



## JUNE 2021 ATVG SUMMER NEWSLETTER

### **TVA CEO: US Needs Tech Advances to Reach Carbon Goals**

The head of America's largest public utility said they are on track to reduce greenhouse gas emissions by 80% by the year 2035, short of President Joe Biden's goal of a carbon pollution free power sector by that date.

Speaking at an online event hosted by the Atlantic Council, Tennessee Valley Authority President and CEO Jeff Lyash recently said that to reach the 100% reduction goal, the utility will need technological advances in energy storage, carbon capture and small modular nuclear reactors, according to a transcript provided by TVA.

Lyash said TVA can reach an 80% reduction in greenhouse gas emissions over 2005 levels "with existing technology and without raising price or adversely impacting reliability." But to do that, it will need to extend the life of the utility's existing nuclear fleet. The final 20% will be harder, especially considering the new energy demands that are expected from electrification of transportation, Lyash said.

Lyash sees small modular nuclear reactors as integral to that goal, saying government support is needed to push forward new technologies that are currently under development. The TVA in 2019 received a preliminary site permit for a small modular reactor near Oak Ridge, Tennessee, the first such permit in the country.

"TVA is ready to lead in this area if the nation needs it to lead," Lyash said, "and with the right level of support, we can build small modular reactors as a lead plant at the Clinch River site."

"First-of-a-kind risk and cost are substantial," Lyash said, but the investment would help the U.S. achieve a low-carbon future and create a valuable export.

In fiscal year 2020, the largest portion of TVA's power came from nuclear, at 42%. Gas accounted for 28%, coal for 15% with hydro generation just behind at 12%. Only 3% of TVA's power came from wind and solar.

Lyash does not see coal as part of the utility's future, saying TVA will continue to phase it out over the next 15 years because its coal plants are reaching the end of their lives.

TVA was established by an act of Congress in 1933 to provide reliable, low-cost electricity; economic development; and environmental stewardship to the people of the Tennessee Valley. It currently provides power to nearly 10 million people in parts of seven Southern states and is the country's third largest electricity generator.



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### **TVA Launches School Uplift, Investing \$7.3 million in 160 Schools**

Tight budgets and aging buildings have left many schools facing the difficult choice to fund learning programs or facility upgrades. A new program by the Tennessee Valley Authority will help 160 public schools in seven states solve that problem.

TVA is investing \$7.3 million in a new School Uplift program over the next three years. School Uplift trains school personnel to reduce their schools' energy use and save money. The state of Tennessee's Energy Efficient Schools Initiative is partnering with TVA and has provided an initial \$600,000 in matching funds.

“Every dollar invested in our schools helps districts allocate resources to where it matters most – educating our children – and we’re excited to bring School Uplift to our schools,” said Cindy Herron, vice president of TVA’s EnergyRight program. “EnergyRight’s mission is to partner with local power companies to transform lives and communities with industry-leading energy services and programs. Helping schools save money on their energy costs and improve learning environments is an important investment in the Valley’s future.”

Eleven schools recently completed the School Uplift pilot, learning to save energy and competing to earn grants for building upgrades and solar pavilions.

The first schools to earn energy upgrade grants worth \$400,000 each include:

*Bledsoe County High School, Pikeville, TN*

*Van Buren High School, Spencer, TN*

*Pickett County K-8, Byrdstown, TN*

On average, pilot schools have already saved nearly 20% on their annual energy bills from behavior changes alone. The energy upgrade grants will provide much needed facility upgrades with a focus on further reducing energy consumption and costs.

Schools awarded TVA-funded grants for solar pavilions include:

*Pine Haven Elementary, Jamestown, TN*

*Pickett County High School, Byrdstown, TN*

*South Fentress Elementary, Grimsley, TN*

*Pikeville Elementary, Pikeville, TN*

*Spencer Elementary School, Spencer, TN*



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### **TVA Charts Path to Clean Energy Future**

The Tennessee Valley Authority will continue to fulfill its mission for future generations by building on its industry-leading carbon reduction by aspiring to move toward net-zero carbon emissions by 2050 based on a set of guiding principles endorsed by the TVA Board of Directors at its quarterly business meeting.

As outlined in TVA's most recent Sustainability Report, TVA's continuing execution of its mission supplying reliable energy at the lowest feasible cost, being a steward of the region's natural resources, and serving as a catalyst for continued economic development, must be viewed through the lens of future sustainability.

Businesses and industries are already seeing the unique value of that approach. In the first six months of fiscal year 2021, TVA helped attract or retain more than 45,200 jobs and \$3.9 billion in investment to the region, not including recent significant news from LG, Milwaukee Tools and Oracle. Building a clean energy future is an essential path TVA is following to attract even more jobs and investment to continue that success. Since 2005, TVA has reduced carbon emissions by 63% primarily through creating one of the most diverse generation portfolios in the nation.

This includes adding 1,600 megawatts of new nuclear capacity, the most of any utility in the nation; an additional 1,600 megawatts of wind and solar capacity; retiring 8,600 megawatts of coal capacity that was at the end of its useful life by the end of 2023 and investing more than \$400 million to promote energy efficiency.

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**Shelby County Lands TVA, Facebook Solar Site**

The Memphis and Shelby County community is already home to the blues and barbeque; now Shelby County also will be home to one of Tennessee's largest solar farms. TVA recently announced a new Green Invest partnership with Facebook and RWE Renewables that will build a 150-megawatt solar facility near Millington. Facebook will use 110 megawatts of the solar energy to support their data center operations in Gallatin, Tennessee and the broader Tennessee Valley.

“Bringing clean energy to Shelby County is part of our long-term community plan, and is critical to support our region’s sustainability strategy,” said Doug Perry, TVA senior vice president, Commercial Energy Solutions. “This project is more than a solar farm; it puts people to work, revitalizes communities and makes our region an environmental leader.”

Since 2018, Green Invest has attracted nearly \$2.7 billion in solar investment and procured over 2,100 megawatts of solar on behalf of its customers, maintaining TVA’s green energy leadership with the greatest amount of renewable generation in the Southeast.

Generating more than \$12 million in property tax revenue, the project will create more than 150 construction jobs; the facility is expected to come online in late 2023, pending environmental reviews.

“Green Invest demonstrates the value that TVA’s public power model has for our community,” said Tennessee State Senator Paul Rose. “This solar farm will be a beacon that attracts jobs and investment into Shelby County,” Millington Mayor Terry Jones believes the project will create valuable opportunities for local residents and businesses. “I’m excited because TVA and Facebook are going to be great neighbors, and their trusted brands will benefit everyone in Shelby County. Businesses want renewable energy, and this solar farm makes it easier for us to compete for good jobs.”



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### **Tennessee Sunshine to Power Jack Daniel's**

A little sunshine will soon be in your next glass of whiskey as Jack Daniel's partners with the Tennessee Valley Authority, Duck River Electric Membership Corporation, and Nashville-based solar power producer Silicon Ranch to provide the iconic Tennessee whiskey maker's Lynchburg distillery with 20 megawatts of solar energy.

TVA signed a long-term power purchase agreement with Silicon Ranch to build, own, and operate the solar facility just a few miles from the world-famous distillery in Moore County, Tennessee, pending environmental reviews. "Our commitment to making great whiskey is only matched by our commitment to preserving the world we call home through sustainable practices," said Jack Daniel's Vice President and Assistant General Manager Melvin Keebler. "We're excited to be the first distillery to sign a Green Invest deal that will provide nearly three-quarters of our electricity needs. Now the world's most iconic whiskey is even greener."

### **Sequoyah Unit 1 Completes Scheduled Refueling, Maintenance Outage**

The Tennessee Valley Authority's Sequoyah Nuclear Plant Unit 1 is once again producing reliable, carbon-free energy after safely completing a scheduled refueling and maintenance outage this week. Plant operators are returning Unit 1 to its full capacity, generating enough power for 650,000 homes.

"The entire Sequoyah team, supported by our union and contract partners, safely completed over 11,700 work activities during the outage," said Tom Marshall, Sequoyah site vice president. "The work we performed together in this outage puts Unit 1 in the best position to continue to operate safely and reliably over the next 18-month cycle. Each of our team members takes great pride in the work they do to ensure the plant continues to provide safe, reliable, low-cost, carbon-free electricity to the people and businesses of the Tennessee Valley." In addition to replacing 85 of the unit's 193 fuel assemblies, detailed inspections of various systems were conducted to confirm all components are fully able to perform their safety functions. Other major maintenance activities included replacing or refurbishing a number of motors, valves and other plant components, as well as several modifications for improving safety.

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**Boating this summer? TVA Tugboat Crew is Keeping You Safe**

With the kickoff to summer officially upon us, it's time to bring out the swim trunks, slather on the sunscreen and for many area residents, hit the Valley's rivers and lakes. If you're like most recreation enthusiasts, you may not think much of the bright red and green buoys that dot the sparkling waters as you Jet Ski, boat or fish. But the crew of TVA's tugboat *Sideview* knows they're vital to keeping the navigation channels safe.

"We maintain all the navigational aids on the secondary channel of the Tennessee River and its tributaries to keep boaters, fishermen and those on pleasure craft safe and keep the water enjoyable," says Senior Marine Pilot Tim Barkley. The crew runs the full length of the Tennessee River from Kentucky Dam to Knoxville, starting the first week of March and winding up around the end of October. "That gets us two full round trips," Barkley says.

At 88 feet long and 25 feet wide, *Sideview* houses four crew members and includes a 90 foot work barge that carries all of the buoys and navigation supplies needed to keep the waterways safe. The crew works four 10s, meaning each member has their own designated space for sleeping, and the group comes together like a family to enjoy meals made onboard, like tacos and steak.

While many Valley residents don't realize that TVA owns tow boats, Deckhand Adam Jones says he's always glad to answer questions and spread the word. "My favorite part of the job is mingling with the public. We'll be out with the boat and buoys in town, it gives us a chance to talk with the avid bass fishermen and people who are just curious about what we do," says Jones.

"This is a valuable service that TVA provides, and we put a lot of effort into keeping boaters safe. Our mission goes beyond providing power at TVA – I like getting the chance to remind people of that."



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### **TVA Turns 88**

May 18, 2021 was TVA's 88<sup>th</sup> anniversary, and a time for everyone to reflect on how much their work still matters. Without the Tennessee Valley Authority Act, signed in 1933 by President Franklin Roosevelt, it is unlikely this region would enjoy the same quality of life it does today.

Many have forgotten or never knew the desperate state of the Tennessee Valley in 1933. As bad as conditions were elsewhere in the nation, in most cases they were worse in the Tennessee Valley. There were devastating flooding issues, especially at Chattanooga, Tennessee and Decatur, Alabama. The Tennessee was a non-navigable river, there many were river hazards, including the famous Muscle Shoals in Alabama and the Suck and the Boiling Pot down below Chattanooga. You simply could not travel the river's entire length, whether for transportation or commerce.

The Tennessee Valley lagged behind the rest of the nation in almost every indicator, especially employment, educational attainment and public health. In 1933 the annual per capita income in the Valley region was \$168, equivalent to about \$3,300 today and only 45 percent of the national average at the time. The birthrate was one-third above the national average. Levels of literacy were low, and the labor force largely unskilled. Valley residents suffered from malnutrition and malaria affected up to 30 percent of the population in some areas. More than half the region's three million people lived on farms and of these, half lived on farms they did not own. Soil-depleting row crops such as corn, cotton and tobacco provided most of the farm income. Because these crops left the topsoil exposed to winter rains, about half the Valley's open land was constantly severely eroded or abandoned.

### **The Original Mission:**

Most rural homes at that time were not electrified; only three farms in 100 had electricity. Unchecked fires burned 10 percent of the region's woodlands every year and poor logging practices had nearly ruined forests that once offered endless miles of timber.

The preamble to the TVA Act of 1933 laid out succinctly that TVA's role was "to improve the navigability and to provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said Valley; to provide for the national defense . . . and for other purposes."

The first generation of TVA employees went to work building an extensive system of dams and locks to control floods and improve navigation of the Tennessee River. They created and distributed powerful fertilizers to help improve farming practices and crop yields. They grew and planted seedlings to stop soil erosion and reforest denuded areas. TVA provided electricity to



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rural areas and recruited industries to the region to provide jobs. They completed these tasks and many more, to improve the quality of life of the people in the region.

### **The Urgent Work of Today:**

While these initial problems were solved, TVA continues being tasked with improving the quality of life for the people of the region. Just as earlier generations of workers met their own challenges, TVA continues meeting theirs: battling climate change, building the energy system of the future.

TVA is working to meet current generation needs while reducing carbon levels and aspiring to achieve net-zero carbon emissions by 2050. They want to ensure this region has some of the best jobs in the nation, so over the past five years their economic development work has generated approximately 341,000 jobs and over \$45.4 billion in capital investment in the Tennessee Valley. By balancing competing demands on the water system to provide flood control, navigation, power production and recreation, as well as water supply and water quality.





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### ATVG Meetings

Summer 2021

July 8/9<sup>th</sup>

**Marriott Huntsville** (ATVG room block available)

**256-830-2222**

#### **July 8<sup>th</sup>**

- 11:30; Lunch
  
- 1:00; ATVG Membership Meeting
  - TVA Update
  - TVPPA Presentation
  - Seven States Power Corporation Presentation
  - Moon Mission Update
  - Cummings Research Park Presentation  
(4<sup>th</sup> largest in the world)
  - *And much more...*
  
- 4:30 ATVG Board Meeting
  
- 6:00 Reception/Dinner

#### **July 9<sup>th</sup>**

- 9:00 Tour of Huntsville Space and Rocket Center

#### **Fall 2021 ATVG Meeting**

Save the Date: October 26/27<sup>th</sup> – Gatlinburg Marriott

**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](mailto:registration@atvg.org) or by U.S. mail to: ATVG, P.O. Box 3578, Clarksville, TN 37043.

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**Registration Form is on next page**



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**Association of Tennessee Valley Governments Meeting Registration For**  
*Registration Fee: \$100.00 for members and affiliates; \$200.00 for non-members*

Name:

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E-Mail:

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Spouse's Name:

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*Registration Fee for spouse is included/No additional charge*

Company/Organization:

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Full Address:

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



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### **ATVG REPORT:**

A quarterly publication of the Association of Tennessee Valley Governments:

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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.

*For details about ATVG's mission and program of work, visit us on line at: [www.atvg.org](http://www.atvg.org)*