

1 S T Q U A R T E R

# 2003 Operational Report to Congress

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## *Highlights*

- TVA and distributors reached agreement in principle on an arrangement to offer benefits, including greater rate certainty, for distributors with long-term contracts with TVA. Discussions on the details of the arrangement are continuing.
- Two of TVA's 158 power distributors have given TVA five years' notice to cancel their wholesale power contracts. The Bowling Green Municipal Utilities and Meriwether Lewis Electric Cooperative power contracts will expire five years from the notice date unless they sign a new contract. During 2002, sales to these distributors generated approximately 1 percent of TVA's total operating revenues. TVA is working to keep both distributors as TVA customers.
- The November 2002 issue of the utility-industry magazine *Electric Light & Power* named TVA's Bull Run Fossil Plant as the most energy-efficient coal-fired power plant among 500 coal-fired plants across the nation. Bull Run has ranked among the nation's top 10 every year since 1996. In addition, TVA's Cumberland Fossil Plant placed sixth and Paradise Fossil Plant ranked 18th in the net generation by coal-fired plants.
- TVA Nuclear was selected to receive the prestigious Tennessee Quality Award for performance excellence. Evaluation criteria for the award include leadership, strategic planning, customer and market focus, human resource management, process management, and business results.
- TVA and Associated Electric Cooperative, Inc., signed a transmission coordination agreement. This is a milestone in the development of the Public Power Regional Transmission Grid, a mechanism for public power providers to meet the intent of FERC Order 2000 consistent with their public service missions.

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# Milestones

## POWER SYSTEM

- TVA's transmission system reliability performance in the first quarter was the best on record on two key indicators – Load Not Served and Customer Connection Point Interruptions – as TVA met a peak load for the quarter of 25,787 megawatts. The system achieved outstanding performance despite damage from a series of violent storms and tornadoes that moved through the Tennessee Valley in November, damaging the TVA transmission system in Mississippi, Tennessee and Alabama.
- Four new replacement steam generators arrived at Sequoyah Nuclear Plant Unit 1 from South Korea. The steam generators will be installed during Unit 1's refueling and maintenance outage this spring.
- As announced at the Institute of Nuclear Power Operations (INPO) formal exit meeting in October, Browns Ferry Nuclear Plant earned an excellent rating, the highest achievable, in overall plant performance for 2002. This is the third consecutive excellent rating the Browns Ferry plant has received.
- Four Selective Catalytic Reduction facilities (SCRs) on Units 1 and 2 at Paradise Fossil Plant in Kentucky and Units 2 and 3 at Allen Fossil Plant in Tennessee are operational. TVA is installing SCR systems on 25 generating units at seven fossil plants to further reduce emissions of nitrogen oxide (NO<sub>x</sub>). By 2005, TVA emissions of NO<sub>x</sub> during the summer ozone season will be reduced by about 75 percent compared to mid-1990 levels. SCRs on four additional units will be online for the summer 2003 ozone season.
- The TVA Board approved a contract for a scrubber to reduce sulfur dioxide emissions from Unit 3 at Paradise Fossil Plant in Kentucky. Construction will begin later this year and produce about 300 jobs, and about 40 permanent jobs will be created when the facility begins operating in 2006. TVA plans to build five additional scrubbers to reduce sulfur dioxide emissions (SO<sub>2</sub>) from the fossil system as part of continuing efforts to improve air quality in the Tennessee Valley region. The scrubbers will cost about \$1.5 billion and will collectively reduce emissions by more than 200,000 tons per year, bringing TVA's (SO<sub>2</sub>) total emissions down by 85 percent since 1977.
- Two TVA fossil units – Widows Creek Unit 8 and Johnsonville Unit 4 – set all-time continuous run records. In addition, Widows Creek Unit 4 completed its longest run in 48 years.
- TVA officials and local leaders dedicated TVA's newest generating units, the Kemper Combustion Turbine site in Dekalb, Mississippi. The site's four units began operating last summer to help supply power during periods of peak demand.
- Approximately 24 miles of transmission line were constructed during the quarter, and four delivery point projects were completed.

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## **CUSTOMER SERVICE AND MARKETING**

**TVA introduced a Discounted Energy Unit (DEU) program that offers distributors a discount to prepay future power costs for 10, 15 or 20-year terms.**

- TVA submitted a bid to the Bristol Virginia Utilities Board (BVUB) for a firm power supply arrangement beginning January 1, 2005. TVA's proposal is to supply all of BVUB's requirements at a price equivalent to TVA's standard wholesale rates, plus a one-time system integration fee to be paid over the term of the contract. The proposed arrangements would consist of two contracts, one for transmission and ancillary services, and one for capacity and energy use.
- TVA introduced a Discounted Energy Unit (DEU) program that offers distributors a discount to prepay future power costs for 10, 15 or 20-year terms. More than 40 distributors have expressed interest in participating in the program. Their indicated participation totals more than \$50 million.
- About 70 distributors participated in an emergency drill that simulated an ice storm moving across the TVA system. The drill was organized by TVA and the Tennessee Valley Public Power Association.
- TVA implemented a new time-of-use blended pricing option that gives qualifying large power customers an incentive to schedule production that lowers their average cost of power and benefits the TVA system by shifting loads away from peak periods.
- Two Green Power Switch® solar sites were dedicated, bringing the number of solar units producing power for Green Power Switch to 14. A 30-kilowatt solar photovoltaic system was dedicated at the University of Mississippi in Oxford, and a 30-kilowatt system was dedicated at the Florence Water Treatment Facility in Florence, Alabama.
- Also as part of Green Power Switch, TVA reached agreement with Invenergy to build a 27 megawatt wind-generation facility next to the two-megawatt Buffalo Mountain wind-generation facility owned by TVA near Oak Ridge, Tennessee. This will be a 10-fold increase in wind-power generation at the site where TVA built the first commercial wind-powered turbines in the southeastern United States.
- TVA entered into a contract to upgrade an underground steam distribution system at Arnold Air Force Base in Tullahoma, Tennessee. The upgrade should save the base more than \$40,000 per year.

## **RIVER SYSTEM OPERATIONS & ENVIRONMENT**

- Possible alternative policies for operating the Tennessee River and reservoir system are being analyzed for potential impacts on major reservoir system objectives, such as commercial navigation, flood risk reduction, power generation, recreation, water quality, water supply, and economic development.

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- The Tennessee Valley averaged 14 inches of rainfall (119 percent of normal) and 6.6 inches of runoff (172 percent of normal) during the quarter. The area above Chattanooga has now recorded four consecutive months of above normal rainfall for the first time since April 1994. The increase in rainfall and runoff has helped alleviate drought-like conditions that have plagued the area since July 1998.
- The Ocoee flume was returned to service in October, after three weeks of forced outage to repair damage caused by a rock slide.
- The third of four unit modernizations at Raccoon Mountain was completed.
- Raccoon Mountain Plant and outage staff hosted several utility groups interested in benchmarking TVA's hydro upgrade outage efforts. This visit resulted from TVA's participation in a forum on outage planning and execution at the Hydro Vision 2002 Conference earlier this year.
- The U.S. Army Corps of Engineers' geophysical exploration contractor, ARCADIS, began work near Chickamauga Lock. ARCADIS will be drilling a series of exploratory holes riverward of the existing lock and downstream of the spillway in the general area of the planned replacement lock. This geologic information is needed for the design of the new lock foundations.
- Work continues at the Regenesys Energy Storage Plant site in Columbus, Mississippi.
- Two TVA scientists have been recognized by the Southern Appalachian Man and the Biosphere (SAMAB) for their contributions to the protection of air quality in the Southern Appalachians.
- The second-term Regional Resource Stewardship Council had its first meeting in Knoxville and heard presentations on public lands management from TVA, the National Park Service, the National Forest Service, the U.S. Army Corps of Engineers, and the states of Tennessee and Alabama.
- TVA's Clean Marina Initiative was one of four clean marina efforts in the nation highlighted during the first National Clean Marina Conference in Mystic, Connecticut.
- The Department of Energy has appointed a TVA scientist to serve as a utility industry representative on DOE's Fusion Energy Sciences Advisory Committee.
- TVA atmospheric scientists began a field study to measure levels and forms of mercury in plumes from a coal-fired power plant in northwest Georgia. The field study is a collaborative effort by TVA, EPRI, and Southern Company. The plant is owned by Georgia Power.
- Flue gas mercury speciation tests were conducted on Unit 1 at Paradise Fossil Plant as part of a program to determine if SCR units change mercury to a form that can be removed by wet limestone scrubbers.

- Hydro Resource Solutions LLC, TVA's joint venture with Voith Siemens Hydro Power Generation, received a patent for technology that continuously monitors and quantifies the effects of various operating conditions on hydro plant maintenance and environmental costs. WaterView® systems incorporating this technology have been installed at three facilities on the Columbia River in Washington.

## **ECONOMIC DEVELOPMENT**

**Six projects are being considered for \$1.18 million of TVA funding through the Valley Advantage, designed to help secure major investments in the region.**

- TVA approved \$7.85 million in economic development loans for business growth in the Tennessee Valley during the quarter. These loans are expected to leverage an additional \$95 million in capital investment and help create or retain 2,531 jobs. Loans to Valley minority businesses totaled \$500,000.
- Six projects are being considered for \$1.18 million of TVA funding through the Valley Advantage, which is designed to help secure major investments in the region. The \$1.18 million would leverage \$450 million in capital investment from partners and help companies create 1,710 jobs.
- TVA provided financial assistance and engineering support for the American Eurocopter project in northeast Mississippi. A signature project of the Crescent Initiative, American Eurocopter plans to build a 100,000-square-foot facility at Mississippi Golden Triangle Regional Airport, which serves Starkville, Columbus, and West Point, Mississippi. The plant will assemble and customize helicopters for specialized tasks. Projected employment at the facility is 100, with a total capital investment of \$12 million.
- Other significant project announcements include Southeast Tissue in Sheffield, Alabama, with \$240 million in capital investment, 400 jobs, and 15 megawatts of new power load; Williams Aircraft in Huntsville, Alabama, with \$233 million in capital investment, 700 jobs, and five megawatts of new power load; and Topre America Corporation in Cullman, Alabama, with \$132 million in capital investment, 300 jobs, and six megawatts of new power load.
- Nine regional banks are participating in the Valley Coalition to support minority businesses by providing increased access to capital and other technical assistance. During the quarter, a loan for \$300,000 in TVA funding was approved and will leverage \$3.1 million from a Valley Coalition banking partner and help create 60 jobs. Since the Valley Coalition was formed, TVA has invested \$3 million in companies, leveraging \$12.8 million from banking partners and helping to create or retain 385 jobs in Valley communities.
- The TVA Online Business Resource Center was deployed for entrepreneurs seeking information, and the TVA Mobile Business Center and its programs for small business development were discontinued. The online center serves as a clearinghouse of public and private resources on entrepreneurship, small business, industry organizations, and business services. It is available on the TVA Web site at [www.tva.com](http://www.tva.com).

- TVA co-sponsored the 28th Annual Tennessee Legislative Retreat and Training Conference. More than 3,000 government, business, and civic leaders participated in the event, which included workshops on economic and community development, health care, and education. TVA presented a report prepared by TVA staff, The State of the Black Economy in Tennessee.
- TVA provided financial assistance and technical expertise to the State of Alabama and the local recruitment team responsible for bringing Boeing to Decatur, Alabama. In November, Boeing's Delta IV rocket, manufactured at the Decatur facility, had a successful debut launch.
- TVA completed 80 technical services projects for Valley communities and industries during the quarter. Notable projects included a conceptual plan for an automotive industrial site in Limestone County, Alabama; site evaluation for a large industrial site in Monroe County, Mississippi; industrial site development plan for Simpson County, Kentucky; industrial speculative building design for Franklin County, Tennessee; downtown architectural design support for Covington, Tennessee, and Nettleton, Mississippi; retail leakage study and architectural renderings for a Choctaw County, Mississippi, project; and target industry reports for Monroe County, Tennessee, and McCracken County, Kentucky.

## FINANCE

**TVA reduced net interest expense on outstanding debt by \$14 million, or 4 percent, compared with the same period last year.**

- Operating revenues increased by \$172 million to \$1.693 billion for the quarter, compared with the same period last year, primarily because of colder winter weather this year. With the increase in operating revenues, there was a lesser increase in operating expenses of \$132 million. The increased operating revenues and operating expenses resulted in a \$40 million, or 11 percent, net increase in operating income for the first quarter.
- TVA reduced net interest expense on outstanding debt by \$14 million, or 4 percent, compared with the same period last year.
- TVA saved an estimated \$3.4 million for the quarter through the Owner Controlled Insurance Program. The program consolidates individual contractors' insurance policies into one policy provided by TVA. Savings from this program since it began in 1992 total \$87 million.
- TVA has established a Corporate Accountability and Disclosure Plan, a Disclosure Control Committee, and a Disclosure and Financial Code of Ethics to help assure investors, stakeholders and the public that TVA's financial and non-financial disclosures provide an accurate description of TVA and its financial condition.
- More than 200 business school students and 42 national firms attended the annual Investment Challenge Program Conference and Job Fair. The conference is conducted for the 19 universities that participate in TVA's Investment Challenge program. The Investment Challenge is a partnership between TVA and regional colleges and universities to provide students experience in portfolio management.

## **CORPORATE**

**A new TVA Kids Web site –  
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- TVA continued its initiative to develop a strategic plan that will allow TVA to address three key elements in a comprehensive manner: (1) TVA's mission of providing reliable, affordable electric power, supporting sustainable economic development, and serving as steward of the region's environment; (2) the need to reduce interest payments to improve TVA's financial position; and (3) the public policy goal of facilitating the development of efficient wholesale markets.
- A new TVA Kids Web site – [www.tvakids.com](http://www.tvakids.com) – was posted for children in the fourth through eighth grades. The site provides information on the generation of electricity, the Tennessee River system, and TVA's dedication to a clean environment.
- TVA completed the relocation of its primary Nashville office, reducing office space by 76,000 square feet. The former location was subleased to Bridgestone/Firestone.
- TVA continued to improve the efficient use of its facilities by selling two buildings at public auction, terminating leases on warehouse and office space in two other locations, and subleasing more than 22,000 square feet of office space in Chattanooga.
- TVA is continuing to assess, test and upgrade the security of its IT systems to ensure the integrity of these systems and meet federal requirements.
- TVA is participating as a charter principal member of the National Safe Waterways and Seaports Alliance. The Alliance was created to develop a comprehensive waterway security plan and explore technological solutions for threats to the nation's waterways. Other charter principal members are Oak Ridge National Laboratory and the U.S. Army Corps of Engineers.
- TVA reconditioned 110 vehicles for continued use, avoiding the cost of \$2.5 million in new vehicles.
- TVA is using nine hybrid vehicles across the Valley to demonstrate how such vehicles can reduce fuel consumption and vehicle emissions. The cars have a gasoline engine and electric motor, do not need to be charged externally, and charge the battery while being driven. The hybrid vehicle's range is 620 to 634 miles on one tank of 13.2 gallons of gas.

## **STATE NEWS**

### **ALABAMA**

- TVA and Alabama's Department of Conservation and Natural Resources are cooperating in a stabilization project to protect 3,700 feet of critically eroded shoreline at Lake Guntersville State Park. This is the third year that TVA and the state have cooperated to stabilize the shoreline at this popular state park.

- TVA, other federal and state agencies, the Poultry Water Quality Consortium, and local poultry farmers met to discuss water quality and economic development problems in the poultry industry in north Alabama. The poultry industry in Alabama generates more than \$3 billion annually. The group identified potential projects to help poultry operators properly handle poultry waste.
- TVA facilitated the Shoals Area Quality Communities process, and local leaders identified obtaining a National Heritage Area designation as a key component of their long-term economic development efforts. Congressman Bud Cramer of Alabama introduced legislation for the Shoals National Heritage Area that has been signed by President Bush. The National Park Service will conduct a study, which is expected to lead to the creation of the Muscle Shoals National Heritage Area.

## **GEORGIA**

**Approximately 300 feet of severely eroding stream bank were stabilized on Lookout Creek in Rising Fawn, Georgia.**

- Approximately 300 feet of severely eroding stream bank were stabilized on Lookout Creek in Rising Fawn, Georgia. This project serves as a demonstration area for farmers experiencing stream erosion in this sensitive hydrologic unit. TVA provided technical assistance and the design for the project.
- At the request of a landowner in northwest Georgia, TVA helped enroll private land on which TVA has a transmission line right-of-way (ROW) in the U.S. Department of Agriculture Conservation Reserve Program. This demonstration will reduce maintenance costs and impacts to the riparian area and address recommendations on ROW maintenance from the Regional Resource Stewardship Council.

## **KENTUCKY**

- TVA met with Kentucky State Environmental Education Committee representatives to review the Tennessee Growth Readiness program, which helps communities understand how land use affects water quality. The representatives are expected to recommend to the Committee that the Tennessee program be adapted for use in Kentucky as part of its statewide education program.

## **MISSISSIPPI**

- TVA participated in the Mississippi State University Research and Technology Corporation's groundbreaking for a facility to assist new technology start-up companies throughout northeast Mississippi. The project is a collaborative effort by MSURTC, TVA, the Appalachian Regional Commission, the Economic Development Administration, the U.S. Department of Commerce, the Mississippi Development Authority, and the Golden Triangle Enterprise Center.

## TENNESSEE

- TVA has adopted two new schools in the Chattanooga area as part of its Partners in Education program. The inner-city magnet primary schools, Battle Academy and Brown Academy, were built by the City of Chattanooga with private and public funds.
- TVA and the Tennessee Department of Environment and Conservation conducted the annual fall coordination meeting with the 25 commercial outfitters operating on the Ocoee River. Discussions included safety, the 2003 release schedule, fees, and use data.
- TVA has begun work at the Volunteer Army Ammunition Plant near Chattanooga, helping the Army dismantle and decontaminate an ammunition production facility.
- TVA met with the Friends of Fort Patrick Henry Coalition to discuss the drawdown of Fort Patrick Henry Reservoir for spillway-gate repairs and a cultural resources survey. Some sites that will be exposed during the drawdown are estimated to be between 2,000 and 7,000 years old.
- The University of Tennessee has chosen the Tims Ford area as one of two sites for experimental plantings of native warm-season grasses in order to determine their effectiveness in reducing non-point source pollution in watersheds. TVA is providing the land base for this project.
- TVA co-sponsored the 2002 Tri-Cities Tennessee Valley Corridor Summit attended by more than 300 people. The Summit focused on how the Tennessee Valley Corridor can leverage the Tri-Cities regional assets and capabilities in information technology, medical technology, and biotechnology for maximum business development, job creation, and research opportunities.
- Two recipients of TVA Minority Business Development loans received the Tennessee Governor's Manufacturing Award, recognizing productivity improvement practices in their Tennessee operations. Ponce Metals, a steel service center company located in Loudon County, and DCS Electronics, a specialty manufacturer of industrial control systems in Blount County, received the awards.

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## VIRGINIA

- The town of Appalachia agreed to operate and maintain an onsite wastewater treatment system for the 15-home coal camp community of Imboden, located in Wise County, Virginia. For the past 50 years, the community has piped raw sewage into Pigeon Creek, a tributary of the Powell River that flows into Norris Reservoir. TVA assisted the local watershed coalition and the Wise County Health Department in securing a \$100,000 grant for the project.

- The Virginia Department of Environmental Quality recently submitted its 2002 303(d) report (a list of impaired stream segments) to the Environmental Protection Agency. In this report, the Virginia department suggested removing the bacteria impairment on the mainstream of the Guest River in southwest Virginia because recent sampling showed lower concentrations of bacteria. This is the first step in moving the Guest River Watershed's status from "poor" to "fair."
- TVA met with the Virginia Department of Conservation and Recreation Southern Rivers director and his staff. TVA provided information about the Tennessee Growth Readiness Program, which helps communities understand how land use affects water quality.

## **OTHER**

**EPA will be using TVA's environmental expertise to conduct remediation at an abandoned asphalt plant site in Waterloo, Arkansas.**

- Since 2001, TVA has supported the Environmental Protection Agency by providing management oversight for well-capping activities at abandoned, leaking oil wells near Lake Oologah, Oklahoma. Many of these wells either are currently discharging or have the potential to begin discharging oil into navigable waters. The first phase of the project covered a six-square-mile area. TVA will continue to assist EPA during Phase II, which will cover 20 sections of land adjoining the eastern shore of Lake Oologah.
- EPA also will be using TVA's environmental expertise to conduct remediation at an abandoned asphalt plant site in Waterloo, Arkansas. EPA has authorized funding for initial phases of the project; additional funding may be made available later to cover more extensive cleanup.