

June 2015 ATVG Newsletter

NRC Authorizes Staff to Issue Unit 2 License at Watts Bar

TVA's third nuclear power plant, Watts Bar Nuclear Plant, is located on 1,700 acres on the northern end of Chickamauga Reservoir, in east Tennessee. The plant was named for a sandbar at Watts Island that hampered navigation on the Tennessee River until it was flooded by Watts Bar Reservoir. Groundbreaking on Watts Bar Nuclear Plant occurred in 1972, with major construction beginning a year later.

For the first time in nearly two decades, the U.S. Nuclear Regulatory Commission has voted to issue an operating license for a new nuclear power plant, pending staff approval of final startup tests. Thirty-six years after construction began at Watts Bar, NRC commissioners this week voted unanimously to authorize its staff to approve startup at the Unit 2 reactor, once TVA completes final installations, inspections and startup tests.

The Tennessee Valley Authority, the federal utility which has spent more than \$6 billion to build and rebuild the Unit 2 reactor at Watts Bar, plans to conduct hot functional tests of plant equipment in June and load nuclear fuel in the new reactor later this summer or fall.

TVA expects to begin power generation at the new reactor by the end of the year. If approved by the NRC staff, Watts Bar Unit 2 will become the first U.S. commercial reactor to get an operating license since TVA completed the first reactor at Watts Bar in 1996.

"The commission's action was a critical regulatory step necessary to keep Watts Bar Unit 2 on track to become the nation's first new nuclear generation of the 21st century," TVA's Chief Nuclear Officer Joe Grimes said in a statement. "The delegation of this authority signifies confidence that NRC inspections show Watts Bar Unit 2 is being built according to rigorous regulatory requirements and industry standards."

Anti-nuclear groups last year challenged the licensing of Watts Bar, claiming that equipment in the plant was too susceptible to earthquakes and floods and that additional reactors should not be added to the 99 U.S. reactors now in operation until the Department of Energy meets its legal obligation to find a permanent repository for radioactive wastes. However, after lengthy studies has NRC has rejected every single one of their claims.

The utility had to increase the budget for the completion of Unit 2 three years ago when the original 5-year, \$2.5 billion completion project proved inadequate. But TVA remains on schedule and within budget for its revised \$4.2 billion completion plan. The NRC's "Staff Requirements Memorandum" adopted May 26th delegates authority to plant inspectors and the NRC regional office in Atlanta to issue an operating license for TVA to load nuclear fuel and begin power production at Watts Bar Unit 2. TVA, which once employed more than 3,200 workers at Unit 2, is reducing its construction workforce and is moving toward getting the plant ready for power testing and generation.

"We have a responsibility to complete Watts Bar Unit 2 the right way -- safely and with quality -- and that's what we're doing," said Mike Skaggs, TVA's vice president in charge of Watts Bar operations and construction. "The Watts Bar team has made tremendous progress getting us to this point and is focused on the work and challenges ahead to successfully complete, test, and license Unit 2 and to integrate the unit into TVA's nuclear fleet." Completing Unit 2 will put an existing asset to work for TVA customers and add more than 1,150 megawatts of generating capacity to the TVA power system.

TWRA Announces Long-Term Funding

The Tennessee Wildlife Resources Agency (TWRA), the Fish and Wildlife Service (USFWS) and Georgia Department of Natural Resources (GADNR) joined U.S. Senator Lamar Alexander and leaders from the Tennessee Valley Authority in an announcement to provide long-term funding for trout production and stocking in 13 TVA dam tailwaters and reservoirs in Tennessee and Georgia.

The announcement for the multi-agency agreement to the USFWS came in a press conference at the Erwin National Fish Hatchery on May 11th. The agreement ensures popular trout stocking programs in the region will continue beyond 2016, when a temporary TVA funding agreement reached in 2013 is set to expire.

The agreement supports continued TVA reservoir and tailwater stocking of non-native trout that are raised at three federal fish hatcheries operated by the USFWS.

“On behalf of all anglers who fish Tennessee waters, our agency appreciates Sen. Alexander’s leadership and the collaborative effort of the TVA, the USFWS, and the Georgia Department of Natural Resources, insuring the continuation of trout hatchery operations supplying our streams and tailwaters, said Ed Carter, TWRA Executive Director. “It gives me great comfort to know that the economic benefit to all Tennesseans and the fantastic angling opportunities these vital fisheries provide will continue.”

With the help of a working group of key stakeholders, the agencies developed a plan to collectively fund future trout hatchery operations at current levels in the following manner: TVA will provide base funding for the trout stocked; Fish and Wildlife Service will fund infrastructure and maintenance costs at the hatcheries, and the state agencies will take care of costs to distribute and monitor the fish.

Important Note:

If you are planning to attend our July meeting in Oak Ridge, TN on July 22nd and 23rd we must receive your registration by Monday, July 13th. Your registration must include you and your guest's FULL names and the last 4 digits of each person's social security number. Also, everyone must be a U.S. Citizen, and government-issued photo ID is required.

Energy-Efficiency Program at Bendix Spicer Foundation Earns TVA Incentive Rebates

Projects designed to save energy at the Bowling Green, Kentucky, facility of Bendix Spicer Foundation Brake LLC (BSFB) have been rewarded with incentive rebates from TVA. The rebates are part of the EnergyRight® Solutions for Industry program of TVA. A joint venture between Bendix Commercial Vehicle Systems LLC and Dana Commercial Vehicle Products, LLC, BSFB has manufactured Bendix® brand name air disc and drum brakes in Bowling Green since 2007.

Led by its energy conservation team, Bendix Spicer Foundation Brake partners with Warren RECC (Rural Electric Cooperative Corporation), which helps identify and implement projects to support BSFB's goal of becoming more energy efficient. Warren RECC brings electricity to individuals and communities in rural areas of south central Kentucky.

In the first project, recently completed, BSFB replaced 112 low-efficiency lighting fixtures in the facility's warehouse. New high-output fluorescent fixtures reduce energy use and associated costs by an estimated \$9,500 annually while increasing light levels, resulting in a safer work space. The project earned a rebate of \$8,768.20 from TVA.

A second project is replacing 25 metal halide pole heads with LED pole heads in BSFB's front parking lot, and 27 metal halide wall packs with LED wall packs on the building's exterior. Estimated energy savings equate to \$5,523 annually, and a TVA rebate estimated at \$2,302.54 is expected after the project is completed in mid-June. The new lighting will make the parking lot, truck yard, and employee entrance areas brighter and safer.

ATVG REPORT:

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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

Association of Tennessee Valley Governments

Summer Meeting July 22/23, 2015

Doubletree Oak Ridge - Reservations 865-481-2468

July 22, 2015 (Eastern Time Zone)

***** Registration forms must be received by Monday, July 13th*****

- 11:30 a.m. Working Lunch at Doubletree
- Welcome and Introductions – Ron Woody
 - Program Overview – Mike Arms
 - TVA Update – Bert Robinson

- 1:00 p.m. Depart for Y-12 National Security Complex
- History and Overview of Y-12 – Ray Smith
 - Presentation on Proposed Manhattan Project National Park

- 2:15 p.m. Depart for Kingston Fossil Plant
- Overview of Plant Operations
 - Presentation on Ash Spill Recovery
 - Plant Tour

- 5:00 p.m. Return to Doubletree
6:30 p.m. Social Event and Dinner

July 23, 2015

- 8:00 a.m. ATVG Board Meeting (separate agenda will be provided) with Continental Breakfast

- 9:00 a.m. Depart for Oak Ridge National Laboratory
- Presentation and Tour of Oak Ridge Computing Facility (Super Computer)
 - Presentation and Tour of Spallation Neutron Source

- 11:15 a.m. Return to Doubletree; Noon: Big Ed’s Pizza Lunch (optional)

****Important Note: Guests and Spouses are invited on all tours: must be U.S. citizens; Government-Issued Photo ID REQUIRED; need FULL names IN ADVANCE and last 4 digits of each person’s social security number.***

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: \$40.00 for members and affiliates; \$75.00 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

This article was written by ATVG President Ron Woody, who also serves as secretary on the ECA board.

Energy Communities Alliance
Aiken, S.C.
May 18, 2015

The Energy Communities Alliance met in Aiken, South Carolina in mid-May for a Peer Exchange on Advancing Nuclear Priorities. Assistant Secretary Pete Lyons, PhD. of the DOE Office of Nuclear Energy discussed issues of both the front-end and back-end of the fuel cycle, including steps to develop interim storage, site a repository for defense high-level waste and advancing new nuclear technologies.

Roane County Executive Ron Woody facilitated the second discussion titled, "Update: The Pursuit of SMRs (Small Modular Reactors) and Advanced Reactors." Woody gave a historical perspective of TVA's energy policies and practices which is summarized as follows:

"TVA is the nation's largest public power provider. TVA is a corporation of the U.S. Government but takes no federal appropriations. TVA was established in 1933 and currently serves over 9 million people.

I serve as the current president of the Association of Tennessee Valley Governments (ATVG), an organization similar to ECA which works with TVA and comments on various TVA policies. TVA serves most of Tennessee and parts of Alabama, Georgia, Kentucky, Mississippi, North Carolina and Virginia.

DOE and TVA coordinate in the region around the DOE-Oak Ridge facilities. DOE-Oak Ridge hosts the Oak Ridge National Lab, Y-12 National Security Complex and the former K-25 uranium enrichment facility. Due to the energy demands of DOE-Oak Ridge, in this region TVA has assets including:

- Bull Run Fossil Plant- 6 billion kilowatts/year to 400,000 homes; 1 mile north of ORNL
- Kingston Fossil Plant- 8 billion kilowatts/year to 540,000 homes; 4-8 miles west of ORNL & 2-4 miles west of K-25
- Watts Bar Nuclear Plant- 1100 megawatts to 650,000 homes; 20-40 miles southwest of ORNL

Between Bull Run and Kingston Fossil Plants rests 1364 acres of the former planned Clinch River Breeder Reactor Site approved for plans in 1970 funding, but funding terminated in 1983.

Since ORNL houses the world's fastest computer system which requires huge amounts of energy to run and cool the computer, TVA partnered with B&W Bechtel to propose an M-powered SMR. As Director Lyons previously mentioned, the M-power reactor project has been terminated. However, TVA continues to seek EPA approval for using the Clinch River site for an SMR or other type of advanced nuclear reactor.

TVA's integrated resource plan includes: hydro, fossil, nuclear, gas, renewable, energy efficiency, and pump and store. The integrated resource plan portfolio continues to change and SMRs or other advanced reactor technologies are being considered.

Watts Bar Unit 1 construction began in 1973 and became operational in 1996. Unit 2 began in 1973, was suspended in 1988, restarted in 2007 and is scheduled to go on-line in December of this year. Watts Bar Unit 1 was the last nuclear reactor to go on-line in the last century and Watts Bar Unit 2 is scheduled to be the first nuclear reactor to go on-line in this century.

Woody then turned the program over to Doug McCuiston, Chief Operating Office, X-Energy, LLC, who discussed SMRs and Advanced Nuclear Reactors.

Energy Communities Alliance is the organization of local governments that are adjacent to or impacted by Department of Energy (DOE) activities. Our board members include elected officials and administrators from local governments impacted by DOE.

ECA's mission is to bring together local government officials in Department of Energy-impacted communities to share information, establish policy positions, and advocate community interests in order to effectively address an increasingly complex set of environmental, regulatory, and economic development needs.

Construction Begins on Largest Solar Array in Kentucky

A groundbreaking ceremony at the site of a capped landfill at Fort Campbell, KY on Wednesday, May 27th marked the next step in the installation's renewable energy plan. The ceremony marked the beginning of construction of the largest solar array in Kentucky. The multimillion dollar project will install a ground-mounted solar panel system near the corner of Market Garden Road and Screaming Eagle Boulevard.

Once fully operational, the solar array will produce 5 megawatts of energy, or enough to power 463 homes. Preparation to install a solar array began in 2012 when Fort Campbell established a renewable energy plan. The reasoning for establishing such a plan came from directives set forth in the American Renewable Energy Act, which requires 25 percent of energy consumed by federal installations to be produced by renewable means by 2025.

This addition of renewable energy sources will lessen Fort Campbell's reliance on coal-powered energy. This change signals a positive impact in the years to come for the environment and future generations, said Garrison Energy Manager Rick McCoy. "The fossil fuels and everything alone that we're not burning and putting into the air makes this thing very attractive," he said. "Not tearing down the mountains to get to coal, instead of your children looking down into a valley where the mountain used to be, they'll be looking up at the mountain."

Phase One of the project will provide approximately 1.9 megawatts of energy capable of "plugging in" directly into the Fort Campbell power grid, McCoy said. This phase should be complete sometime in September, depending on weather. The project would not be a reality without the support of post leadership, particularly Garrison Commander Col. David "Buck" Dellinger, McCoy said, as well as a host of other partners. A \$3.1 million grant awarded by the State of Kentucky to Fort Campbell and the Pennyrite Rural Electric Cooperative Corp. in December 2012 pushed the project forward. Fort Campbell applied for the grant after establishing a 10-year Utility Energy Services Contract with PRECC, which allows the electric cooperative to use the grant to pay for the solar array's interconnection infrastructure.

"By some strokes of luck, we stumbled upon this opportunity with the State of Kentucky," McCoy said. "It was enough to get us started. Without that money, we wouldn't be standing here today. Because it just would not have been economically feasible. This project, with the help of the State of Kentucky, with their generous grant, will pay for itself in 10 years."

Fort Campbell received an additional \$800,000 grant through the Department of Energy's Federal Emergency Management Program to fund Phase Two of the solar array project. The funding is tied to a 27-year Power Purchase Agreement. "It's about doing the right thing," Dellinger said. "This project is the result of many agencies, federal and state, working together."

Other projects are now on the horizon as Fort Campbell aims to produce 20 megawatts of utility-grade renewable energy. Other possibilities include biogenic shale gas, biomass and waste energy. "This a new era of how we're going to produce energy and how we're going to have energy security on Fort Campbell," Dellinger said.

"This is truly a significant milestone in the implementation of Fort Campbell's plan. This project is not just about making power. It's about making a difference that will be felt for many years. In addition to being a renewable energy source, this project will save 4.7 million tons of carbon dioxide emissions annually. Every time we make a choice like this, we're making the environment cleaner. We're giving cleaner air for our children and their children to breathe."

The U.S. Army Corps of Engineers, Engineering and Support Center, out of Huntsville, AL, is supporting the project. This solar array is one of many similar renewable energy projects at other military installations, including a \$75 million solar panel farm being constructed at Fort Benning, Ga. This project also comes at a time when utility costs remain a major concern Armywide. The Army spends about \$1.3 billion annually on these expenses, Lt. Gen. David D. Halverson said during an Association of the U.S. Army forum earlier this year.

McCoy said the full 5 megawatts provided by the solar array should be available by mid-2016, and the resulting energy will be used solely at Fort Campbell. "The wonderful thing about solar is, in the summertime it's making the most energy at the time when you need it the most, because that's when the air conditioners are coming on," he said. "The hottest day of July, our demand hits somewhere between 60 and 65 megawatts." While this number reflects peak demand, McCoy said energy usage on weekends often falls between 30 and 35 megawatts.

TVA Continues to Improve Local Recreation Areas

TVA manages 293,000 acres of land and 266,000 of that is undeveloped land that people can hunt, hike, camp and fish on,” said David Brewster, manager of TVA West Operations, Natural Resource Management. “This is land that is not encumbered by hydroelectric facilities or nuclear plants.” Brewster said in the past year, TVA has made improvements to its interpretive trails like those that wind through the popular Muscle Shoals Reservation. “We’ve been paving parking lots and restriping them and doing some invasive plant control to open it up,” he said.

Workers used special mowers to cut and mulch privet hedge. Brewster said TVA also removed numerous hackberry trees from its wooded recreation areas. He said TVA has also replaced rotted wooden steps along some of the unimproved trails on the reservation. “In some areas, we’ve put in new stonework in the same design as the CCC,” Brewster said, referring to the Civilian Conservation Corps, which helped develop some of the recreation areas on the reservation. “We’ve been doing a lot over the last year on those trails.” Near completion at the Rockpile Fishing Area is a TVA-themed playground with a mock dam kids can climb on. It has a slide that resembles a spillway at the dam. The park is below Wilson Dam in northwest Alabama. “It’s very nature oriented,” Brewster said. TVA spokeswoman Kristine Shattuck-Cooper said the playground should be completed by the end of the June.

The Rockpile Fishing Area parking lot has been resurfaced, and a road leading to a popular waterfall near the dam has been paved, Shattuck-Cooper said. While it’s not in the Shoals, Brewster said TVA is proud of its new Marbut Bend Trail near Athens. The trail is unique because it is handicapped accessible. It has a 100-foot boardwalk that crosses a small wetland and a 1,000-foot boardwalk that carries visitors across the entire wetland.

“It’s pretty impressive,” he said.

TVA manages the Tennessee River and its tributaries and keeps its reservoirs as full as possible during the summer months. “We manage the river for navigation purposes, for recreation purposes, as well as a lot of different uses up and down the river,” Shattuck-Cooper said. There are several power production facilities along the river that utilize the water for cooling purposes, she said. Shattuck-Cooper said all of TVA’s main reservoirs, including Wheeler, Wilson and Pickwick lakes, are at their normal summer levels. TVA needs an average of an inch of water a week to maintain the proper lake levels. Shattuck-Cooper also said it’s important to keep a certain current going for aquatic life that makes the river their home. “We’re mandated to maintain a nine-foot navigation channel at all times,” Brewster said.