

**Regional Energy Resource Council Minutes
May 18, 2021**

**Tennessee Valley Authority
Virtual Meeting**

The Tennessee Valley Authority (TVA) Regional Energy Resource Council (RERC or Council) convened for the 4th meeting of the 4th term at 9 a.m. Eastern on Tuesday, May 18, 2021. The meeting was held virtually, in keeping with public health guidance during the coronavirus pandemic. Meeting presentations are available at www.tva.gov/rerc.

Council members attending:

Bill Carswell, Erin Gill, Rodney Goodman, Dana Jeanes, Jonathan Levenshus, Peter Mattheis, Jennifer Mundt (Chair), Alice Perry, Kari Babski-Reeves, Patrice Robinson, Charles Snavelly, Alexa Voytek, Clay Walker and Lloyd Webb.

Designated Federal Officer: Melanie Farrell

Facilitator: Jo Anne Lavender

- Appendix A - TVA staff and members of the public who attended the meeting
- Appendix B - Agenda

Purpose

The purpose of the meeting was to present information on TVA’s asset management, energy system of the future, carbon strategy, sustainability report and innovation initiatives, and to obtain an RERC Advice Statement for the question, “Having heard how TVA is preparing for the energy system of the future, are there other actions that TVA should consider for reaching its goals?”

1. Welcome and Introductions

- A.** After welcomes from RERC Chair Jennifer Mundt and Althea Jones, Senior Manager for Stakeholder Relations, Melanie Farrell, Vice President of External Strategy & Regulatory Oversight and the new Designated Federal Officer for the RERC, spoke briefly regarding her position and expressed her enthusiasm to work with the Council. She also said it was TVA’s 88th birthday. TVA was created to improve life for those in the Tennessee Valley and the topics on the day’s agenda are at the core of that very mission.
- B.** Jo Anne Lavender, Meeting Facilitator, explained that the RERC’s fifth term would begin in the summer. She noted that during its fourth term, the RERC covered the following topics: coal ash management, improving TVA’s transparency, TVA’s Vonore Battery Project, impacts of COVID-19 on TVA’s energy system (internal and external), TVA’s electric vehicle (EV) strategy, TVA’s Valley Partner Initiative, Southeast Energy Exchange Market, 2019 IRP near-term actions, sustainable carbon reduction strategy, innovative research initiatives, and asset management strategy. During the fourth term, the RERC provided advice statements on how TVA can partner with other entities to remove barriers to EV adoption, gaps in TVA’s EV strategy, improvements to TVA’s Sustainability Report, and preparing for the Energy System of the Future.

2. Designated Federal Officer Briefing — Melanie Farrell (Presentation can be found at www.tva.gov/lerc)

Melanie Farrell provided an update on the TVA Board of Directors. In January 2021, the Board welcomed two new members — Beth Harwell and Brian Noland. The White House made the following nominations to fill additional Board positions: Beth Prichard Geer, Chief of Staff to former Vice President Al Gore and a member of Nashville Mayor John Cooper’s Sustainability Advisory Committee; Robert Klein, retired line foreman for the Electric Power Board of Chattanooga; Kimberly Lewis, Chief Executive Officer of PROJECTSYZ Inc.; and Michelle Moore, CEO of Groundswell, a clean energy nonprofit.

Farrell also reported that:

- TVA had its safest year on record in 2020. While many TVA employees worked from home, many worked in the field and operating plants.
- Memphis Light, Gas and Water (MLGW), TVA’s largest customer, has been looking at alternative power supply providers. Last summer, MLGW did its own integrated resource plan, which suggested costs savings if Memphis took a different path. MLGW is pursuing requests for proposal to get bids to validate potential savings. TVA continues to believe it provides the best value and lowest cost but is being respectful of MLGW and its process.
- Four local power companies have filed a petition with FERC to compel TVA to allow them to use TVA’s transmission system for their customers. TVA opposed the petition because it would shift the cost to the other 149 companies and would break down the foundation of the public power model. There is no defined timeframe by which FERC will respond on this petition.
- TVA is working with partners across the Tennessee Valley to develop comprehensive electric vehicle strategies that reduce barriers to EV adoption. This is a significant area of opportunity to improve carbon emission rates in the region.
- TVA is excited to be involved with the development of the Southeast Energy Exchange Market (SEEM), a collaborative energy exchange system. FERC issued a deficiency letter with questions about SEEM, and TVA is working with other participants to respond to the letter. SEEM has developed a website — Southeastenergymarket.com— to engage stakeholders further.

3. Asset Strategy (Presentation can be found at www.tva.gov/lerc) — **Brian Child, Vice President, Enterprise Planning, and Jacinda Woodward, Senior Vice President, Power Operations**

Brian Child and Jacinda Woodward provided a comprehensive overview of TVA’s asset strategy. Child began by discussing the 2019 Integrated Resource Plan (IRP), which provides strategic direction for TVA’s asset plans. The IRP strives to achieve six goals based on least-cost planning principles: low-cost, risk-informed, environmentally responsible, reliable, diverse portfolio, and flexible.

Child described TVA’s rigorous analytical process and its stakeholder engagement process, which together helped TVA identify the collection of resources it will need to meet the Valley’s energy needs. Over the next 20 years, TVA’s power supply will see significant growth in solar, battery storage and natural gas, evaluation of additional coal and gas retirements, and a 70 percent reduction in carbon emissions by 2030. TVA has a path to achieving an approximate 80 percent carbon reduction by 2035 and an aspiration to achieve net-zero by 2050.

The IRP provided signposts to help guide decisions and inform the timing of the next IRP. Child highlighted a few signposts, including a demand for electricity due to a strong industry load partly offset by COVID-19 impacts, customer expectations to use more renewables, regulatory requirements as the Biden Administration shifts policies on issues such as climate change, and emerging and developmental technologies.

Today, TVA has one of the nation's cleanest power supplies, with 60 percent carbon-free resources. Child discussed the planning process, from tactical decisions that can be made in the near-term when there is more certainty about technology to strategic planning that looks out 20 years or more and is fine-tuned as signposts evolve and TVA gains experience operating a changing fleet. Child presented TVA's current asset strategy for each resource and highlighted key points.

He provided detailed information on TVA's asset strategy decision-making process and the factors that go into planning assumptions. He noted that TVA has established planning assumptions to retire its coal fleet — the Bull Run plant by 2023, which has been approved by the TVA Board, and the four remaining coal plants (Cumberland, Gallatin, Kingston and Shawnee) by 2035. Child explained how TVA plans plant retirements and works to ensure an orderly transition for its workforce, the community, and energy portfolio. TVA needs to consider the available resources to fill the gap left by a plant retirement. TVA is upgrading its combustion-turbine natural gas plants. Natural gas is a critical part of TVA's asset strategy and will remain so until carbon-free technology is available. Natural gas allows TVA to reduce energy derived from coal, which enhances TVA's decarbonization efforts, and it enables solar energy expansion by maintaining system reliability and resiliency. TVA's solar commitments to date are over 2,300 MW, and TVA expects to add a total of 10,000 MW to the system by 2035.

Jacinda Woodward explained that a diverse power system is important to ensure TVA can supply energy in real-time in a reliable, environmentally responsible way. She offered examples of how load-shape changes throughout the year, and that TVA needs a flexible and ready system to meet the Valley's demands for energy. TVA is actively looking at how to increase the flexibility of its assets and integrate storage. Woodward noted that a large part of TVA's planning and decision-making involves seeking input from, and communicating with, employees and external stakeholders. The environmental review process for a major decision such as a coal plant closure can take 18 to 26 months. TVA takes a structured approach to change, with a comprehensive workforce strategy that provides opportunities for employee transition. TVA works toward a 5-year rolling window of certainty for staffing needs, recognizing that employees and communities have served the region for many years.

QUESTIONS/ANSWERS

RERC members asked several questions on topics that included potential cyber-attacks, specifics about TVA's fleet, customers' demand for renewables, and advanced technologies. Regarding TVA's approach to potential cyber-attacks, Woodward said TVA is focused on cyber security and has a robust plan to protect TVA assets. Its use of distributed energy resources will increase TVA's resiliency. In response to a question about the cost impact of ramping up and ramping down larger plants as renewables are added to the system, Woodward said TVA has incorporated maintenance and heat-rate costs into modeling and, as a resource, its hydro plants allow TVA to manage some of those costs. Child added that TVA also is looking at aeroderivative gas turbines as a bridge to accommodate more solar generation on the system.

Woodward said Board members vote on decisions related to asset retirements or replacements. Asked about the age of the gas fleet, Woodward said TVA studied its gas plants and has optimized its gas assets by adapting several plants to combined-cycle operations and adding aeroderivatives to improve plants' flexibility to respond to solar and other renewables. Child noted that the TVA 10-K (**a comprehensive report filed annually by a publicly-traded company about its financial performance**) provides the dates of when TVA assets were placed in service.

In response to a question about why TVA does not provide rooftop solar, Child said TVA has no plans for residential solar but is uniquely positioned to look at any number of options. It plans to reach up to 70 percent reduction in carbon emissions by 2030 based on its current generating portfolio, and a team within TVA is looking at a wide range of options that will reduce carbon emissions even further in the future. Child said TVA believes it can accomplish these changes while maintaining flat base rates based on planning assumptions. Asked if customer demand is prompting TVA's targeted acceleration to 10,000 MW of solar by 2035, Child said it is difficult to pinpoint what the new demand for solar may be down the road. Still, based on the current pace, demand is expected to be high.

Asked about demand response, Woodward said TVA uses demand response in various ways in transmission and power supply. Products are being explored that can help TVA shape the load. TVA is determining how to forge tighter partnerships with large industries and local power companies to find ways to shape the load. Demand response will play a role similar to storage in balancing demand and supply. Asked about reliability to maintain capacity and prevent power shortages like those that occurred in Texas, Child said that the discussion of reliability heads back to the conversation around natural gas and the critical role it will play when there are increased levels of solar on the system, yet the sun isn't shining. He also said that as a public power company, TVA plans for contingencies. It plans for a reserve margin and builds it into the cost model. TVA knows customers expect resilient, cost-effective power.

4. Public Comments

Eric Vettel, President and CEO of the American Energy Society (Society) offered public comments. He said the Society does not play favorites but has TVA fans within its 135,000 members. When the Society provides thought leadership, its readers devour it. He said the Society can be TVA's megaphone. He noted that its members include talent and technology scouts, the Pentagon, universities, and small and large companies and whatever question TVA may have, the Society is here to help. He suggested that TVA could connect on LinkedIn, and the Society would promote TVA messages as well.

5. Energy System of the Future: Building a Sustainable, Clean Future (Presentation can be found at www.tva.gov/rerc) — **Rebecca Tolene, Vice President, Environment**

TVA was built on a foundation of sustainability, and TVA's sustainability journey and plan moving forward is as important as ever. Rebecca Tolene said TVA's sustainability performance plays a key role in economic growth in the Valley because it helps attract and retain industry in the region. TVA wants to be part of the solution, working with policymakers and companies toward the best path forward. The Sustainability Report was just released, and based on RERC feedback, it is a simpler document this year. TVA also produced a supplemental Carbon Report to highlight its efforts to reduce carbon emissions.

Tolene said sustainability has environmental, social, and financial components. TVA's focus on sustainability ensures it meets its longstanding Mission of Service without compromising the

future. She explained that focusing on TVA's performance of its Mission (reliable, low-cost energy; economic development; environmental stewardship) through six sustainability areas, or lenses (environment, governance, employees, economic, partnerships, social/community) enables TVA to sustain its business model today and for future generations. She noted that looking at the company through the lens of sustainability drives performance and risk management.

Tolene said a top priority is to transition TVA's sustainability reporting from reporting on past performance to driving strong sustainability continuous improvement with a cyclical reporting program. As part of her presentation, she reviewed advice on the 2019 Sustainability Report in a joint RERC/RRSC (Regional Resource Stewardship Council) meeting in December 2020. She noted the ways that advice was used to improve the 2020 report and the Sustainability Program overall.

TVA is focused on carbon emission reduction and already has reduced emissions by 63 percent from 2005 levels. TVA aspires to achieve net-zero carbon emissions by 2050 and support broader national efforts to decarbonize the economy. Actions driving these reductions include new extended power uprates, investing more than \$400 million to promote energy efficiency, and adding 1,600 megawatts of wind and solar capacity.

Tolene shared the guiding principles and framework that will shape TVA's decarbonization future. She walked the Council through TVA's Decarbonization Journey, including how TVA got to where it is, what comes next, and five innovation tools for the future — Energy Technology Innovation, Valley Innovation, Fleet Innovation, Energy Delivery Innovation and Natural Resource Stewardship Innovation.

TVA has a plan to reach 70 percent carbon reductions by 2030, with natural gas playing a key role as a bridge technology as renewables are added onto the system. TVA is working on pathways that would lead to an 80 percent reduction by 2035 through partnerships and support for the research and development of cutting-edge technologies. As TVA aspires to achieve net-zero carbon emissions, it does so while balancing its mission to provide affordable, reliable power.

QUESTIONS/ANSWERS

RERC members asked questions about topics such as factoring in purchased power in emissions numbers, values in the decarbonization framework, and electrification. In response to how TVA factors purchased power into its carbon reduction numbers, Tolene said TVA uses the most current standards for purchase power carbon emissions and watches its purchased power rate of carbon very closely. Asked about how TVA tracks customers' carbon footprints, Tolene offered a brief explanation. In response to a question about how TVA developed the "values" it will follow in its framework, Tolene said a team of experts worked on them together and defined them as factors such as partnerships with local power companies, environmental benefits or detriments of an action, and environmental justice impacts. In response to a question about how transportation electrification intersects with TVA's plans to meet increased demand, Tolene noted that studies in the Tennessee Valley show that electrification softens some of the peaks in the Valley. As TVA makes decisions about growth, it evaluates options from a carbon standpoint and for determining which options meet the needs of electrification. TVA takes the load curve into account. A Council member noted that under the Biden Administration, TVA will have many opportunities for partnerships with the Department of Energy and other agencies. Tolene said

TVA CEO Jeff Lyash has met with Gina McCarthy, Domestic Climate Coordinator in the Biden administration, to discuss TVA's carbon plans.

6. TVA's Signature Transformative Innovation Initiatives (Presentation can be found at www.tva.gov/erc) — **Joe Hoagland, Vice President, Innovation and Research, and Amy Henry, Director, Research & Technology Innovation**

Joe Hoagland said his colleagues before him laid a good foundation for talking about transformative innovation. For example, when thinking about decarbonization in a broad set of directions, transformative innovation looks at how TVA moves beyond 80 percent decarbonization and reaches 100 percent. It looks at the transmission grid and challenges such as building efficiency and broader electrification, which will be critical. Transformative Innovation Initiatives is also looking at future technologies such as carbon capture on gas, longer-term battery storage, and advanced nuclear. Hoagland said that as TVA finds solutions, it will focus on how to advance them. Hoagland thanked the RERC for its friendships and debates over time as he steps down as Designated Federal Officer and is replaced by Melanie Farrell.

Amy Henry pointed out an increasing complexity in the power system, and as dynamics change, TVA sees more opportunities for demand response and distributed resources. There is a new set of business opportunities; now, TVA needs to determine which have the biggest advantages.

TVA's system has always been complex, and now there is additional complexity as it creates a system with more renewables and flexibility. There are also new technologies and options to support the transmission system while working to reduce carbon emissions.

With TVA's ambitious carbon goals, Henry said that achieving the last 20 percent is a challenge requiring business innovation and TVA will focus on meeting demand in the cleanest ways possible. Many of the innovative technologies being considered have promise. Still, they are in the early stages of development and there is work that needs to happen for them to be useable within the system. Henry described ways for how the system is transforming as new technologies occur across the system and noted that this is a Valley-wide challenge.

Henry described six transformative initiatives that TVA has established: Decarbonization Options, Advanced Nuclear Solutions, Storage Integration, Regional Grid Transformation, Connected Communities, and Electric Vehicle Evolution. TVA is working to engage allies and facilitate a discussion on a shared vision. Following that, a roadmap of the journey will be produced, which will be implemented by the partners. Henry described the partnerships TVA is forming with universities, industry groups, labs, and venture capitalists to advance these initiatives. TVA also is engaging with the Biden Administration and is looking for opportunities to partner with the Department of Energy and other agencies on advanced nuclear and carbon technologies.

The long-term goals of the initiatives are public power evolution, affordable decarbonization, idea pipeline, transformed grid, optimized planning, generation, and delivery. In achieving these goals, TVA will deliver on its mission to grow powerful partnerships, gain financial strength, develop our people with new skills and new technologies, achieve operational excellence, and ignite innovation.

QUESTIONS/ANSWERS

In response to how TVA will work with partners to get technology out into the Valley for its Connected Community initiative, Hoagland said TVA can work with stakeholders to leverage programs, resources and opportunities that exist in the Valley. TVA is working to build a team to develop a comprehensive plan that would close technology gaps for TVA's seven-state region. One RERC member noted that the U.S. Department of Transportation announced that federal rights of way could be used for other utilities, so there might be synergy there. In response to a question about how TVA is using IRP tools and models to quantify the regional grid, interactive buildings and distribution-level controls from a bulk power system standpoint, Henry said regional grid transformation will give TVA the ability to plan more specifically what is in the distribution system and to be able to move that energy around in a more efficient way. Hoagland added that the transformation offers an opportunity to think through the process first, then determine what tools work for the long run.

Asked how TVA decides whom to partner with and the budget, cost and time for a project, Hoagland said, first, the six initiatives were identified as TVA worked to determine what it could do in the innovation space. Then, as TVA works on its asset strategy, carbon reduction and its sustainability strategy, it will look at what initiatives provide the biggest bang for the dollar. The challenge is that not all of these technologies are cost-effective where they are today. TVA needs to figure out how to deploy technologies at scale, at a reasonable cost, with reliability, and by the date it needs it. If this is clearly not possible for a particular project, TVA will stop and move to something else. On large projects such as advanced nuclear or carbon capture, TVA is telling the federal government it has the capability to prove out these technologies, but it needs federal support.

When asked why the potential for smart traffic lights was included in the presentation, Henry said they provide an example of how smart technology might come into their lives in the future. The grid transformation serves as a possible foundation for opportunities like that in the future. The opportunity has similarities to electric vehicle charging opportunities as the transmission grid is fine-tuned. There was also discussion about building broadband and how TVA could start the conversation if people are not discussing it.

7. Advice Question and Discussion

The advice question was, "Having heard how TVA is preparing for the energy system of the future, are there other actions that TVA should consider for reaching its goals?"

Council members were given an opportunity to weigh in on the topic before a draft advice statement was prepared. Comments and suggestions included:

- Lloyd Webb stated that there are a lot of technologies and possibilities. It would be good to compare capital and human resources based on capabilities and then evaluate what TVA's priorities look like, given those considerations.
- According to Jonathan Levenshus, the central question seems to be how to continue and accelerate to a carbon-free grid. Challenges open new doors, and this is a historic opportunity for TVA to look at them and find ways to turn them into opportunities.
- Dr. Bill Carswell stated that rooftop solar is important, and people think TVA does not like solar because it does not support rooftop solar. He questioned why TVA does not support it and stated that TVA should create a policy that blends rooftop solar into its current decarbonization or create, develop and publish its reason for not doing so. TVA should create time-of-use discounts for EV charging, so people know the importance of off-peak charging.

- Dana Jeanes commented that there is a lot of enthusiasm for decarbonization and sustainability but advised against forgetting about the average customer. He explained that average customers are mainly concerned with the lights being on and their bills being affordable. Mr. Jeanes stated that TVA should exercise some caution on untried technologies and take a balanced approach focused on reliability and costs.
- Jennifer Mundt commented on how the asset and sustainability strategies help TVA pivot toward new initiatives and technology. This may present opportunities for this Council to frame the development of the IRP through that lens. It will be important for TVA to evaluate workforce assets and transfer employees, as possible, to new carbon projects. She stated that it would be helpful for TVA to identify champions across these innovation efforts.
- Rodney Goodman said it was good to hear that TVA is preparing its workforce for changes. Technologies like electric vehicles and smart thermostats aren't on a lot of people's radars. He asked about how these technologies could be deployed across economic spectrums.
- Dr. Kari Babski-Reeves mentioned the recent cyber attack on a pipeline. As TVA ensures its power system is safe, protecting its data management systems is just as important. Young people live in a digital world, and it is important that their thought processes are included in planning.
- Alexa Voytek discussed that workforce development should be a primary area of focus, and electric vehicles, the microgrid and the energy burden on Valley residents are also important.
- Patrice Robinson said the public wants low-cost, reliable power. Perhaps TVA can do more in terms of utilizing social media sites to ensure that the public is aware of TVA's direction. She suggested that TVA could also use those sites to poll the public on what they want. She questioned how TVA will shape education and reduce the energy burden for residents in the Valley.


After the Council's comments, RERC Chair Jennifer Mundt and TVA staff met to draft a preliminary advice statement. The Council discussed the draft, made tweaks, and voted unanimously to approve the advice statement below.

8. Closing Comments

Jennifer Mundt, Chair, noted that this meeting wrapped up the two-year term, and she thanked everyone for their perseverance and engagement.

Melanie Farrell thanked the Council on behalf of TVA and its Board of Directors for its time commitment and dedication to helping TVA chart the path forward with the energy system of the future. The first meeting of the fifth term will be on Oct. 13-14, and TVA is hopeful it can take place in person and with a field trip.

Approved by:


Jennifer Mundt -- date

September 9, 2020

**Regional Energy Resource Council
May 18, 2021 Meeting
Advice Statement**

It is an auspicious day - TVA's 88th anniversary reminds us that TVA's purpose is in its mission of providing low-cost and reliable energy to the Valley. Today's 21st century sweeping energy system challenges are similar in scope to those a nascent TVA encountered nine decades ago.

These challenges represent opportunities TVA can realize by applying the tenets of the Asset Strategy, Sustainability and Low Carbon Reports, and Transformative Innovation Initiatives in its long-term planning going forward.

The Council recommends that the Board and staff consider the following actions as they prepare TVA for the energy system of the future:

People

Workforce Development

- Prepare both TVA employees and workers in the region for the clean energy transition, including training in data analytics; and
- Encourage younger people into the technology process sooner than later.

Energy Burden

- Any negative effects resulting from applying these tenets to transitioning TVA to low-carbon future should be both considered and minimized for low-income energy burdened households; and
- Include these low-income households when calculating the benefits of a decarbonized future.

Communications/Stakeholders/Messaging

- Better communicate TVA's rooftop solar and distributed energy policies;
- "Meet people where they are" so that lay people can understand what TVA and its partners are doing and how things are changing;
- Time-of-use programs and smart grid applications are needed but not at the expense of low-cost reliable energy; and
- Use social media to communicate, conduct surveys, and ask people what they think about and want from TVA.

Policy

- Engage with Federal partners on broadband deployment and the existing franchise structure and advanced research and technology development; and
- Investigate DOT right-of way partnership for fiber optimization in rural regions.

Programs/Planning

- Consider future IRP modelling at the distribution level;
- Consider time-of-use discounts for off-peak EV charging;
- Ensure equitable deployment of new technologies (i.e., smart meters, EVs, etc.) to people regardless of socioeconomic status;
- Employ cybersecurity to ensure the energy system of the future is safe, not vulnerable; and
- Prioritize investments in technologies that have high likelihood of success.

**Appendix A
Non-Council Meeting Attendees**

TVA Staff Members	
Pam Anderson	Kendra Mansur
Jennifer Bogus (TVA Office of Inspector General)	Khurshid Mehta
Jennifer Brundige	Deborah Murray
Brian Child	Barbara Perdue
Cathy Coffey	Tricia Roelofs
Melanie Farrell	Marylee Sauder (contractor)
Scott Fiedler	Andrew Scalf
Tiffany Foster	Rebecca Tolene
Amy Henry	Rick Underwood (TVA Office of Inspector General)
Joe Hoagland	Liz Upchurch
Althea Jones	Jacinda Woodward
Heather Kulisek (TVA Office of Inspector General)	Ala Young
Jo Anne Lavender	

Stakeholders	
Steve Bell	JoAnn McIntosh
Al Berrong	Juan Medina
Molly Cripps	Gunseli Shareef
Mark Hall	Maggie Shoer
Richard Holland	Eric Vettel
Terry Marsh	Blake Worthington

RERC Meeting Agenda
May 18, 2021
Virtual - <https://bit.ly/RERC-May>
All times are EDT

8:30	Begin checking in RERC and speakers
9:00	<p>Call to Order - JoAnne Lavender Facilitator</p> <p>Welcome - RRSC Chair Jennifer Mundt and Designated Federal Officer Melanie Farrell</p> <p>Safety, Protocols & Agenda - Jo Anne</p>
9:30	Public Listening Session - JoAnne
10:00	TVA Update - Melanie Farrell, VP, External Strategy and Regulatory Oversight
10:15	Planning for the Energy System of the Future - Brian Child - VP Enterprise Planning; Jacinda Woodward, Sr. Vice President of Power Operations
11:00	Break
11:15	TVA Carbon Strategy and Sustainability Report - Rebecca Tolene, VP Environment and Chief Sustainability Officer
11:45	TVA's Signature Transformative Innovation Initiatives - Joe Hoagland, VP Innovation & Research and Amy Henry, Director, Research & Technology Innovation
12:15	Council Advice Discussion - TVA's evolving energy system
12:45	Lunch Break
1:15	Review and approve advice - Jennifer, Council
2:00	Closing remarks and Adjourn - JoAnne, Jennifer, Melanie