

3 R D Q U A R T E R

# 2001 Operational Report to Congress

A P R I L - J U N E , 2 0 0 1

## *Overall*

- In June, TVA implemented the Strategic Facilities Plan to ensure that office space and other facilities are managed in a cost-effective manner. The strategic plan, which was requested by the Board, is the first comprehensive guide to managing TVA's total facilities portfolio. Implementation of the plan could produce as much as \$25 million in savings over several years.
- Dry conditions continued across the Tennessee Valley through the third quarter of 2001. April and May were the driest months on record in some watersheds, and rainfall for the same two months was 75 percent of normal in the area above Chattanooga, which is the crucial area for filling the 10 major tributary reservoirs. Extended dry conditions also reduced runoff and kept stream flows to 53 percent of normal. Due to the lack of rainfall and reduced runoff, six reservoirs did not meet the minimum summer recreation levels on June 1.

**Implementation of the  
Strategic Facilities Plan  
could produce \$25 million in  
savings.**



# Milestones

## OPERATIONS

**Upgrades and a new  
combined cycle plant will  
increase capacity and  
ensure adequate power  
supply.**

- To ensure an adequate and reliable power supply, TVA brought an additional 680 megawatts of combustion turbine capacity online to provide peaking power this summer. The turbines are located at the new Lagoon Creek site in Haywood County, Tennessee.
- TVA plans to add another 680 megawatts of combustion turbine capacity for the summer of 2002. A 340-megawatt turbine facility is planned for Kemper County, Mississippi, and 340 megawatts of capacity will be added at the Lagoon Creek site in West Tennessee.
- TVA has proposed construction of a 510-megawatt, natural gas-fired, combined cycle plant at the Arnold Air Force Base near Tullahoma, Tennessee for operation in 2003. A public meeting is scheduled for July 10 to gather input for the draft Environmental Impact Statement (EIS). A final decision on the project will be made following completion of the EIS.
- In April, the TVA Board approved proposals to increase the generating output at Sequoyah and Browns Ferry Nuclear Plants by a total of 278 megawatts. The improvements will be implemented between 2003 and 2005.
- Projects to improve transmission system reliability and overall system performance were placed in service in preparation for summer load conditions. These projects included the installation of four 161-kV capacitor banks; 500-kV transformer replacements at Limestone and Wilson; and breaker and relay replacements at generating stations.
- The transmission system reliability performance indicators for frequency and duration of customer interruptions were within target during the third quarter. The Transmission/Power Supply Group placed eight new delivery points into service and completed construction of 48 equivalent miles of transmission line.
- TVA is installing 18 selective catalytic reduction systems 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. Two facilities, constructed on Units 1 and 2 at Paradise Fossil Plant, are now operational. Construction is underway on four additional facilities.
- Browns Ferry Unit 2 completed the cycle 11 refueling outage on April 25 with a duration of 38 days. During the outage, major reliability activities were completed such as main generator rewind and refurbishment.
- The Institute of Nuclear Power Operations (INPO) Index for Watts Bar Unit 1 was 99.95 percent for the month of March. With 100 percent being the highest achievable, the INPO Index is a weighted combination of performance indicators.

- Three TVA fossil plants achieved significant milestones in safety performance during this quarter. Bull Run Fossil Plant reached the five-year mark without incurring a lost-time injury; Colbert Fossil Plant employees have worked over 4.7 million hours without a lost-time injury, establishing a new TVA fossil plant record; and John Sevier Fossil Plant employees established a new TVA fossil plant record on May 17 by reaching the 11-year milestone without a lost-time injury.
- Three TVA fossil units set records during the third quarter for continuous operation. Unit 1 at Allen Fossil Plant Unit set a continuous run record of 179 days before being taken offline for a scheduled outage. This was the third continuous run record for Unit 1 in the past two years. On June 29, Colbert Fossil Plant Unit 5 surpassed its continuous run record of 79 days, and on June 28, Johnsonville Unit 2 established a record of 349 days, surpassing the previous 299-day mark set in 1997. Unit 2 is one of TVA's oldest units, and will have been in service for 50 years this fall.
- TVA Nuclear employees joined with the nuclear industry across the country in June to donate blood for the *Energy for Life* nuclear energy blood drive sponsored by the Nuclear Energy Institute.

## **RIVER SYSTEM OPERATIONS & ENVIRONMENT**

- The Regional Resource Stewardship Council (RRSC) submitted its first recommendations to the TVA Board. The recommendations addressed aquatic plant management on reservoirs, land use planning, a new study of reservoir operations policies, and stakeholder relations policy. The next meeting is set for August 28.
- New solar panel installations were dedicated at the American Museum of Science and Energy in Oak Ridge, at Cocke County High School in Newport, Tennessee, and at the Lover's Lane Soccer Complex in Bowling Green, Kentucky. TVA now has 10 solar sites with a generating capacity of 158 kW for its Green Power Switch renewable energy program.
- The TVA ozone forecasting team implemented forecasting for Nashville/ Middle Tennessee and East Tennessee/Southwest Virginia regions. The forecasts are provided to the Tennessee Division of Air Pollution Control and the Nashville-Davidson County Metropolitan Health Department, which distribute the forecasts to the EPA National AIRNow Program and to state and local programs.
- TVA commissioned an air quality monitoring station at the Alcorn County Airport near Corinth, Mississippi in cooperation with the Mississippi Department of Environmental Quality. The data will be used to establish an air quality baseline for economic development and environmental review, promote environmental education, and contribute to national air quality mapping and forecasting.

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- TVA performed intensive fine particle air sampling for one month at three Tennessee monitoring stations—Lawrence County (rural setting), Chattanooga (urban setting), and Look Rock in the Smoky Mountains (remote setting). The information will help design regional particle management strategies. The project is in cooperation with the Tennessee Department of Air Pollution Control, the Chattanooga-Hamilton County Air Pollution Control Bureau, and the National Park Service.
- In coordination with Kentucky water quality officials, TVA modified flow from Kentucky and Barkley Reservoirs over a three-week period in response to flooding on the Mississippi River. During a portion of the period, flow through Kentucky Reservoir did not meet TVA's biweekly minimum flow commitment. Adequate tailwater was available, however, due to the flood crest from the Ohio. The flow changes were coordinated with the towing industry, the Army Corps of Engineers, and the Coast Guard.
- Implementation of the Guntersville and Nickajack Reservoir stakeholder group plans for managing aquatic plants began in June. Areas adjacent to public recreation, residential, and commercial shoreline development will be treated by a licensed contractor using EPA-approved aquatic herbicides. Mechanical harvesters will maintain access lanes and manage growth near water intakes. The Guntersville plan is a national model for public participation, long-term strategy development, public agency oversight, and use of professional contractors.
- TVA's second Annual Environmental Report was distributed May 2 to audiences throughout the Valley. The report is available in printed format and online at [www.tva.com](http://www.tva.com).
- The draft Guntersville Reservoir Land Management Plan and Environmental Impact Statement was distributed to gather public and official comments. The draft provides two alternatives, which differ in the amount of land allocated to recreation and commercial uses. Both plans would allocate about 90 percent of lands to resource protection and management.
- The Red Bird Properties Assessment was submitted to the Department of Agriculture on May 25. Public Law 106-429 transferred TVA's Red Bird Coal Properties to the Secretary of Agriculture to become part of Daniel Boone National Forest. An environmental assessment determined the properties are in compliance with environmental laws and that no outstanding corrective actions or commitments remained to be performed by TVA.
- In cooperation with commercial rafting outfitters, TVA developed a water release plan for Apalachia Dam on the Hiwassee River that addresses recreation needs and dry conditions. The minimum generation schedule through July 31 provides five hours of water on Friday and Saturday and six hours on Wednesday and Thursday. On Sunday through Tuesday, releases above minimum flow requirements will be made only to maintain aquatic habitat or power system reliability.

**A new water release plan  
has addressed  
recreation needs as  
well as dry conditions.**

**TVA and ATVG sponsored a  
Tennessee River  
conference.**

- In cooperation with America's Clean Water Foundation, TVA conducted a workshop in April to train and certify environmental assessors to work with poultry producers and associations. The assessors will conduct voluntary on-farm assessments to identify how poultry farmers can minimize adverse environmental impacts. The foundation receives funding from Congress to develop and implement assessment programs for poultry, swine, beef, dairy, and aquaculture facilities.
- The Association of Tennessee Valley Governments and TVA co-sponsored a conference in Knoxville in June to discuss issues affecting the Tennessee River. About 200 participants representing Valley governments, water suppliers, academia, and stakeholder groups heard speakers address water policy, environmental law, water valuation, and other issues.
- TVA, DOE, and the Southern Alliance for Clean Energy co-sponsored the first Wind Energy Workshop in the Southeast in Knoxville on June 27. Attendance exceeded expectations with more than 100 participants, including representatives from Southern Company, Carolina Power & Light, and Florida Power and Light.
- TVA met with staff representatives from the North Carolina General Assembly, the Governor's office, and the Department of Environment and Natural Resources on June 18 to discuss TVA's emission reductions, a comparison of TVA electricity rates, and emission sources affecting North Carolina. On June 19, testimony was presented to the North Carolina House Public Utilities Committee and the House Environment Committee.
- As a result of concerns raised by local residents about flood depths near Buckingham Island on the French Broad River downstream from Douglas Dam, TVA revised flood profiles based on new surveyed cross sections. The flood elevations are several feet higher than previously computed for several miles below the dam. The profiles were used to site a new wastewater pumping station for a development site in Sevier County. Officials in Sevierville and Sevier County will use the information for floodplain management.
- In cooperation with Boone Lake Association, 25 informal recreation sites on Boone Reservoir are being maintained again this year to prevent degradation to land and water. The association provides administration, equipment, and labor for cleanup work, and patrols the lake to carry out its commitment to improve water quality.
- A study by the University of Tennessee has determined that closure of the Chickamauga lock would create significant traffic problems, pollution, and road damage due to the increased truck volume needed to offset the loss of the commercial barge transportation. The study is part of the process by the Army Corps of Engineers to assess the need for replacing the lock.
- TVA is working with the North Carolina Division of Water Quality to develop a restoration plan for the 115-square-mile Mud Creek Watershed in Henderson County. The creek and two of its tributaries do not meet standards for secondary recreation, fishing, or wildlife due to fecal coliform bacteria and sediment.

- The town of Eva, Alabama will use TVA's reciprocating wetlands technology (ReCip™) to provide decentralized wastewater treatment for the community.
- The U.S. Patent and Trademark Office issued a notice of allowance for TVA's patent application for "Method and Apparatus for Monitoring a Hydroelectric Facility Trash Rack and Optimizing Performance." The technology enables TVA to avoid power losses at hydroelectric plants. The technology is being commercialized through Hydro Resource Solutions, which is jointly owned by TVA and Voith Siemens Hydro Power Generation Inc.

## **CUSTOMER SERVICE**

- TVA met with its distributor customers June 29 in Nashville to discuss a framework for more contract flexibility, including provisions for meeting a portion of their power requirements through other sources or suppliers. The meeting was the first step in developing new business relationships with the 158 distributor customers. TVA outlined a framework for choices that would allow for both short- and long-term contract options. A TVA team will work with customer representatives to negotiate the details for drafting contract arrangements that are equitable to all distributors.
- TVA approved a total of \$6 million in economic development loans for business growth in the Tennessee Valley during the third quarter. The loans are expected to leverage an additional \$88.2 million in capital investment to help create 1,929 jobs. Loans to Valley minority businesses totaled \$492,000.
- Temporary price relief for Variable Price Interruptible (VPI) customers that TVA provided beginning October 1, 2000 expired on April 30, 2001, as energy prices returned to more normal levels. To keep interruptible power as a viable option, TVA limited the revenue markup earned on VPI and offered an interruptible price credit.
- TVA signed agreements with McMinnville Electric System and Bolivar Electric Department, to purchase 20 megawatts of generating capacity from each to help meet power needs during peak demand periods. TVA is now purchasing power from three of its distributor customers under long-term contracts.
- The Hartsville site development team continues to evaluate a portion of the former TVA nuclear plant site for industrial development. Local officials and economic developers are on the team. Local officials are evaluating options for transferring ownership of designated acreage to the local community.
- TVA continues to facilitate the Mississippi Crescent Initiative, a collaborative regional development project in northeastern Mississippi. Five teams of leaders and officials from across the region are developing projects and implementing key actions to consolidate use of the area's resources to promote quality economic growth.

**TVA approved \$6 million in economic development loans for the Valley.**

**Regional banks are working with TVA to implement the Valley Coalition for the enhancement of minority business development.**

- TVA is working with regional banks to implement the Valley Coalition for enhancing minority economic development. An agreement to formalize the partnership was distributed to participating banks for signing. A formal public announcement of the coalition is expected in mid-September.
- TVA partnered with the State of Tennessee and other corporate sponsors in the Sixth Annual Black Enterprise/Bank of America Entrepreneurs Conference on May 15 - 20. More than 1,500 entrepreneurs participated in the workshops and activities. Memphis Light, Gas, & Water Division (MLGW), Knoxville Utilities Board (KUB), and TVA co-hosted the opening reception.
- TVA completed 48 technical services projects for Valley communities and industries during the quarter. The projects included: architectural and engineering assistance for the proposed Northwest Tennessee Port and Industrial Complex in Lake County; preliminary architectural design for downtown renovation in Trenton, Tennessee; conceptual industrial park layouts for Boaz and Scottsboro, Alabama; an industrial site plan for Marshall County, Kentucky; a site layout for a speculative building in Calhoun City, Mississippi; a labor study for Fentress County, Tennessee; and target industry studies for Okolona, Mississippi, and the Mississippi Crescent Initiative.
- TVA entered into two energy performance contracts with Arnold Engineering and Development Center (AEDC) located on Arnold Air Force Base in Tullahoma, Tennessee. The contracts involve retrofitting the lighting systems in 239 buildings and upgrading the underground steam distribution system. The work will save the base about \$960,000 in annual utility costs.
- For the fifth consecutive year, power distributors increased their total dollar commitment to TVA's Comprehensive Services Program (CSP). Through CSP, TVA and the distributors provide engineering and technical assistance for commercial and industrial customers in areas of energy use.
- TVA and its distributor customers have developed recommendations to redesign the *energy right* residential marketing programs. The recommendations involving budget, inspections, advertising, training, new products, and manufactured homes will be presented to the Tennessee Valley Public Power Association for approval.
- The Mitchell Neilson Elementary School Energy Team in Murfreesboro, Tennessee, won first place in the elementary division of the National Energy Education Development Project. The team consisted of ten fourth- and fifth-graders and was sponsored by Middle Tennessee Electric Membership Corporation, Murfreesboro Electric Department, and TVA.

## FINANCIAL

- The TVA Inspector General issued a report in June comparing TVA's electric rates and cost structure to that of 12 investor-owned utilities in the seven states bordering the TVA service area. The report showed the average retail prices in the TVA service area in 1999 were eight percent below the average of the other utilities. (Kentucky was the only state with a lower average price.)
- The General Accounting Office issued a report in April on TVA's triple-A bond rating, confirming that the TVA Act states that the federal government does not guarantee TVA's bonds. GAO noted that TVA clearly displays such "no guarantee" language in all bond-offering materials. The report noted there is a perception in the investment community that the federal government would support TVA's debt if necessary because TVA is owned by the U.S. government. The report cited government ownership together with TVA's strong operational performance and legislative framework—including the TVA Board's authority to set electric rates—as reasons for the triple-A rating.
- TVA successfully priced £250 million in global bonds on June 29, 2001. The bonds have a coupon of 5.625 percent and a maturity of June 7, 2032. The deal was led by Morgan Stanley Dean Witter, and the proceeds were changed back to U.S. dollars.
- TVA redeemed all of its 1996 Series A QIDS (Quarterly Income Debt Securities) due March 31, 2046, on April 30, 2001. TVA issued \$500 million of the 7.5 percent QIDS in April 1996. The issue traded on the New York Stock Exchange under the symbol "TVB". TVA also announced a call of the 1993 Series C due July 15, 2003 on July 15, 2001. TVA issued \$1,250 billion of the 6.125 percent Power Bonds in July 1993.
- The inaugural issue of TVA's <sup>SM</sup>electronotes was made on April 16. The program gives individual investors the opportunity to purchase TVA debt securities offered on a continuous basis on the first and third Monday of every month. During the quarter, TVA sold \$211 million in <sup>SM</sup>electronotes.

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## ADMINISTRATION

- On April 26, TVA filed a breach of contract lawsuit to recover damages from the U.S. Department of Energy for failure to begin removing and disposing of spent nuclear fuel from commercial nuclear power plants by January 1, 1998. Several other nuclear utilities previously filed similar suits against DOE to recover damages. TVA will be required to spend over \$120 million at the Browns Ferry and Sequoyah Nuclear Plants for additional spent fuel storage capacity. A federal appeals court has already held that DOE is in breach of its contracts with nuclear utilities.

**The Tennessee Minority  
Supplier Development  
Council named TVA its  
2001 Corporation of  
the Year.**

- The U.S. Department of Justice (DOJ) released a national report on cybercrime co-authored by the TVA Police. TVA Police assisted DOJ in surveying and identifying the critical roles and technology needs of federal, state, and local law enforcement agencies when dealing with cybercrime. Key findings in the report will be used by DOJ to propose congressional funding for a broad range of national strategy recommendations on training and awareness of cybercrime.
- TVA has established TVA Online Connection, a single e-commerce “portal” for all e-business initiatives with its power customers. The “portal” provides customized information based on the user’s profile, weather information, and links to the eMarketplace, which allows online purchases from selected suppliers.
- TVA was named 2001 Corporation of the Year by the Tennessee Minority Supplier Development Council. The award honors TVA for developing and expanding minority business opportunities. TVA purchased more than \$300 million worth of products and services during the past year from small, minority-, and women-owned businesses.
- Several surplus computers were donated to Valley schools through the TVA Technology Initiative. The donations help schools provide quality education and ensure the future workforce has the knowledge and skills to compete.
- Database Administration supported the implementation of an information management system which standardizes how power system calculations are managed TVA-wide. The system tracks calculations used for the design and operation of generating plants. The system currently contains 122,170 calculations and 1,411,258 cross references.
- A TVA enterprise security awareness event was held in conjunction with EPRI for electric utility enterprise security education in the Tennessee Valley.