Regional Energy Resource Council (RERC) Minutes
Tennessee Valley Authority
December 12, 2023 at 2:00 PM
Virtual Meeting

The Tennessee Valley Authority (TVA) Regional Energy Resource Council (RERC or Council) convened virtually for a one-hour meeting. It was the second meeting of the 6th term of the RERC. Members of the public were able to view and listen to the meeting. The meeting presentations are available at www.tva.gov/rerc.

Council members in attendance
Adam Benshoff, Jan Berry, Marquita Bradshaw, Ron Bunch, Monte Cooper, Erin Gill, Chelsea Jenkins, Pete Mattheis, Dan Miller, Doug Peters, Boyd Pettit, Erik Schmidt, Patricia Sims, Alexa Voytek, Julie Woosley.

Designated Federal Officer: Melanie Farrell
Designated Federal Officer Alternate: Althea Jones
Facilitator: Jo Anne Lavender

1. Welcome and Introductions

A. Melanie Farrell, Vice President of TVA External Strategy and Regulatory Oversight, welcomed everyone to the meeting.

B. Erin Gill, Chair, noted for new members who are not familiar with the Integrated Resource Plan (IRP), that it is one of TVA's most important planning processes. She said the RERC will be asked to provide an advice statement for the TVA Board in summer 2024.

C. Brian Child, Vice President of TVA Enterprise Planning, said he is grateful that TVA has the opportunity to update the RERC on the IRP.

2. TVA IRP Overview and Process Update – Clifton Lowry, Director, Resource Planning and Strategy (Presentation can be found at www.tva.gov/rerc)

Clifton Lowry provided an overview of TVA's 2024 Integrated Resource Plan (IRP). The IRP takes a systemwide look at how TVA can meet energy demands between now and 2050. TVA's IRPs are usually 20-year studies, but it is extending this one to 2050 to align with TVA's aspiration to achieve net-zero by 2050. TVA also will produce an Environmental Impact Statement (EIS) that evaluates the potential environmental impacts of the IRP options.

The IRP sets a planning foundation for how TVA will make generation asset decisions into the 2030s and beyond. It also sets TVA's long-term strategic direction and its long-range financial plan.

Lowry explained that the IRP is based on six least-cost planning principles: low-cost, risk informed, environmentally responsible, reliable and resilient, diverse, and flexible. The IRP will not set rates or identify specific sites for new resources.

In a critical step in the IRP process, TVA and a diverse stakeholder group, called the IRP Working Group, identified scenarios, which are plausible futures outside TVA's control, and strategies, which are ways that TVA can meet demand. Computer modeling will generate potential resource plans (portfolios) for each scenario/strategy combination.

The five scenarios being used in the modeling are:

- Reference Case
- Higher Growth Economy
- Stagnant Economy
- Carbon Regulation
- Carbon Regulation plus Growth.

The five strategies being used in the modeling are:

- Baseline Utility Planning
- Carbon-Free Innovation Focus
- Carbon-Free Commercial Ready Focus
- Distributed and Demand Side Resources Focus
- Resiliency Focus.

TVA experienced high demand in the 1990s, with a 2.5% compound annual growth rate for more than 10 years. It saw less demand in the 10-year period after the financial crisis in 2008, and experienced flat growth of less than <0.4% compound annual growth for the next 10 years. TVA has seen greater demand on the system recently, and we expect that demand to keep growing at a 0.8% compound annual growth rate across the IRP study period. The IRP scenarios include a demand growth trajectory of 2.3% compound annual growth across the study period.

The IRP uses a rigorous analytical process. After generating the 25 potential portfolios, TVA will analyze all portfolios, considering key tradeoffs, and identify a preferred portfolio direction for the coming years.

Lowry reviewed the timeline for the project, noting that TVA will publish the Draft IRP and Draft EIS in spring 2024. TVA also will host informational open houses and seek public comments after the drafts are released. TVA plans to present the 2024 IRP and accompanying EIS to the TVA Board for its decision in summer 2024.

QUESTIONS/ANSWERS

- **Does the process include benchmarking?**
    - There are three ways we have benchmarked and validated:
        - We asked Deloitte to look at our peers and evaluate if we are consistent.
        - We have partnered with a third party to review cost assumptions. This includes current prices, as well as forecasts into the future. We are working with the National Renewable Energy Laboratory (NREL). We are using an annual technology baseline of resource costs and characteristics to ensure our modeling resource types are appropriate.

- **One thing that came out of the Utility of the Future Information Exchange was that there will need to be distribution modeling that is focused on specific locations. Integrated Distribution Planning should include LPCs that want to coordinate.**
    - The IRP involves systemwide analysis. If there are opportunities to lower distribution costs in the Valley, we would signal that in the IRP as a strategic direction.

- **The regulation case and the regulation with growth case are almost the same. What is the difference in the narratives?**
    - When we started with the IRP, we had them baked together. The Working Group thought we should try to understand each one separately. When you think about the world with carbon regulations, what ends up happening is there are higher electricity prices in the near-term. The result is a dampening of demand for a period of time, coupled with industry speeding up to meet demand. One looks at the scenario of regulation changes, and the other looks at regulation changes but in a faster-growing economy.

- **The three benchmarking partners you mentioned: What have they found? How have they looked at what TVA put together?**
    - Generally, they found we are in line with best practices. With advanced nuclear, TVA is actively working to understand what deploying small modular reactors would look like. That is further down the path. Our numbers are higher than NREL's for generic SMRs. That piece is noted and we'll characterize the reasons why in the IRP.

- **How much does a shift in pricing of technology factor into sensitivities? Last time, there were questions about how much solar was being included. Will shifts in pricing be baked in as sensitivity analysis?**
    - When promoting a particular asset, we are considering cost reduction of the resource type relative to the focus area, such that the model will pick it. We will look at how much is needed to have it pick it. It will show us how diversity of generating assets would play out in the future. We can tell the model to add the cost back in. We can do operating-cost sensitivity analysis to see, if we changed

one variable, how much more of that asset would be on the system, how quickly the model would pick it and what is reasonable.

- **Which gas plants are baked in?**
    - The retirement of the coal fleet by 2035 is factored in. The replacement of the Cumberland plant is factored in, because the Environmental Impact Statement has been completed and a decision has been made on replacement. And the preferred alternative for the Kingston plant retirement and gas replacement has been factored in. Beyond them, even if there is a notice of intent, none of those are baked in. The model selects what it sees as the best resources.

- **Does the IRP take locations and weather into consideration? Is overloading a concern?**
    - The IRP doesn't consider specific sites. When we create a load forecast, we are looking at things like the market economic forecast and, related to weather, temperatures and variability around temperatures. We look at the trend in temperatures over the last 20 years. As a result, if you see temperatures up in the winter, it doesn't mean you can't see -10°. You can, but there is a lower probability. Regarding overloading, that would be site-specific transmission issues, and there is not that level of granularity in the IRP.

3. Stakeholder Engagement Opportunities – Melanie Farrell, Vice President, External Strategy and Regulatory Oversight (Presentation can be found at **www.tva.gov/rerc**)

Melanie Farrell explained that stakeholder engagement is important to TVA and critical to the IRP process. TVA created the IRP Working Group with the intent of bringing together diverse customer and stakeholder perspectives to inform the planning process. The Working Group consists of eight customer representatives, including three from local power companies and five from customer associations, and 16 stakeholder representatives, including three from research or academic institutions, three from energy or environmental non-governmental organizations, four from state or federal government, and six from community, sustainability or other special interests. The group, which meets in person monthly as well as virtually as needed, is playing a crucial role in shaping the IRP.

Public input is critical to the IRP as well, and Farrell reviewed numerous public engagement opportunities. They include the EIS scoping and comment period; public webinars; Board public listening sessions; RERC meetings, which are open to the public; public open house meetings slated for Spring 2024; and ongoing interaction with IRP experts and regional field teams at local events. The public open houses will take place across TVA's service territory after the Draft IRP and Draft EIS are published, offering an opportunity for the public to learn more about the IRP and EIS and to comment in person and virtually.

Farrell reviewed a timeline for public outreach between now and the end of the process in late summer 2024. She also reviewed the RERC's role, which will include providing an advice statement to the TVA Board on the final version of the IRP.

QUESTIONS/ANSWERS

- **Do you have way for people to directly ask questions of staff? Like, town halls? The digital divide can cause a problem, because some people don't have computer or Internet access.**
    - The public is invited to the open houses, which will be in locations across the Tennessee Valley, after the Draft IRP and Draft EIS are published. If you have suggestions on ways to reach more people, please let us know.

- **Are you benchmarking private companies?**
    - We have benchmarked private companies, and we are proactively talking with and working with stakeholders. We are bringing them into the process.

4. Next RERC Meeting and Closing Remarks – Melanie Farrell, Vice President, External Strategy and Regulatory Oversight

The next RERC meeting, on January 18 in Knoxville, TN, will be a joint RERC and Regional Resource Stewardship Council (RRSC) meeting. The councils will provide advice statements on the Valley Pathways Study. The public is invited to attend and can register ahead of time to make comments.

Farrell thanked the RERC members for their participation and said TVA will continue to keep them apprised of the IRP process. Erin Gill, Chair, thanked them as well, and noted that the RERC will continue to play a role in the IRP.