

Regional Energy Resource Council (RERC) Minutes
Tennessee Valley Authority
November 7, 2023
8 a.m. Central

Meeting location:
Cadence Bank Arena
Tupelo, Mississippi

The Tennessee Valley Authority (TVA) Regional Energy Resource Council (RERC or Council) convened for the 1st meeting of the 6th term, beginning at 8 a.m. Central on Tuesday, November 7, 2023. Meeting presentations are available at www.tva.gov/merc.

Council members attending in-person:

Adam Benshoff, Jan Berry, Marquita Bradshaw, Monte Cooper, Erin Gill, Chrissy Heard, Chelsea Jenkins, Pete Mattheis, Doug Peters, Erik Schmidt, Patricia Sims, Alexa Voytek, Julie Woosley

Council members attending virtually:

Rodney Goodman, Candy Johnson, Boyd Pettit

Designated Federal Officer: Melanie Farrell

Designated Federal Officer Alternate: Althea Jones

Facilitator: Jo Anne Lavender

- Appendix A – TVA staff and stakeholders who attended the meeting
- Appendix B – Agenda

Purpose

The purpose of the meeting was to provide an overview of TVA’s mission and current strategy, review and inform RERC members on TVA’s 2024 Integrated Resource Plan (IRP) process, and provide informational updates on two stakeholder engagement initiatives: the Utility of the Future Information Exchange and the Valley Pathways Study. The meeting also provided an opportunity for TVA Board members to hear RERC members’ thoughts on the energy system of the future.

1. Welcome and Introductions

- A.** Melanie Farrell, TVA Vice President of External Strategy and Regulatory Oversight, welcomed everyone to the meeting. She talked about the importance of the Council’s advice to TVA and its Board of Directors and TVA’s commitment to hear from people with diverse perspectives as it navigates toward the energy system of the future.
- B.** Erin Gill, RERC Chair, thanked the members for their participation. She said TVA shares a lot of information, and the Council’s input is taken seriously. She noted that RERC consensus statements to the Board help set the foundation for future dialogue.

C. Jo Anne Lavender welcomed the group and reviewed the agenda and the purpose of the meeting.

2. Federal Advisory Committee Act (FACA Briefing) – Jennifer Brundige, Attorney, Office of General Counsel (Presentation can be found at www.tva.gov/merc)

Jennifer Brundige offered background on the Federal Advisory Committee Act, which was passed in 1972, and ensures that advisory committees, like the RERC, provide advice that is relevant, objective and open to the public and that they comply with the Act's record-keeping requirements. Brundige noted that public access is a key element. The RERC's meetings are open to the public, and people can join virtually or in-person. The agendas and meeting minutes are posted on TVA's website. Members of the public are invited to register to speak during public listening sessions at meetings. Brundige reviewed the role of the RERC, the provisions of the RERC charter and the balanced membership of the Council.

3. Designated Federal Officer Briefing — Melanie Farrell, TVA Vice President of External Strategy and Regulatory Oversight (Presentation can be found at www.tva.gov/merc)

Melanie Farrell said this RERC meeting was being held in Tupelo because the Board meeting was taking place there later in the week. Tupelo is an important location in TVA's 90-year history, because it was the first city to receive power from TVA – via the Wilson Dam.

Farrell provided highlights of recent TVA and RERC activity:

- The Tennessee Valley is experiencing tremendous growth, as low-cost power and a low cost of living attract companies and individuals to the region. This growth impacts TVA, which remains focused on affordable, reliable, resilient and clean energy; environmental stewardship; and economic development.
- TVA is embarking on its 2024 Integrated Resource Plan (IRP), which will help determine how it meets energy demand between now and 2050.
- In the past year, the RERC has weighed in on important topics such as TVA's approach to advanced nuclear technology and its exploration of small modular reactors; TVA's work to engage environmental justice communities and to consider community equity in all operations; and TVA's focus on innovation and technology.

Farrell said the RERC is one of the ways that TVA provides open and transparent communication with the public. She again thanked the members for their work.

4. Introduction to TVA – Brian Child, Vice President, Enterprise Planning (Presentation can be found at www.tva.gov/merc)

Brian Child offered an introduction to TVA and covered four key topics: its mission, asset portfolio, finances, and innovation and research initiatives.

TVA was created to make life better for the people of the Tennessee Valley. Three focus areas are central to its mission: Energy that is affordable, reliable, resilient and ever cleaner; environmental stewardship; and economic development. As a public power entity, TVA partners with 153 local power companies as well as direct-served customers. As a public power provider,

TVA reinvests money earned from the sale of power back to the communities it serves and into its facilities. It is a corporate agency of the United States, but is self-financed and governed by its nine-member Board.

TVA's FY 2022 capacity was 39,553 megawatts, which represents the number of megawatts available to serve a peak demand. Its resource portfolio includes gas, nuclear, coal, demand response programs, hydro, solar and wind. TVA's river management has averted \$9.7 billion in flood damages since 1936. In FY 2022, TVA helped attract and retain 66,5000 jobs and \$10.2 billion in investments.

In reviewing TVA finances, Child noted that in FY 2022, 90% of TVA's revenue came from sales to local power companies, 7.4% from sales to direct-served customers, 1.2% from sales to federal agencies, and the remaining from other revenues. He reviewed operating revenue, expenses such as fuel and purchased power, and O&M expenses. Child also detailed TVA's payments in lieu of taxes, its interest expenses and its capital expenditures, which it anticipates will rise as it spends on capacity expansion to address increases in power demand.

Child described TVA's investments in its existing fleet and its new primary system operations center as well as its innovation and research efforts, which center around seven focus areas: advanced nuclear solutions, decarbonization options, storage integration, future grid performance, regional grid transformation, Connected Communities and electric vehicle evolution.

QUESTIONS/ANSWERS

- Council member comment: I'd like to remind everyone that the first cooperative in the country was formed in 1934 in Mississippi. It was Alcorn County Electric Power Association.
- So, nuclear is about 21% of capacity and provides 39% of the energy, and gas is about 37% or 38% of capacity and provides 33% of energy? Is that how it works?
 - *Yes. Nuclear runs all the time, and gas runs as needed. Some resources have a higher capacity factor because we run them more frequently. Nuclear has a high capacity factor whereas gas is much lower.*
- Can you explain demand response?
 - *For demand response, we give companies notice that we could benefit from them reducing their usage at a certain time, and they let us know if they can do it then. Energy efficiency and demand response have always been areas of focus, but they are becoming bigger focus areas because of the growth on the system.*
- Where do the payments in lieu of taxes go?
 - *The payments go to the states primarily. There may be a little bit that goes to counties and other municipalities, but the majority goes to the states. The states handle it from there.*
- Would Inflation Reduction Act tax credits reduce payments in lieu of taxes?
 - *Payments in lieu of taxes are based on revenues. If we get credits that help reduce costs, that helps keep rates low, but it doesn't necessarily change our revenues.*
- When TVA created the long-term power contracts with local power companies, I know that trying to pay down interest faster was a motivating factor here. Is that reflected here? Did we succeed in paying that debt down at a rapid rate?
 - *The long-term contract has allowed us to have a more comfortable time horizon over which we recover the debt cost for new construction. It doesn't have a direct*

impact on interest expense. But it has helped with our level of comfort with debt. We have been steadily reducing our debt. It is expected to go up, due in part to the asset transformation we are under.

- I was surprised that a third of the stack of renewables is purchased power. Is that purchased from outside the traditional service territory? Is that power being brought onto TVA's grid?
 - *It could be power that TVA has purchased but that is not necessarily outside our service territory. It could be inside our territory, but we don't own the asset. We enter into purchase power agreements for multiple reasons. Sometimes, it can be financially advantageous for our customers. Other times, we purchase power to help with system reliability.*
- Do you anticipate purchasing more power from other RTOs?
 - *As it stands now, we do have some purchases out there that we are planning on or have actually already entered into agreements. Part of that is a reflection of the growth on our system. You don't build a new power plant overnight. We have a number of new assets we are building, but there's load that has come about quickly. So we are doing a little bit more in the market just until we can get some of those additional resources online.*
- I know TVA has done a large RFP for carbon-free energy. Is that reflected here?
 - *By and large, it is not going to be reflected here, because under the carbon-free RFP, you would be entering into a purchased power arrangement, so that is not TVA capital that is being deployed. But it would be reflected in our assumptions in purchased power expense. Those agreements are still being worked through.*
- I would think that with that scale, there would be a big increase in the purchased power bar on the chart, but I don't see a big increase. Is there one?
 - *There is some increase, but there will be a lot of it later than 2026.*
- On the capital expenditures chart, it shows 40 gigawatts for capacity. Then, are you expecting year-over-year 5% load growth?
 - *We are not expecting 5% load growth year-over-year. The expectation for the next few years is in the ballpark of 1% growth on the system.*
- Do you know how TVA compares with how other utilities are investing?
 - *There are a number of ways you could look at it. I don't have that comparison with me. We have a benchmarking organization, and they look at how we compare in that area and countless others.*
- Looking at fuel rates, since you are building out so much gas and the price of gas is going to go up, I am surprised the fuel rate didn't go up more.
 - *Two things related to gas: The gas is offsetting coal, and while we're buying more gas, we're also buying less coal – and the price of coal is going up. The other thing that is critical is that our buildout of gas is part of what is enabling us to actively build out solar and other renewables. We are increasing the gas capacity, but the amount of energy that's going to come from gas doesn't change that drastically. It's there for when the sun isn't shining and for when you can't utilize other carbon-free resources.*
- So, your base rate is just your average cost recovered under the base rate from customers? And you get variance there, and the fuel rate is what you recover through the fuel clause. So it includes not only fuel, but purchased power that gets pushed through the fuel clause like solar PPAs and what not. Is that correct?
 - *Yes, that's correct.*
- On the power rates slide, the industrial rates are an average cost to customers. The big drivers are things like are you served at transmission or served at distribution, and those

served at distribution have much lower rates. You have load factor impacts as well. This is an average cost.

- When you say retail rate, do you mean all in?
 - *We're a wholesaler. But you can't really benchmark wholesale rates; what you can benchmark is retail rates. So, this is the all-in – our base rate, our fuel rate and whatever the LPC would add.*
- The \$30 billion debt ceiling you mentioned is coming quickly, especially in regard to the small modular reactors that we heard about last fall. Can you talk about how the headroom changes?
 - *As we look out on the planning horizon, the debt ceiling is out there, but we do not view it as a constraint on our ability to do the things we need to do. If there is a desire to move forward with an SMR, we would need to be able to do so in a way that we either have someone else take on the funding that keeps it from being a debt ceiling issue for us, or there would have to be some other kind of relief granted.*
- Could you go the history of the debt ceiling as far as the timeframe, because \$30 billion in 2023 is not the same as \$30 billion when it was established.
 - *The \$30 billion debt ceiling was put in place in 1979, and it has not changed since then. If indexed for inflation, it would be \$130 billion or \$140 billion today. But it's not; it is still \$30 billion.*
- Who set the debt ceiling?
 - *It was set by Congress in 1979. It had been \$15 billion prior to that.*
- For the expansion of nuclear, what was the driver? Did you bring on a new facility?
 - *Yes, we brought on an additional reactor at the current location. Then we also have had uprates of existing assets.*

5. Valley Pathways Study: Building a Competitive, Clean Economy – Laura Duncan, Senior Project Manager, Environment & Energy Policy (Presentation can be found at www.tva.gov/merc)

Laura Duncan presented information on TVA's partnership with the University of Tennessee's Baker School of Public Policy and Public Affairs, Guidehouse Consulting, VEIC and stakeholders region-wide to conduct the Valley Pathways Study. The partners and a diverse stakeholder working group met regularly to discuss how economic sectors in the region could come together to reduce carbon emissions and grow the economy.

Together, the partners and working group members determined a greenhouse gas emissions baseline for the region, then identified scenarios that economic sectors could face in the future and the pathways they could use to reach net-zero. The four scenarios are:

- **Community resiliency** – A future where more demands – for energy, goods, and services – throughout the economy are met and funded locally. Denser communities, both urban and rural, allow for less driving.
- **Accelerated electrification** – A future where almost everything in the Valley is electrified. This scenario explores the upper bound of how much electricity demand growth might be expected in a net-zero economy.
- **Low carbon breakthrough** – A future in which the pace and magnitude of electrification is more limited. Instead, innovation allows new low-carbon fuel alternatives to be deployed beyond just niche applications.

- **Combined Scenario** – A future where the Valley strives for a combination of the three strategies. This scenario takes an “all of the above” approach matching decarbonization strategies to their most impactful sectors.

The Valley Pathways Study team will present preliminary findings at a joint meeting with the RERC and Regional Resource Stewardship Council (RRSC) in mid-January 2024. Then, it will incorporate the Councils’ advice and publish the Valley Pathways Study Report. It will provide information to the public at a webinar in early 2024, and it will provide information region-wide so organizations have the study’s findings as they develop plans.

QUESTIONS/ANSWERS

- To what extent does the study look at the responsible parties for implementing those pathways and the risks and the available funding?
 - *We are developing a section that identifies strategies, and with the stakeholder group, there have been potential stakeholders and funding possibilities identified. We are not developing an action plan at this point. We think it will be more beneficial to put the information out there and see what questions there are, what feedback there is and how this is beneficial to the stakeholders in helping them move forward with reductions in their sectors.*
- A comment from a stakeholder: In terms of understanding the context, it was almost like an opportunity assessment combined with a traditional GHG inventory. We asked, “What are the lanes of opportunity within the free market, the economic side of things?” That reframed it for us as we were going through that process.

6. Utility of the Future Information Exchange – Althea Jones, Senior Manager, Public and Community Engagement (Presentation can be found at www.tva.gov/serc)

Althea Jones said the objective of the Utility of the Future Information Exchange (UF-IX) was to provide a forum for a diverse group of stakeholders to discuss the Integrated Resource Plan (IRP) process and issues they thought should be considered in the IRP and beyond. The goal was to discuss and understand issues, technologies, challenges and opportunities in the evolving marketplace; facilitate mutual understanding among diverse interests; hear ideas; and present options and considerations to TVA and each other. A third-party facilitator, Future 500, managed the process.

In addition to the IRP, the stakeholder group talked about distributed energy resources (DER) and distribution, generation and transmission, community issues, and modeling and associated assumptions. The group, which met four times, produced a report that includes considerations for the IRP as well as others that span beyond the scope of the IRP. The report was shared with the IRP Working Group.

The group’s discussions addressed three guiding questions: What would enhance TVA’s IRP process? Are there new and novel approaches to planning for evolving technologies? How can TV best engage stakeholders throughout the process? TVA is keeping the UF-IX team members apprised of the IRP’s progress and how their input has been used.

QUESTIONS/ANSWERS

- I was part of the group. It was a productive environment, and the report reflects the group's efforts. How do we convey this and make sure these suggestions are implemented?
 - *We are committed to leveraging this tool. We are working with the IRP Working Group and the RERC, and circling back with the UF-IX group to have those discussions. It is a great tool, and there are different ways we are going to use it.*
 - *Melanie Farrell added: TVA's process was to listen and take feedback without bringing TVA's immediate response to the suggestions, although our feedback is the intent. Ultimately, over the course of the next year, there will be periodic updates with the UF-IX Working Group and with the IRP and RERC. We will come back and talk about what was incorporated and how it influenced TVA's direction and strategy. The most important part of stakeholder engagement is listening and utilizing the feedback. We are fully committed to doing that.*
- I was part of the group, too. I enjoyed the engagement, and the diversity of thought was really something.

7. Integrated Resource Plan (IRP) Overview – Brian Child, Vice President, Enterprise Planning, and Melanie Farrell, Vice President, External Strategy and Regulatory Oversight (Presentation can be found at www.tva.gov/erc)

Brian Child provided an overview of resource planning and the Integrated Resource Plan (IRP). TVA and a diverse group of stakeholders, the IRP Working Group, have embarked on the 2024 IRP, which will evaluate how TVA can meet power demand across a variety of futures between now and 2050. The IRP will help TVA establish a foundation for power-generation asset planning and long-term financial planning. TVA also is conducting a programmatic Environment Impact Statement (EIS) that will evaluate the impact of the IRP.

TVA and the IRP Working Group have spent months evaluating forecasts and other information to identify five scenarios, or futures, TVA could find itself operating in over the next few decades. They also identified five business strategies TVA could use to meet energy demand in each possible future. TVA will model what each power generation mix would be when scenarios, strategies and other information is incorporated into the model. The model will generate 25 potential resource plans, or portfolios – one for each scenario and strategy combination. TVA – with input from the Working Group and the public – will evaluate the portfolios and develop recommendations on how best to meet power demand through 2050.

TVA uses least-cost planning, which considers six key principles: low-cost, risk-informed, environmentally responsible, reliable and resilient, diverse and flexible. During the presentation, Child reviewed the resource planning process, TVA's 2019 IRP and its recommendations, and the ways TVA's current asset strategy was shaped by the 2019 IRP. He noted that key considerations for the 2024 IRP include power affordability, reliability and resiliency; dispatchability; electrification and load growth; carbon reductions and net zero; renewables and storage; climate impacts; environmental justice; and other risks.

Child reviewed the IRP timeline, noting that TVA will publish the Draft IRP and Draft EIS in Spring 2024. Public input is vital to the process, and there will be a public comment period with webinars and public open houses across the region to provide information and gather public input. That input will be considered, and the IRP and EIS will be finalized for presentation to the TVA Board of Directors in Summer 2024.

Melanie Farrell provided an overview of the National Environmental Policy Act (NEPA) process, which determines the environmental impacts of a project or plan and ensures that TVA decision-makers are informed of the environmental impacts. The NEPA process includes public involvement, and for the IRP, it began with a public scoping period – when the public was asked for input on factors TVA should consider in the IRP. The Scoping Report was published in Fall 2023.

Farrell said TVA is providing information and gathering public input in numerous ways, including through public webinars, public listening sessions at Board meetings and RERC meetings, its IRP website, and the public open houses planned for Spring 2024. Public input during the comment period for the Draft IRP and Draft EIS will be included when the Final IRP and Final EIS are published.

QUESTIONS/ANSWERS

- In policy decisions, how much do you engage in the various state legislative processes?
 - *We cannot lobby. We are required to plan under the laws, rules and regulations as they exist, not as what they might be. But we don't work in a vacuum. We are 100 percent looking at what the implications are for TVA, so if they go from hypothetical to reality, we are prepared. If there are near-term decisions or other things lingering on the horizon, we are prepared with no-regret actions no matter how the policy or legislation unfolds.*
- Are LPCs engaged more actively?
 - Doug Peters, with Tennessee Valley Public Power Association, said TVPPA can lobby Congress. For federal legislation, TVPPA would be the entity to go to Washington specific to a TVA issue federally.
- Peters also said: Technology today allows utility companies to manage and reshape the load curve, because we now have the technology that allows us to play on the load side. It is a new day. I am on the IRP, on Valley Vision, Regional Grid Transformation. All of it is looking at aspects of how to integrate TVA's generation system and transmission system with my members' distribution systems in ways it has never been done before. And to do it in ways that recognize local control. We have to build a business model that will cause members to take actions at the local level that will integrate it into something. We will be listening to the outcome of this group and provide input and advice to the Board to bring a brand-new future together.
- TVA is not governed by a PUC, so that is a distinction. And there are LPCs that fall outside the regulatory process. For the IRP, TVA runs that process.
 - *Doug Peters said: We have utilities in places like Knoxville and Nashville that have their own objectives. Each location has different ideas of what they want to achieve. It is going to take a different approach going forward.*
- How does TVA deal with rate design?
 - *There is the ability to incent or disincentivize through rate design, and it is being looked at by our commercial organization.*
- You work with LPCs, right? You advise LPCs?
 - *This is a long-term process.*
 - *Doug Peters said: We anticipate this work. We are on the cusp of doing things we have never done before. Rates will need to incent that. We need guidance from the IRP, Valley Vision, to understand what kind of DER and what kind of incentives make the most sense, then we can start to work on rates that support those kind of opportunities. We have been meeting with our rates and pricing committee, talking about these things.*

- With the environmental impact statements for Cumberland and Kingston, the cost of the baseline isn't included. How are you going to treat cost data? Will you show the cost of each option?
 - *There is a little bit that's still to be determined, but it will be evaluated with a scorecard. The scorecard has not been developed yet, but there will be a cost component that will be part of the scorecard.*

8. Public Comments

Nancy Muse

TVA is in the process of developing their Integrated Resource Plan, which will have far-reaching impacts on the human, environmental and economic health of the TVA service area. The nation's largest public utility still has some work to do to establish a culture of trust among the Board, the staff and the residents of the TVA service area.

TVA has a closely controlled IRP group with members that have been carefully selected by those in TVA who maintain control of the process. The outcome of this controlled input is manifest in the 2022 fiscal year energy-mix pie chart shown today which shows solar and wind only at a 4%. This shameful percentage is representative of the out-of-balance influence within TVA of those whose livelihoods and associations that have been tied to the fossil fuel and nuclear industries. TVA is again pushing nuclear after decades of problems which are inconvenient to share with those in the IRP process and the people at this meeting today – issues such as the ongoing buildup of nuclear wastes for which there is no long-term solution.

The rationale that a mix of energy sources is necessary is a false argument. The continued investment in gas and nuclear only serves to underfund and stifle the implementation of renewables.

The format of public scoping meetings has been tightly controlled and this includes the virtual IRP input meetings. The questions and comments submitted are not shared openly and are screened by the facilitators. I recently attended two virtual public comment sessions conducted by the EPA on issues related to coal ash which serve as models for such public input meetings. I suggest that TVA study this format and proceed accordingly going forward with the IRP process.

TVA can and should restore trust by conducting a series of transparent, inclusive, public-input sessions, with presentations by experts in the field of state-of-the-art renewable energy applications which should be prioritized and incorporated in the IRP.

Amy Kelly

I am a field organizing strategist with the Sierra Club, working with state chapters in the TVA service area. The Sierra Club has more than 40,000 members and supporters in that area. The Sierra Club completes an annual review and report about utility climate pledges and finds that TVA has the largest planned gas buildout of any other utility by 2030. Other utilities are transitioning from coal and going straight to renewable energy and storage options. There is a real opportunity for TVA to change its trajectory for decades of fossil fuels by choosing to halt gas planning to wait for the results of the 2024 Integrated Resource Plan. TVA needs a forward-looking renewable energy heavy plan. Solar and wind still only make up less than 5% of TVA's energy mix. TVA has an opportunity to take advantage of the Inflation Reduction Act, which it qualifies for with direct pay tax incentives. Energy communities like Memphis, Cumberland City

and Kingston qualify for bonus credits to reduce costs for renewable energy at those sites as energy communities. We would like to see the Regional Energy Resource Council take up this issue.

Last year, the Regional Energy Resource Council worked on a statement of advice to the TVA Board around environmental justice. I want to raise that again, because communities are still having difficulty fully participating in TVA's limited public input processes. It holds open houses instead of public meetings or public hearings. These are poster board presentations that make it difficult for people to ascertain the same information. TVA's registration for Board meetings is open, but when people arrive, they will not know if they are able to speak within the timeframe. We recently sent a letter suggesting options to improve these public input processes to the TVA Board. TVA is raising rates and provided a press release that discusses a \$15 billion budget. That information should be publicly available. We have no idea what is in the budget the TVA Board passed. We would appreciate the Regional Energy Resource Council adopting this as an issue to improve input in the TVA region for both industry and residents.

David Liffrig

I represent NACCO Natural Resources. We operate the Red Hills facility in Ackerman, Mississippi. One, I would like to express my gratitude and thankfulness. I appreciate the time and energy that goes into coming to these meetings. Thank you for what you are doing for the region. Second, I appreciate everything for the hundreds of employees and thousands of families impacted because of what is going on at the Red Hills facility. It is changing generations of poverty. When that facility went into operation in 1997, it changed people's lives. There are thousands of kids impacted by this all the time – higher graduation rates out of that county and a lot of positive things. The other thing with that facility is that it provides dispatchable, 24/7, 365-days-a-year power that can come off the generation facility. It is a modern coal facility. You might say that's an oxymoron, but it's not, because it is a fluidized bed and there are low emissions in terms of sulfur and NOx. Then, you deal with the CO₂, which can be handled with carbon capture facilities. You can handle the whole thing start to finish and provide the TVA customer base with reliable, dispatchable power year-round. That is part of the answer to having a balanced portfolio, that we don't give up on the heavy lifters that have brought us all together. Everything we have in this room is because of electrical generation. I appreciate your consideration of what's going on and finding the right balance between renewables. It is not just one solution for the whole thing. We look at balance in what we do as well. Mitigation resources and stream and wetland reclamation. We try to do everything we can to provide the people in the Valley with a balanced, sustainable, clean and viable future. I appreciate your attention, and we look forward to future conversations.

9. TVA's Energy System of the Future – Discussion

TVA Board members Beth Geer, Beth Harwell, Michelle Moore, Bill Renick and Wade White attended the afternoon session of the RERC meeting. Melanie Farrell introduced the Board members. Erin Gill, RERC Chair, thanked the Board members for attending and said it spoke volumes about their commitment. RERC members were asked to talk about what they think is important as TVA builds the energy system of the future. Below are summaries of their comments.

Council members' remarks

- **Erin Gill, Knoxville Utilities Board**

When you look ahead, the electric grid is going to play a critical role in the energy system of the future and in decarbonizing the economy. There will be a deeper reliance on decentralized and distributed energy resources, and leaning into partnerships with LPCs, industry partners and local communities will be important. As we move the Valley forward, we need to see honesty and transparency that acknowledge challenges head on and honesty about data and potential futures. Natural gas does have a role to play, and I would offer my opinion that as we build gas, it needs to be future-proofed from the beginning such that it enables and does not forestall that decarbonized electricity generation that will meet the needs of the Valley for decades to come.

- **Pat Sims, Drake State Community & Technical College**

I was appointed to the President's National Infrastructure Advisory Council (NIAC). Many of the conversations focus on workforce development and how we prepare for the future, and we need to make sure we consider affordable power. As we move forward and start thinking about new strategies, there are costs associated with these improvements, and we need to make certain that we are sensitive to how they impact all segments of our community. As we grow new economies, we need to ensure that all citizens have the opportunity to participate in training and in programs that improve lives. And finally, as we do work in conservation, we need to make certain that we are providing opportunities for students who may not have had opportunities to appreciate the environment. We need to be educating our communities.

- **Jan Berry, Citizens Climate Education**

There is optimism here that we can change if we take the time and do what we need to do to provide a livable planet for future generations. We are committed to building relationships, treating others with respect, building community, diversity and looking for environmental justice opportunities. Now is the time to take advantage of the federal legislation that has been passed. The quicker we act on reducing carbon emissions, the more effective it will be. Other things that are important include sharing between regions, expanding energy efficiency and fighting climate change with every resource we have. Gas is going to be built, and I understand that aeroderivative turbines will be helpful to manage solar and assets, but you could have a fast turbine that runs on hydrogen instead of natural gas. If you can't do it right today, please to do it right in the future.

- **Pete Mattheis, Tennessee Valley Industrial Committee**

Reliability is critical. We urge TVA to have a reliable system with DER and other changes as a point of focus. Low-cost power is also critical. It is an advantage TVA is able to have, and it takes work. The third thing is optionality. Things like interruptible programs and sustainability are important to our members. We have more and more members that require low carbon power to compete in certain markets, and they are requiring that today. The final thing is that TVA needs to have effective means of communication and interaction with stakeholders and customers. It is an important part of the public power model to have engagement with the broad public and the ratepayers and thinking about ways to keep those groups active and engaged in meaningful ways.

- **Adam Benshoff, Ford Motor Co.**

We bring three angles to this discussion. We bring a large customer perspective. We are investing \$5.6 billion in the Valley and creating 6,000 jobs, and a lot of that is because of the affordable power that is here and also the path that TVA is on. The second lens is long-term sustainability. For us, sustainability includes our products and their emission profiles and their sustainability. Our goals are dependent on organizations like TVA meeting that zero-carbon grid. Finally, the other area is really a technology lens. Electrification of transportation is happening. EVs are more than just load. Ford has on market a bi-directional charger. We are looking at opportunities for EVs to be not just

load but a good resource that can be valued by LPCs and at the wholesale and transmission level.

- **Julie Woosley, State of North Carolina**

There is a lot of funding out there at the federal level, and state energy offices are often the lead on those. We have fairly thin resources, so we rely on stakeholders to help put those proposals together and to bring the funding to the states. We appreciate your support on that. Second, people can understand risks and benefits, but they might not understand comparative risks. The public might not see the potential benefits that are out there to making energy changes. We need to help them understand the choices being made. We want to make sure we are sharing why we are making these choices, so they are clear on the decisions being made. State offices do quite a bit of work on workforce development and energy burden, and we're good partners to get that information out.

- **Monte Cooper, Jackson Energy Authority**

I represent the typical LPC customer. At the local level, if we have a customer who gets a \$100 electric bill, about \$20 of that goes to the LPC and about \$80 goes to TVA for the wholesale power. Two months ago, when the TVA wholesale rate increase came through, I let our Board know what was going on and the challenges TVA faces. I explained the coal retirements, closing the nuclear gap with some gas generation, and the opposition you face to every option there is. As you look to the future and are making important decisions, affordability has to be one of the key things – with reliability as well. As we move toward decarbonization, which we all want to get to, we need to be doing it in a way that low-income families can afford.

- **Erik Schmidt, City of Chattanooga**

I'd like to circle back to energy burden. We have a lot to be thankful for in terms of the decarbonization and modernization. I've always thought the challenges that come with energy as it relates to climate solutions are more opportunities than problems. Tennessee has been extremely fortunate to see large economic investments, and Chattanooga is experiencing a rebirth. That is also based on reliable and affordability of TVA. From a city standpoint, our experience has shown that many of the things in front of us are achievable. We reduced our energy consumption 27% and saved ourselves \$2 million a year. The maturation of this economy is already happening. We've improved phones, we've improved cars, we did all these things; why wouldn't we improve energy.

- **Chrissy Heard, State of Mississippi**

I have no background in energy, but I am a consumer in energy. We know what is important, and the most important things are cost and reliability. Most citizens have no idea how energy is generated or distributed or transmitted. But they know we need a company that generates energy we can rely on, that we can afford and that we can be proud of. They can say, "TVA has our back." I come from Columbus, where TVA has made it possible for Columbus to have the Columbus Air Force Base, Steel Dynamics, Weyerhaeuser and now a big aluminum factory. They have brought many jobs and a feeling of hope in our area to revitalize it. That is what it means to the average citizen.

- **Doug Peters, Tennessee Valley Public Power Association**

Reliability, affordability, resiliency and clean are important. We want the environment to be as clean as it can be, and we don't our sector to contribute in a negative way to that. We think it is going to take some planning. You're talking about industry that invests in asset life 20, 30, 40 years, and to try to second guess that against regulatory changes from agencies like the DOE and EPA is a very complex task now. My members need certainty in their planning. TVA's recent rate increase came outside the normal process of being within a 10-year financial plan, and that caused us concern. We encourage you

to think about how to set forth a new 10-year generation plan, 10-year financial plan, that balances everything you just heard. Least-cost planning and giving us at least a five- to 10-year look ahead so we know how our investments will fit with your investments is going to be critical.

- **Marquita Bradshaw, Sowing Justice**

My organization is focused on capacity, coalition building and issues around civic engagement and getting people involved to help make communities healthy and safe. Certain communities do not get the benefit of development and implementation of environmental laws. We can answer the call and connect the dots and put a face on energy and equate it to human health. I am here to make sure people understand the language used at this table is translatable and there is meaningful involvement. We need to be stewards of the earth and stewards of people's health. We can create energy that doesn't cause harm in the future. It means investments and a lot of community involvement so they feel like they are part of the process from the beginning and not that it is happening to them. We need to mitigate land loss and make sure that people who are traditionally marginalized are not further impacted by land loss.

- **Alexa Voytek, State of Tennessee**

The IRP process and the steps to get us to decarbonization is so multi-faceted and so complex, and there are so many stakeholders that need to be involved. For that reason, transparency is key, and communicating why a decision was made is really critical for the education of the general public. It is important to be iterative and re-evaluate where certain processes are perhaps falling short and where we may need to revise those processes to reach our end goals. At the state energy office level, with federal acts, we are working with TVA on numerous fronts. If this is the single largest climate investment by the U.S. government, we should make sure we are taking advantage of that. Workforce development is important. I commend TVA for listening to the public but I challenge you to improve upon that process. There is a great need to hear from those who are underserved.

- **Chelsea Jenkins, Commonwealth of Virginia**

Last year, Gov. Youngkin charged us with developing a transparent plan that an 8th-grader could read, is inclusive and is data-driven. We had 700 meetings with stakeholders over five months. We analyzed all of the comments and developed five guiding principles: reliability, affordability, innovation, competition and environmental stewardship. Virginia has a great history of environmental stewardship, and we want to continue that trend. Clean energy companies are not all created equal, and we wanted to make sure all energy technologies are treated the same. Stakeholders said they needed more flexibility and that we needed to create an innovative culture. When we rolled out the energy plan, the governor said it's a "both/and" moment and not an "either/or" moment. It would be good to share best practices with each other on how to educate people about energy.

- **Rodney Goodman, Habitat for Humanity**

This is my sixth term on the RERC. In Bowling Green, we are blessed to see tremendous economic growth in our area. We work with families who have very small margins. We are working with them to build equity into their lives. We are always concerned about affordability. We help insulate our families from rising energy costs by spending a lot of effort in energy efficiency. We construct our homes to be at least 50% more efficient than a code-built home. As we have these new technologies, new programs, it is important to make sure there is equitable access to them. There are great economic opportunities. As we talk about workforce development, I want to make sure that we give folks who need a lift the opportunity to take part in the success in our

region. Regarding environmental justice, we need to ensure that we're willing to share the consequences of decisions equitably down the road.

Board members' comments

Beth Geer

I have been on the Board for a year. The challenges are hard to work through sometimes. Generation is important, and getting the balance between economic development and generation can be tricky. Listening is so important. It goes without saying that when you get around the table and listen, you have more hope and feel more optimistic about the future. There is usually a solution. I feel like TVA does a good job of that. We want to hear your views and thoughts. Chrissy is right; most people don't have an idea of how energy is generated and transmitted, and it is an important point that we leave out sometimes. The LPC role is something we will be talking a lot about, and the more we can do with LPCs to solve some of the issues they're facing, the better.

Wade White asked:

- Do we have an understanding of the track record of our IRPs? How right were we and how wrong were we on the 2019 IRP? I ask that, because when this is done, there are things we will have to look at and have to decide on.
 - Brian Child – If you look at the 2019 IRP, there are more things that we got right than got wrong. We are still within the bounds of that IRP. In some ways, it was not the journey we thought we might take. For example, loads are higher than what we would have assumed for our base case in the 2019 IRP, but we would not have envisioned a pandemic, which brought the loads down but then they've come up quickly. I don't think we will ever find ourselves like we did before, going from the 1990s to 2011 between IRPs. I don't think that will ever happen again. The world is changing rapidly. There are new technologies. If we push the boundaries appropriately in the IRP, we ought to be able to get four to six years between them. I think we need to continue to do them informed by signposts, by paying attention to what is happening in the world around us.
 - Doug Peters – The IRP is a compass, not a GPS. It has been more accurate than not. We do need to pay a lot more attention on a real-time basis. I'm not sure we paid enough attention to things like ESG. There is a natural counterbalance to EV adoption, and it's the infrastructure. We will be able to accommodate that extremely well. The big surprise was the whole move to electrification or decarbonization, especially in commercial and industrial. All commercial and industrial concerns that I'm aware of have zero-carbon goals. They are going to do what they need to do in their operations to demonstrate that they have gotten to zero. But that throws it over the fence to the utility company, and I think that is where we missed what is happening today in terms of load growth.

Michelle Moore

There are a lot of changes happening in the energy sector, and they are amplified by changes in technology and civic transformation in lots of other sectors, all of which have to pass through the energy sector. I am appreciative of the RERC for sharing and listening, and through your listening sessions, you bring more voices into the conversation. The more people you hear from and the more diverse the perspectives are, the smarter your decisions are. It is important to focus on ways to help people who are impacted by energy burden. I appreciate the work this

committee is doing to get out there and bring more voices to the table. As I have shared in other settings, even when there is disagreement or conflict, that conflict is creative and helps eliminate the borders of the challenges that we need to solve together.

Bill Renick

I want everyone in this group to take your position as seriously as I take mine as a Board member. Don't just tell me the same stuff all the time. Regarding transparency, we ought to be able to see it. I want us to do something about it. I am concerned about the average person and the average utility bill. Your input is important, and I am going to take it seriously. It's going to be your move. I will listen to what you have to say and try to make decisions from the real world dealing with these issues every day. There are good things happening and good people at TVA. I want you to know that from my standpoint, I am going to take it seriously and try to be as informed as I can when I vote on this Board. I want it to be fruitful. I want the RERC to bear fruit, and I am going to listen to you.

Beth Harwell

All of the directors said it well. We are interested and concerned with what you have to say and what your needs are. We appreciate listening and learning from you.

10. Closing Comments

Melanie Farrell thanked the Board members for attending the meeting. She thanked the Council members for their engagement and discussion. She said TVA is working hard to ensure there is meaningful engagement and diverse voices at the table and that TVA is listening. TVA carries the members' comments and sentiments back to the committee process.

Erin Gill also thanked the members for their participation and said there will be a lot more opportunities at subsequent meetings to build upon the discussions from this meeting.

11. RERC Schedule

December 12, 2023 – Virtual Meeting

January 17-18, 2024 – Joint RERC and RRSC Meeting in Knoxville

APPENDIX A

Non-Council Meeting Attendees

TVA Staff Members (v = attended virtually)	
Rebecca Brinkley	Jo Anne Lavender
Jennifer Brundige	Jeannette Mills
Brian Child	Barbie Perdue
Laura Duncan	Marylee Sauder (v)
Amy Edge	Spencer Sessions (v)
Melanie Farrell	Logan Stephens
Bekim Haliti	Jennifer Walton
Althea Jones	Steve Livingston (v)
TVA Board Members	
Beth Geer	Bill Renick
Beth Harwell	Wade White
Michelle Moore	

Stakeholders (v = attended virtually)	
Sarah Al-Zhyri (v)	Gaby Sarri-Tobar (v)
Curtis Baysinger (v)	Simon Mahan (v)
Sudeep Ghantasala (v)	Jessica Monroe (v)
Lisa Hammer (v)	Nancy Muse (v)
Amy Kelly (v)	Ken Neal (v)
Jeff King	Brian Paddock (v)
Heather Kulisek (v)	Jim Powell (v)
David Liffrig	Amy Rush (v)
Tom Littlepage (v)	

APPENDIX B

Regional Energy Resource Council Meeting Agenda November 7 Tupelo, Mississippi

**Meeting Location: Cadence Bank Arena
375 E. Main St.
Tupelo, MS 38804**

Objectives:

- Kickoff the 6th term of the RERC
- Overview of TVA Mission and current strategy
- Review and inform RERC Members on the Integrated Resource Plan (IRP) process
- Informational updates on Utility of the Future Information Exchange and the Valley Pathways Study stakeholder engagements

Nov 7

8:00 – 8:10	Welcome / Call Meeting to Order
8:10 – 8:30	Introductions and Agenda Review
8:30 – 8:45	FACA Briefing
8:45 – 9:00	DFO Briefing
9:00 – 10:00	<u>Introduction to TVA</u> <ul style="list-style-type: none"> <input type="checkbox"/> TVA Purpose and Mission, Governance <input type="checkbox"/> TVA Finances <input type="checkbox"/> TVA's Generation Portfolio and Transmission System <input type="checkbox"/> TVA's Innovation & Research Initiatives
10:00 – 10:15	Break
10:15 – 11:30	<u>Stakeholder Engagement Updates</u> <ul style="list-style-type: none"> <input type="checkbox"/> Valley Pathways Study <input type="checkbox"/> Utility of the Future Information Exchange
11:30	Adjourn Meeting
12:10 – 12:15	Recap
12:15 – 1:45	IRP Overview – Process, Plan and role of RERC
1:45 – 2:00	Break
2:00 – 3:00	Public Listening Session
3:00 – 5:00	RERC Member Discussion for the Benefit of TVA Board Members - TVA's Energy System of the Future Key Question: What is important to each stakeholder?
5:00	Adjourn Meeting