

March 2023 ATVG Newsletter

TVA's Clean Energy Energizes Region's Economic Growth

- TVA's Board announced a Valley Pathways Study that will help drive continued economic competitiveness of the region by accelerating a clean-energy economy.
- TVA has one of the nation's largest, most diverse, and cleanest generation portfolios which mitigate the impact of volatile fuel markets.
- TVA has provided local power companies more than \$500 million in pandemic-related credits to help support communities across the region.
- TVA's base rates have remained unchanged for four years.

The Tennessee Valley Authority Board of Directors on Thursday announced plans to move forward with a Valley Pathways Study that will look at all segments of the economy to accelerate the region's clean-energy economy. TVA will use this study to expand on the region's standing as a national leader for innovation in new nuclear, renewable energy, electric vehicles, energy storage and hydrogen.

"TVA has one of the nation's largest, most diverse and cleanest generation portfolios, and our economic development team is staying busy because our affordable, reliable, resilient, and clean energy is the catalyst that fuels our region's growth," said Jeff Lyash, TVA president and CEO. "If we want to go further, faster in our pursuit of a clean energy economy, we must work together across all sectors. Our objective is to learn and work together to create pathways to a clean energy economy."

Lyash highlighted that the study – a partnership between the University of Tennessee's Baker Center and TVA – is critical to help the region better define the pace of electrification and identify the connections between the power industry and all sectors of the economy to pinpoint ways everyone can adopt sustainable, carbon-free solutions.

Lyash noted that, after a decade of nearly flat load growth, TVA has experienced nearly 2.5% demand growth from 2020 to 2022. Southern states are the fastest-growing region in the nation, and Tennessee is among the states with the largest rate of population increase for the past year for the entire country. TVA's service area is expected to exceed 10 million residents in the next Census Bureau report. TVA anticipates adding 10,000-14,000 megawatts of new resources by the end of this decade to meet the growing power demand from both businesses and homeowners.

"We are aggressively investing in our system, more than \$18 billion in capacity expansion and base capital, since 2014," said Lyash. "In addition, we plan to continue these investments as we work to bring online about 3,800 megawatts of generation to create an energy system that is affordable, reliable, resilient, and clean. Those investments are now paying dividends to Valley families in terms of good jobs, lower power bills and cleaner air, and the Valley Pathways Study can help support our region's economic competitiveness."

"The Tennessee Valley is fortunate to have several possible paths for achieving its decarbonization goals," said Charles Sims, Baker Center Energy and Environment program director. "We look forward to working with all those involved to better understand the broader Valley's opportunities, needs, and challenges related to these different decarbonization pathways." With a 57% carbon reduction against the 2005 benchmark, coupled with no base rate increase since 2019, TVA has helped attract \$2.7 billion of business additions and expansions, which is projected to create or retain more than 21,700 jobs, in the first fiscal quarter alone. Over the past five years, those figures are much larger – 346,000 jobs and \$47 billion of investment.

TVA Partnership Awards \$1 million in STEM Grants to Local Schools

The Tennessee Valley Authority, in partnership with Bicentennial Volunteers Inc., a TVA retiree organization, is awarding \$1 million in grants to educators in public schools to develop science, technology, engineering, and math education projects across the Tennessee Valley.

“TVA is focused on supporting clean-energy technologies and STEM education that helps today’s students develop the skills needed to work in these careers,” said Jeannette Mills, TVA executive vice president, and chief external relations officer. “Innovation is the key to success, and it’s inspiring to contribute to the next generation’s visionaries.”

The competitive STEM classroom grant program is operated in partnership with the Tennessee STEM Innovation Network, managed by the Battelle organization. The program received 458 grant applications this year, and 238 were selected for funding. This year, the program will support about 136,000 students across seven states with hands-on STEM activities.

“The Tennessee STEM Innovation Network is honored to partner with TVA in this exciting grant program to further STEM education endeavors across the state,” said Gretchen Brown, operations director. “This opportunity can make a difference for educators and students as they incorporate 21st-century skills and real-world problem-solving. It is a privilege to work with this partnership year after year and continue to serve the incredible educators of the Tennessee Valley.”

Grants are awarded in urban and rural areas to meet the diverse needs of local communities. For example, Cold Springs Elementary, in Bremen, Ala., and served by Cullman Electric Cooperative, will create an outdoor classroom for enhanced learning. The outdoor learning experience will include raised beds, animal habitats, water filtration systems, and weather stations that will provide students with hands-on environmental science experiences.

In Elkton, Ky., served by Pennyrite RECC, Todd County Central High School will expand its Unmanned Aviation Systems curriculum by purchasing new drones and accessories. Students will learn about aviation, build flight plans, and take the FAA Part-107 exam to earn a drone pilot license.

In Chattanooga, Tenn., Normal Park Museum Magnet School, served by EPB, will use grant funding to buy materials for students to construct sustainable building models. In partnership with GreenSpaces Chattanooga, students will be tasked with taking an undeveloped plot of land and designing a building that will function as a part of a sustainable city. Throughout the project, students will better understand the interconnectedness between science and math and learn about engineering and architecture careers.

Grants up to \$5,000 were awarded in a competitive process, and preference was given to grant applications that explored TVA’s primary areas of focus: environment, energy, economic development, and community problem-solving. Any school that receives its power from a local power company served by TVA was eligible to apply.

Since 2018, TVA/BVI has provided nearly \$5 million in STEM grants supporting nearly 600,000 students.

“Supporting education and ensuring students have a solid STEM background is critical to our children’s future no matter what career path they take,” said TVA Public and Community Engagement Program Manager Trina Gallman. “I am proud of the partnerships we have built to help these educators inspire their students through the STEM activities this program will provide.”

LIDAR Technology Leads the Way in Measuring TVA Land

In TVA’s Office of Transmission and Power Supply, LIDAR is a critical tool for surveying and mapping for projects such as developing new substation sites or checking the accuracy of transmission line construction. Lasers scan objects such as roads, trees, transmission poles, and wires and return millions of data points that are collected in three-dimensional (3D) point clouds. After post-processing to ensure accurate scale and georeferencing, these 3D point clouds are an extremely accurate model of the project area. They can be used to take precise measurements or to build to-scale digital models.

LIDAR is a tool that can gather a lot of information in a short period of time. It can collect data on thousands of miles of transmission lines more quickly and safely than conventional survey equipment. The collected data, which typically includes a LIDAR point cloud, ambient weather observations, and imagery, is used to develop predictive models that can be leveraged during the engineering design and analysis of the electrical grid system.

According to Adam Green, senior manager of Transmission Line Engineering, “We are in the process of using LIDAR data to build 3D models of all TVA transmission lines 100kV and above. These models will be helpful for responding more quickly to storm damage or helping a TVA customer who wants a new delivery point, as we will already have the data needed to help with design changes. They also help to ensure the reliability of the transmission grid because we can identify any clearance violations which could cause a transmission line to be out of service.”

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ATVG is a 501(c) (4), not-for-profit, public interest
organization.

ATVG advocates for the interests of county and
city/town governments residing within the seven
state TVA region and their partners in the public
and private sectors.

ATVG Spring Meeting

April 26-28, 2023

Paris Landing State Park Lodge (Central Time Zone)

Phone: 1-731-924-4300 or 1-888-867-2757 ATVG Group Code: 1149

April 26th

- **6:00 p.m. Early Arrival Social Hour in Lodge Bar**

Dinner on your own

April 27th

- **8:30 a.m. Depart for U.S. Fish and Wildlife Nature Center** (*Meet in Lodge Lobby*)
- **11:00 a.m. ATVG Board Meeting Lakeview Room** (*Separate agenda will be provided*)
- **Noon: Lunch in Lodge Restaurant** (*Meal ticket will be provided*)
- **1:00 p.m. ATVG General Meeting** –*Call to Order Lamar Paris, ATVG Board President*
- **1:15 p.m. TVA Update** – *Bert Robinson, TVA*

- **1:45 p.m. Program - TVA Economic and Community Development**
- **4:00 p.m. Adjourn** (*Enjoy Park Amenities*)
- **6:30 p.m. Depart for Paris Fish Fry Tent** (*Dinner and “Fish Fry” Activities*)

April 28th

- **8:00 a.m. Country Breakfast** – *Lakeview Room*
- **9:30 Depart for Parade** (*Optional*)

* Please note Hotel Registration link can be found on www.ATVG.org

Please help us make necessary arrangements by letting us know if you will be attending. Send the enclosed registration form by email to: registration@atvg.org or by U.S. mail to: ATVG, P.O. Box 3578, Clarksville, TN 37043

Association of Tennessee Valley Governments Meeting Registration Form

Registration Fee: \$175.00 for members and affiliates; \$300.00 for non-members

Name:

E-Mail:

Spouse's Name:

Registration Fee for spouse is included/No additional charge

Company/Organization:

Full Address:

Make checks payable to: Association of Tennessee Valley Governments- P.O. Box 3578 – Clarksville, TN 37043