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July 22, 2026

*Submitted Electronically and via email to IRP@tva.gov*

**Re: Sierra Club Comments on TVA's 2026 Preliminary Integrated Resource Plan**

The Sierra Club, on behalf of its over 7,200 members in Tennessee and thousands of additional members elsewhere throughout TVA's service territory, submits the following comments on TVA's 2026 Preliminary Integrated Resource Plan (the "Preliminary IRP"). As discussed in more detail below, the Preliminary IRP suffers from defects that skew its analysis away from clean renewables and towards dirty fossil energy; this distortion is even more apparent when viewed in light of TVA's 2025 Draft IRP, which recommended far more solar and other clean resources. TVA should avoid pursuing a risky and expensive fossil-heavy portfolio, and should instead invest in renewable energy.

Sierra Club also appreciates that TVA is conducting a public comment period for the Preliminary IRP. TVA has recently walked away from transparency and public accountability by changing its regulations to make public notice and comment under NEPA completely discretionary to TVA,[1] and TVA has demonstrated a willingness to use that discretion to cloak incredibly significant resource decisions from public scrutiny, as demonstrated by TVA's surprise Supplemental Environmental Impact Statements for the Kingston and Cumberland coal plants, reversing without notice TVA's prior decisions to retire those facilities. Given both the importance of resource planning and TVA's unique role as a federal public power provider, transparency and public comment are absolutely essential. The changing demand forecasts that TVA cites in the Preliminary IRP, as well as the extreme differences in modeled portfolios between the Preliminary IRP and the 2025 Draft IRP, underscore the need for transparent public

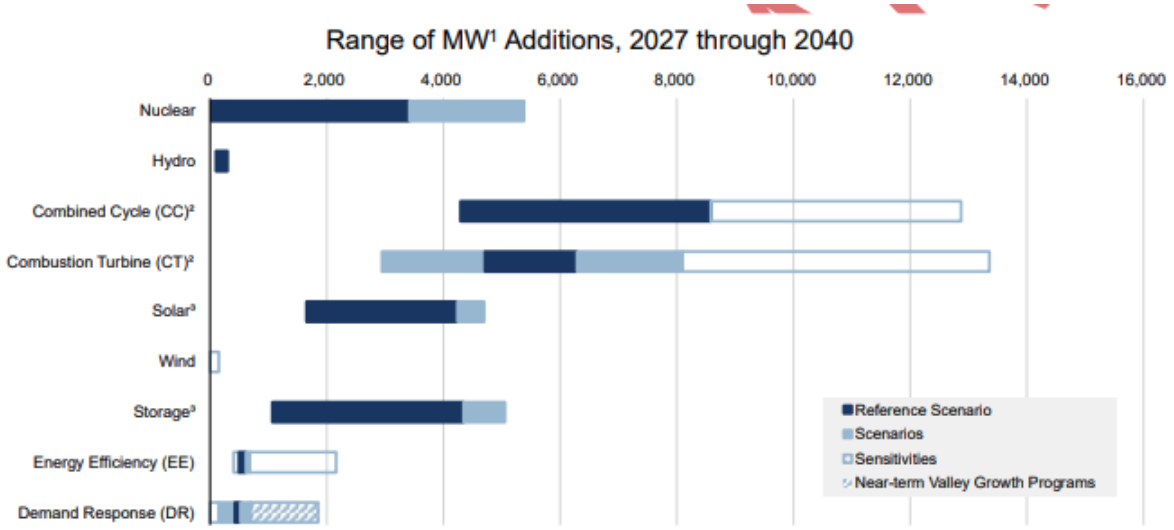
[1] *See, e.g.*, 91 Fed. Reg. 2470 (Jan. 21, 2026).

engagement and accountability as TVA makes long-term resource decisions that will impact the well-being of millions of people living in the Tennessee Valley.

## COMMENTS

A. The Preliminary IRP's Overreliance on Gas is Out of Step Regionally and Nationally

A striking change between the 2025 Draft IRP and the 2026 Preliminary IRP is the dramatic shift away from renewables and towards a gas buildout. Specifically, by 2040, the Preliminary IRP predicts that TVA will add between 7 and 16 gigawatts of new gas, and up to *25 gigawatts* of new gas in sensitivity analyses.




*Source: 2026 Preliminary IRP at ES-11.*

At the same time, the amount of renewables in the IRP shrunk precipitously. Looking just at the baseline utility planning modeling runs in the two different IRPs shows a collapse in the amount of renewable energy in the modeling.

***Table 1: Renewables in Baseline Utility Planning, No Carbon Regulation Modeling Runs***

| | **2025 Draft IRP** | **2026 Preliminary IRP** |
|---|---|---|
| New Renewables by 2035 | 8GW | 1.5GW |
| New Renewables as a percentage of new gas capacity by 2035 | 89% | 20.3% |
| New Renewables as a percentage of new capacity by 2035 | 67% | 10.3% |

| | | |
|---|---|---|
| New Renewables by 2050 | 21GW | 2.3GW |

*Data taken from 2025 Draft IRP at 4-13, fig. 4-13 and TVA, Incremental Capacity Tables.*[2]

Essentially, renewables shrank from the solid majority of new near-term resource additions to a small minority of those resource additions. The picture is even more stark when looking towards 2050, at the end of the planning period, where TVA in its 2025 Draft IRP forecast an order of magnitude more renewable capacity additions than it does now.

TVA's projections are out of step regionally and nationally with planned resource additions. For example, by comparison, many other utilities in the southeast are adding significant amounts of solar to their portfolios.

RESOURCE PLAN CAPACITY ADDITIONS (MW) THROUGH 2030, BY SOLAR PERCENTAGE

| Utility | IRP Year | Total Additions (Nameplate MW) | Solar Additions (Nameplate MW) | Percent Solar |
|---|---|---|---|---|
| Tampa Electric* | 2026 | 1,289 | 954 | 74% |
| Florida Power & Light * | 2026 | 13,265 | 9,238 | 70% |
| Duke Energy Florida* | 2026 | 2,933 | 2,022 | 70% |
| Duke Energy Progress | 2025 | 5,802 | 2,110 | 36% |
| Duke Energy Carolinas | 2025 | 4,987 | 1,591 | 32% |
| Georgia Power | 2025 | 10,098 | 1,690 | 17% |
| Santee Cooper | 2025 | 1,823 | 125 | 7% |
| Alabama Power | 2025 | 1,973 | 0 | 0% |
| Mississippi Power | 2027 | 0 | 0 | 0 |
| Dominion Energy South Carolina | 2026 | 0 | 0 | 0 |
| TVA | Expected Aug. 2026 | Unknown | Unknown | Unknown |

*Source: Southern Alliance for Clean Energy (SACE), "Solar in the Southeast" Ninth Edition Report published June 2026.*

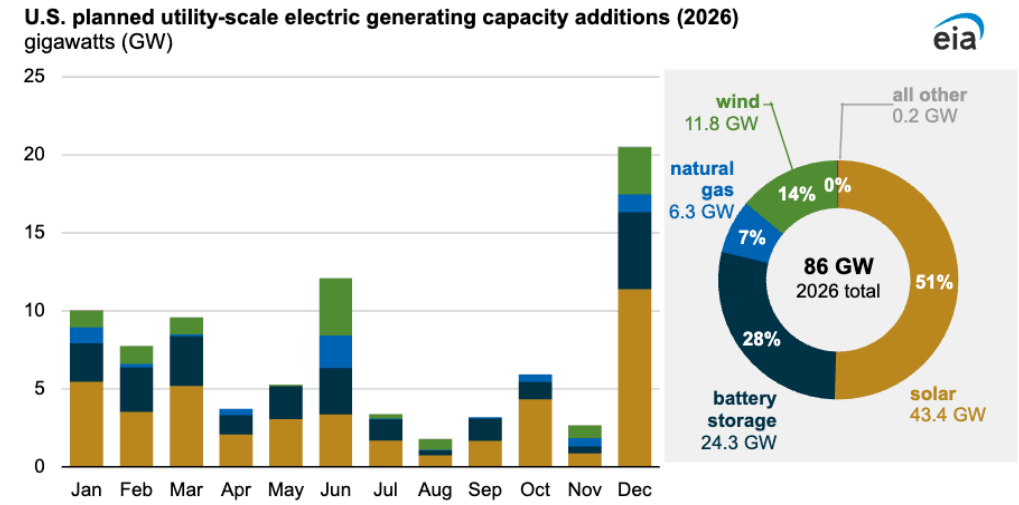
**In Florida, there is no IRP requirement; utilities file a Ten-Year Site Plan each year*

Looking more broadly, the federal Energy Information Administration predicts that nearly all of the capacity added across the entire country in 2026 will be renewables.

[2] *Available at* https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/environmental-stewardship/integrated-resource-plan/2026-irp/data-files/3---tva-final-2026-irp_incremental-capacity-tables.xlsx?sfvrsn=97c71ef1_1.

FEBRUARY 20, 2026

## New U.S. electric generating capacity expected to reach a record high in 2026




**Data source:** U.S. Energy Information Administration, *Preliminary Monthly Electric Generator Inventory*, December 2025

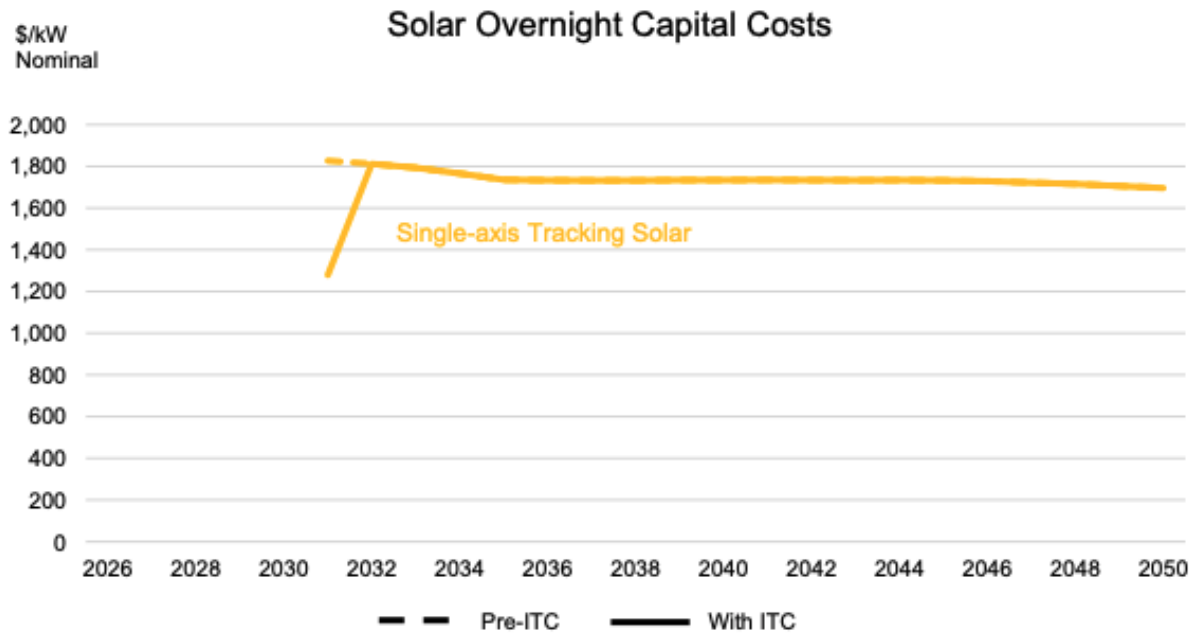
Of the 86 gigawatts predicted to be added in the U.S. in 2026, over half is predicted to be solar, and more than half of the rest is predicted to be battery storage; gas additions make up just 7% of the total. By contrast, in the Preliminary IRP reference case, in 2027 TVA adds 1.4 gigawatts of combined cycle gas and 200 megawatts of gas combustion turbines, but only 260 megawatts of renewables.[3]

B. The Preliminary IRP Artificially Dissuades the Model from Selecting Renewables

Despite solar being the least cost resource, multiple aspects of the Preliminary IRP modeling distort the analysis away from solar and towards fossil resources.

First, while the 2025 Draft IRP determined that renewables such as wind and solar and battery storage would be available in 2027, the Preliminary IRP precludes the model from selecting such resources until 2031. That four-year delay in solar availability is critical–as a result, the model is prevented from adding such resources while tax credits are still available.

[3] *See* TVA, Incremental Capacity Tables, *available at* https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/environmental-stewardship/integrated-resource-plan/2026-irp/data-files/3---tva-final-2026-irp_incremental-capacity-tables.xlsx?sfvrsn=97c71ef1_1.




*Source: 2026 Preliminary IRP at E-13*.

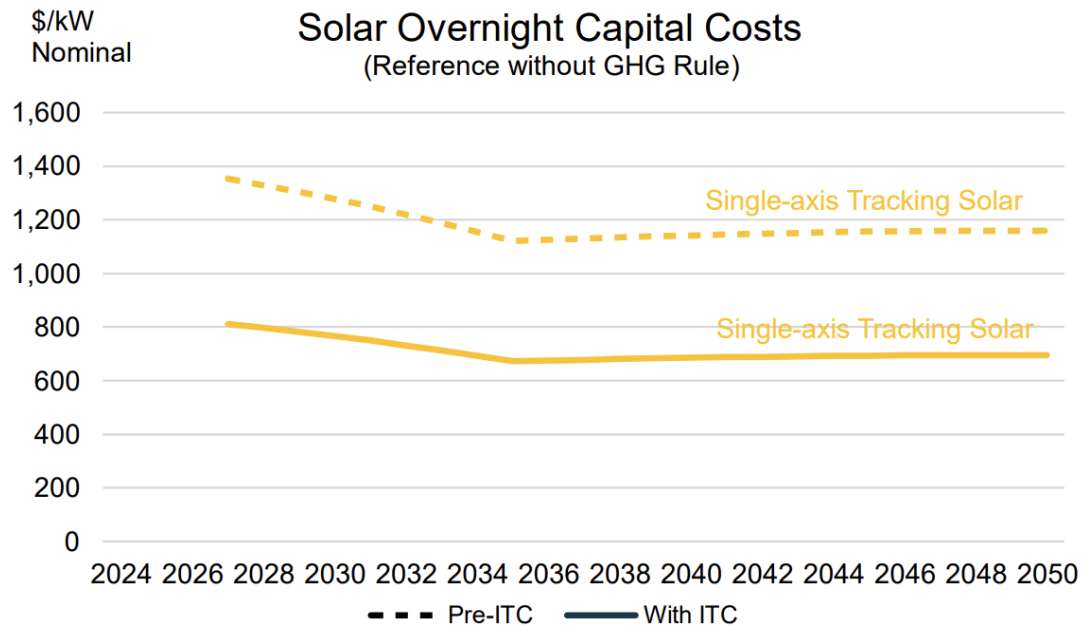
TVA's assumed price for solar jumps from $1,279/kW to $1,812/kW–or by nearly 42%–by 2032, meaning that the model is given almost no opportunity to select low cost solar resources. Under the 2025 Draft IRP, TVA gave the model effectively five times as much opportunity to select solar before the expiration of tax credits as does the 2026 Preliminary IRP modeling.

Similarly, the Preliminary IRP pushes back the availability of battery storage. In the 2025 Draft IRP, TVA allowed the model to start selecting battery storage in 2029. 2025 Draft IRP at 3-17. However, in the 2026 Preliminary IRP, the model is precluded from selecting battery storage until 2031. 2026 Preliminary IRP at 2-21. But TVA has, outside of the current IRP process, recently acknowledged that it can add significant amounts of solar and storage well-before either 2029 or 2031. Indeed, less than a year ago, the TVA Board acknowledged that TVA can add significant amounts of battery storage well before the date that the IRP assumes such resources would be available, observing that TVA "has identified a commercial opportunity that may add up to 1,500 MW of new operational BESS capacity by CY 2029." TVA Board Resolution: Battery Storage Systems Opportunity to Maintain Continuity of Operations (Nov. 6, 2025).[4] Similarly, in February 2024, TVA stated that it had the ability to add a gigawatt of new solar capacity every year. *See* Kingston FEIS Appendix D at D-4 ("Based on this recent direct experience, the estimated implementation rate for solar in the TVA PSA is approximately 1,000

[4] *Available at* https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/about-tva/board-of-directors/november-6--2025/resolutions/battery-options-to-support-tva-capacity-(stamped).pdf?sfvrsn=8b2f0be1_1.

MW per year").[5] Accordingly, the delay in when the model can actually add solar and storage artificially and significantly reduces the amount of such resources the model ends up selecting.

Second, TVA now assumes a much higher solar price than it did in 2025. Whereas, post Investment Tax Credit, the 2026 Preliminary IRP assumes a solar price of $1800/kW, the 2025 Draft IRP predicted that solar would cost, absent that same tax credit, roughly $1200/kW by 2032, with that price continuing to decline steeply for several more years.

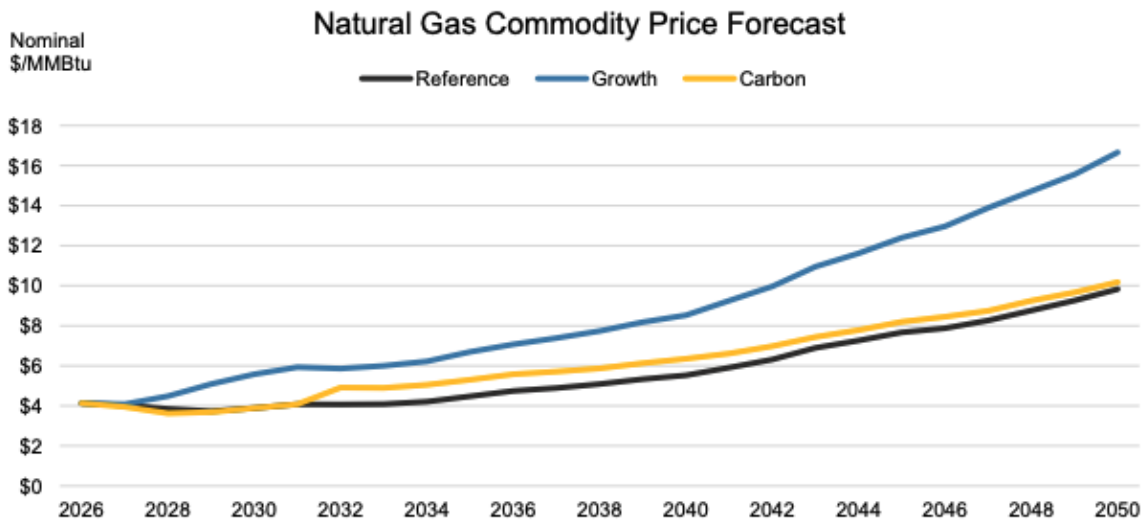



*Source: 2025 Draft IRP at E-15.*

This assumed higher cost of solar significantly affects the modeling's outputs. As demonstrated by TVA's sensitivity run of lower renewable and storage costs, assuming a lower cost of solar results in an almost 1-for-1 increase in solar capacity additions and corresponding decrease in combined cycle gas additions. *See* 2026 Preliminary IRP at 3-37, tbl. 3-7.

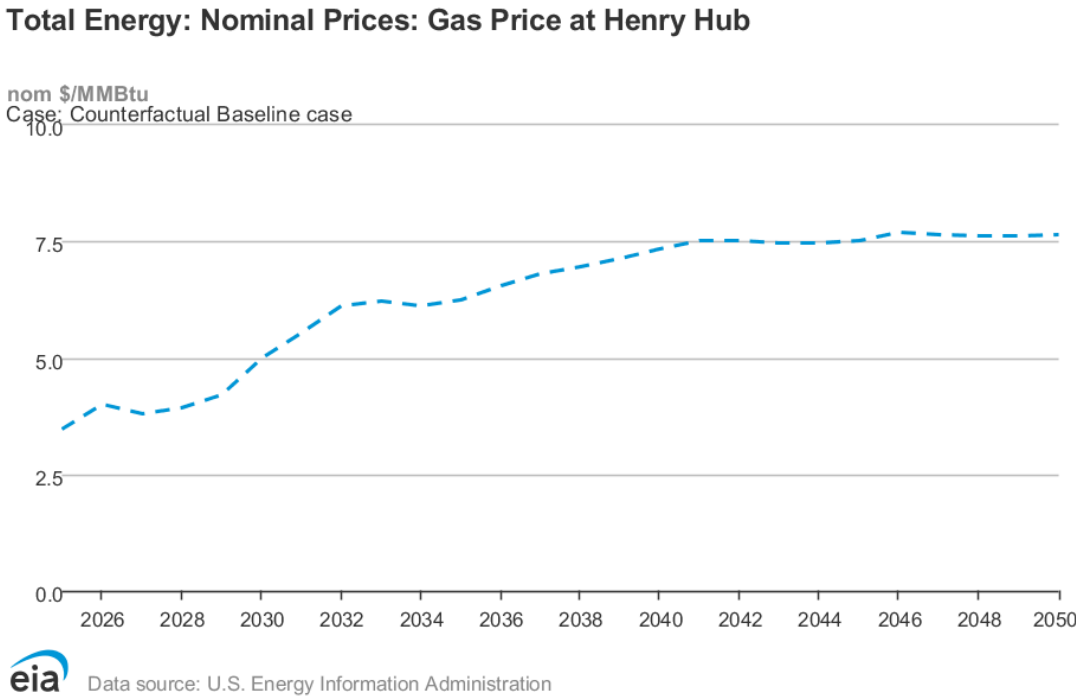
While assuming a higher cost for solar, the 2026 Preliminary IRP also underassesses the price of gas, again shifting the model away from renewables and towards fossil fuels.

[5] *Available at* https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/environment/environmental-stewardship/nepa-environmental-reviews/kingston-retirement/removed-cover_kingston.pdf?sfvrsn=25991f5a_7.




*Source: 2026 Preliminary IRP at 2-14.*

Although TVA does project increasing gas costs, most of the increase in the Reference case comes towards the end of the planning period, with gas prices remaining below $6/MMbtu until almost 2042. By contrast, the Energy Information Administration predicts gas prices rising more rapidly in the near term:




*Annual Energy Outlook 2026 Table 1. Total Energy Supply, Disposition, and Price Summary.*[6]

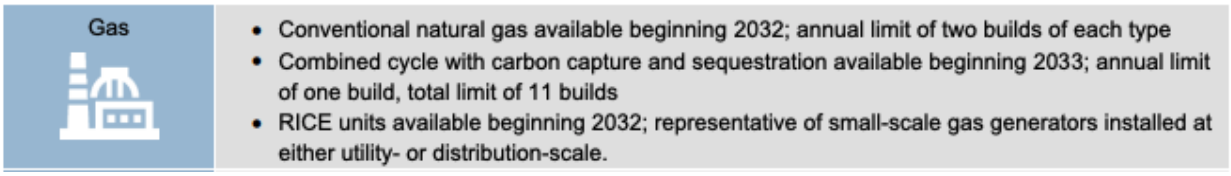
[6] *Available at* https://www.eia.gov/outlooks/aeo/data/browser/#/?id=1-AEO2026&region=0-0&cases=cb2026&start=2025&end=2050&f=A&linechart=~~cb2026-d021826b.54-1-AEO2026&map=&ctype=linechart&sid=&sourcekey=0.

According to EIA's prediction, gas prices reach $6/MMbtu in 2032, a *decade* before TVA's forecast. Given that fuel prices are a very significant part of overall gas generation costs–particularly for combustion turbines–TVA's assumption that most gas price increases come later in the planning period skews the model towards selecting gas in the near term, and away from solar and other renewable resources.

Third, the Preliminary IRP considers only a limited set of battery storage technologies, modeling only 4-hour batteries and 8-hour "advanced chemistry" batteries, while not modeling longer duration energy storage options such as 50- or 100-hour storage systems, or shorter duration systems, such as 2-hour batteries. These different storage technologies would provide different benefits to TVA's system that are not captured by the Preliminary IRP analyses. For example, 2-hour batteries are useful for narrow peak services, potentially akin to some of the role played by 4-hour batteries, but are less expensive. On the other hand, longer-duration batteries provide different values than 8-hour batteries; in particular, concerns about early-morning winter peaks could be addressed with such resources. Other utilities are modeling scenarios with long duration battery storage; TVA should do the same.

Additionally, the model caps the annual builds of renewable resources at very low levels, while assuming TVA can build multiple gigawatts of gas every year. Even once solar is available to the model in 2031, the model is, in most modeling runs, prevented from selecting more than 1 gigawatt of solar additions per year; the model is similarly constrained from selecting more than 500 megawatts of 4-hour battery storage per year. 2026 Preliminary IRP at 2-20. And those caps do not grow with time, meaning that TVA presumes that it will not be able to improve its ability to add solar or storage as it gains experience and as its overall system size grows.

By contrast, the model is allowed to select very large amounts of gas:




*Source: 2026 Preliminary IRP at 2-20.*

Each "type" of gas plant is quite large: 2.1 gigawatts for conventional combined cycle plants, and 1 gigawatt per combustion turbine plant. 2026 Preliminary IRP at 2-22. Accordingly, the model is able to pick as many as six gigawatts of conventional gas plants per year, while it is far from clear that TVA would ever be able to add that much gas so quickly. This again tilts the analysis in favor of gas, and away from renewables.

Finally, TVA errs in its modeling by coding the life extensions of TVA's coal fleet into the model itself. As part of the Preliminary IRP, the model was not allowed to pick the most economic time to retire TVA's existing fleet of coal-fired units. And, while it is telling that the model under no scenario chose to add *more* coal to TVA's fleet, the inability of the model to choose optimal *retirements* of existing coal robs TVA staff and the TVA Board of valuable information as to the cost-efficacy of keeping these old, dirty units online. Indeed, other TVA materials indicate that keeping just the Kingston and Cumberland coal-fired facilities online is extremely costly: nearly $1.4 *billion* in necessary investments.[7]

Further, handcuffing the model in this regard also prevents it from picking cleaner new resources, such as solar and storage, to meet TVA's capacity and energy needs, since the model is effectively forced to use the coal. The portfolios generated by the model are accordingly more expensive and less informative than they would otherwise be; this additionally artificially suppresses the amount of renewables in the portfolios so generated.

As a result, for this reason and the reasons discussed above, the 2026 Preliminary IRP underselects solar and battery storage, and overselects gas.

C. TVA Should Avoid Risky Overreliance on Gas

As discussed above, TVA's modeling favors gas over renewables. But even TVA itself acknowledges that this is risky. As the 2026 Preliminary IRP observes, "higher reliance on natural gas generation results in higher financial risk exposure than alternative strategies." 2026 Preliminary IRP at 3-31. This is particularly the case when one considers that TVA's demand growth forecasts are heavily influenced by perceived demand growth from data center expansion. *See* 2026 Preliminary IRP at 2-3, tbl. 2-1 (noting as a "key change" the "rising electricity demand driven by . . . industrial growth (primarily data center load)"). While new gas plants are huge, gigawatt-scale resources that take years to build and decades to repay capital costs, hyperscale datacenters operate on vastly shorter timescales, with chips becoming obsolete within years, when they don't burn out in 18-24 months. Accordingly, TVA could make the mistake of committing itself to a multi-year plan of building out enormous amounts of gas generation to meet demand from datacenters that might not materialize, or may materialize and then move away leaving TVA and the Valley burdened with unneeded gas plants.

[7] *See* TVA, Kingston System Value Analysis (Jan. 29, 2026) at 188 (attached hereto as Exhibit A) ("The total investment needed to continue to operate KIF, maintain historical performance, and comply with regulatory requirements is expected to be $636 million."); *see* TVA, Cumberland System Value Analysis (Jan. 29, 2026) at 162 (attached hereto as Exhibit B) ("The total investment needed to continue to operate CUF, maintain historical performance, and comply with regulatory requirements is expected to be $738 million.")

By contrast, renewable energy resources like solar and storage are scalable and rapidly deployable, and represent "off the shelf" solutions that are already widely available. Accordingly, TVA should focus on a renewables-plus-storage strategy to meet its needs.

TVA's modeling–even with the distortions hampering renewables discussed above–is consistent with this recommendation. TVA's scoring of the three strategies analyzed in the Preliminary IRP, the "Distributed" strategy that emphasizes renewables performs the best overall.


*Source: 2026 Preliminary IRP at ES-9.*

The Distributed strategy has a low system average cost across scenarios, quite comparable to the Reference case strategy, and significantly lower than the "Innovation" strategy; it also "generally has the lowest financial risk exposure based on lower fuel requirements." 2026 Preliminary IRP at 3-27. It also generally across scenarios had the best operating cost stability performance. And it generally has the lowest water consumption across the strategies, and low carbon emissions that would only be lower if additional renewables and battery storage would be implemented. Particularly given the large uncertainties surrounding things like fuel cost and the ultimate technical feasibility, availability, and cost of the next generation nuclear resources relied on in the Innovation strategy, the Distributed strategy modeling results strongly suggests that, for TVA to avoid risk and reduce emissions, it should prioritize renewable energy and battery storage.

D. TVA Should Abandon the "Land Use" Metric

Although the "Distributed" strategy's beneficial inclusion of solar does decrease that strategy's score in the "land use" metric, it is important that TVA recognize how distorting that metric is. As the Club discussed in its comments on the 2019 Draft IRP (*see* 2019 Sierra Club Comments at 11-14), *and* in comments on the 2025 Draft IRP (*see* Sierra Club December 11, 2024 Comments at 3, n.2) a metric that simply looks at the raw number of acres "used" in different portfolios without reference to *how* those acres are used provides essentially no useful information for decisionmakers. For example, the metric fails to capture how *reversible* land use

may be: an acre used for solar panels can be readily returned to its former use if the panels are removed (indeed, in many cases such lifecycle planning is *legally required* for solar development), whereas an acre used for, say, a pipeline segment with compressor station and associated construction roadways, or for a gas turbine, becomes developed forever. Similarly, the metric fails to account for the intensity of land use. An acre solar project could use land very lightly, with raised panels coexisting along with agricultural uses (and thereby helping to provide income and tax base for rural land that might otherwise face economic pressure to become irreversibly developed); by contrast, an acre of land used for, say, the storage of spent nuclear fuel rods is used very, very intensely. Indeed, most people would undoubtedly far rather have many acres of solar panels in or near their communities than a single acre of nuclear waste storage, and thus scoring the former as far worse than the latter in terms of environmental impact, as the "land use" metric would do, distorts decisionmaking.

Instead, TVA should assess the public health impacts of emissions under the different strategies. Tools such as EPA's COBRA model can estimate health benefits and mortality avoided due to reductions in emissions, and TVA could apply such models to help differentiate among the strategies–and the resource selections within those strategies–on important public health bases. Particularly given the rather narrow net present value and system average cost metrics between things like the Reference strategy and the Distributed strategy, such analysis is likely to be extremely useful in directing TVA portfolio design going forward. As a result, TVA should fold into its final IRP analysis an assessment of the public health impacts of pollution under the different portfolios generated in the 2026 Preliminary IRP modeling. Given the substantial environmental justice implications of portfolio design and resource selection, a system-wide assessment of the public health and mortality impacts of different resource strategies will be critically important for both the public and the Board.

E. TVA Should Closely Incorporate Transmission Planning with Resource Planning

TVA must follow through with an Integrated Transmission Planning process as an accompaniment to the IRP. Transmission planning is increasingly important in ensuring that resource planning processes that demonstrate the importance of investing in renewable and carbon-free resources actually result in real-world shifts towards such resources and away from dirty fossil power. As GridStrategies notes:

- Transmission has a direct impact on the cost and timeline for accessing resource options evaluated in generation planning;
- The need for transmission is affected by generation retirements and the type and location of planned generation resources; and
- Expanding transmission ties to neighboring grid operators can also offer a lower-cost source of energy and capacity than building in-region resources.

*See* GridStrategies, *Incorporating transmission into TVA's IRP for truly "Integrated" Resource Planning* (Oct. 2024) (the "GridStrategies Report"), attached hereto as Exhibit C, at 1. A simple example of this value is the economies of scale that flow from higher-capacity transmission. By planning ahead to assess where higher-capacity transmission might be useful in wheeling renewable power from sources such as wind and solar, TVA can ensure that such renewable projects are more cost-effectively integrated into TVA's system.

As such, the Sierra Club strongly recommends that TVA engage in overall transmission and resource planning steps as follows:

1. Identify portfolios of generation and transmission that minimize cost and risk for ratepayers,
2. Account for the multiple types of benefits provided by transmission, which the Federal Energy Regulatory Commission (FERC) listed in Order 1920,
3. Proactively plan the high-capacity transmission that will be needed to cost-effectively meet needs looking at least 20 years in the future, with that transmission planning preceding interconnection applications for specific generators,
4. Iterate between transmission and generation planning and among different models to develop, test, and refine optimal portfolios as additional information becomes available,
5. Include stakeholders in the transmission planning process to provide overall direction and feedback on how to refine iterative plans,
6. Quantify the net benefits of expanding transmission ties to other grid operators, and weigh those against local generation projects, and
7. Fully integrate transmission planning into future resource decisions and into all future IRPs.

*See* GridStrategies Report at 1-2.

F. Improvements in Stakeholder Engagement

The Sierra Club appreciates the opportunity to participate with delegates to the TVA IRP Working Group in this IRP cycle. There are ways in which the Working Group could be improved, however. For example, loosening strictures of confidentiality over materials prepared by TVA as part of the process would better enable Working Group delegates to communicate with internal organizational stakeholders; it would also enhance the ability of Working Group members to communicate with the larger public, both to help educate them on TVA's IRP process and progress and to help gather and convey to TVA concerns, information, and insights from the public. Similarly, many IRP Working Group members were constrained from working with external technical experts; this hindered the ability of the Working Group to contribute as

fully as might have been otherwise, to the diminishment of the IRP process.

Stakeholder engagement and TVA's responsiveness to the public at TVA's IRP Open Houses and webinars could also be improved. Speakers should be given opportunities to provide public testimony—as they would at public hearings on agency rulemakings, for example—and that testimony should be incorporated and added to the record. Additionally, TVA should approach open houses and public hearings on its IRP with a clear sense of what information from the public would be useful in helping TVA to best fulfill its statutory missions, and should clearly convey to the public questions on which TVA most needs public input.

Finally, the Sierra Club encourages TVA to make public in a docket or other publicly available online resource all public comments and testimony it receives on the IRP as soon as possible and before issuance of the final IRP. This should include public comment on the IRP submitted at RERC meetings and TVA board meetings, which should be incorporated into the IRP comment collection by TVA. All of the IRP comments material is presumably public, and otherwise subject to Freedom of Information Act requests; by making such material available without being requested, TVA could help ensure that commenters in particular and the general public at large are better able to see commonalities and points of divergence among people submitting information to TVA as part of the IRP process.

## CONCLUSION

For the foregoing reasons, TVA should revise its Preliminary IRP before finalization, and should in particular recommend to the Board that TVA pursue a renewables-focused approach to meeting TVA's generation needs and fulfilling TVA's tripartite mission of power provision, economic development, and environmental stewardship. The failure to prioritize the lowest cost and most environmentally benign energy sources like solar, wind, storage, and energy conservation and efficiency, and instead continuing to rely on the highest cost and most environmentally damaging coal, gas, and nuclear, is short sighted and will result in higher electricity costs for ratepayers in the Tennessee Valley while exacerbating the negative health effects of those dirty energy sources.

Sincerely,

/s/ Zachary M. Fabish

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