoly."); Att. 58, Pam Sohn, *Is TVA locking the South out of the future?*, CHATTANOOGA TIMES FREE PRESS (December 21st, 2019), <https://www.timesfreepress.com/news/opinion/times/story/2019/dec/21/sohn-tvlocking-south-out-future/511057/>.

D. The Flexibility Proposal will significantly affect the environment and requires an EIS.

The Flexibility Proposal will significantly affect the quality of the human environment and therefore requires analysis in a full EIS. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.27. The Flexibility Proposal is a major federal action. It is an official policy. Much like the “15-foot policy” at issue in *Sherwood*, which governed the way that TVA maintenance personnel would manage the acreage within its vast rights of way, the Flexibility Proposal will govern TVA’s relationship with local power companies. 590 F. App’x 451.

The Flexibility Proposal will significantly affect the quality of the human environment. *See* 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.27. As discussed above, the analysis proceeds in two steps. First, “the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.” 40 C.F.R. § 1508.27(a). Here again, TVA’s policy will affect its entire region. The Flexibility Proposal applies to local power companies that have signed the Long-term Contract, currently at least 138 of the 154 local power companies in TVA territory.¹¹⁰ It will affect residents of TVA’s region in terms of air quality, public health, and clean-energy jobs, and will affect the customers of these local power companies through its impact on their bills.

Second, the “intensity” or “the severity of impact” of the action must be analyzed. 40 C.F.R. § 1508.27(b). NEPA regulations provide ten factors to consider when evaluating intensity. The first is simply environmental impacts. 40 C.F.R. § 1508.27(b)(1). Additional factors include impacts to public health, *id.* § 1508.27(b)(2), “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial,” *id.* § 1508.27(b)(4), “[t]he degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration,” *id.* § 1508.27(b)(6), and cumulative impacts, *id.* § 1508.27(b)(7). Like the Long-term Contract, the Flexibility Proposal will have these impacts.

For those local power companies that have signed the Long-term Contract, the Flexibility Proposal will govern their ability to deploy their own generation resources. Under the Flexibility Proposal, local power companies must not violate five “principles” established by TVA.¹¹¹ These principles limit local power companies’ self-generation *capacity* to five percent of a local power company’s average total *energy* sales during the previous five TVA fiscal years, with a minimum of 1 MW.¹¹² This limitation plainly has a direct impact on the environment by effectively capping the amount of distributed generation that local power companies may deploy. As the

¹¹⁰ Draft EA at 1-1.

¹¹¹ *Id.* at 2-1 to -2.

¹¹² *Id.* at 2-1.

price of renewable generation continues to decrease and customers continue to demand it, local power companies might otherwise exceed the threshold.¹¹³

Other “principles” of the Flexibility Proposal also generate significant environmental impacts. The second principle requires that qualifying “flexible” generation must be located within the local power company’s service territory.¹¹⁴ Depending on the quality of renewable generation resources in a local power company’s territory compared to other areas, this limitation may make it more expensive for a local power company to develop renewable generation and therefore may decrease the capacity developed.

The fourth principle explains that “TVA will remain obligated to provide the full power requirements of the Valley Partner.”¹¹⁵ Thus, TVA appears to assign local power companies’ “flexible” generation zero capacity value, and to honor this provision it will need to plan as though this is the case. Doing so overestimates the capacity that TVA needs and likely overvalues the capacity value of TVA’s existing resources such as coal-burning power plants. This in turn will likely lead TVA to conclude that it must keep those plants operating longer than otherwise necessary.

Finally, the fifth principle requires that “flexible” generation be consistent with TVA’s IRP. TVA explains that “[c]onsistent with DER identified in the 2019 IRP, community solar, rooftop solar, co-located solar and battery installations, natural gas-fired generators, and high efficiency natural gas-fired combined heat and power projects would be eligible,” although diesel- and coal-burning generators would not.¹¹⁶ Plainly, including fossil gas-burning generators among the types of eligible generation will have a negative environmental impact compared to excluding them, assuming that any local power company chooses to develop them.

As long as local power companies abide by these rules, TVA renounces all control over the generation sources they select,¹¹⁷ meaning there is nothing to prevent local power companies from selecting fossil gas-burning plants for all “flexible” generation. When it comes to analyzing the environmental impacts of the Flexibility Proposal, however, TVA assumes that no more than fifty percent of the generation deployed under the Flexibility Proposal will be fossil gas-burning. TVA analyzes three deployment scenarios: 100 percent solar, ninety percent solar and ten percent gas, and fifty-fifty solar and gas.¹¹⁸ TVA asserts, without explanation, that these three scenarios represent the “likely” range of generation mixes and explains that this is the range “that would ensure that TVA’s carbon position is improved.”¹¹⁹ In other words, TVA acknowledges

¹¹³ Under the terms of the Long-term Contract the Flexibility Proposal may not permit “flexible” generation in excess of five percent of the LPC’s energy use; however, far from showing that the environmental impact of this cap does not need to be analyzed under NEPA, at best it shows simply that the Long-term Contract needs to undergo NEPA review.

¹¹⁴ Draft EA at 2-1.

¹¹⁵ *Id.* at 2-1.

¹¹⁶ *Id.* at 2-2.

¹¹⁷ *Id.*

¹¹⁸ *Id.* at 3-1.

¹¹⁹ *Id.*

that if more than fifty percent of the “flexible” generation that local power companies develop under the Flexibility Proposal is fossil gas-burning, then TVA’s contribution to climate change will be greater than it otherwise would. Accordingly, the EA is internally inconsistent and the basis for TVA’s conclusion that the Flexibility Proposal will not have significant environmental impacts is arbitrary.

In these ways and more, the Flexibility Proposal will significantly affect the quality of the human environment. *See* 40 C.F.R. § 1508.27. It will stifle the growth of renewable energy, resulting in greater air pollution which will worsen public health and exacerbate climate change. Largely for this reason, the proposal has proven controversial, as noted above. *See id.* § 1508.27(b)(2). Of course, the Flexibility Proposal is precedent for each individual flexibility agreement that TVA will subsequently enter with local power companies, which will have significant environmental impacts of their own, not least concerning whether the generation in question is renewable or not. *See id.* § 1508.27(b)(6). And the Flexibility Proposal will have cumulative impacts on top of those of the existing and un-analyzed Long-term Contract and other actions by TVA that have constrained the growth of renewable energy. *See id.* § 1508.27(b)(7).

E. Tiering the Draft EA to the 2019 IRP in inappropriate.

The draft EA for the Flexibility Proposal purports to tier to the EIS for the 2019 IRP.¹²⁰ “Tiering” is the practice of first preparing an EIS for a broader agency action such as an overall program, and later incorporating applicable parts of the general discussion into the NEPA analyses for narrower agency actions such as site-specific projects. 40 C.F.R. § 1508.28; *see* Proposed Revisions to Procedures Implementing the National Environmental Policy Act (NEPA) and Executive Order Nos. 11988 (Floodplain Management) and 11990 (Protection of Wetlands) § 5.8.6., 47 Fed. Reg. 54,586-01 (1982), adopted in 48 Fed. Reg. 19,264 (1983); Procedures for Implementing the National Environmental Policy Act, 85 Fed. Reg. 17,434-01, 17465. “Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site-specific action),” the agency should summarize the issues discussed in the broader statement and “concentrate on the issues specific to the subsequent action.” 40 C.F.R. § 1502.20.

There are at least two problems with TVA’s attempt to tier to the EIS for the 2019 IRP in this case. First, the EIS did not analyze the effects of actions like the Flexibility Proposal. To serve as a sufficient basis for tiering, the EIS for a broader action must evaluate the effects of the later narrower action whose environmental documents tiers to it. *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 997-98 (9th Cir. 2004) (explaining that broader EIS tiered from must have accounted for specific impacts of later action). To some degree, this requires anticipating the type of action for whose environmental document the agency later seeks

¹²⁰ *Id.* at 1-4 to -5.

to tier to the broader EIS. *See* 40 C.F.R. § 1502.20 (“an action included within the entire program or policy”).

The EIS for the 2019 IRP did not analyze the effects of actions like the Flexibility Proposal, nor did it anticipate similar actions. In the Draft EA, TVA makes clear that it considers the Flexibility Proposal to be a form of DER analyzed in the sections of the EIS addressing DERs:

TVA considered the promotion of DER most explicitly under Strategy B (“Promote DER”). Under that strategy, TVA would focus on increasing the pace of DER adoption by incentivizing distributed solar generation and storage, combined heat and power, energy efficiency, and demand response. High penetration of distributed generation was also considered under the different scenarios evaluated in the IRP (TVA 2019a).¹²¹

The EIS explains that “Strategy B focuses on increasing the pace of DER adoption by incentivizing distributed solar and storage, combined heat and power, energy efficiency and demand response.”¹²² This list does not contain “natural gas-fired generators,” which are eligible for the Flexibility Proposal.¹²³ Nor does the Flexibility Proposal include energy efficiency and demand response, two important components of the Promote DER strategy analyzed in the 2019 IRP. Further, the draft EA acknowledges that “The 2019 IRP EIS did not provide general information about generating resources of the scale contemplated in the Flexibility Proposal,”¹²⁴ meaning, apparently, relatively small-capacity installations.

Furthermore, the Draft EA denies any capacity value to the “flexible” resources that LPCs may deploy. Its analysis of the effects of the Flexibility Proposal on energy production and use simply states that solar and fossil gas-burning generation would displace fossil-gas burning generation that TVA would have deployed, and

due to the relatively small proportion of TVA’s overall generating capacity that would be provided by LPCs under the Proposed Action Alternative, and particularly LPC natural gas-fired generation, the Proposed Action Alternative is unlikely to markedly alter the TVA long-term power supply plan (TVA 2019a) or the timing of the construction of new generating capacity and retirement of existing generating capacity.¹²⁵

In other words, any “flexible” generation would displace fossil gas-burning generation in the moment, but none of it would affect TVA’s plans. By contrast, in the EIS for the 2019 IRP TVA

¹²¹ Draft EA at 1-4.

¹²² Att. 43, 2019 IRP EIS at 3-8.

¹²³ Draft EA at 2-2.

¹²⁴ Draft EA at 1-4.

¹²⁵ Draft EA at 3-5.

acknowledges that DER deployment will decrease demand,¹²⁶ which will decrease the reserve capacity TVA needs.¹²⁷

Second, the EIS for the 2019 IRP did not take into account the effect of a rate discount on demand. The 2019 IRP relies on the assumption that DER deployment will decrease demand.¹²⁸ This is surely true. However, assuming that local power companies that sign the Long-term Contract pass at least some of the 3.1 percent wholesale discount on their consumers, the discount will increase demand.¹²⁹ Because TVA incorrectly failed to conduct a NEPA review of its decision to adopt the Long-term Contract, the effect of this increase in demand has never been analyzed. Accordingly, it must be analyzed now. At a minimum, the demand increase caused by the 3.1 percent wholesale rate credit should be analyzed in conjunction with the reduction in demand caused by varying levels of local power company deployment of “flexible” resources under the Flexibility Proposal. Demand growth as a result of the discount will offset and could even overtake the reduction in demand caused by local power companies’ deployment of “flexible” generation under the Flexibility Proposal.¹³⁰ That relative (or absolute) increase in demand will have a significant environmental impact not contemplated at all in the EIS for the 2019 IRP. Under NEPA, it is TVA’s charge to analyze the effect on demand of its wholesale credit, compare it to any renewable generation TVA expects to be developed under the Flexibility Proposal, and assess the overall environmental impacts.

TVA purports to “tier its analysis to address more site-specific impacts that may occur based on likely local power company deployment scenarios,”¹³¹ but the EA does not analyze any site-specific impacts.¹³² Although tiering to the EIS for a broader agency action is perfectly permissible, it does not insulate the later narrower agency action from full NEPA review including the requirement to prepare an EIS to evaluate significant impacts. *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1214 (9th Cir. 1998). As set forth above, there are significant environmental impacts to the Flexibility Proposal that have not been analyzed in the Draft EA and were not analyzed in the EIS for the 2019 IRP.

¹²⁶ Att. 43, 2019 IRP EIS, 4-5 to -6.

¹²⁷ *Id.* at 4-7 (explaining that reserve capacity needs depend on peak load).

¹²⁸ *Id.* At 4-5 to -6, 6-4.

¹²⁹ Att. 49, Greenlink Analytics, Evaluating TVA’s Newly Proposed Wholesale Reductions and Capacity Additions, Table 1 and accompanying text (May 2020).

¹³⁰ *Id.* at Table 4 and accompanying text. For this analysis, Greenlink Analytics used the 90 percent solar, 10 percent gas scenario that TVA identified as most likely to occur, and used a conservative assumption that the full five percent flexibility is utilized by local power companies.

¹³¹ Draft EA at 1-4.

¹³² *See id.* (“Because the Flexibility Proposal establishes a ‘program’ applying to any LPC that has a long-term agreement with TVA, the EA’s analysis is largely generic in nature as site specific information about the location or type of power generation resource LPCs would utilize is unknown.”); 3-3 (“TVA would not have approval authority over LPC generation resources that may be adopted under the Flexibility Proposal. Therefore, this EA addresses the potential impacts of the construction and operation of the flexible generation resources under the control of the LPCs in a generic non-site specific context and to the extent those impacts are foreseeable.”).

In addition to tiering to the EIS for the 2019 IRP, the Draft EA “incorporates by reference TVA’s 2018 Wholesale Rate Change EA.”¹³³ TVA does not purport to tier to the document but appears to attempt to incorporate the whole of its analysis. This is improper. *See* 40 C.F.R. § 1502.21 (allowing incorporation by reference for EIS but making no provision for EA); *Nat. Res. Def. Council v. Duvall*, 777 F. Supp. 1533, 1538 (E.D. Cal. 1991). Further, TVA’s brief description of the rate-change EA is insufficient for incorporation by reference. *See* 40 C.F.R. § 1502.21; *Recent Past Pres. Network v. Latschar*, 701 F. Supp. 2d 49, 59 (D.D.C. 2010). Finally, had TVA intended to tier, it could not, because a NEPA document may tier only to an EIS. 40 C.F.R. § 1502.20 (“Whenever a broad environmental impact statement has been prepared . . .”); *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 810 (9th Cir. 1999).

V. TVA INAPPROPRIATELY PREDETERMINED THE OUTCOME OF ITS NEPA ANALYSIS.

NEPA prescribes the process that Federal agencies must follow before taking any action that significantly affects the environment. *Coal. For Advancement of Regional Transp. v. FHWA*, 9595 F. Supp. 2d 982, 993 (W.D. Ky. 2013). To that end, NEPA prohibits Federal agencies from predetermining the outcome of the NEPA process, 40 C.F.R. §§ 1501.2; 1502.5 1506.1(a), and proscribes agencies from making “irreversible and irretrievable commitments of resources” before completing their environmental analysis. *Center for Biological Diversity v. U.S. Forest Serv.*, 2020 WL 142569 *8 (S.D. Oh. Mar. 13, 2020). TVA has flipped the NEPA process on its head: rolling out the Long-term Contract and promising local power companies a flexibility option that allowed up to five percent flexible generation, entering into at least 138 contracts with terms of 20 plus years, and only now producing an inadequate environmental analysis of the Flexibility Proposal, without ever having analyzed the impacts associated with the Long-term Contract as a whole. In doing so, TVA impermissibly predetermined the outcome of its belated NEPA analysis.

The Long-term Contract provides that TVA will “develop and provide enhanced power supply flexibility, with mutually agreed-upon pricing structures, for 3-5 percent of Distributor’s energy, by no later than October 1, 2021.”¹³⁴ This commitment predetermined TVA’s subsequent NEPA analysis because in order to comply with the Long-term Contract, TVA must propose a flexibility option that allows local power companies flexibility with regard to no less than three percent and no more than five percent of their demand. Unlike local power companies, which can choose to terminate the agreement if they do not find the Flexibility Proposal agreeable or if TVA fails to propose a flexibility option, the contract does not give TVA the ability to conclude that no Flexibility Proposal is necessary or select an alternative that would allow local power companies generate over five percent of their annual demand.¹³⁵ In other words, TVA “irreversibly and irretrievably committed itself to a plan of action that is dependent on the NEPA environmental analysis producing a certain outcome, before the agency has

¹³³ *Id.* at 3-7.

¹³⁴ Att. 3, TVA, Board Exhibit 8-22-19J, Long-term Agreement § 2.

¹³⁵ *Id.*

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completed that environmental analysis.” *Forest Guardians v. U.S. Fish and Wildlife Serv.*, 611 F.3d 682, 714 (10th Cir. 2010); *Tenn. Envtl. Council*, 32 F. Supp. 3d at 884. The “point of commitment” came when TVA began signing Long-term Contracts with local power companies in August 2019. *Metcalfe v. Daley*, 214 F.3d 1135, 1143-44 (9th Cir. 2000) (Upon signing a contract, agency made an “irreversible and irretrievable commitment of resources”); *Save the Yaak Comm. v. Block*, 540 F.2d 714, 718, 718-19 (9th Cir. 1988) (The awarding of contracts prior to preparation of EAs demonstrates that the agency did not comply with NEPA’s requirements concerning the timing of their environmental analysis). Since then, TVA has signed at least 137 additional Long-term Contract contracts with local power companies.

This situation is analogous to that considered by the Ninth Circuit Court of Appeals in *Metcalfe*, 214 F.3d 1135. In *Metcalfe*, plaintiffs argued that a federal agency failed to comply with 40 C.F.R. §§ 1501.2 and 1502.5’s requirement that federal agencies begin the NEPA process as early as possible, and made an “irreversible and irretrievable commitment of resources” by entering into a contract with an indigenous group agreeing to support the group’s application to the International Whaling Commission for a whaling quota of five grey whales a year before the EA was prepared. *Id.* at 1143. The Ninth Circuit Court of Appeals held that the federal agency had predetermined the outcome of its environmental analysis in violation of NEPA:

The Federal Defendants did not engage the NEPA process “at the earliest possible time.” Instead, the record makes clear that the Federal Defendants did not even consider the potential environmental effects of the proposed action until long after they had already committed in writing to support the Makah whaling proposal. The “point of commitment” in this case came when NOAA signed the contract with the Makah in March 1996 and then worked to effectuate the agreement. It was at this juncture that it made an “irreversible and irretrievable commitment of resources.” ... Had NOAA/NMFS found after signing the Agreement that allowing the Makah to resume whaling would have a significant effect on the environment, the Federal Defendants would have been required to prepare an EIS, and they may not have been able to fulfill their written commitment to the Tribe. As such, NOAA would have been in breach of contract.

Id. at 1144-45.

So it is here. By entering into the Long-term Contract with local power companies promising the development of a Flexibility Proposal that allowed three to five percent flexible generation before even beginning its NEPA analysis, TVA “irretrievably and irreversibly” committed itself to a particular outcome. If TVA had found, after completing its Draft EA, that flexible generation of three to five percent would have a significant effect on the environment, and been required to prepare an EIS, it may not have had time to fulfill its written commitment to the LPCs by October 21. Similarly, if TVA had found that flexible generation of less than three percent or greater than five percent was a reasonable alternative to the Preferred Alternative, TVA would have had to breach its contract with local power companies in order to propose such an alternative. Therefore, TVA failed to comply with NEPA by making an “irretrievably and

irreversible” commitment of resources prior to completing—or even starting—its environmental analysis.

VI. TVA’ S ALTERNATIVES ANALYSIS IS ARBITRARY AND CAPRICIOUS.

The touchstone of NEPA compliance is whether selection and discussion of alternatives within an EA fosters informed decision-making and informed public participation. *Mont. Wilderness Ass’n v. Fry*, 310 F. Supp. 2d 1127, 1144 (D. Mon. 2004); *Cal. v. Block*, 690 F.2d 753, 767 (9th Cir. 1982). The Draft EA fails this test. TVA relies on a Statement of Purpose and Need that is impermissibly narrow; bases its analysis on a flawed and inaccurate No Action Alternative; and fails to analyze a full range of reasonable alternatives in sufficient detail.

A. TVA’s Statement of Purpose and Need is impermissibly narrow.

Agencies may not rely on purpose and need statements that are so narrow as to “compel the selection of a particular alternative.” *Theodore Roosevelt Conservation P’ship v. Salazar*, 661 F.3d 66, 74 (D.C. Cir. 2011). “An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the goals of the agency's action, and [NEPA] would become a foreordained formality.” *Tenn. Env’tl. Council*, 32 F. Supp. 3d at 876. In other words, it is arbitrary and capricious for an agency to “define [a] project so narrowly that it foreclose[s] a reasonable consideration of alternatives.” *Utah Env’tl. Cong. v. Bosworth*, 439 F.3d 1184, 1195 (10th Cir. 2006).

TVA states that the purpose and need for the proposed action is to: (1) enhance the Valley’s energy resource development, and (2) respond to customer demand for renewable energy resources.¹³⁶ However, in describing the Purpose and Need for the Proposed Action, TVA repeatedly references its commitment in the Long-term Contract to “develop an option for power supply flexibility for Valley Partners to generate *up to five percent of energy*.”¹³⁷ By including the five percent limit of any power flexibility option in its statement of purpose and need TVA assured that only one alternative—the Proposed Action Alternative—could be selected.

Agencies are permitted to set reasonable bounds on a statement of purpose and need. *Airport Neighbors Alliance, Inc. v. U.S.*, 90 F.3d 426, 432 (10th Cir. 1996). But here, TVA has not provided any tangible justification for the five percent cap on flexible generation. TVA has not provided any quantitative analysis demonstrating that a five percent cap is necessary to “ensure[] the financial health” of TVA, and has failed to articulate any reason—other than the fact that TVA pre-committed to offering up to five percent flexibility generation in the Long-term Contract—for not considering higher

¹³⁶ Draft EA at 1-1.

¹³⁷ Draft EA at 1-1 (emphasis added); *see id.* (“The five percent flexibility level would provide Valley Partners sufficient flexibility to meet their customers’ need while ensuring that the financial health impact to TVA is at a level that fits within the current strategic financial plan.”); *see also id.* at 2-2 (describing elimination of the Flexible Generation of Greater than Five Percent Alternative).

levels of solar generation. When SELC requested documents regarding the development of this Statement of Purpose and Need, TVA failed to provide any information supporting its statement that five percent generation cap is necessary to “ensure[] the financial health” of TVA.¹³⁸ Instead, TVA disclosed only its most recent 10-Q Report and copies of the minutes and presentation from TVA’s August 22, 2019 board meeting.¹³⁹ None of these documents explain the basis for the five percent limit on flexible generation in Draft EA’s Statement of Purpose and Need. Therefore, TVA acted arbitrarily by artificially constraining the statement of purpose and need in a manner that compelled the selection of TVA’s Proposed Action Alternative.

B. TVA’s “No Action” Alternative is unrealistic and flawed.

TVA’s No Action Alternative is inaccurate, produces an unreliable baseline against which to evaluate the impacts of the proposed alternative, and renders the entire alternatives analysis arbitrary and capricious. TVA states that “[u]nder the No Action Alternative, TVA would continue to implement the Long-term Contracts but would not offer power supply flexibility options.”¹⁴⁰ This means that “LPCs have the option to terminate their LTP agreement.”¹⁴¹ In other words, the No Action Alternative assumes the existence of the Long-term Contract. TVA’s formulation of the No Action Alternative is flawed two major ways. First, it assumes the existence of the Long-term Contract without accounting for any of the environmental impacts of the Long-term Contract—which to date remain unanalyzed.¹⁴² Second, the No Action Alternative does not account for changes in the number of local power companies participating in the Long-term Contract if the Flexibility Proposal were not adopted.

Under normal circumstances, analyzing a no action alternative “in terms of continuing with the present course of action until that action is changed” would be reasonable. 46 Fed. Reg. 18,026, 18,027 (1981). However, TVA never actually evaluated the environmental impacts of the “current plan or action”—the Long-term Contract. As a result, the No Action Alternative, which assumes the existence of the Long-term Contract but does not account for environmental and other impacts of the Long-term Contract, is inaccurate and flawed. Instead of acknowledging the yet-unquantified impacts of the Long-term Contract, TVA assumes that the world with Long-term Contracts is exactly the same as the world without Long-term Contracts. This is simply not true. For example, the 3.1 percent decrease in wholesale prices for local power companies that sign Long-term Contracts would likely increase demand for energy.¹⁴³ This increase in load could affect TVA’s generation practices and have environmental impacts. Furthermore, decreases in wholesale prices could impact the adoption and viability of energy efficiency

¹³⁸ Att. 16, Letter from Amanda Garcia, SELC, to Denise Smith, TVA 1 (April 13, 2020).

¹³⁹ Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (Apr. 24, 2020).

¹⁴⁰ Draft EA at 3-4 (“TVA would continue to implement the LTP agreements but would not offer power supply flexibility options.”)

¹⁴¹ Draft EA at 1-1.

¹⁴² See *supra* pp. 12-22.

¹⁴³ See Att. 49, Greenlink Analytics, Evaluating TVA’s Newly Proposed Wholesale Reductions and Capacity Additions (May 2020); Att. 50, TATYANA DERYUGINA, ET AL.

programs and distributed solar—when energy is cheaper, customers have less of an incentive to adopt energy efficiency measures and invest in distributed solar. The EA does not consider any of these likely impacts. Instead, TVA irrationally assumes that the existence of the Long-term Contract will have no impact whatsoever.

Furthermore, the No Action Alternative does not account for local power companies that would cease their participation in the Long-term Contract if the Flexibility Proposal is not adopted. Even if the Long-term Contract’s environmental impacts had been properly considered—and they were not—TVA would be required to analyze how the adoption of the Proposed Alternative would impact local power companies’ participation in the Long-term Contract. TVA acknowledges that under the No Action alternative “LPCs have the option to terminate their LTP agreement”¹⁴⁴ but fails to consider whether local power companies would actually exercise this right and how termination of the Long-term Contract by some local power companies would impact that program. Many of TVA’s largest local power companies developed community solar projects under a former TVA program, and, as described elsewhere in these comments, at least two of TVA’s largest local power companies’ customers (NES and KUB) have recently taken advantage of TVA’s Green Invest program, indicating a strong interest in developing renewable projects at a local scale.¹⁴⁵ Further, as discussed above, at least one local power company is actively engaged in evaluating terminating its contract with TVA in part to obtain cheaper, cleaner power from other sources.¹⁴⁶ In other words, if TVA insists on inaccurately including the Long-term Contract in the No Action Alternative, it must at least consider the impact the absence of a Flexibility Proposal would have on the number of local power companies continuing to contract with TVA under the Long-term Contract.

C. TVA failed to analyze a reasonable range of alternatives.

NEPA requires agencies to “[r]igorously explore” and “objectively evaluate” all “reasonable alternatives.” 40 C.F.R. § 1502.14, (a), (d); *see Meister v. U.S. Dep’t of Agric.*, 623 F.3d 363,377 (6th Cir. 2010) (Courts “will insist that the agency has, in fact, adequately studied the issue and taken a hard look at the environmental consequences of its decision.”). This obligation applies whether an agency is preparing an EIS or an EA. *Western Watersheds Project*, 719 F.3d at 1050. While an agency’s obligation to discuss alternatives is less in an EA than an EIS, it must still “give full and meaningful consideration to all reasonable alternatives” in an EA. *Id.*; *see Coal. For Advancement of Reg’l Transp.*, 959 F. Supp. 2d at 1003 (Agencies must “rigorously explore and objectively evaluate all reasonable alternatives[.]”). “The existence of a viable but unexamined alternative renders and EA inadequate.” *Western Watersheds Project*, 719 F.3d at 1050. Furthermore, feasible alternatives must be considered in detail. *Id.*; *see Muckleshoot Indian Tribe*, at 814 (concluding that the Forest Service violated NEPA by considering but preliminarily dismissing several feasible alternatives). The Draft EA only analyzed the No Action Alternative and the Proposed Action Alternative in detail.¹⁴⁷ TVA also

¹⁴⁴ Draft EA 1-1.

¹⁴⁵ *See infra* pp. 38-40.

¹⁴⁶ *See supra* pp. 15-18.

¹⁴⁷ *Id.* at 2-1

briefly considered two additional alternatives: Flexible Generation of Greater than Five Percent and Expansion of the TVA Flexibility Research Project.¹⁴⁸ The Draft EA is inadequate because it altogether failed to consider several reasonable alternatives and dismissed the Flexible Generation of Greater than Five Percent and Expansion without sufficiently detailed analysis.

1. *Zero-Carbon Alternative*

The Draft EA failed to even consider reasonable alternatives that would meet TVA's stated purpose of enhancing the Tennessee Valley's resource diversity and responding to customer demand for renewable energy resources.¹⁴⁹ For example, TVA did not evaluate a Zero-Carbon Alternative that would, like the Proposed Action Alternative, allow LPCs to generate up to five percent of their average annual demand but would limit that generation to zero-carbon resources. A Zero-Carbon Alternative would enhance the Valley's resource diversity by encouraging renewable energy resource development and respond to customer demand for renewable energy resources more effectively than the Proposed Action Alternative, considers natural gas generation to be eligible flexible generation.¹⁵⁰ Unlike renewable generation, such as solar panels, gas-fired generators and natural gas-fired combined heat and power projects have numerous significant environmental impacts.¹⁵¹ Furthermore, as TVA notes in the Purpose and Need portion of the Draft EA, the economics of renewables are continuing to advance.¹⁵² Innovative renewable generation arrangements such as storage plus storage facilities can improve TVA's operational agility and avoid the need for costly and environmentally damaging long-term investments in dirty generation sources such as natural gas.

Because a Zero-Carbon Alternative would bring about TVA's stated project purpose and is within the "ambit of an existing standard" TVA may not reject it outright. *See Meister*, 623 F.3d at 379 ("An alternative within the ambit of an existing standard ... generally may not be abandoned without any consideration whatsoever."). TVA's NEPA analysis will continue to be inadequate unless a Zero-Carbon Alternative is analyzed in detail and objectively evaluated. *See Western Watersheds Project*, 719 F.3d at 1050.

2. *Flexible Generation of Greater than Five Percent Alternative*

Furthermore, to the extent that TVA did consider a Flexibility Proposal that would allow greater than five percent flexible generation, TVA's analysis was inadequate. TVA dismissed the Flexible Generation of Greater than Five Percent Alternative with minimal explanation:

¹⁴⁸ *See id.* at 2-2.

¹⁴⁹ *Id.* at 1-1.

¹⁵⁰ *Id.* at 2-2.

¹⁵¹ Att. 59, IMPACTS OF NATURAL GAS, UNION OF CONCERNED SCIENTISTS (Jun. 19, 2014) <https://www.ucsusa.org/resources/environmental-impacts-natural-gas>; Att. 60, David Roberts, *More natural gas isn't a "middle ground" – it's a climate disaster*, VOX (May 30, 2019) <https://www.vox.com/energy-and-environment/2019/5/30/18643819/climate-change-natural-gas-middle-ground>.

¹⁵² Draft EA at 1-1.

TVA considered allowing Valley Partners to have flexible generation of greater than five percent of their average total hourly energy sales over the last five TVA fiscal years. When developing the LTP agreement, TVA determined that the range of three to five percent balanced the risk of revenue erosion with the expected benefits of rate and financial stability from longer commitment periods, and moves this new concept gradually. Additionally, TVA determined that while five percent power supply flexibility would provide LPCs with substantially more flexibility than three percent, any flexibility greater than five percent would impose a higher risk to the financial plan. For these reasons, this alternative was eliminated from further consideration.¹⁵³

First, TVA's reliance on the commitment it made in the Long-term Contract to justify elimination of this alternative is further evidence of improper bias and predetermination in the NEPA process.¹⁵⁴

Second, TVA's conclusory assertions that "any flexibility greater than five percent would impose a higher risk to the financial plan" and "the range of three to five percent balanced the risk of revenue erosion with the expected benefits of rate and financial stability from longer commitment periods" lack any justification. As a matter of law, NEPA documents must contain data "sufficient to enable those who did not have a part" in the compilation of the analysis "to understand and consider meaningfully the factors involved." *Oak Ridge Env'tl. Peace All.*, 412 F. Supp. 3d at 806 (citing *Izaak Walton League of Am. v. Marsh*, 655 F.2d 346, 368-69 (D.C. Cir. 1981)). As such, an agency is obligated to insure the professional integrity of the discussions and analyses in NEPA documents and "identify any methodologies used with explicitly reference to the scientific and other sources relied upon for any conclusions." 40 C.F.R. § 1502.24; *Oak Ridge Env'tl. Peace All.*, 412 F. Supp. 3d at 806. The Draft EA fails to provide any analytical support for TVA's assertions regarding the need for a five percent flexibility cap, and does not reference any scientific or other sources relied upon for these conclusions.

When SELC attempted to obtain documentation supporting these statements, TVA failed to provide any data or analysis supporting its conclusion that flexible generation must be capped at five percent.¹⁵⁵ Instead, in response to SELC's request, TVA disclosed its most recent 10-Q Report and copies of the minutes and presentation from TVA's August 22, 2019 board meeting.¹⁵⁶ None of these documents provide any additional detail regarding how the three-to-five percent range was derived, or why TVA considers flexible generation in excess of five percent to be unreasonable.

Therefore, TVA's rejection of the Flexible Generation of Greater than Five Percent Alternative is based entirely on conclusory statements that appear to lack any analytical justification. This is a far cry from the "full and meaningful consideration" that NEPA requires.

¹⁵³ Draft EA at 2-2.

¹⁵⁴ See *supra* pp. 31-33.

¹⁵⁵ Att. 16, Letter from Amanda Garcia, SELC, to Denise Smith, TVA 1 (April 13, 2020).

¹⁵⁶ Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (Apr. 24, 2020).

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Western Watersheds Project, 719 F.3d at 1050; *see Oak Ridge Env'tl. Peace All.*, 412 F. Supp. 3d at 806.

VII. TVA'S ANALYSIS OF IMPACTS IS DEFICIENT.

NEPA requires that Federal Agencies analyze the direct, indirect, and cumulative impacts of a proposed action. 40 C.F.R. §§ 1502.16, 1508.7, 1508.8. For the reasons discussed in below, TVA has failed to do so.

A. TVA failed to consider the indirect effects of granting preference LPCs that sign the Long-term Contract.

TVA's Green Invest program, which promotes DER development in the Valley, helps undertake renewable energy agreements to build new, large-scale renewable energy installations through a competitive bid process.¹⁵⁷ However, according to TVA, Valley Partners—local companies that have signed the Long-term Contract—“generally receive commercial terms reflective of the long-term commitment they have made to the Valley, resulting in more favorable solution for their customers.”¹⁵⁸

As an initial matter, this policy of promising vague “more favorable solutions” to local power companies that sign onto long-term buy-all-sell-all contracts is exactly the kind of predatory behavior that led to monopolies being disfavored as a matter of public policy in this country. *U.S. v. Griffith*, 334 U.S. 100, 107 (1948) (“So it is that monopoly power, whether lawfully or unlawfully acquired, may itself constitute an evil and stand condemned...”). In fact, federal law aims to prevent monopolies by prohibiting sellers from offering lower prices to favored buyers and higher prices to disfavored buyers. *See, e.g., Afshari v. Copper John Corp.*, 2019 WL 320576 at *2 (E.D. Ky. 2019) (citing 15 U.S.C. § 13(a)).

Beyond being bad public policy, TVA's promise to favor infrastructure development for local power companies that sign Long-term Contracts reveals another yet-unexamined impact of the Long-term Contract and Flexibility Proposal. NEPA requires Federal agencies to consider direct effects that “are caused by the action and occur at the same time and place” and indirect effects that the action foreseeably causes, but that are removed from the action in time and location. 40 C.F.R. § 1508.8. In particular agencies are required to analyze whether an alternative “would [] lead to secondary impacts with respect to shifts in patterns of population movement and growth, public service demands, or changes in business and economic activities.” *See Barnes v. U.S. Dep't of Transp.*, 655 F.3d 1124 (9th Cir 2011) (In light of the potential to create demand, even if the stated purpose of new airport runway project was to increase safety and efficiency,

¹⁵⁷ Draft EA 3-18.

¹⁵⁸ *Id.*; *see e.g.*, Att. 9, Vanderbilt, NES, TVA and Silicon Ranch Partner on Landmark Renewable Energy Deal, TVA (Jan. 22, 2020) <https://www.tva.com/newsroom/press-releases/vanderbilt-nes-tva-and-silicon-ranch-partner-on-landmark-renewable-energy-deal>. (“NES’ recent 20-year commitment to public power in the region enabled them to meet the sustainability needs of their largest customer with affordable renewable energy through this new program”).

agencies were required to analyze the impacts of the increased demand attributable to the additional runway as growth-inducing effects under NEPA.).

The Green Invest program, which encourages infrastructure investment and development, is being used as an incentive to encourage local power companies to sign Long-term Contracts. Therefore, an indirect impact of the Flexibility Proposal and Long-term Contract is that energy infrastructure development patterns in TVA territory are likely change. For example, the Knoxville Utilities Board, which was initially wary of entering into the Long-term Contract due to the length of the new contract and ability access sufficient renewable generation under the five percent generation cap, decided to sign a Long-term Contract after engaging TVA in a “separate agreement under its Green Invest program to apply a portion of [KUB’s] annual partnership credit (\$1.1 million) towards approximately 212 MW of solar power.”¹⁵⁹ Despite this clear connection between the Long-term Contract, the Flexibility Proposal, and the Green Invest program, TVA has failed to consider how to the promise of “more favorable solutions” to local power companies that sign a Long-term Contract will impact infrastructure development patterns in its service territory. In doing so, TVA has failed to take the required “hard look” at indirect impacts associated with the Proposed Action.

B. The EA fails to consider the cumulative impacts of the Long-term Contract.

As previously discussed, NEPA requires TVA to (1) analyze the environmental impacts of the Long-term Contract in an EIS and (2) analyze the Flexibility Proposal together with the Long-term Contract in a single EIS as connected actions.¹⁶⁰ However, even if this were not the case, TVA would be required to analyze the environmental impacts of the Long-term Contract in the Draft EA as a cumulative impact. A cumulative impact is “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions[.]” 40 C.F.R. 1508.7; *see Kentucky Riverkeeper, Inc. v. Rowlette*, 714 F.3d 402, 408 (6th Cir. 2013); *Am. Rivers & Ala. Rivers Alliance*, 895 F.3d at 54-55.

As described above, the Long-term Contract has caused and will continue to cause significant impacts on the environment. By locking local power companies into perpetual contracts with TVA, the Long-term Contract insulates TVA from the competitive pressure of increasingly appealing renewable generation sources, denying local power companies the ability to use those sources at a capacity greater than five percent of their average annual generation and allowing TVA to maintain a less competitive generation portfolio.¹⁶¹ The Long-term Contract is part of the background against which the Flexibility Proposal will operate; the environmental impacts of the Flexibility Proposal will be laid on top of those of the Long-term Contract. Yet the Draft EA fails to analyze the environmental impact of the Long-term Contract at all. NEPA requires that it do so. *See Kentucky Riverkeeper, Inc.*, at 410 (“An environmental assessment that

¹⁵⁹ Att. 61, Knoxville Utilities Board, Board Meeting Agenda Thursday, March 12, 2020.

¹⁶⁰ *See supra* pp. 12-23

¹⁶¹ *See supra* pp. 12-22.

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omits consideration of past impacts, followed by a conclusory suggestion that past impacts did not matter, cannot be in conformance.”).

The Draft EA lists a collection of cumulative impacts stemming from “the Green Power Providers, Green Power Switch and Green Invest programs, economic development efforts, rate changes, and energy efficiency programs for residences, businesses, and industries (e.g., TVA EnergyRight programs).”¹⁶² TVA then describes each of these actions. But it does not actually analyze their cumulative impacts. Instead, it simply asserts that the overall cumulative impacts of the Flexibility Proposal and previous actions “are expected to be minimal and within the bounds of the impacts described in the 2019 IRP EIS (TVA 2019a).”¹⁶³ In fact, these actions will have significant cumulative impacts as discussed throughout this letter, including slowing the growth of renewables and harming public health. TVA’s expectation to the contrary is unsupported and unexplained.

¹⁶² Draft EA 3-18.

¹⁶³ Draft EA 3-19.

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VIII. CONCLUSION

We again thank TVA for considering these comments. We recognize the invaluable role TVA has played in the history of the Valley and we believe TVA has a vital role to play in the Valley's ongoing transition to a clean-energy economy, which will improve public health, the economy, and the environment for all residents. Addressing the issues discussed above will be a step down this path. We look forward to working with TVA on these and other issues in the coming months and years.

William Moll
Conservation Chair
Tennessee Chapter Sierra Club

Thad Culley
Regional Director
Vote Solar

Brianna Knisley
Tennessee Campaign Coordinator
Appalachian Voices

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Sincerely,



Amanda Garcia
Nick Jimenez
Maia Hutt
Attorneys
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Betsy Garber
President
Tennessee Interfaith Power & Light

Daniel Tait
Chief Operating Officer
Energy Alabama

Attachments listed below and provided via ShareFile:

[\[web address redacted\]](#)

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List of Attachments

Att. 1, TENN. VALLEY AUTH., 2019 INTEGRATED RESOURCE PLAN VOLUME I - FINAL RESOURCE PLAN

Att. 2, Minutes of Meetings of the Board of Directors Tennessee Valley Authority August 22, 2019

Att. 3, TVA, Board Exhibit 8-22-19J

Att. 4, E-mail from Matthew Stephen Higdon, NEPA Specialist, Environmental Compliance & Operations, Tennessee Valley Authority to Amanda Garcia (April 10, 2020, 3:06 pm)

Att. 5, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (April 24, 2020)

Att. 6, NES Contract No. 19-72-316 (executed August 28, 2019)

Att. 7, Environmental Reviews, TVA (last visited April 22, 2020).

Att. 8, Memo from John M. Thomas, III, EVP, Financial Services and Chief Financial Officer, Tenn. Valley Auth., to Board of Directors of Tenn. Valley Auth. in support of Board resolution approving Flexibility Option (January 29, 2020)

Att. 9, Vanderbilt, NES, TVA and Silicon Ranch Partner on Landmark Renewable Energy Deal, TVA (Jan. 22, 2020)

Att. 10, Email from TVA Stakeholder Relations Team to Amanda Garcia, SELC (April 3, 2020, 9:59 AM EST)

Att. 11, Flexibility Proposal, TVA

Att. 12, *Coronavirus in the U.S.: Latest Map and Case Count*, N.Y. TIMES (Updated May 1, 2020).

Att. 13, Richard Fausset and Rick Rojas, *Across the South, 'Walking a Tightrope' While Awaiting the Worst*, N.Y. TIMES, (April 8, 2020)

Att. 14, Samantha Max, *Tennessee Orders Residents to Remain Home*, NPR, (April 2, 2020)

Att. 15, E-mail from Matthew Higdon, TVA to Amanda Garcia, SELC (April 24, 2020 4:18 PM EST)

Att. 16, Letter from Amanda Garcia, SELC, to Denise Smith, TVA (April 13, 2020)

Att. 17, Letter from Amanda Garcia, SELC, to Denise Smith, TVA (April 27, 2020)

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Att. 18, Email from Denise Smith, TVA, to Amanda Garcia, SELC (April 30, 2020)

Att. 19, Tenn. Valley Auth., Sec. Exchange Comm'n Form 10-K/A, Am. No. 1 (Nov. 15, 2019)

Att. 20, *About*, MLGW (last visited Apr. 23, 2020)

Att. 21, MEMPHIS LIGHT GAS AND WATER DIVISION, INTEGRATED RESOURCE PLAN AND TRANSMISSION ANALYSIS – REQUEST FOR PROPOSAL (RFP) (2019)

Att. 22, MLGW Power Supply Advisory Team (PSAT), Presentation: Orientation Meeting (April 30, 2019)

Att. 23, Darrell Proctor, *Judge: TVA Deal for Bellefonte Nuclear Plant Stays in Place*, POWER (May 17, 2019)

Att. 24, Marc Perrusquia, *POWER BROKER: SPECIAL REPORT: Inside a long-shot plan to buy a never-opened nuclear plant and sell its power to a single customer: MLGW*, DAILY MEMPHIAN (May 17, 2019 12:35 AM CT)

Att. 25, Dave Flessner, *Memphis Light Gas & Water studies leaving TVA, eyes energy options*, CHATTANOOGA TIMES FREE PRESS (Feb. 24, 2019)

Att. 26, Mike Suriani, *MLGW officials consider ending power supply relationship with TVA*, NEWS CHANNEL 3 WREG MEMPHIS (Feb. 27, 2020 / 06:56 PM CST)

Att. 27, JURGEN WEISS, ET AL., THE BRATTLE GROUP, *POWER TO MEMPHIS: OPTIONS FOR A RELIABLE, AFFORDABLE AND GREENER FUTURE* (2019)

Att. 28, ACES, MEMPHIS LIGHT, GAS AND WATER LONG-TERM PORTFOLIO CONSIDERATIONS (2019)

Att. 29, JUDAH ROSE, ET AL., ICF RESOURCES LLC, *ASSESSMENT OF WHOLESALE POWER OPTIONS FOR MEMPHIS LIGHT, GAS AND WATER: PRELIMINARY DRAFT* (2018)

Att. 30, *Nuclear*, TENN. VALLEY AUTH., (last visited Apr. 23, 2020)

Att. 31, SETH BROWN, GDS ASSOCIATES, INC., *EVALUATION OF LONG-TERM POWER SUPPLY ALTERNATIVES: MEMPHIS LIGHT GAS & WATER (MLGW)* (Draft as of January 28, 2019)

Att. 32, Press Release: MLGW selects consultant for Integrated Resource Plan, MLGW (July 22, 2019)

Att. 33, Siemens, Presentation: Integrated Resource Plan and Transmission Analysis (Feb. 27, 2020)

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Att. 34, Maggie Shober, *TVA releases final long-term resource plan, and we are underwhelmed*, SOUTHERN ALL. FOR CLEAN ENERGY (June 29, 2019)

Att. 35, DAVID WHITE, ET AL., SYNAPSE ENERGY ECONOMICS, INC., MEMPHIS AND TENNESSEE VALLEY AUTHORITY: RISK ANALYSIS OF FUTURE TVA RATES FOR MEMPHIS (2019)

Att. 36, James Bruggers, *Southern Cities' Renewable Energy Push Could Be Stifled as Utility Locks Them Into Longer Contracts*, INSIDE CLIMATE NEWS (Dec. 16, 2019)

Att. 37, James Bruggers, *Cities Pressure TVA to Boost Renewable Energy as Memphis Weighs Breaking Away*, INSIDE CLIMATE NEWS (Apr. 30, 2019)

Att. 38, Volunteer Elec. Coop., Press Release: TVA Board Approves Rate Increase, Passed Through by VEC Board (Oct. 1, 2018)

Att. 39, Volunteer Elec. Coop., Press Release: TVA Rates Increased in October (Dec. 21, 2017)

Att. 40, Letter from Medline Rogero, Mayor, City of Knoxville to Hunter Hydas, IRP Program Manager, TVA (Apr. 8, 2019)

Att. 41, TVA, 2018 Wholesale Rate Change, Draft Environmental Assessment, (March 2018)

Att. 42, TVA, 2018 Wholesale Rate Change, Final Environmental Assessment, (May 2018)

Att. 43, TENN. VALLEY AUTH., 2019 INTEGRATED RESOURCE PLAN, VOLUME II - FINAL ENVIRONMENTAL IMPACT STATEMENT

Att. 44, Tenn. Valley Auth., CHANGES TO GREEN POWER PROVIDERS PROGRAM FINAL ENVIRONMENTAL ASSESSMENT (Dec. 2019)

Att. 45, SELC et al., Comments on Changes to Green Power Providers Program Draft Environmental Assessment (November 8, 2019)

Att. 46, SELC et al. Comments on TVA's Draft Integrated Resource Plan and Draft Environmental Impact Statement (April 7, 2019).

Att. 47, MarketWatch, Press Release: 10-Q: TENNESSEE VALLEY AUTHORITY (Feb. 5, 2020)

Att. 48, Tenn. Valley Auth., Presentation: Board Meeting, August 22, 2019, Knoxville, Tennessee

Att. 49, Greenlink Analytics, Evaluating TVA's Newly Proposed Wholesale Reductions and Capacity Additions (May 2020)

SELC et al. Comments on TVA Power Supply Flexibility Proposal Draft EA

May 4, 2020

Page 46 of 46

Att. 50, TATYANA DERYUGINA, ET AL., THE LONG-RUN ELASTICITY OF ELECTRICITY DEMAND: EVIDENCE FROM MUNICIPAL ELECTRIC AGGREGATION (2017)

Att. 51, M.A. Bernstein and J. Griffin, RAND Corporation, Regional Differences in the Price-Elasticity of Demand for Energy (2006)

Att. 52, Am. Council for an Energy-Efficient Econ., Press Release: Report: “Energy Burden” on Low-Income, African American, & Latino Households up to Three Times as High as Other Homes, More Energy Efficiency Needed (Apr. 20, 2016)

Att. 53, *Changes to TVA’s NEPA Procedures*, TENN. VALLEY AUTH

Att. 54, TENN. VALLEY AUTH., RESPONSE TO PUBLIC COMMENTS: PUBLIC REVIEW OF TVA’S PROPOSED AMENDMENTS TO PROCEDURES FOR IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT (June to September 2017), (March 2020)

Att. 55, James Bruggers for Inside Climate News, *TVA’s push for lengthy utility deals could set back green initiatives in Tennessee cities*, KNOX NEWS (5:00 a.m. ET Jan. 8, 2020)

Att. 56, Daniel Tait & Joe Smyth, *TVA attempts to chain local power companies to longer contracts in effort to prevent defection risk: New TVA contract could prevent municipal utilities, co-ops from pursuing local renewable energy, storage*, ENERGY & POL’Y INST. (Sept. 22, 2019)

Att. 57, Samuel Hardiman for The Commercial Appeal, *Here’s TVA’s final offer to Memphis*, ENERGY CENTRAL (Jan 3, 2020 6:53 am GMT)

Att. 58, Pam Sohn, *Is TVA locking the South out of the future?*, CHATTANOOGA TIMES FREE PRESS (December 21st, 2019)

Att. 59, IMPACTS OF NATURAL GAS, UNION OF CONCERNED SCIENTISTS (Jun. 19, 2014)

Att. 60, David Roberts, *More natural gas isn’t a “middle ground” – it’s a climate disaster*, VOX (May 30, 2019)

Att. 61, Knoxville Utilities Board, Board Meeting Agenda Thursday, March 12, 2020



STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION

ROY COOPER
GOVERNOR

MACHELLE SANDERS
SECRETARY

May 5, 2020

Mr. Matthew Higdon
Tennessee Valley Authority
400 West Summit Hill Drive
Knoxville, TN 37902

Re: SCH File # 20-E-0000-0232; Proposed project would provide flexible power generation options to TVA local power company customers.

Dear Mr. Higdon:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are comments made by the agencies in the review of this document.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

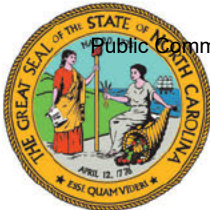
Should you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in cursive script that reads "Crystal Best".

Crystal Best
State Environmental Review Clearinghouse

Attachments
cc: Region D
Region E
Region A
Region C



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

JAMIE RAGAN
Director

MEMORANDUM

To: Crystal Best
State Clearinghouse Coordinator
NC Department of Administration

From: Lyn Hardison
Division of Environmental Assistance and Customer Service
Environmental Assistance and Project Review Coordinator
Washington Regional Office

RE: 20-0232
Environmental Assessment - Proposed project would
provide flexible power generation options to TVA local
power company customers.
Avery, Burke, Cherokee, McDowell, Watauga Counties

Date: April 28, 2020

The Department of Environmental Quality has reviewed the proposal for the referenced project. Based on the information provided, several of our agencies have identified permits that may be required and offered some valuable guidance. The comments are attached for the applicant's review.

The Department agencies will continue to be available to assist the applicant through any environmental review or permitting processes.

Thank you for the opportunity to respond.

Attachments



State of North Carolina Department of Environmental Quality Public Comments - TVA Power Supply Flexibility Proposal Draft EA
 INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: Asheville
 Project Number: 20-0232 Due Date: 04/27/2020
 County: Avery

After review of this project it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters.	Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual.	30 days (90 days)
<input type="checkbox"/>	Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system	Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria.	30 days (N/A)
<input type="checkbox"/>	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
<input type="checkbox"/>	Water Use Permit	Pre-application technical conference usually necessary.	30 days (N/A)
<input type="checkbox"/>	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well.	7 days (15 days)
<input type="checkbox"/>	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input type="checkbox"/>	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
<input type="checkbox"/>	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
<input type="checkbox"/>	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950	Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building.	60 days (90 days)
<input checked="" type="checkbox"/>	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of \$65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
<input type="checkbox"/>	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		(30 days)
<input checked="" type="checkbox"/>	Sedimentation and erosion control must be addressed in accordance with affected counties and municipalities. Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		Based on Local Program
<input checked="" type="checkbox"/>	Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre.		30-60 days (90 days)
<input checked="" type="checkbox"/>	Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state.		45 days (90 days)

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Mining Permit	On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/>	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)
<input type="checkbox"/>	Oil Refining Facilities	N/A	90-120 days (N/A)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations.	10 days N/A
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
<input type="checkbox"/>	State Lakes Construction Permit	Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property	15-20 days N/A
<input type="checkbox"/>	401 Water Quality Certification	Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323.	60 days (130 days)
<input type="checkbox"/>	Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program		
<input type="checkbox"/>	Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information		
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 - \$475.00 fee must accompany application	75 days (150 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$100.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
<input checked="" type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input checked="" type="checkbox"/>	Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
<input checked="" type="checkbox"/>	If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
<input type="checkbox"/>	Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information.		

Other Comments (attach additional pages as necessary, being certain to comment authority)

Division	Initials	No comment	Comments	Date Review
DAQ	PVB	<input checked="" type="checkbox"/>		4/9/20
DWR-WQROS (Aquifer & Surface)	BL & BL	<input type="checkbox"/>	Additional site specific information will be needed to evaluate potential impacts to surface water and groundwater; project scoping cannot be thoroughly completed based on the current document. Individual projects or activities may require various DWR permits or requirements to obtain deemed permitted status. For example, if any proposed projects will include fill or modification to streams, wetlands, or open waters, a 404 permit from the Army Corps and corresponding 401 Water Quality Certification from DWR will likely be required. All construction projects shall implement construction BMPs to prevent sediment laden runoff from reaching waters, which would be a violation of water quality standards. Please note the following link to the NC DEQ permit handbook: https://deq.nc.gov/permits-regulations/permit-guidance/permit-handbook &	4/13/20 4/13/20
DWR-PWS	WPC	<input type="checkbox"/>	Call for utility locations prior to construction to determine if water infrastructure is within the project corridor.	4/9/20
DEMLR (LQ & SW)	MMS	<input type="checkbox"/>	<p>The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of \$65 for the first acre or any part of an acre.</p> <p>Sedimentation and erosion control must be addressed in accordance with all affected counties and municipalities approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.</p> <p>For this site compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program may be required. This program regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre.</p> <p>Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs which regulate site development and post-construction stormwater runoff control may be required for this site. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state.</p>	4/9/20
DWM – UST	CEL	<input type="checkbox"/>	<p>I searched the Petroleum Underground Storage Tank (UST) and Non-UST Databases and there could be numerous petroleum incidents on or adjacent to the proposed project areas. Please contact our office with more site specific data.</p> <p>The following comments are pertinent to my review:</p> <p>The Asheville Regional Office (ARO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs within the project area. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (828) 296-4500.</p>	4/14/20

			<p>Any petroleum USTs or ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information on petroleum ASTs it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be contacted.</p> <p>Any petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environmental Quality (NCDEQ) – Division of Waste Management (DWM) UST Section in the ARO.</p> <p>Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosive or inhalation hazards exist. Also, notify the UST Section of the ARO. Petroleum contaminated soils must be handled in accordance with all applicable regulations.</p> <p>Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (828) 296-4500. If you have any questions or need additional information, please contact me via email at caroline.lafond@ncdenr.gov or by phone at (828) 296-4644.</p>	
Other Comments		<input type="checkbox"/>		/ /

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Asheville Regional Office
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043 | <input type="checkbox"/> Fayetteville Regional Office
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707 | <input type="checkbox"/> Mooresville Regional Office
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040 |
| <input type="checkbox"/> Raleigh Regional Office
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718 | <input type="checkbox"/> Washington Regional Office
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716 | <input type="checkbox"/> Wilmington Regional Office
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004 |
| | <input type="checkbox"/> Winston-Salem Regional Office
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797 | |



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL SCOTT
Director

TO: Lyn Hardison, Environmental Coordinator

FROM: Caroline LaFond, Regional UST Supervisor

COPY: Scott Bullock, Corrective Action Branch Head, Sharon Brinkley, Administrative Secretary

DATE: April 14, 2020

RE: Environmental Review – Project Number 20-0232 – Avery County - Proposed project would provide flexible power generation options to TVA local power company customers.

I searched the Petroleum Underground Storage Tank (UST) and Non-UST Databases and there is the potential for numerous Petroleum incidents locates within the proposed project areas. Please contact our office with more site specific information.

The following comments are pertinent to my review:

The Asheville Regional Office (ARO) UST Section recommends removal of any abandoned or out-of-use petroleum USTs or petroleum ASTs within the project area. The UST Section should be contacted regarding use of any proposed or on-site petroleum USTs or ASTs. We may be reached at (828) 296-4500.

Any petroleum USTs or ASTs must be installed and maintained in accordance with applicable local, state, and federal regulations. For additional information on petroleum ASTs it is advisable that the North Carolina Department of Insurance at (919) 661-5880 ext. 239, USEPA (404) 562-8761, local fire department, and Local Building Inspectors be contacted.

Any petroleum spills must be contained and the area of impact must be properly restored. Petroleum spills of significant quantity must be reported to the North Carolina Department of Environmental Quality (NCDEQ) – Division of Waste Management (DWM) UST Section in the ARO.

Any soils excavated during demolition or construction that show evidence of petroleum contamination, such as stained soil, odors, or free product must be reported immediately to the local Fire Marshall to determine whether explosive or inhalation hazards exist. Also, notify the UST Section of the ARO. Petroleum contaminated soils must be handled in accordance with all applicable regulations.

Any questions or concerns regarding spills from petroleum USTs, ASTs, or vehicles should be directed to the UST Section at (828) 296-4500. If you have any questions or need additional information, please contact me via email at caroline.lafond@ncdenr.gov or by phone at (828) 296-4644.





ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
MICHAEL SCOTT
Director

Date: April 16, 2020

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch – Special Projects Unit

From: Bonnie S. Ware
Inactive Hazardous Sites Branch

Subject: NEPA Project #20-0232, Tennessee Valley Authority, Avery (Burke Cherokee McDowell Watauga County, North Carolina)

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the Tennessee Valley Authority project. Proposed project would provide flexible power generation options to TVA local power company customers.

Twenty-Two (22) total sites were identified within one mile of the project as shown on the attached report. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: <http://deq.nc.gov/waste-management-laserfiche>.

Please contact Janet Macdonald at 919.707.8349 if you have any questions.

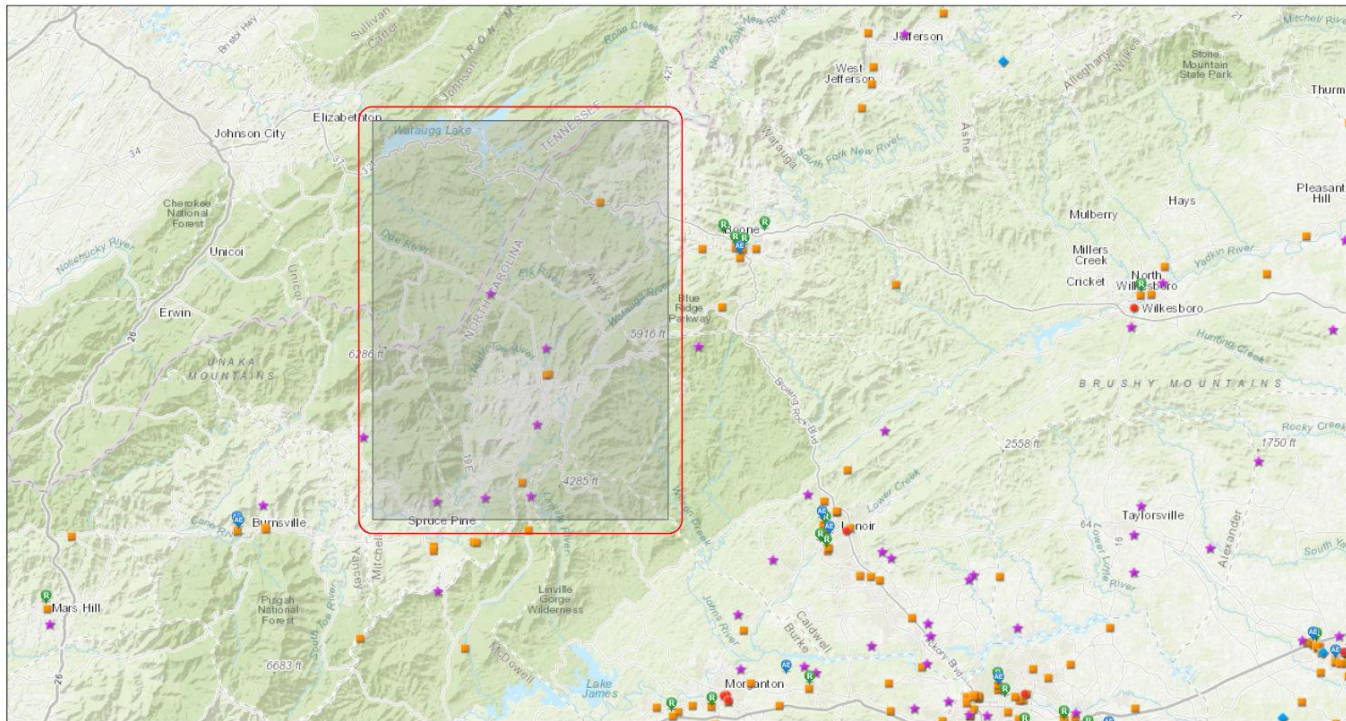


SEPA/NEPA Review Report

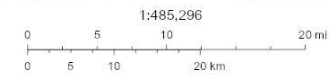
Area of Interest (AOI) Information

area : 455,306.91 acres

Apr 16 2020 15:28:00 Eastern Daylight Time



- NC Brownfields Location_View
- Recorded
- Active Eligible
- Federal Remediation Branch
- Pre Regulatory Landfill Sites
- DSCA_Certified - Copy
- Inactive Hazardous Sites



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

20-0232 Map 1 of 2

Summary

Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	0	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	5	N/A	N/A
Pre-Regulatory Landfill Sites	7	N/A	N/A
Brownfields Program Sites	0	N/A	N/A

Inactive Hazardous Sites

#	EPAID	SITENAME	Count
1	NONCD0002802	NEWLAND PESTICIDES SITE	1
2	NONCD0001825	HARMON RESIDENCE, LARRY	1
3	NONCD0002192	NCDOT/FRANKLIN RESIDENCE	1
4	NONCD0002435	MY FAVORITE MARTIN TRUCK ACCIDENT	1
5	NONCD0001102	BLUE RIDGE AUTO SALES	1

Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NONCD0000431	Bakersville Refuse Disposal	1
2	NONCD0000122	Crossnore Refuse Dump	1
3	NONCD0000123	Elk Park Dump	1
4	NONCD0000121	Green Valley Dump	1
5	NONCD0000423	Linville Falls Refuse Disposal	1
6	NONCD0000124	Newland Refuse Dump	1
7	NONCD0000432	Spruce Pine Refuse Disposal	1

20-0232 Map 2 of 2

Summary

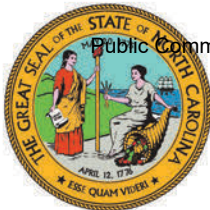
Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	0	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	6	N/A	N/A
Pre-Regulatory Landfill Sites	4	N/A	N/A
Brownfields Program Sites	0	N/A	N/A

Inactive Hazardous Sites

#	EPAID	SITENAME	Count
1	NC0001402213	ELLIS JUNK YARD	1
2	NCD038551263	TRI-COUNTY COMMUNITY COLLEGE	1
3	NCD089989917	EMERSON ELECTRIC COMPANY	1
4	NONCD0001737	FRANKLIN QUARRY-NCDOT-SITE #15	1
5	NONCD0001934	BRP US INC (FRMR)	1
6	NONCD0001099	C & L SURPLUS	1

Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NONCD0000231	Andrews Dump	1
2	NONCD0000228	Lake Hiwassee Resort Dump	1
3	NONCD0000230	Murphy Refuse Dump	1
4	NONCD0000229	Peachtree Com. Dump	1



NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL SCOTT
Director

April 24, 2020

To: Lyn Hardison, Environmental Assistance and SEPA Coordinator
Division of Environmental Assistance and Customer Service

From: Melodi Deaver, Administrative Specialist
Division of Waste Management, Hazardous Waste Section

RE: NEPA Review, Project# 20-0232, Tennessee Valley Authority (Avery County)

The Hazardous Waste Section has reviewed the proposed project that would provide flexible power generation options to TVA local power company customers and would like to make the following comment:

Any hazardous waste generated from the demolition, construction, operation, maintenance, and/or remediation (e.g. excavated soil) from the proposed project must be managed in accordance with the North Carolina Hazardous Waste Rules. The demolition, construction, operation, maintenance, and remediation activities conducted will most likely generate a solid waste, and a determination must be made whether it is a hazardous waste. If a project site generates more than 220 pounds of hazardous waste in a calendar month, the HWS must be notified, and the site must comply with the small quantity generator (SQG) requirements. If a project site generates more than 2200 pounds of hazardous waste in a calendar month, the HWS must be notified, and the facility must comply with the large quantity generator (LQG) requirements.

Generators are required to determine their generator status and both SQGs & LQGs are required to obtain a site EPA Identification number for the generation of hazardous waste.

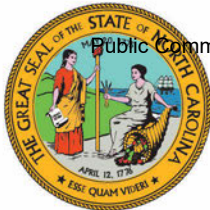
Should any questions arise, please contact Melodi Deaver at 919-707-8204

Respectfully,

Melodi Deaver

Compliance Branch
Hazardous Waste Section





NORTH CAROLINA
Environmental Quality

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL SCOTT
Director

DATE: April 16, 2020

TO: Michael Scott, Division Director through Sharon Brinkley

FROM: Deb Aja, Western District Supervisor - Solid Waste Section

RE: NEPA Project 20-0232 - Avery, Burke, Cherokee, McDowell, and Watauga Counties, N.C.
Tennessee Valley Authority (TVA) Power Supply Flexibility Proposal

The Solid Waste Section has reviewed the Draft Environmental Assessment for the TVA Power Supply Flexibility Proposal to provide flexible power generation options to TVA local power company customers, including customers in Avery, Burke, Cherokee, McDowell, and Watauga Counties, North Carolina. The review has been completed and has found no adverse impact on the surrounding community and likewise knows of no situations in the community, which would affect this project from a solid waste perspective.

During any implementation of the proposal, every feasible effort should be made to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials where suitable. Any wastes generated that cannot be beneficially reused or recycled must also be disposed of at a solid waste management facility approved to manage the respective waste type. The Section strongly recommends that any contractors are required to provide proof of proper disposal for all waste generated as part of the project. A list of permitted solid waste management facilities is available on the Solid Waste Section portal site at: [NC Solid Waste Facilities](#). A map of solid waste facilities in North Carolina is available at: [Division of Waste Management Site Locator Tool](#).

Please contact Deb Aja, Western District Supervisor, at 828-296-4702 or by email at [\[email redacted\]](#) with any questions regarding solid waste management for this project.

Cc: Jason Watkins, Field Operations Branch Head
Charles Gerstell, Environmental Senior Specialist
Lee Hill, Environmental Senior Specialist
Kris Riddle, Environmental Senior Specialist



**NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW**

COUNTY: AVERY
BURKE
CHEROKEE
MCDOWELL
WATAUGA

H12: OTHER

STATE NUMBER: 20-E-0000-0232
DATE RECEIVED: 04/09/2020
AGENCY RESPONSE: 04/27/2020
REVIEW CLOSED: 05/01/2020

MS CINDY WILLIAMS
CLEARINGHOUSE COORDINATOR
DPS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
4218 MAIL SERVICE CENTER
RALEIGH NC

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DPS - DIV OF EMERGENCY MANAGEMENT
HIGH COUNTRY COG
ISOTHERMAL PLANN & ECON DEV
SOUTHWESTERN COMMISSION
WESTERN PIEDMONT COG

PROJECT INFORMATION

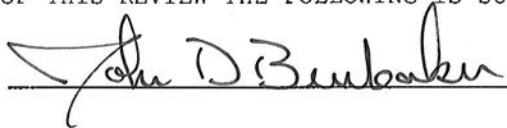
APPLICANT: Tennessee Valley Authority
TYPE: National Environmental Policy Act
Environmental Assessment

DESC: Proposed project would provide flexible power generation options to TVA local power company customers. - View documents at <http://www.tva.gov/nepa>

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: 

DATE: 29 April 2020



North Carolina Department of Public Safety

Emergency Management

Roy Cooper, Governor
Erik A. Hooks, Secretary

Michael A. Sprayberry, Director

April 29, 2020

State Clearinghouse
N.C. Department of Administration
1301 Mail Service Center
Raleigh, North Carolina 27699-1301

Subject: Intergovernmental Review State Number: 20-E-0000-0232
Tennessee Valley Authority Power Supply Flexibility Proposal Draft Environmental Assessment

As requested by the North Carolina State Clearinghouse, the North Carolina Department of Public Safety Division of Emergency Management Risk Management reviewed the proposed Tennessee Valley Authority Power Supply Flexibility Proposal Draft Environmental Assessment and offers the following comment.

Proposed changes to the hydrology or hydraulics associated with Tennessee Valley Authority controlled features within the Special Flood Hazard Areas of North Carolina should be coordinated with the North Carolina Floodplain Mapping Program (NCFMP). This will help assure that the revised hydrology and hydraulics are appropriately modeled and mapped on future Flood Information Studies.

Thank you for your cooperation and consideration. If you have any questions concerning the above comment, please contact me at 919-825-2300, by email at dan.brubaker@ncdps.gov or at the address shown on the footer of this document.

Sincerely,

John D. Brubaker, P.E., CFM
NFIP Coordinator
Emergency Management

cc: File

MAILING ADDRESS:
4218 Mail Service Center
Raleigh NC 27699-4218
www.ncem.org



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NORTH CAROLINA STATE CLEARINGHOUSE

DEPARTMENT OF ADMINISTRATION

INTERGOVERNMENTAL REVIEW

Public Comments - TVA Power Supply Flexibility Proposal Draft EA

COUNTY: AVERY
BURKE
CHEROKEE
MCDOWELL
WATAUGA

H12: OTHER

STATE NUMBER: 20-E-0000-0232
DATE RECEIVED: 04/09/2020
AGENCY RESPONSE: 04/27/2020
REVIEW CLOSED: 05/01/2020

MS JEANNE STONE
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION
STATEWIDE PLANNING - MSC #1554
RALEIGH NC

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HIGH COUNTRY COG
ISOTHERMAL PLANN & ECON DEV
SOUTHWESTERN COMMISSION
WESTERN PIEDMONT COG

PROJECT INFORMATION

APPLICANT: Tennessee Valley Authority
TYPE: National Environmental Policy Act
Environmental Assessment

DESC: Proposed project would provide flexible power generation options to TVA local power company customers. - View documents at <http://www.tva.gov/nepa>

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

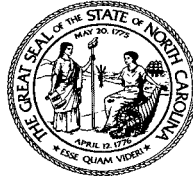
If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

Pam R. Cook

DATE: 4/15/2020



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

June 4, 2020

Matthew Higdon
Tennessee Valley Authority

mshigdon@tva.gov

RE: Construct flexible power generation options for TVA local power company customers, multiple locations, Multi County, ER 20-0888

Dear Mr. Higdon:

Thank you for your submission received May 6, 2020. We have reviewed the materials submitted and offer the following comments.

The documents provided note that the new Flexibility Agreements would have local power companies identify and provide locations for proposed flexible generation projects across several counties in North Carolina including Avery, Burke, Cherokee, McDowell, and Watauga Counties. Based on our records, there are hundreds of archaeological resources and historic properties within this area. While most have not had their eligibility for listing in the National Register of Historic Places assessed, some have been determined eligible, potentially eligible, or are listed on the National Register.

We are aware of numerous archaeologically sensitive areas within these counties, but much of these areas have not been systematically surveyed. Thus, we expect additional significant archaeological sites could be present. Without more specific project plans, we cannot offer meaningful guidance regarding archaeological resources. We ask that as specific flexible generation projects are developed and prior to the initiation of any ground disturbing activities within project areas, you continue to consult with us.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above-referenced tracking number.

Sincerely,



 Ramona Bartos, Deputy
State Historic Preservation Officer

cc: Crystal Best, State Clearing House

[\[email redacted\]](#)

Received: 5/6/2020
Historic Preservation
Office

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

Public Comments - TVA Power Supply Flexibility Proposal Draft EA

COUNTY: AVERY
BURKE
CHEROKEE
MCDOWELL
WATAUGA

H12: OTHER

ER 20-0888

STATE NUMBER: 20-E-0000-0232
DATE RECEIVED: 04/09/2020
AGENCY RESPONSE: 04/27/2020
REVIEW CLOSED: 05/01/2020

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF NATURAL & CULTURAL RESOURCE
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

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HIGH COUNTRY COG
ISOTHERMAL PLANN & ECON DEV
SOUTHWESTERN COMMISSION
WESTERN PIEDMONT COG

PROJECT INFORMATION

APPLICANT: Tennessee Valley Authority
TYPE: National Environmental Policy Act
Environmental Assessment

DESC: Proposed project would provide flexible power generation options to TVA local power company customers. - View documents at <http://www.tva.gov/nepa>

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

Due: 5/14/2020

Comments DJC 5/7/2020

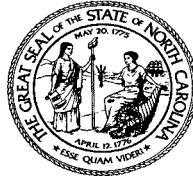
A-- Letter sent to TVA on
06/04/2020, copied SCH.

S-- Comment KBH 06/03/2020
See attached.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: _____

DATE: 06/04/2020



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

June 4, 2020

MEMORANDUM

TO: Crystal Best
North Carolina State Clearinghouse
Department of Administration

RSE for Ramona M. Bartos

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer

SUBJECT: Draft Environmental Assessment. Construct flexible power generation options for TVA local power company customers, Multi County, ER 20-0888

Thank you for your submission received May 6, 2020, transmitting the draft Environmental Assessment for the above-referenced undertaking. We have reviewed the materials submitted and offer the following comments.

We note the preferred alternative consists of flexible generation projects across several counties in North Carolina including Avery, Burke, Cherokee, McDowell, and Watauga Counties. We do not object to the preferred alternative. However, to accurately assess impacts to historic properties in those counties, individual project documentation should be submitted to us for review and comment prior to construction.

Contact Katie Harville, NCHPO Environmental Review Specialist, at 919-814-6581, or [\[email redacted\]](#), to discuss the survey area, and with any questions about HSSR report guidelines or deliverables.

These comments are made in accord with G.S. 121-12(a). If you have any questions regarding these comments, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579. In all future communication concerning this project, please cite the above-referenced tracking number.

cc: Matthew Higdon, Tennessee Valley Authority mshigdon@tva.gov

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 615-921-9470

1033 DEMONBREUN STREET, SUITE 205
NASHVILLE, TN 37203

Facsimile 615-921-8011

May 14, 2020

SUBMITTED VIA EMAIL

Matthew Higdon
NEPA Specialist
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902
mshigdon@tva.gov

**RE: Additional Information Regarding TVA Power Supply Flexibility Proposal
Draft Environmental Assessment**

Dear Mr. Higdon:

The Southern Environmental Law Center (SELC) respectfully submits additional comments regarding the Tennessee Valley Authority (TVA) Power Supply Flexibility Proposal Draft Environmental Assessment (Draft Flexibility EA) based on new information provided by TVA after the close of the comment period.¹ The information was provided by TVA in response to a request for clarification submitted by SELC regarding TVA's prior response to a Freedom of Information Act (FOIA) request regarding the Draft Flexibility EA and related Long-term Contract option.² TVA provided the information described in this letter one day after the close of the comment period on the Draft Flexibility EA.³ As you are aware, TVA had previously denied Citizen Groups' request for an extension of time to comment on the Draft Flexibility EA because TVA claimed to have "provided you, in an expedited manner, the additional information that you requested during the comment period to facilitate your review of the draft EA."⁴ On the contrary,

¹ Draft Flexibility EA, available at

https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Environmental%20Reviews/Flexibility%20Proposal/TVA%20Power%20Supply%20Flexibility%20Proposal%20Draft%20EA%20April%203.2020.pdf.

² Letter from Amanda Garcia, SELC, to Denise Smith, TVA (Apr. 13, 2020); Letter from Denise Smith, TVA, to Amanda Garcia, SELC (April 24, 2020); Letter from Amanda Garcia, SELC, to Denise Smith, TVA (April 27, 2020).

³ Att. 1, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020); Att. 2, Email from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020 1:46 PM CST).

⁴ E-mail from Matthew Higdon, TVA to Amanda Garcia, SELC (April 24, 2020 4:18 PM CST).

as described below, TVA failed to provide information we requested during the comment period, and that information is directly relevant to the environmental impacts TVA is required to disclose and analyze under NEPA. We therefore submit these additional comments based on the information TVA provided after the close of the comment period to support both our initial substantive comments on the inadequacy of TVA's environmental review of the Long-term Contract option and Flexibility Proposal and our comments regarding TVA's procedural failure to meaningfully engage the public with regard to these connected major federal actions.⁵

1) Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020)

In this letter, TVA admits that, despite TVA management's representations to the Board and the statements in TVA's 10-Q, the utility has not evaluated relevant environmental and economic impacts of the Long-term Contract option, including the impact of the rate cut on demand and distributed energy resource penetration.⁶

2) TVA Valley Partner Engagement Kick Off Meeting (November 7, 2019)⁷

TVA states that this presentation responds to our request for "documents showing the alternatives and impacts considered prior to seeking TVA Board approval of the long-term partnership and flexibility proposal."⁸ Setting aside whether that description adequately summarizes the information we requested, this document shows that TVA had already developed flexibility principles several months prior to the action taken at the February 2020 Board meeting and the issuance of the Draft Flexibility EA in April. This fact supports our comments regarding TVA's predetermination of the outcome of this EA and its failure to comply with NEPA at all regarding the original decision to adopt the Long-term Contract option.⁹ The fact that TVA was presenting its flexibility principles to local power companies in November 2019 highlights that the February 2020 Board action was superfluous. Further, and contrary to TVA's claim, the

⁵ See generally Comments of SELC, et al., re: TVA Power Supply Flexibility Proposal Draft Environmental Assessment (May 4, 2020).

⁶ Att. 1, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020) ("Items 3 and 4 of your letter ask for documents regarding the effect of the 3.1% partnership credit on wholesale or retail electricity demand or sales; and on levels of penetration of distributed energy resources. TVA has not analyzed the impact of either of these items on the strategic financial plan, so we have no records to provide for this part of your request.")

⁷ Att. 3, TVA, TVA Valley Partner Engagement Kick Off Meeting (November 7, 2019).

⁸ Att. 1, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020).

⁹ See generally Comments of SELC, et al., re: TVA Power Supply Flexibility Proposal Draft Environmental Assessment (May 4, 2020).

May 14, 2020

Page 3 of 3

“Partner Kickoff” presentation does not show “alternatives and impacts considered prior to seeking TVA Board approval of the long-term partnership and flexibility proposal.”¹⁰ Rather, it shows the impacts different levels of local power company adoption of the Long-term Contract would have on TVA’s financials. This is not an alternatives analysis. Instead, it is just an evaluation of different levels of adoption of *one* alternative—the one TVA had already predetermined and adopted without the required NEPA review.

Finally, although TVA re-attached Slide 78 from the previously-provided August 2019 Board meeting, that slide similarly does not provide an evaluation of “alternatives.” It does, however, provide additional support for the fact that the 20-year lock-in provision has value for TVA, reinforcing our comments that the purpose of the proposal is to benefit TVA, not the local power companies or end-use customers in the Valley.

Because these late-produced materials were before TVA at the time it made its decision, they are already part of the administrative record. *Sherwood v. Tennessee Valley Auth.*, 842 F.3d 400, 407 (6th Cir. 2016). For the sake of clarity, however, we request that TVA formally designate them as such and include this letter in doing so. *See Sierra Club v. Costle*, 657 F.2d 298, 398 (D.C. Cir. 1981).

Sincerely,



Amanda Garcia
Managing Attorney

Attachments listed below and provided via Sharefile:

[\[webpage address redacted\]](#)

List of Attachments

Att. 1, Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020)

Att. 2, Email from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020 1:46 PM CST)

Att. 3, TVA, TVA Valley Partner Engagement Kick Off Meeting (November 7, 2019)

¹⁰ Letter from Denise Smith, TVA, to Amanda Garcia, SELC (May 5, 2020).

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 615-921-9470

1033 DEMONBREUN STREET, SUITE 205
NASHVILLE, TN 37203

Facsimile 615-921-8011

June 4, 2020

SUBMITTED VIA EMAIL with attachments

Matthew Higdon
NEPA Specialist
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B
Knoxville, TN 37902
mshigdon@tva.gov

**RE: Additional Information Regarding TVA Power Supply Flexibility Proposal
Draft Environmental Assessment: MLGW Draft IRP and Related
Documents**

Dear Mr. Higdon:

The Southern Environmental Law Center (SELC) respectfully submits additional comments regarding the Tennessee Valley Authority (TVA) Power Supply Flexibility Proposal Draft Environmental Assessment (Draft Flexibility EA) based on new information.¹ The information was provided by Siemens Industry, Inc., Siemens Power Technologies (Siemens), in a Draft Integrated Resource Plan (Draft IRP) published on May 29, 2020, to aid Memphis Light, Gas and Water (MLGW) in deciding whether to terminate its power supply contract with TVA.

The Draft IRP includes analysis of the Long-term Contract and confirms the significant environmental impacts associated with it, underscoring the inadequacy of TVA's environmental review of both the Long-term Contract and the Flexibility Proposal. Siemens analyzed ten energy portfolios, each with a different mix of local generation and market purchases from the neighboring Midcontinent Independent System Operator.² Siemens evaluated the portfolios based on reliability, affordability, price risk, sustainability, market risk, economic growth, and

¹ Draft Flexibility EA, available at

https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Environmental%20Reviews/Flexibility%20Proposal/TVA%20Power%20Supply%20Flexibility%20Proposal%20Draft%20EA%20April%203.2020.pdf.

² Att. 1, DRAFT: Integrated Resource Plan Report, Memphis Light, Gas, and Water, Part I at 1 (May 2020) (MLGW Draft IRP), available at <http://www.mlwg.com/about/IRPDraftDocument>; *see generally* Att. 1-3 (MLGW Draft IRP Parts I, II, and III); *see also* Att. 4, Siemens, Presentation, Integrated Resource Plan—Draft Results, PSAT Meeting (May 29, 2020).

June 4, 2020

Page 2 of 3

resiliency.³ Siemens' preferred portfolios would decrease CO₂ emissions by more than 50% relative to the Long-term Contract.⁴ All of the top four portfolios reduce emissions by at least 25% relative to the Long-term Contract.⁵ In MLGW's top two portfolios, over 75% of energy is from non-hydro renewable sources.⁶ In contrast, TVA would generate merely 6.5% of its energy from non-hydro renewable sources.⁷

Not only would these alternatives potentially substantially decrease local and global environmental impacts, but they would also save Memphians millions of dollars. Compared with the Long-term Contract, the top two portfolios would save MLGW \$122 million per year.⁸ Those savings mean MLGW could substantially decrease costs for Memphis, whose citizens bear the worst energy burden in the country. By analyzing MLGW's alternatives, the Draft IRP makes clear the significant socioeconomic, energy, air, and climate impacts of the Long-term Contract that should have been studied by TVA before implementing it. These impacts must be studied by TVA before entering into any additional Long-term Contracts with local power companies and before implementing the Flexibility Proposal. Further, the exhaustive technical study in the Draft IRP has intensified the controversy over whether Memphis should sign the Long-term Contract by making its financial and environmental impacts clear.⁹ TVA must conduct an Environmental Impact Statement to take a hard look at the significant environmental impacts the Long-term Contract will have—not only in Memphis but throughout the Tennessee Valley.

Sincerely,



Trey Bussey
Associate Attorney

³ MLGW Draft IRP at 8–9.

⁴ *Id.* at Part II, 223.

⁵ *Id.*

⁶ *Id.* at Part II, 224.

⁷ *Id.*

⁸ *Id.* at Part I, 18.

⁹ *See id.*; see also Att. 5, Samuel Hardiman, *Memphis could see more than \$100M in annual savings if it leaves TVA, draft of power supply report shows*, MEMPHIS COMMERCIAL APPEAL (May 29, 2020),

<https://www.commercialappeal.com/story/news/2020/05/29/mlgw-could-save-millions-leaving-tva-joining-miso/5282548002/>.

List of Attachments

Att. 1, DRAFT: Integrated Resource Plan Report, Memphis Light, Gas, and Water Part I (May 2020)

Att. 2, DRAFT: Integrated Resource Plan Report, Memphis Light, Gas, and Water Part II (May 2020)

Att. 3, DRAFT: Integrated Resource Plan Report, Memphis Light, Gas, and Water Part III (May 2020)

Att. 4, Siemens, Presentation, Integrated Resource Plan—Draft Results, PSAT Meeting (May 29, 2020)

Att. 5, Samuel Hardiman, *Memphis could see more than \$100M in annual savings if it leaves TVA, draft of power supply report shows*, MEMPHIS COMMERCIAL APPEAL (May 29, 2020)