

1 S T Q U A R T E R

2002 Operational Report to Congress

O C T O B E R - D E C E M B E R 2 0 0 1

Overall

- Economic forecasts for the Tennessee Valley indicate that manufacturing will begin to recover from the current recession by Spring 2002. Given this, the regional economy is expected to make a somewhat faster and stronger recovery than the national economy. Nevertheless, the regional gross domestic product for 2002 is expected to grow only 1.2 percent from 2001. The region is expected to continue to strengthen in 2003 and outpace the U.S. with a growth rate of 5.9 percent. The region's auto industry is a primary reason for the strong projected growth.

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- New energy technologies were the focus of the Energy Technology Expo co-hosted by TVA and the Tennessee Valley Public Power Association in Chattanooga in November. The Expo featured technical presentations, panel discussions, and a trade show exhibition highlighting the latest technological advances in the energy industry. More than 500 people attended the conference, and more than 200 area students toured the exhibit area.
- The TVA Board has approved additional benefits to minimize the hardship on reservists serving on active military duty to support operations Noble Eagle and Infinite Justice. The benefits include TVA payment of full medical and dental premiums during periods of leave without pay; payment of the difference between employees' TVA basic pay and their military basic pay during those periods; payment of \$10,000 to the survivor(s) of any TVA reservist who dies while in the line of duty in the Armed Forces; and authorization to excuse absences for returning reservists and their families.
- On December 26, the TVA power system met the peak power demand for the quarter – 22,361 megawatts – as temperatures across the region averaged 23 degrees.
- The TVA Police remains on heightened alert status since September 11, 2001. TVA's facilities are being protected 24 hours a day, seven days a week.



Milestones

OPERATIONS

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- Watts Bar Nuclear Plant achieved a rating of Excellent from the Institute of Nuclear Power Operations for plant performance. This is the highest rating achievable.
- TVA completed a Draft Supplemental Environmental Impact Statement for the proposal to extend operation of Browns Ferry Nuclear Plant Units 2 and 3 and potential restart of Unit 1. TVA also began a study to develop a comprehensive cost estimate and schedule for the potential restart of Browns Ferry Unit 1. The Board will consider the results of this study, the data in Browns Ferry's Supplemental Environmental Impact Statement, the Valley's power supply needs, and other economic factors before making a decision on whether to restart the unit.
- Sequoyah Nuclear Plant Unit 1 completed a refueling outage, including the installation of a leading-edge flow meter to increase unit output by approximately 12 megawatts.
- TVA fossil plants received high marks in the Electric Light & Power Industry Report on the top-performing electric utilities and power plants across the Nation for the past year:
 - Cumberland Fossil Plant was ranked 5th-highest in total generation among the Nation's 1,215 steam-electric plants. Among the top 50 plants, Cumberland was ranked 4th-lowest in production cost.
 - Among the nation's steam-electric plants, three TVA plants made the top 50 for heat rate, a measure of efficiency in converting fuel to electricity. Bull Run Fossil Plant was ranked 7th in the country, Kingston was ranked 30th, and Cumberland was ranked 44th.
- To continue providing a reliable supply of power to its customers, TVA is building an additional 680 megawatts of new combustion-turbine capacity to provide peaking power beginning in the summer of 2002. The location for 340 megawatts of this capacity is a new site in Kemper County, Mississippi. The remaining 340 megawatts will be installed at TVA's Lagoon Creek site in Tennessee, where eight combustion turbines began operating in the summer of 2001.
- TVA is continuing efforts to improve air quality in the Tennessee Valley region. Five additional scrubbers will reduce sulfur dioxide emissions from TVA's fossil system by more than 200,000 tons per year, bringing TVA's total emissions down by 85 percent since 1977. The scrubbers will cost about \$1.5 billion, and design will begin in 2003.

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- Work is continuing on the installation of 18 selective catalytic reduction (SCR) systems at seven TVA fossil plants to further reduce emissions of nitrogen oxide (NOx). By 2005, TVA emissions of NOx during the summer ozone season will be reduced by about 75 percent, compared with mid-1990 levels. Two SCRs at Paradise Fossil Plant are now operational. SCRs on two units at TVA's Allen Fossil Plant in Memphis are scheduled to be operational for the summer of 2002.
- As a part of TVA's efforts to achieve regional coordination in transmission matters, TVA has entered into a contract to perform reliability monitoring and analysis services for the transmission systems of Associated Electric Cooperative, Inc., Big Rivers Electric Corporation, and East Kentucky Power Cooperative. This means we are providing real-time monitoring and reliability analysis of their transmission systems – as well as our own – to help ensure that the power supply remains stable. In keeping with industry trends toward broader regional control of transmission services, this is a key step in the development of a Public Power Regional Transmission Grid.
- On TVA's transmission system, five new delivery points were placed in service, and approximately 14 equivalent miles of transmission line were constructed.
- Unit 2 at TVA's Gallatin Fossil Plant established a continuous run record of 236 days. The unit's prior record was 179 days, set in 1999.
- In October, former and current employees at TVA's Johnsonville Fossil Plant celebrated the plant's first 50 years of operation. By the end of 2006, seven of TVA's 11 fossil plants will have generating units that have been in service for at least 50 years.
- Colbert Fossil Plant employees set an all-time safety record for a TVA fossil plant, working more than 4.9 million work-hours without a lost-time accident. John Sevier Fossil Plant employees recently surpassed four million work-hours without a lost-time accident. John Sevier employees have worked more than 11 years without an accident, a TVA fossil system record.

RIVER SYSTEM OPERATIONS & ENVIRONMENT

- During the first quarter of fiscal year 2002, the Tennessee Valley averaged 10.7 inches of rainfall – 91 percent of normal – and 5.1 inches of runoff, the rain that reaches the reservoir system. The rainfall and runoff, however, were not evenly distributed. For example, the area west of Chattanooga reported 8.3 inches of runoff, while the area east of Chattanooga reported only 2.0 inches of runoff. In general, rainfall east of Chattanooga is more beneficial because that is where the majority of TVA's storage reservoirs are located. Because the area below Chattanooga has been wetter than normal, several dams on the lower main river had to spill water for flood control on the Tennessee and Ohio Rivers.

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- As part of TVA's overall security program, we are working with the U.S. Army Corps of Engineers on a comprehensive approach to hydro plant security, plans for navigation, and points of contact during emergency situations. Employees have been trained on security assessments for dams, hydro generation facilities, locks, switchyards, and recreation areas. Risk assessments of facilities are being conducted to identify additional security measures needed at TVA facilities.
- In December, TVA relaxed security restrictions at dam reservations to end enforcement of the 100-yard standoff distance from dams. This followed discussions with the U.S. Army Corps of Engineers and federal law enforcement agencies and was consistent with security measures taken by other federal dam management agencies. Other heightened security measures continue to be in place at TVA facilities.
- Marvin Cones, TVA's Manager of Dams, Locks and Bridges, accepted an appointment to the United States Society on Dams task group on security at dams.
- The Reservoir Operations Study, a two-year review of how TVA's operates the Tennessee River system, is under way. As part of the study, work continued on the development of models for Chickamauga, South Holston, and Wilson Reservoirs. We are also evaluating bid proposals for evaluating how different operating policies would impact flood risk.
- TVA completed the annual update of its Dam Safety Emergency Action Plan and distributed copies to hydro projects, Watershed Team offices, and other locations throughout TVA.
- An unloaded 15-barge tow struck the downstream miter gate at Kentucky Lock. A joint inspection was performed by TVA Dam Safety and the U.S. Army Corps of Engineers. The lock will remain in service, as only minor structural damage occurred. Repairs are scheduled for early 2002.
- An earthquake occurred in northeastern Alabama on December 7 at 7:08 p.m. CST. The earthquake measured 3.9 on the Richter scale and was centered 15 miles northwest of Scottsboro, Alabama. Guntersville is the nearest TVA dam, 22 miles south-southwest of the epicenter. The operator at the dam, the U.S. Army Corps of Engineers lockmaster, and the TVA Police conducted initial inspections with no adverse findings. A follow-up inspection conducted by Dam Safety found no problems at the site.
- In October, TVA broke ground for the Regenesys plant near Columbus Air Force Base in Mississippi. The Regenesys Energy Storage system is a flow battery that can store electricity available during periods of lower power demand and generate electricity during times of peak demand. This is the first Regenesys facility in the U.S. and the second in the world. Construction is scheduled to take about 18 months.

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- TVA conducted a public meeting in Mountain City, Tennessee, in December to discuss proposed construction of a 20-MW wind farm on nearby Stone Mountain. Citizens at the meeting expressed a range of opinions on the proposal, with most generally supporting it. Following the release of the draft Environmental Assessment on the proposed wind farm in early January 2002, TVA will hold an additional public meeting at Mountain City and in the Oak Ridge/Oliver Springs area.
- TVA participated in the Southern Appalachian Mountain Initiative (SAMI) semiannual meeting in Asheville, North Carolina, where preliminary results of SAMI's ecological and socioeconomic analyses were presented. The SAMI process will culminate in the Governors' Summit on Mountain Air Quality, hosted by the Governor of North Carolina, in late July 2002. It is anticipated that SAMI will make recommendations that affect state regulations on emissions from TVA fossil plants. The eight states are Tennessee, North Carolina, South Carolina, Virginia, West Virginia, Kentucky, Alabama, and Georgia.
- TVA atmospheric scientists met with the Arkansas, Tennessee, and Mississippi Ozone Study (ATMOS) Technical Workgroup. The primary goal of ATMOS is to help state and local regulatory agencies develop environmental management programs to meet the 8-hour National Ambient Air Quality Standard for ozone. The effort specifically addresses issues for Memphis, Nashville, Chattanooga, Knoxville, and Bristol-Kingsport, Tennessee; Tupelo, Mississippi; and Little Rock, Arkansas. TVA scientists serve on the workgroup because of TVA's leadership in ozone modeling and research in the Tennessee Valley region.
- The Tennessee Recycling Coalition recently honored the Tennessee Department of Agriculture and the Tennessee Valley Authority with the Government Recycler of the Year Award for 2001. The award was presented in recognition of the TDA/TVA Pollution Prevention Program for Pesticides and Fertilizers.
- The National Award for Outstanding Sponsor Achievement was presented to TVA in honor of TVA's commitment to working with partners to protect natural resources and supporting regional economic development.
- The Public Power Institute, in conjunction with the Great Smoky Mountains National Park, held the kickoff event for the demonstration of Alternately Fueled Vehicles in the Cades Cove area of the park. The demonstration included 15 electric vehicles.
- TVA's Raccoon Mountain Pumped-Storage Plant was certified and its Reservoir Releases Improvements program recertified by the Wildlife Habitat Council (WHC) at the Council's annual symposium in Washington, DC. Certification recognizes outstanding wildlife-habitat management and environmental-education efforts at corporate sites.

- TVA received a national EPRI Lighting the Way Award for corporate contributions to the EPRI Power Quality Program. TVA was nominated for this award by EPRI Power Quality staff and utility advisers of the Power Quality Product Line Council.
- The constructed wetlands demonstration in Oahu, Hawaii, has been operational for one year, treating wastewater from a U.S. Navy installation.
- TVA staff participated in meetings with Colombian academic and governmental officials on TVA's support of Colombia's water management issues. Staff also made a presentation at the Integrated Management of Watersheds Seminar in Caracas, Venezuela.

CUSTOMER SERVICE

- TVA is continuing to work with distributor customers to develop options for both longer-term contracts and partial-requirements contracts.
- During the quarter, TVA approved a total of \$4.5 million in economic development loans for business growth in the Tennessee Valley. These loans are expected to leverage an additional \$24.4 million in capital investment and help create or retain 1,416 jobs. Loans to Valley minority businesses totaled \$282,000.
- Two additional banks have agreed to participate in the Valley Coalition for Minority Economic Development. The Bank of Nashville and SouthTrust have joined six other regional banks to support minority and other socially and economically disadvantaged businesses by providing increased access to capital and other technical assistance.
- TVA completed 68 technical-services projects for Valley communities and industries. These include promotional materials for the Tri-State Commerce Park in Tishomingo County, Mississippi; site evaluation for Historic Fort Blount in Jackson County, Tennessee; site design for the Pelham Industrial Park in Grundy County, Tennessee; site plan for Edmonson County, Kentucky; economic profile for Jackson Purchase area, Kentucky; economic profile for Southern Highroads area; input for Pickwick Land Plan; and various environmental evaluations for economic development loan requests.
- Since the introduction of the Enhanced Security Deposit Agreement in November, TVA has enrolled 39 distributors in the program, which provides significant financial benefits to businesses and industries operating in the Valley. Under the program, TVA works with distributors to provide alternative credit assurance for qualifying customers on which TVA can obtain credit insurance and who otherwise must post security deposits with their power supplier.

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FINANCIAL

- TVA's debt level continues to decrease. TVA reduced debt by \$610 million in 2001, for a total debt reduction of \$2.3 billion since 1996.
- Interest expense declined by \$103 million in 2001, for a total decrease of \$370 million over the past five years. TVA issued \$600 million in global power bonds in December with a coupon rate of 4.875 percent, achieving the lowest rate ever on a five-year financing by TVA.
- The decline in debt and interest expense has reduced the cost of power as TVA continues to prepare for competition. Interest costs as a percentage of revenue have declined 32 percent since 1997.

ADMINISTRATION

- The TVA Police is working to establish a protocol for requesting assistance from the State of Tennessee in the event that TVA and local law enforcement resources have been exhausted and additional protective assistance is needed. As part of the effort, members of the Tennessee Emergency Management Agency, Tennessee Highway Patrol, and the Tennessee National Guard visited several TVA sites, including Melton Hill and Fort Loudoun Dams, Volunteer Substation, and Bull Run Fossil Plant.
- As part of TVA's Facilities Strategic Plan, staff disposed of or subleased 44,000 square feet of office space and consolidated 11,000 square feet. This produced \$400,000 in revenues and savings. Next steps include disposing of or subleasing an additional 16 pieces of property across the Valley.
- TVA's directly served customers now have access to the TVA Online Connection. This is a secure Internet site that offers customers real-time product pricing information, billing details and network purchasing, as well as local news feeds and weather.
- The Nuclear Energy Institute has recognized TVA for some of its Supply Chain practices, including strategic sourcing, inventory optimization, and e-commerce.
- Employee Carol Dominioni received the Robert R. Church, Sr., runner-up award for supporting small and minority-owned businesses. The Mid-South Minority Business Council, in Memphis, Tennessee, presented the award.

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STATE NEWS

ALABAMA

- The 7th annual Wet 'n Wild Festival was held in October at the Wheeler National Wildlife Refuge in Decatur, Alabama. The festival was sponsored by the Flint Creek Watershed Project with a grant from Solutia, a Decatur-area industry. About 1,500 fifth-graders visited teaching stations about aquatic life and wildlife. TVA's teaching station included presentations about watershed management activities, sources and impacts of nonpoint source pollution on water quality, and how pollution affects fish health.

MISSISSIPPI

- TVA and Chattanooga's Electric Transit Vehicle Institute met with the Mayor of Starkville, Mississippi, and Mississippi State University representatives to discuss potential electric bus applications and potential electric bus routes in Starkville.

TENNESSEE

- TVA, the Memphis Area Chamber of Commerce, the Mid-South Minority Business Council, and Memphis Light, Gas and Water collaborated to establish the Memphis Business Academy. A two-year pilot will assess the impact of enhanced education and training for small businesses and their employees in the Memphis area. Eleven companies were chosen for the pilot. The effort will be used as a model for other communities wanting to increase the efficiency of small, minority-owned, and women-owned businesses.
- Washington County Park Authority and TVA stabilized 500 linear feet of critically eroding reservoir shoreline on South Holston Reservoir. TVA also stabilized 500 feet of critically eroding shoreline at Loyston Island on Norris Reservoir. Loyston Campground's picnic, beach, and boat ramp areas are high-use recreational sites.
- Waverly Industrial Park had been identified as the largest single contributor of sediment into Trace Creek, a tributary to Kentucky Reservoir. TVA recently partnered with Five Rivers Resource Conservation & Development and the city of Waverly, Tennessee, to implement sediment control measures at the industrial park.
- TVA provided minimum flows from Cherokee Dam to help facilitate the release of 1,885 lake sturgeon at Nance's Ferry, Holston River Mile 33.
- In partnership with the State of Tennessee, Tims Ford State Park, and the U.S. Army Corps of Engineers, TVA hosted an open house for customers and stakeholders in the Tims Ford area. Members of the public, elected officials, and others discussed water quality; watershed improvements; implementation of the Tims Ford Land Management and Disposition Plan; residential development; and other issues.

**TVA, Memphis Light, Gas
and Water, the Memphis
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**TVA's Public Power Institute
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Building" practices.**

- TVA's Public Power Institute and Memphis Light, Gas and Water facilitated an information session in Memphis to support interest by local developers in incorporating "green building" practices in the Memphis Uptown Project, a major redevelopment project currently under way. Construction of approximately 1,400 multi-family units is expected to begin this summer and could showcase green building practices.
- The Hartsville Site Development Team is finalizing its evaluation of a portion of the former TVA nuclear plant site for industrial development. TVA will consider the recommendations of this group on the transfer of approximately 600 acres for industrial development.
- TVA participated as a major sponsor of Chattanooga's first Town Hall Forum, "Working With NASA—It's Not All Rocket Science." The Forum, which focused on growing the region's manufacturing sector, is a public/private partnership with Blue Cross/Blue Shield, Unum Provident Corporation, the University of Tennessee at Chattanooga, the Chattanooga Area Chamber of Commerce, and the Chattanooga Manufacturer's Association.