

1 S T Q U A R T E R

# 2001 Operational Report to Congress

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## *Overall*

- TVA began the new fiscal year by completing payment of a record \$307.6 million in tax-equivalent payments to state and local governments during 2000, and became the first utility in the Southeast to begin commercial-scale use of wind power. The addition of wind power provided the second of three renewable generation sources for the TVA Green Power Switch<sup>SM</sup> program. The third renewable source—landfill gas—will join solar and wind power with the scheduled startup of a Murfreesboro, Tennessee, site this winter.
- The record \$307.6 million in tax-equivalent payments, based on power sales and TVA-owned property, exceeded last year's payments by about \$4 million, reflecting regional economic growth that produced a record \$6.7 billion in power sales to local utilities and large industries served by TVA. The payments were made to the seven states in the TVA region and to Illinois, where TVA has coal reserves.
- In November, TVA was named one of the top 10 outstanding public works projects in the United States during the 20th Century. The recognition by the American Public Works Association placed TVA in the company of the Hoover Dam, the Panama Canal, and the Interstate Highway system as projects that significantly improved the quality of life for Americans.

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# Milestones

## OPERATIONS

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- The November issue of *Electric Light & Power* magazine ranked TVA as the largest generator of electricity and the nation's largest power wholesaler among the nation's Top 100 utilities in 1999. The annual rankings for top U.S. nuclear plants also ranked TVA's Sequoyah Nuclear Plant first in the country in lowest total production cost. Browns Ferry and Watts Bar Nuclear Plants ranked seventh and eleventh, respectively. Bull Run Fossil Plant ranked fifth in the nation based on heat rate, a measure of overall efficiency.
- The forced outage rate of the fossil system for December 2000 was the lowest December level since 1963. The higher plant availability played a key role in TVA meeting its new all-time winter peak power demand set in December. Fifty-nine of TVA's 60 coal-fired units were operating at the time of the peak. The only unit not operating was on a scheduled outage. The coal-fired units generated more electricity in December 2000 than in any single month since July 1993.
- For the fourth time, Sequoyah Nuclear Plant set a world record for the shortest refueling outage for reactors of similar design. The Unit 2 reactor was refueled and prepared for restart in 23 days.
- The Unit 1 reactor at Watts Bar completed refueling outage in 27 days, which is the third shortest outage on record for U.S. reactors of similar design. The first and second place records are held by Sequoyah's Unit 2 and Unit 1, respectively. The Watts Bar refueling followed the unit's record 513 days of continuous operation.
- The four units at John Sevier Fossil Plant set a plant record on October 20 after operating continuously for 121 days. The previous record was 77 days, set in 1993.
- Installation is proceeding on 18 Selective Catalytic Reduction systems at seven TVA fossil plants to reduce nitrogen oxide (NOx) emissions at a cost of more than \$850 million. By 2005, TVA emissions of NOx during the summer ozone season will be reduced by about 75 percent compared to mid-1990 levels. The first system, installed at Paradise Fossil Plant, became operational last summer.
- Unit 3 at Allen Fossil Plant generated 4.9 million megawatt-hours during the past year, which was the most since 1994 and the second highest in the past 30 years. Widows Creek generated 9 million megawatt-hours last year, the plant's third highest amount since 1971.

- To meet continued load growth and to ensure power supply reliability, TVA is building 680 megawatts of combustion turbine capacity in Haywood County, Tennessee, to provide more peaking power by the summer of 2001. Another 680 megawatts of additional combustion turbine capacity is proposed for the summer of 2002. Kemper County, Mississippi is the proposed site for 340 megawatts of this additional capacity.
- The new Transmission Power Supply Training Center became operational in December. The center is located at the Bellefonte Nuclear Plant site near Scottsboro, Alabama. The facility will provide training to linemen, electricians, and power and communications technicians.
- The Maintenance and Technical Training programs at Sequoyah Nuclear Plant received renewed accreditation by the National Nuclear Accrediting Board. The programs are reviewed every four years by the independent panel, which operates under the auspices of the Institute of Nuclear Power Operations.
- About 800 employees, retirees, and their families attended the 50<sup>th</sup> anniversary celebration of the TVA Power Service Shops in Muscle Shoals, Alabama, on December 14. The facility provides repair and maintenance support for all TVA power plants and for some local utilities served by TVA. The shops employ almost 400 people, and are staffed seven days a week, 24 hours a day for most of the year.

## RIVER SYSTEM OPERATIONS & ENVIRONMENT

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- Dry conditions continued across the region, where only 60 percent of normal rainfall was recorded during the first quarter. Despite a reduction in hydro generation, integrated management of the available water provided adequate flows for water quality, water supply, and navigation levels.
- The Regional Resource Stewardship Council considered various Integrated Resource Management issues, including water quality protection, public land use, and reservoir levels. A workshop, sponsored by the North Alabama members of the council, was held in Muscle Shoals for area business, government and community leaders. Presentations were made by Alabama State Senator Roger Bedford and Jimmy Barnett, General Manager of Sheffield Utilities.
- The Chairman of TVA signed an agreement with BP Amoco to work together on new initiatives and technologies to benefit the environment. Under the agreement, TVA will work in partnership with BP Amoco to foster initiatives that benefit the public power industry through research, demonstrations, and assimilation of low-cost environmental technologies into the marketplace.

- TVA received a patent for a new method for controlling mercury emissions from exhaust gases at coal-fired plants. The technology, which uses a catalyst to oxidize elemental mercury, is expected to be more economical than using activated carbon.
- The Tennessee-Georgia South Chickamauga Creek Watershed Project was recognized as a model for others by the Tennessee Natural Resources Conservation Service. State Conservationist James Ford said the project will be used as a training module for addressing agricultural pollution.

## CUSTOMER SERVICE

The TVA  
Public Power Institute  
is working with Innogy  
Technology Ventures  
Limited to further  
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technology, an  
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storage method.

- TVA and the 158 power distributors it serves met a record winter peak demand on December 20 without problems. The record demand for 26,719 megawatts was set when the average temperature across the service region was 16° F. The peak was met without interrupting service to industrial customers or asking the public for voluntary power reductions. More recently, the December record was surpassed on January 3 when demand reached 27,015 MW. Both demand peaks surpassed the previous winter record of 26,670 MW, set in 1997.
- During the first quarter, 29 miles of transmission line were built or upgraded, three delivery points were completed and placed into service, and two capacitor banks were built and placed into service at the Phipps Bend Substation.
- The Tennessee Valley Public Power Association (TVPPA) is working with TVA to refine long-range plans for Business Outlook 2001, a report outlining TVA's principal business challenges and initiatives through 2007. The primary goal of the initial TVA Business Outlook, issued in 1997, was to ensure that TVA prices remain competitive through the year 2007. TVA is on track to achieve this goal.
- The TVA Public Power Institute is working with Innogy Technology Ventures Limited to further develop the Regenesys technology, an innovative energy-storage method. In November, the TVA Board approved construction of a 12-megawatt unit in Northeast Mississippi that uses the new technology, which stores electricity during periods of low demand for use during periods of high demand. The Regenesys technology recently won the Most Promising Pre-Commercial Technology Development Award in the Financial Times 2000 Energy Global Awards competition.
- TVA approved a total of \$3.8 million in economic development loans during the first quarter for business growth in the Tennessee Valley. The loans will help leverage an additional \$97.7 million in capital investment and help create 1,460 jobs.

- Local utilities served by TVA are taking the lead in developing a new business model to reduce costs and improve marketing of the *energy right*<sup>®</sup> residential power program. TVA and local utilities have offered residential programs in partnership since the 1970s to promote the wise use of electricity. The programs were branded with the *energy right*<sup>®</sup> name in 1994.
- TVA continues expanding Green Power Switch<sup>SM</sup>, the largest green power initiative in the Southeast. Three new solar generating sites are under construction, and in November, TVA dedicated its 2-megawatt Buffalo Mountain Wind Park in eastern Tennessee, which is the first commercial-scale use of wind power in the Southeast. A 5-megawatt landfill gas generation facility is scheduled to begin commercial operation in mid-February. Customer response is exceeding initial sales projections.
- TVA is working with other utilities and electric water heating manufacturers to establish the Heat Pump Water Heating Council (HPWHC) to advance the use of efficient electric water heating technologies. Participation in HPWHC supports TVA's efforts to increase electric water heating efficiency in schools and commercial buildings, primarily through the use of geothermal heating and cooling systems. Alabama Power, Jackson Electric Membership Cooperative (Georgia), GPU, and Hawaii Electric have committed to or expressed interest in the council.
- TVA cosponsored a live satellite teleconference to present the energy and cost-savings benefits of geothermal technology in government buildings. More than 125 state and local officials, architects, and engineers attended the conference via 12 down-link sites provided by TVA across the Valley. The conference was broadcast internationally by the Geothermal Heat Pump Consortium. The University of Tennessee County Technical Assistance Service and the Association for Tennessee Valley Governments helped TVA stage the event.

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## FINANCIAL

- The 2000 TVA Annual Report, which was published in November, highlights record revenues of nearly \$6.8 billion, net income of \$24 million, and a debt reduction of \$391 million. Total debt reduction during the past four years now totals \$1.7 billion.
- TVA reported to the U.S. Treasury Department that it made 96 percent of its payments, including vendor and payroll, via Electric Funds Transfer during FY 2000. This was well ahead of the 75 percent average for federal agencies.

- Twenty-four national companies participated in the Job Fair sponsored by TVA as part of its 2000 Fall Investment Challenge conference. A total of 260 students and faculty from the region's 19 public universities attended the conference. The Job Fair has become an important resource for businesses seeking recent financial graduates from the Valley.
- TVA Retirement Services processed 843 retirements during the past fiscal year, which represents about six percent of the workforce.

## OTHER

The Workforce Education  
Business Board named  
TVA as an Outstanding  
Business Partner  
for 2000.

- For the first time since it began negotiating with labor unions in a construction-oriented environment 60 years ago, TVA and unions reached a labor agreement that is tailored to TVA's utility operations. The agreement will improve efficiency by eliminating many of the cross-craft handoffs that caused delays and interruptions in the work processes at the plants. The trades and labor employees represented by six unions will have the opportunity to earn higher pay by attaining multiple skills.
- The TVA Energy Management Annual Report for FY 2000 and the TVA Energy Scorecard were submitted to the Department of Energy and the Office of Management and Budget. The reports outline TVA progress toward meeting goals set by the National Energy Conservation Policy Act, the Energy Policy Act of 1992, and Executive Order 13123.
- TVA executed a three-year agreement to sublease three floors of the Chestnut Street Tower in Chattanooga to UnumProvident. The agreement supports the expansion of UnumProvident operations in Chattanooga and reduces TVA operating expenses.
- The Workforce Education Business Board, a nonprofit organization dedicated to improving education in six East Tennessee counties, named TVA as an Outstanding Business Partner for 2000. The award recognizes TVA's involvement in the CADNet School-to-Work cooperative program, which teaches high school students computer-aided drafting skills.
- TVA provided temporary housing for the Tennessee Cumberland Mountain State Park Visitor Center and Park Office after a fire damaged the state facilities.
- Several activities were held during November to increase employee knowledge and awareness about computer and information security. The events supported the 13<sup>th</sup> annual International Computer Security Day.

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- TVA Police and the FBI co-hosted the initial meeting in Knoxville for the InfraGard Program being conducted by the U.S. Department of Justice. The program educates and mobilizes government, industry, and academia to fight cyber-crime.
- TVA Police, at the request of the U.S. Coast Guard, participated in a interagency forum in Washington, D. C., to review boating rules and regulations of various federal agencies for uniformity and consistency. The forum also discussed strategies to better educate the public about recreational boating.
- TVA is a key participant in the federal Environmental Crimes Joint Task Force for East Tennessee, which leads the nation in environmental prosecutions and convictions. The task force, which is operated by the U.S. Attorney General, includes the FBI, the EPA, TVA Police, and several other federal and state investigative agencies. The task force was recently honored with an Award of Excellence from the President's Council on Integrity and Efficiency.
- The TVA internal website (InsideNet) was redesigned to support increased use of the employee/management self-service concept, which increases efficiency. The site offers employee access to earnings and deduction information and supports time and attendance, workforce and workflow management, and dissemination of information to employees.