Government Performance and Results Act (GPRA)









Tennessee Valley Authority

Annual Performance Report FY 2001

For the Fiscal Year Ending September 30, 2001

> Submitted to Congress March 2002



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Introduction

The Government Performance and Results Act of 1993 (GPRA) requires federal agencies to establish standards measuring their performance and effectiveness. Federal agencies are required to develop strategic plans describing their overall goals and objectives, annual performance plans containing quantifiable measures of their progress and performance reports describing their success in meeting those standards and measures. This report documents the Tennesse Valley Authority's (TVA) actual performance and progress in achieving the goals and objectives identified in its annual performance plan for FY 2002. Information is expressed in terms required by GPRA and the Office of Management and Budget (OMB) Circular A-11. This Performance Report is aligned with TVA's current Strategic Plan submitted to Congress covering the period 2000-2005.

TVA is a government agency that must make the right decisions to compete as a business in a vigorous marketplace. At the same time, TVA exists to serve the public good and must assume the responsibility to help deliver economic, environmental and societal value to our customers, our stakeholders and the people living and working in our region.

TVA is proceeding on the course charted by our Vision, Goals, Strategic Objectives and Critical Success Factors, approved and implemented in 1999. However, TVA is re-evaluating the way we report our corporate performance in response to attention and interest from our customers, stakeholders, and communities, and in keeping with new reporting formats and practices evolving within companies. This GPRA document is presented utilizing the Triple Bottom Line concept which assesses economic, environmental, and societal performance to provide a balanced view of performance targets among our economic, environmental and societal bottom lines.

TVA was not aided by any non-federal parties in the development of this plan.

Mission Statement

The mission of the Tennessee Valley Authority is to develop and operate the Tennessee River system to improve navigation, minimize flood damage, and to provide energy and related products and services safely, reliably, and at the lowest feasible cost to residents and businesses in the multistate Tennessee Valley region. TVA's integrated management of the entire Tennessee River watershed optimizes the benefits of the water resource. Major functions of the corporation include:

- Management of the Tennessee River system for multiple purposes including navigation, flood control, power generation, water quality, public lands conservation, recreation, and economic development;
- Generation of electricity;
- Sale and transmission of electricity to wholesale and large industrial customers;
- Stimulation of economic development activities that generate a higher quality of life for citizens of the Tennessee Valley;
- Preservation and environmentally-sensitive management of TVA assets and federal lands entrusted to TVA; and
- Research and technology development that addresses environmental problems related to TVA's statutory responsibilities for river and land management and power generation.

In January 1999, the TVA Board of Directors issued their statement of the vision for TVA.

Generating Prosperity in the Valley

Strategic Objectives:

- Meet our customers' needs by providing affordable, reliable electric power;
- Reduce our delivered cost of power relative to the market;
- Continue the trend of debt reduction;
- Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system;
- Support sustainable economic development in the Tennessee Valley; and
- Strengthen our working relationships with Valley residents, communities and businesses; and with our customers, suppliers and government officials and representatives.

Value Statement and Triple-Bottom Line

Achieve Excellence in Business Performance and Public Service.

As the electric utility industry navigates its way through myriad stages of restructuring, TVA must differentiate itself from other utilities in order to retain its leadership role in the new market environment. TVA has long held a unique position within the utility industry as a low-cost power generator, and an integrated river-management entity. However, as the competitive environment changes around TVA, so must TVA. TVA's challenges include not only maintaining its high level of operational excellence in power generation, transmission, and river management, but also in delivering value to each of three primary constituent groups: (1) customers; (2) stakeholders; and (3) society.

For customers of TVA power, value means providing affordable, reliable power. Value also means continually developing and providing new, more flexible pricing and product alternatives to help meet customer demands in a changing environment. In addition, businesses and industries in the Tennessee Valley currently face tremendous financial pressures as the economy continues its slow pace of growth. TVA has the opportunity and responsibility to assist its customers during this time of challenge by working with them to understand their energy needs and providing products to meet these requirements at as low a cost as feasible. TVA will provide additional value to its customers by providing stable prices for power. During this period of uncertainty in the economy and even more so in the evolving utility industry, any element of certainty is highly valued. TVA provides great certainty to its customers by maintaining stable power prices during a period of highly volatile energy markets. Finally and importantly TVA is helping to implement the Administration's energy policy by working with TVA's customers to gradually open the region's electricity markets to competition.

The stakeholders of TVA, from federal, state and local governments to kayakers on the Ocoee River, are almost as numerous and varied as the species of fish in Valley rivers. TVA's challenge with

respect to providing stakeholder value is to balance the competing demands on TVA resources in order to optimize the value provided to all stakeholders. TVA must allocate limited financial resources among the competing demands of debt reduction, economic development, investing in assets for system load growth, clean air initiatives, and research and development for alternative energy sources. TVA must also balance the use of water resources for hydroelectric power generation, flood control, recreational lake and waterway use, navigation for Valley shippers, maintenance of safe water quality, as well as many others. Not only must TVA continue to manage this delicate balance of competition for resources, but TVA also must communicate this value to its stakeholders. TVA can marshal this stakeholder support if TVA's stakeholders understand the collective value delivered to them through its integrated system operations.

TVA provides value to society at large by continuing to fulfill its original mission of regional resource management, promoting economic growth, and leading the electric utility industry in operational excellence. In order to continue in this role as a public power agency, TVA must demonstrate its value to society and industry as a leader in energy technology, environmental protection, human resource equality and opportunity, and operational excellence. In carrying out this mission, TVA is taking a leadership role by making significant investments in clean air equipment for its coal burning facilities, developing and sharing breakthroughs in energy technology, maintaining high performance in operations and safety in its nuclear and fossil units, and by creating opportunities for economic growth. TVA will ultimately succeed if society understands the value of TVA's unique leadership role in the utility industry and accepts no other entity as the steward of its resources.

In order to effectively assess and improve TVA's performance with respect to these value statements, TVA has re-grouped the performance measures contained in previous performance reports into three primary categories: (1) Economic measures, (2) Environmental measures, and (3) Societal measures. This three-pronged approach can be viewed as a "Triple-Bottom Line" with each category emphasized equally. The triple bottom-line approach to performance measurement gives TVA the framework to monitor, assess and improve its performance in achieving its value statement of achieving excellence in business performance and public service.

Relationship of TVA'S Goals, Strategic Objectives and Critical Success Factors to the Performance Goals

Performance goals are selected to support attainment of the Strategic Objectives and Critical Success Factors and are expressed as performance indicators and annual targets.

TVA's goals are:

- Supplying Low-cost Reliable Power
- Supporting a Thriving River System
- Stimulating Economic Growth

The following table summarizes information from the previous section and demonstrates the linkages between TVA's Vision, Strategic Objectives, Critical Success Factors, and Performance Goals / Measures.

Bottom line alignment to Critical Success Factors, Strategic Objectives, TVA Vision and Triple Bottom Line

Bottom Line		Strategic Objectives	С	ritical Success Factors	Performance Measures
Economic Value	1.A	Meet our customers' needs by providing affordable, reliable electric power.	1.A.1	Improve power reliability to meet customer requirements.	System Reliability (Load Not Served)
			1.A.2	Achieve excellence in asset optimization and production processes.	 Fossil Plant Equivalent Availability Factor Hydro Plant Equivalent Availability Factor Nuclear Plant Net Capacity Factor
			1.A.3	Provide flexible contracts and competitive pricing of products and services.	 Wholesale Customers with Continuing Contracts Energy Sales (kWh)
	1.B	Reduce our delivered cost of power relative to the market.	1.B.1	Generate more for less.	Delivered Cost of Power
	1.C	Continue the trend of debt reduction.	1.C.1	Invest prudently.	Debt/KW of CapacityBond Rating
Environmental Value	2.A	Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.	2.A.1	Manage the environmental and safety impacts of TVA's operations on employees and the region.	 Reportable Environmental Events Sulfur Dioxide Emissions Nitrogen Oxide Emissions INPO Index ERC RCRA Cleanup (Percent Complete)
			2.A.2	Minimize flood damage by operating the river system according to best management practices with flood control as a priority.	Flood Storage Availability

Bottom Line		Strategic Objectives	С	Critical Success Factors	Performance Measures
			2.A.3	Maintain a navigable commercial waterway from Knoxville to Paducah.	 Days Navigable Waterway Is Available from Knoxville to Paducah
					 Shipper Savings
			2.A.4	Provide acceptable water quality.	 Dissolved Oxygen Deficit Due to Forced Outages
					 Minimum Flow Achievement
					 Watershed Water Quality
			2.A.5	Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir-level constraints.	Discretionary Zone Attainment
			2.A.6	Support recreational uses of the river system and associated federal lands.	 Completed Comprehensive Reservoir Land Plans
					 Summer Reservoir Level Attainment
Societal Value	3.A	Support sustainable economic development in the Tennessee Valley.	3.A.1	Promote development through targeted, sustainable growth initiatives.	 Capital Investment Leveraged Jobs Created or Retained
	3.B	Strengthen our working relationships – with Valley residents, communities and businesses; and with our customers, suppliers and government officials and representatives.	3.B.1	Achieve excellence in the customer value and relationship process.	Customer Value Index
			3.B.2	Achieve excellence in the stakeholder relations and communication processes.	Stakeholder Process Satisfaction Index

Performance Goal Targets and Results

The following pages describe TVA's GPRA performance goals, its FY 2001 and outyear targets, and its actual FY 2001 performance on these goals. Explanations are provided where target levels were not achieved, along with a description of steps that will be taken to accomplish the goals in the future.

Economic Value Indicator System Reliability - Load Not Served

Goal/Strategic Objective/Critical Success Factor

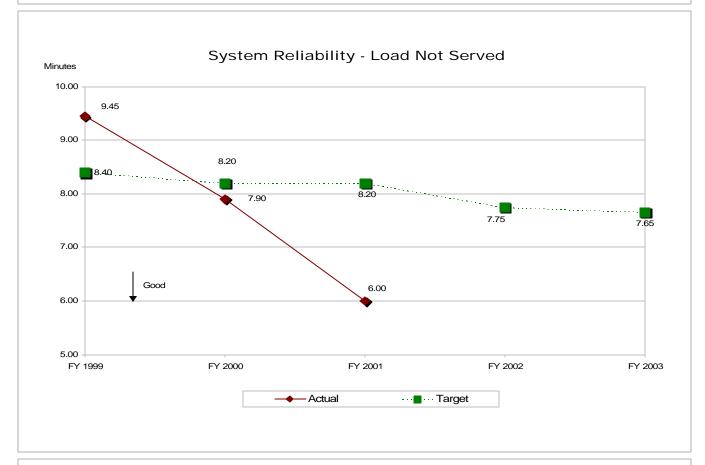
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power.

Critical Success Factor 1.A.1: Improve power reliability to meet customer requirements.

Description

Energy customers require a reliable power supply in order to remain competitive and to maintain consumers' safety and convenience. Load Not Served (LNS), measures the reliability of TVA's power supply in terms of minutes the average customer is without power each year.



FY 2001 Target: 8.20 minutes FY 2001 Performance: 6.00 minutes

Targeted performance on this goal was achieved.

Performance Explanation: Improvements to the power system due to capital projects and aggressive maintenance efforts enable TVA to be able to realize these improving LNS goals.

Economic Value Indicator Fossil (Coal-Fired) Plant Equivalent Availability Factor

Goal/Strategic Objective/Critical Success Factor

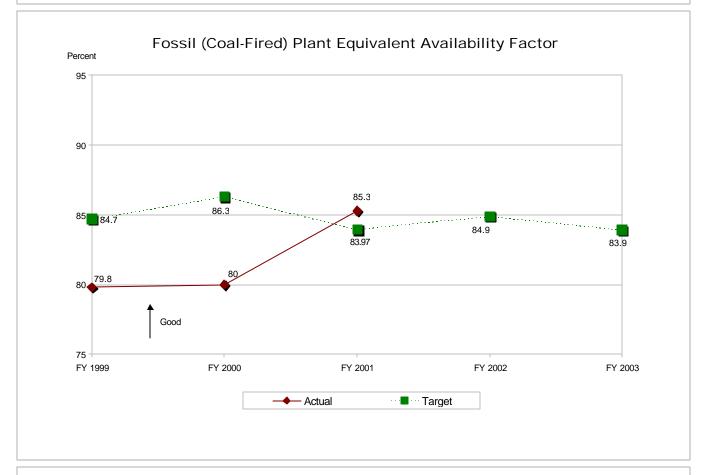
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power.

Critical Success Factor 1.A.2: Achieve excellence in asset optimization and production processes.

Description

All energy customers require an adequate supply of electricity at the lowest price in order to add value to their customers. To ensure that TVA can meet customer demand, TVA's coal-fired plants must operate at optimum availability, defined as the ratio of the amount of energy that can be provided divided by the maximum amount of energy that could be produced over a given period of time.



FY 2001 Target: 83.97% FY 2001 Performance: 85.30%

Targeted performance on this goal was achieved.

Performance Explanation: System availability was better than target primarily due to fewer unexpected equipment failures than projected. Short reliability outages were performed at many plants to minimize the risk of future failures. This resulted in fewer unplanned unit shutdowns and periods of reduced output.

Economic Value Indicator

Conventional Hydro Equivalent Availability Factor

Goal/Strategic Objective/Critical Success Factor

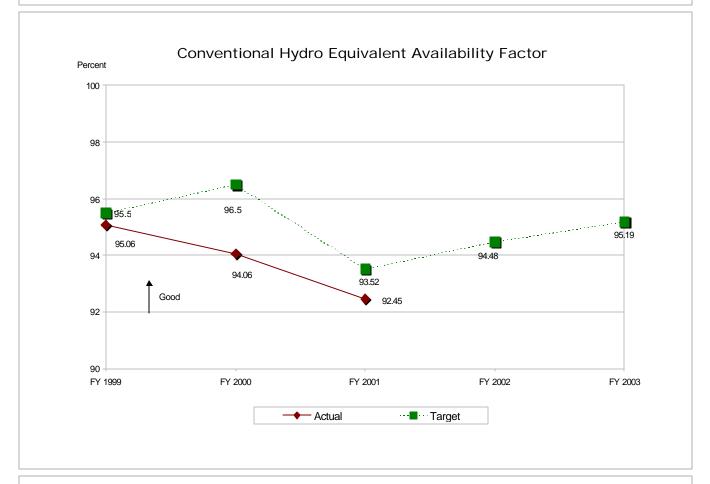
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power.

Critical Success Factor 1.A.2: Achieve excellence in asset optimization and production processes.

Description

TVA's hydroelectric plants work to achieve high performance in plant availability. The hydroelectric plants help to satisfy energy customers' requirements for reliable, available electric power. Hydro-electric plant availability is calculated as the amount of energy available for generation divided by the maximum amount of energy that could be produced over a set period of time.



FY 2001 Target: 93.52% FY 2001 Performance: 92.45%

Targeted performance on this goal was not achieved.

Performance Explanation: Target was not achieved because the outage schedule was revised to reflect changes in the long-term hydro modernization project and in routine outage schedules. These changes in schedule were finalized shortly before the beginning of FY 2001 but after submission of GPRA plan. Additionally, we had 5 long forced unit outages due to transformer failures. It should be noted that although performance did not meet target it was still above industry average.

Economic Value Indicator Nuclear Plant Net Capacity Factor (PPF)

Goal/Strategic Objective/Critical Success Factor

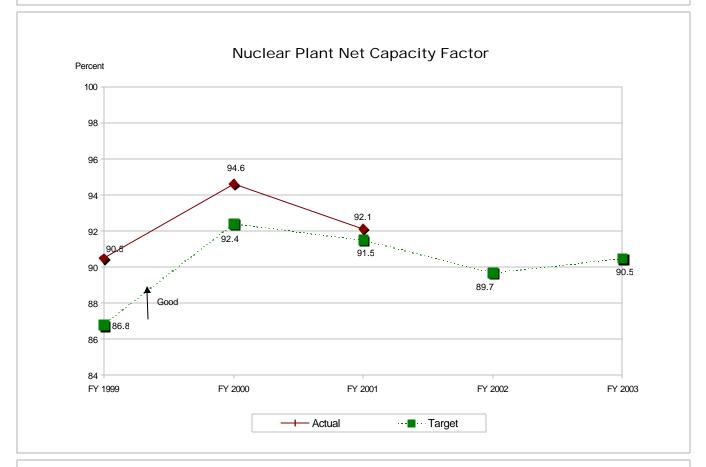
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power.

Critical Success Factor 1.A.2: Achieve excellence in asset optimization and production processes.

Description

To ensure that all nuclear power plants are operating at needed capacity, TVA monitors the "net capacity factor" which is the ratio of the amount of electricity generated divided by the maximum amount of energy that could have been produced by the plant over a specified period of time.



FY 2001 Target: 91.5% FY 2001 Performance: 92.1%

Targeted performance on this goal was achieved.

Performance Explanation: TVA nuclear facilities exceeded expectations for availability. In FY 2001, TVA nuclear plants produced 45.61 billion kilowatt-hours of electricity. This was less than the previous year but was primarily due to the number of planned outage days. Performance is monitored and managed for the planned outage and operational components of generation for each plant and TVA exceeded both in FY 2001. For the fifth time in the history of TVA's nuclear program, all five of the units operated for 100 consecutive days (120.5 days). Each of the five units began or ended continuous runs greater than 250 days during 2001.

Economic Value Indicator Wholesale Customers with Continuing Contracts

Goal/Strategic Objective/Critical Success Factor

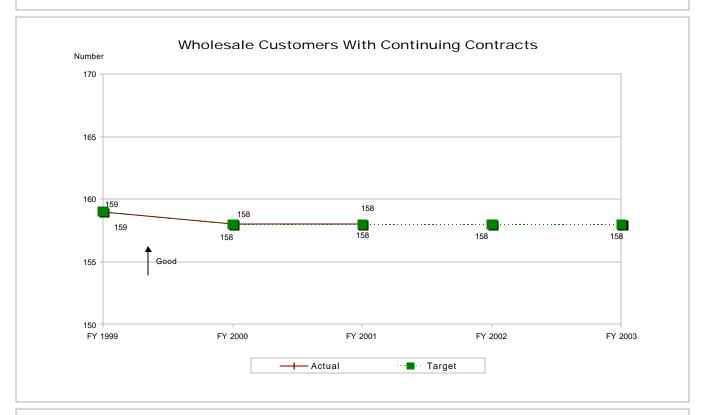
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power.

Critical Success Factor 1.A.3: Provide flexible contracts and competitive pricing of products and services.

Description

TVA's existing power contracts with its distributors have rolling five, ten, or fifteen-year terms. In order to end its commitment to purchase TVA power, a distributor must give notice either 5, 10, or 15 years (as applicable) prior to the desired contract termination date. In anticipation of utility industry restructuring, many of TVA's customers are seeking a more flexible position from which to respond to competitive challenges. TVA is working to address issues of distributors that want more contract flexibility to meet their needs, while not shifting the cost obligations of these arrangements to other customers. These new contracting alternatives, in combination with TVA's continued emphasis on providing low-cost reliable power, will help TVA retain its present customer base. In August 2000, Middle Tennessee Electric Membership Corp., one of TVA's power distributor customers, assumed ownership of the Lebanon Electric Department (LED). LED also was a distributor of TVA power. With LED's transfer of ownership, the number of TVA distributor customers became 158.



FY 2001 Target: 158 FY 2001 Performance: 158

Targeted performance on this goal was achieved.

Performance Explanation: At the end of FY 2001, all of TVA's 158 distributors had on-going contracts (none have given TVA notice of intent to terminate their contracts). TVA is continuing to work with distributors to address their needs for contract flexibility and to assure them that TVA will meet their needs for reliable, low cost electricity in the future.

Economic Value Indicator Energy Sales (kWh)

Goal/Strategic Objective/Critical Success Factor

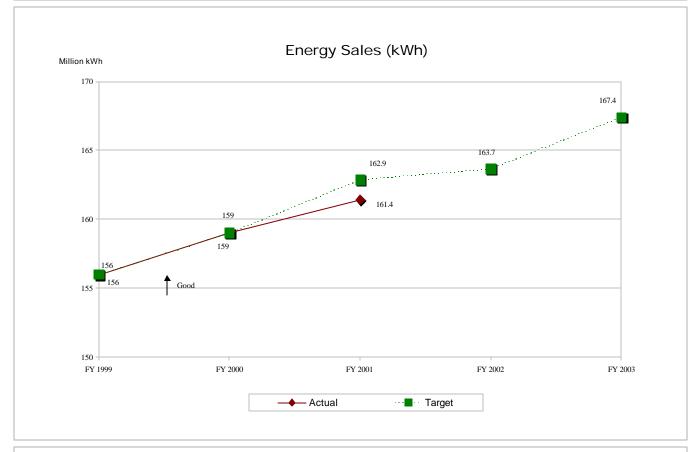
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.A: Meet our customers' needs by providing affordable, reliable electric power..

Critical Success Factor 1.A.3: Provide flexible contracts and competitive pricing of products and services.

Description

TVA takes very seriously its obligation to ensure that reliable generating and transmission capacity is available to meet its customers' needs. The ability to accurately forecast customers' energy needs is an important component of the job of optimizing the use of TVA's assets. Additionally, a trend of *increasing* sales is not only an indication of customer satisfaction with TVA's overall product offerings and quality of service, but provides a broader base over which to spread TVA's fixed costs and thereby reduce the average cost of power delivered



FY 2001 Target: 162.9 million kWh FY 2001 Performance: 161.4 million kWh

Targeted performance on this goal was not achieved.

Performance Explanation: Energy sales were lower than target due to lower sales volume for each customer class and lower volume of purchased power. The decrease in demand was primarily due to a milder than expected summer.

Economic Value Indicator Delivered Cost of Power

Goal/Strategic Objective/Critical Success Factor

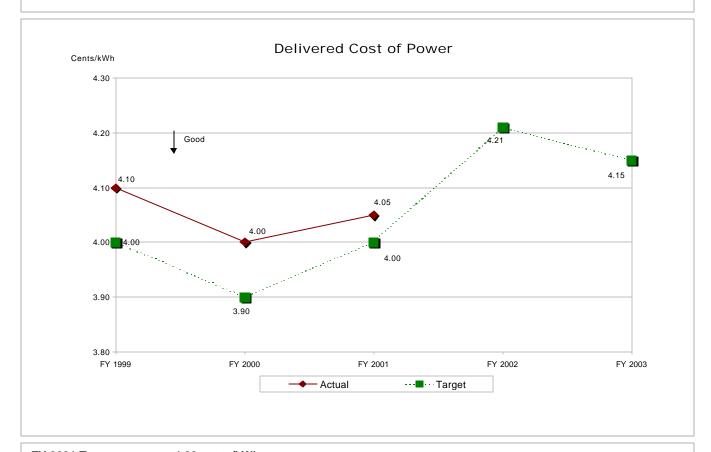
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.B: Reduce our delivered cost of power relative to the market.

Critical Success Factor 1.B.1: Generate more for less.

Description

The cost of electric power is crucial to energy customers, who depend on a low-cost, efficient, and dependable source of energy in order to be competitive in their businesses and cost-effective in their household budgets. To determine the cost of providing power to its energy customers, TVA divides its total costs to deliver power (excluding accounting write-offs) by the total amount of power delivered. Over time, reducing its delivered cost of power enables TVA to remain competitive in a potentially deregulated and openly competitive environment. This assures TVA's customers competitively-priced electricity.



FY 2001 Target: 4.00 cents/kWh FY 2001 Performance: 4.05 cents/kWh

Targeted performance on this goal was not achieved.

Performance Explanation: TVA's total operating costs, including interest, in FY 2001 were \$6.5392 billion, \$90.2 million more than the budget estimate of \$6.449 billion. Total energy sales were 161.4 billion kWh, which were lower than the budget of 162.9.

Economic Value Indicator Debt / kW of Capacity

Goal/Strategic Objective/Critical Success Factor

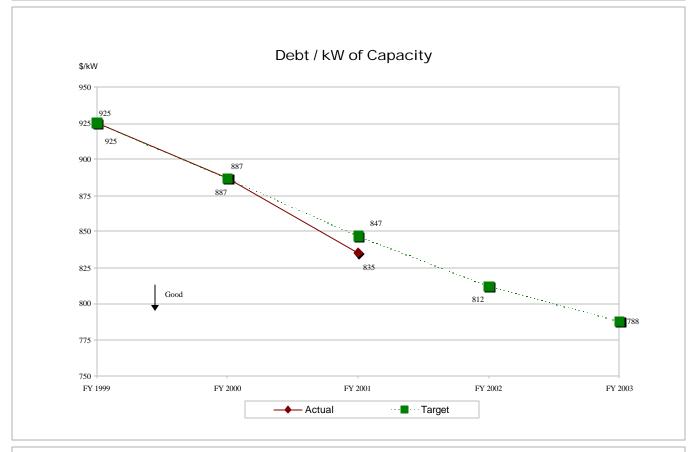
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.C: Continue the trend of debt reduction.

Critical Success Factor 1.C.1: Invest prudently.

Description

TVA will best be able to meet the projected market price for electricity by reducing its high fixed costs for interest (now about 23% of TVA's total cost of power). As TVA reduces and manages its outstanding debt, thus reducing its interest costs, it will shift its cost structure to one that is better able to adjust to the increased volatility of a future deregulated energy market. At the same time, TVA is challenged to provide the capital resources required to finance the growth in its power system (generation and transmission) and to modify its existing plants as necessary to comply with environmental regulations. A good measure for TVA's debt burden, in context with the size of its business, is the amount of "debt per kW of generating capacity." Lowering this measure will produce a more flexible cost structure and a stronger balance sheet.



FY 2001 Target: \$847 / kWh FY 2001 Performance: \$835 / kWh

Targeted performance on this goal was achieved.

Performance Explanation: The target for FY 2001 was based on a budgeted debt reduction of \$500 million. The actual debt reduction for FY 2001 was \$610 million while growth in net dependable winter capacity was also greater than expected.

Economic Value Indicator Bond Rating

Goal/Strategic Objective/Critical Success Factor

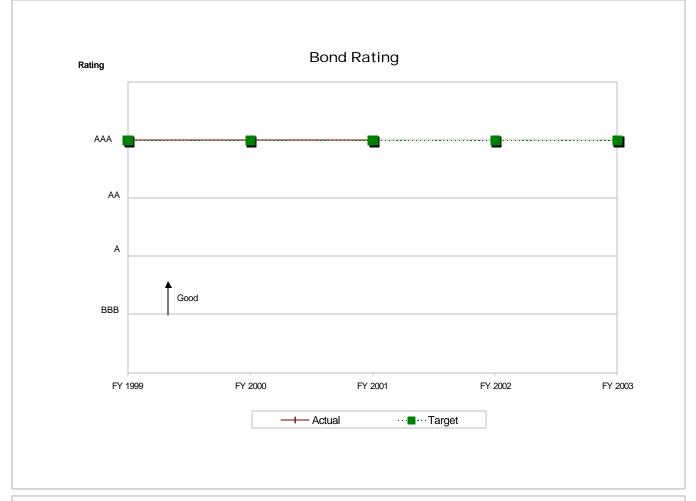
TVA Goal: Supply low-cost reliable power.

Strategic Objective 1.C: Continue the trend of debt reduction.

Critical Success Factor 1.C.1: Invest prudently.

Description

While TVA has taken actions to cap its debt, there will still be a need to refinance maturing debt. This performance measure monitors TVA's success in maintaining its position as an attractive investment.



FY 2001 Target: AAA FY 2001 Performance: AAA

Targeted performance on this goal was achieved.

Performance Explanation: Independent bond ratings issued by Moody's Investors Service during FY 2001 documented TVA's continuing triple-A rating.

Environmental Value Indicator Reportable Environmental Events

Goal/Strategic Objective/Critical Success Factor

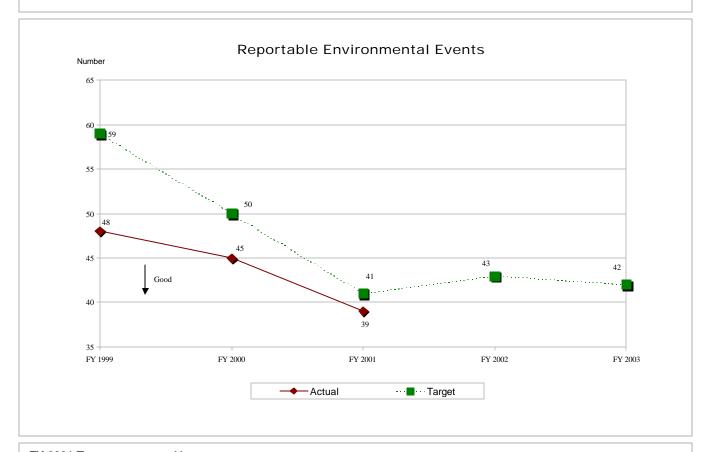
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.1: Manage the environmental and safety impacts of TVA's operations on employees and the region.

Description

Energy customers and the general public expect TVA to be environmentally responsible in conducting operations in order to protect public health, natural resources, and environmental quality. TVA measures the performance of its operations in meeting environmental regulatory compliance requirements by monitoring occurrences of violations at TVA facilities that trigger notifications to, or enforcement actions by, a regulatory agency.



FY 2001 Target: 41 FY 2001 Performance: 39

Targeted performance on this goal was achieved.

Performance Explanation: TVA experienced fewer reportable events than target, reflecting implementation of an ISO 14000 based Environmental Management System, a continuing focus on improving processes, internal auditing, self assessments, appropriate training, and sharing lessons learned.

Environmental Value Indicator Sulfur Dioxide Emissions

Goal/Strategic Objective/Critical Success Factor

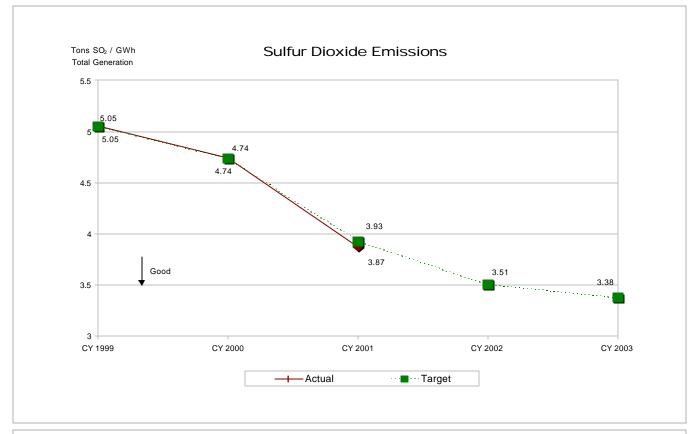
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.1: Manage the environmental and safety impacts of TVA's operations on employees and the region.

Description

Energy customers and the general public expect TVA to be environmentally responsible while conducting operations in order to protect public health and natural resource quality. TVA reduces its SO₂ emissions by using scrubbers and switching to lower sulfur fuels. TVA monitors its emissions to verify compliance with the Clean Air Act.



CY 2001 Target: 3.93 tons SO₂/ GWh CY 2001 Performance: 3.87 tons SO₂/ GWh

Targeted performance on this goal was achieved.

Performance Explanation: Performance was 1.0% better than plan due to lower than planned SO_2 emission rate for the fossil system.

Environmental Value Indicator Nitrogen Oxide Emissions

Goal/Strategic Objective/Critical Success Factor

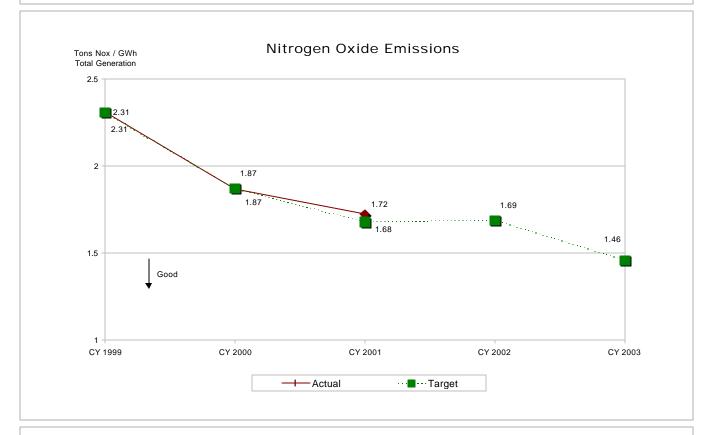
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.1: Manage the environmental and safety impacts of TVA's operations on employees and the region.

Description

Energy customers and the general public expect TVA to be environmentally responsible while conducting operations in order to protect public health and natural resource quality. TVA reduces its nitrogen oxide emissions using technology and operational improvements to maintain compliance with Clean Air Act and to help achieve attainment of local ambient air quality standards in the valley. TVA monitors its emissions to verify compliance with the Clean Air Act.



CY 2001 Target: 1.68 tons NO_x / GWh CY 2001 Performance: 1.72 tons NO_x / GWh

Targeted performance on this goal was not achieved.

Performance Explanation: The tons/GWh target was 2.2% above plan. The primary driver for the variance was TVA generation (GWhs) being 3.3% lower than the plan (used to establish this indicator's target).

Environmental Value Indicator INPO Index

Goal/Strategic Objective/Critical Success Factor

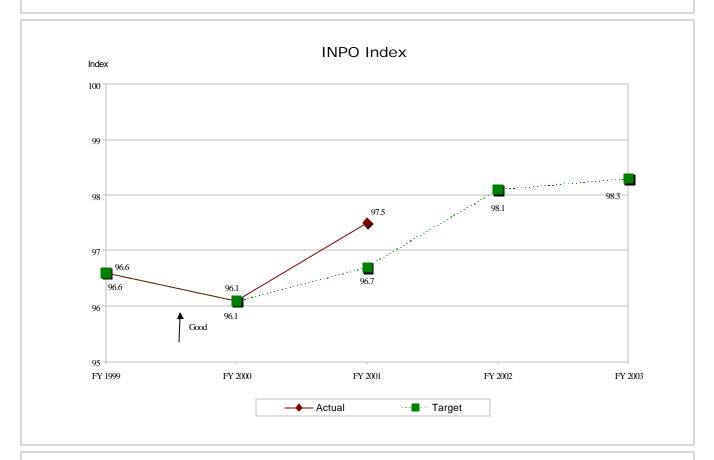
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.1: Manage the environmental and safety impacts of TVA's operations on employees and the region.

Description

To ensure that all the nuclear power plants are operating safely and efficiently, each unit is monitored by a calculated INPO Index. This is a weighting of a variety of performance parameters that measure performance and safety. It is measured as a percent between zero and one hundred.



FY 2001 Target: 96.7 FY 2001 Performance: 97.5

Targeted performance on this goal was achieved.

Performance Explanation: During FY 2001, all units achieved an index value greater than 92%. For a three-month period, WBN1 achieved an INPO Index of 100%, a first for a TVA unit. The INPO Performance Index is a multi-faceted indicator representing performance in ten areas of nuclear operation, industrial safety and generation. The target value for TVA plants is established each year based on steady, continual improvement, not on absolute best achievable performance.

Environmental Value Indicator

Environmental Research Center RCRA Cleanup (ERC)

Goal/Strategic Objective/Critical Success Factor

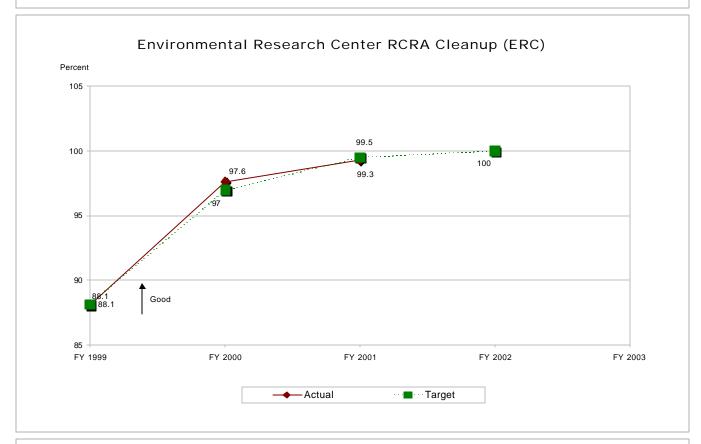
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.1: Manage the environmental and safety impacts of TVA's operations on employees and the region.

Description

TVA is mandated by Federal law to complete the cleanup of contaminated sites at the Environmental Research Center (ERC) reservation in Muscle Shoals, Alabama. The Resource Conservation and Recovery Act (RCRA) Corrective Action Program supports the safe cleanup of contamination caused by decades of federally-funded munitions and fertilizer research and development activities at the ERC.



FY 2001 Target: 99.5% FY 2001 Performance: 99.3%

Targeted performance on this goal was not achieved.

Performance Explanation: Weather delays, re-evaluation of final RCRA cleanup activities, and regulatory process delays have moved completion into FY 2002.

Environmental Value Indicator Flood Storage Availability

Goal/Strategic Objective/Critical Success Factor

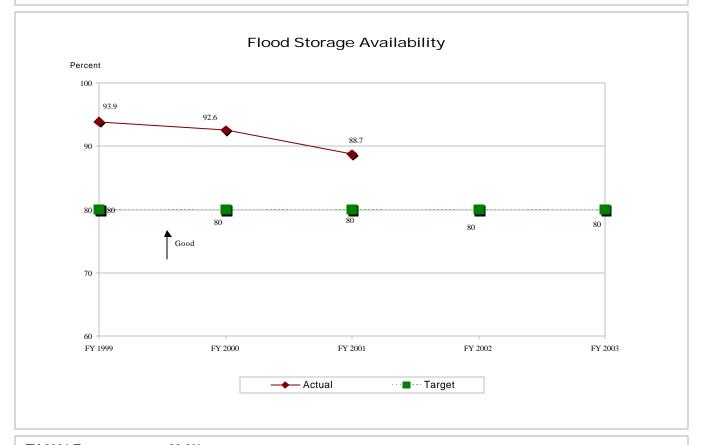
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.2: Minimize flood damage by operating the river system according to best management practices with flood control as a priority.

Description

Flood storage availability indicates TVA's readiness to control damaging floods. The reservoir system is operated based on mandates of the TVA Act and broad policy last reviewed as part of the Lake Improvement Plan in 1991. Based on these guidelines, monthly flood storage availability targets were established for each of TVA's eleven storage projects. Operation of the system in accordance with these targets ensures that the priority placed on flood damage avoidance is maintained.



FY 2001 Target: 80.0% FY 2001 Performance: 88.7%

Targeted performance on this goal was achieved.

Performance Explanation: Performance on this measure is strongly affected by rainfall patterns. The Tennessee Valley watershed continued to experience dryer than normal conditions with rainfall in FY 2001 significantly lower than normal. This lack of rainfall was the major reason for the significantly above-target performance on this indicator.

Environmental Value Indicator

Days Navigable Waterway is Available from Knoxville to Paducah

Goal/Strategic Objective/Critical Success Factor

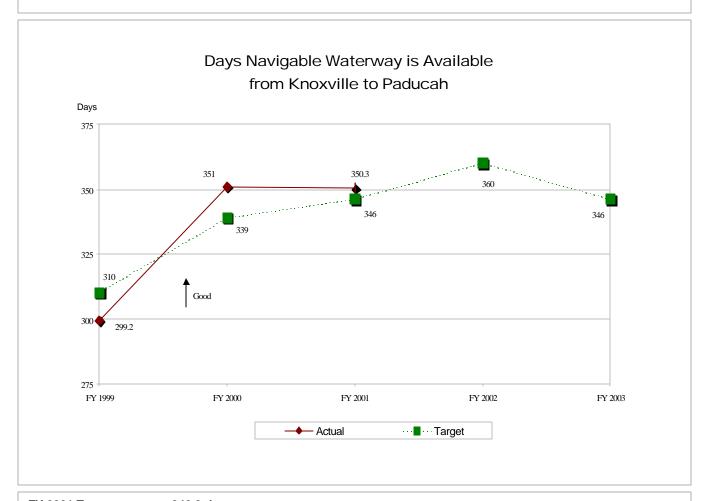
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.3: Maintain a navigable commercial waterway from Knoxville to Paducah.

Description

Commercial shippers rely on TVA to maintain locks and other navigation system components in operable condition and to operate the river system to minimize disruptions to navigation. TVA has a statutory responsibility to maintain a navigable channel along the Tennessee River from Knoxville to Paducah.



FY 2001 Target: 346.0 days FY 2001 Performance: 350.3 days

Targeted performance on this goal was achieved.

Performance Explanation: The scheduled lock closure in FY 2001 was originally estimated to last about 14 days. The condition of the lock was better than expected and the lock remained closed for only 11 days. In addition, there were four days of unanticipated closures.

Environmental Value Indicator Shipper Savings

Goal/Strategic Objective/Critical Success Factor

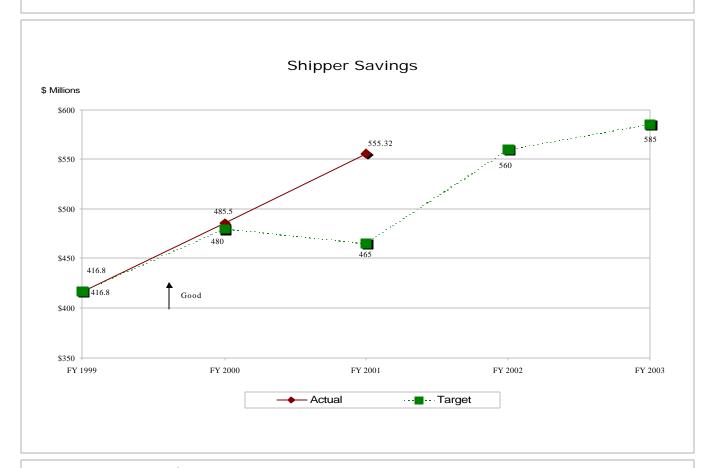
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.3: Maintain a navigable commercial waterway from Knoxville to Paducah.

Description

Commercial shippers rely on TVA to maintain locks and other navigation system components in operable condition and to operate the river system to minimize disruptions to navigation. TVA has a statutory responsibility to maintain a navigable channel along the Tennessee River from Knoxville to Paducah. Shipper savings include reductions in costs accruing to those shipping by barge. If the navigation system is not operable for extended periods of time, shipper savings are reduced.



FY 2001 Target: \$465.00 million FY 2001 Performance: \$555.32 million

Targeted performance on this goal was achieved.

Performance Explanation: Commodity traffic on the Tennessee River system increased during the last four months of the fiscal year resulting in slightly higher annual shipper savings than expected.

Environmental Value Indicator Dissolved Oxygen Deficit Due to Forced Outages

Goal/Strategic Objective/Critical Success Factor

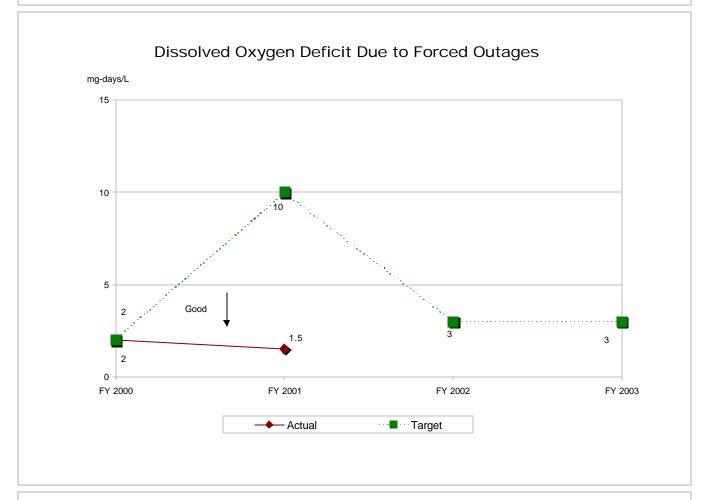
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.4: Provide acceptable water quality.

Description

Aeration systems will be operated at 15 dams to help meet dissolved oxygen (DO) targets in 16 tailwaters. The DO target concentrations are 6 mg/L for cold water tailwaters and 4 mg/L for cool and warm tailwaters. The period of aeration equipment operation is site specific, but can range from mid-April through December.



FY 2001 Target: 10.0 mg-days/L FY 2001 Performance: 1.5 mg-days/L

Targeted performance on this goal was achieved.

Performance Explanation: Aeration system availability during FY 2001 was 99.8%. Planned maintenance of aeration systems aim to restrict forced outages to hours instead of days. Aging aeration system components at some projects are in need of refurbishing or replacement.

Environmental Value Indicator Minimum Flow Achievement

Goal/Strategic Objective/Critical Success Factor

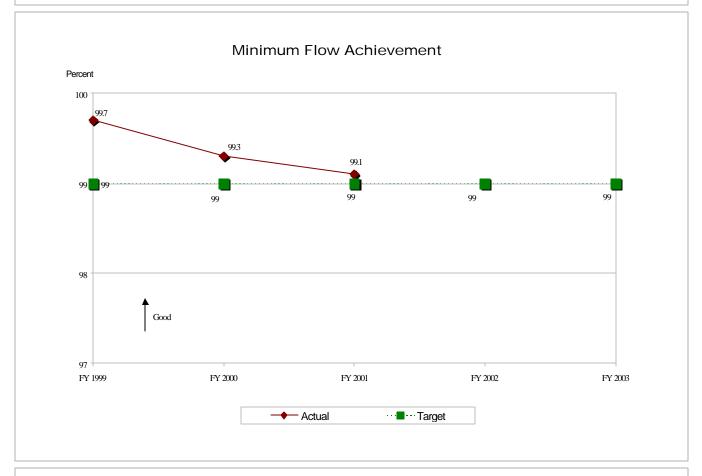
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.4: Provide acceptable water quality.

Description

Dissolved oxygen levels, water temperature, and water flow rates are drastically altered by the vacillating effects of water storage and hydro generation processes. Fisheries, aquatic habitat, and potable water quality bear the most stress. TVA maintains minimum flows at 29 locations to improve the quality of water. Sustaining these minimum flows helps TVA minimize adverse environmental impacts to aquatic habitats and potable water quality associated with dam operations.



FY 2001 Target: 99.0% FY 2001 Performance: 99.1%

Targeted performance on this goal was achieved.

Performance Explanation: TVA maintained required minimum flows at facilities, in spite of unusually dry conditions in the Tennessee Valley. This was achieved by close attention to water scheduling in order to minimize the adverse effects from the lack of rainfall.

Environmental Value Indicator Watershed Water Quality

Goal/Strategic Objective/Critical Success Factor

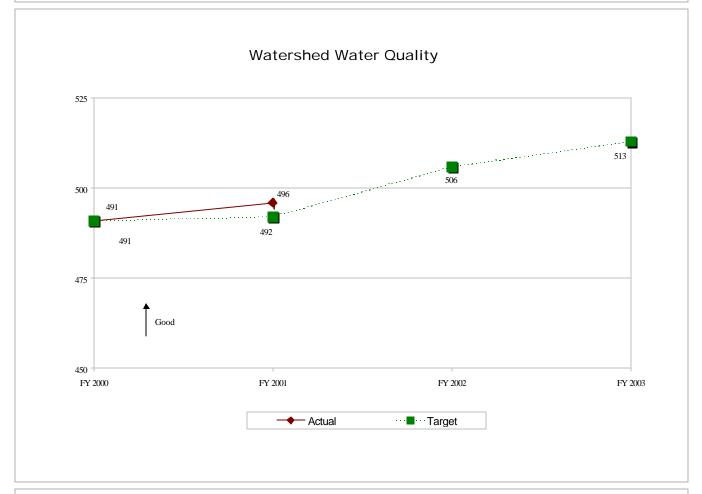
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.4: Provide acceptable water quality.

Description

There are 611 watershed units that make up the Tennessee River system. TVA participates in cooperative efforts involving local and regional public and private partners to improve water quality and natural resource conditions. Annual assessments identify watershed unit status by evaluating stream and reservoir ecological health and shoreline conditions.



FY 2001 Target: 492 FY 2001 Performance: 496

Targeted performance on this goal was achieved.

Performance Explanation: At the end of FY 2001, 496 of the 611 watershed units were in good or fair conditions.

Environmental Value Indicator Discretionary Zone Attainment

Goal/Strategic Objective/Critical Success Factor

TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.5: Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir-level constraints.

Description

Valley residents expect TVA to operate the Tennessee River system of reservoirs for multiple benefits, including flood control, navigation, water quality, recreation, water supply, and hydroelectric generation. To satisfy these requirements, TVA monitors a performance goal that tracks the ability to maximize the flexibility and value of hydropower generation after meeting higher priority objectives. This "discretionary zone" is a region of operation bounded by the flood guide on the top and the minimum operating guide (MOG) on the bottom. Under TVA's river system operation methodology, power value is optimized by operating tributary storage reservoir levels within the discretionary operating zone whenever possible.



FY 2001 Target: 77.0% FY 2001 Performance: 74.4%

Targeted performance on this goal was not achieved.

Performance Explanation: Performance on this measure is strongly affected by rainfall patterns. The Tennessee Valley watershed continued to experience drier than normal conditions in FY 2001. This contributed to TVA's ability to maintain tributary reservoir levels below the flood guide. However, dry conditions make it more difficult to maintain minimum reservoir levels. To help ensure that minimum levels were maintained TVA began holding water in the tributary reservoirs earlier in the year, despite these efforts the target performance was not achieved.

Environmental Value Indicator Completed Comprehensive Reservoir Land Plans

Goal/Strategic Objective/Critical Success Factor

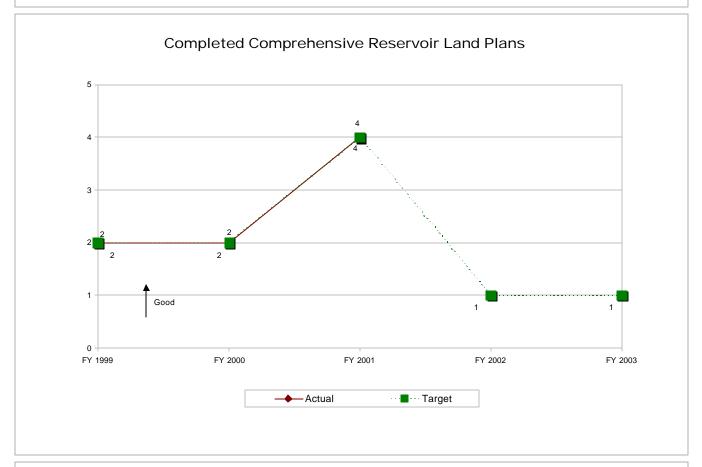
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.6: Support recreational uses of the river system and associated federal lands.

Description

TVA manages 293,000 acres of public land around reservoir projects spanning seven states. The reservoir system is a nationally important recreation and tourism resource that attracts millions of visits per year from residents and tourists who enjoy water-based sports and contribute to a \$1 billion industry. Waterfront properties are highly valued and generate demands for growth that often conflict with the protection of public resources and wildlife habitat. TVA manages these potential conflicts with the use of land management plans that establish allowable uses for TVA property. TVA will develop comprehensive plans for 27 reservoirs.



FY 2001 Target: 4 FY 2001 Performance: 4

Targeted performance on this goal was achieved.

Performance Explanation: Plans were completed for Cherokee, Norris, Guntersville, and Bear Creek Reservoirs in FY 2001. The Pickwick Reservoir Plan is on schedule to be completed during September 2002.

Environmental Value Indicator Summer Reservoir Level Attainment

Goal/Strategic Objective/Critical Success Factor

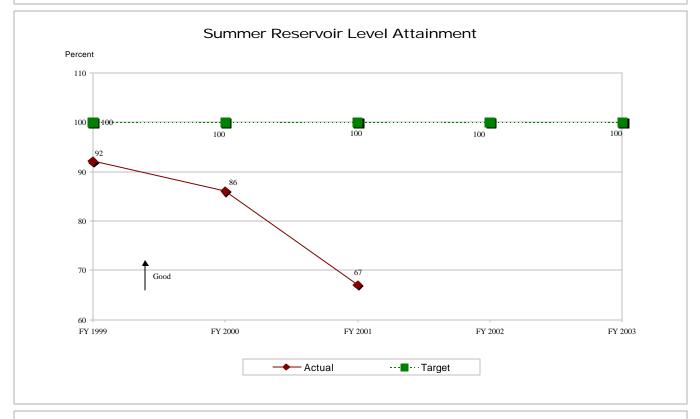
TVA Goal: Support a thriving river system.

Strategic Objective 2.A: Enhance the quality of life in the Tennessee Valley through environmental stewardship and the integrated management of the Tennessee River system.

Critical Success Factor 2.A.6: Support recreational uses of the river system and associated federal lands.

Description

Recreational reservoir users want TVA to maintain high water levels during the summer. These customers provide regional economic benefits through increased expenditures for recreational activities. In its 1991 Lake Improvement Plan, TVA made commitments to the user public to maintain tributary reservoirs at specified levels during June and July to support recreational uses which have significant economic impacts for the Tennessee Valley. TVA measures its commitment to these customers by monitoring achievement of targeted minimum water levels during June and July in ten tributary storage reservoirs.



FY 2001 Target: 100% FY 2001 Performance: 67%

Targeted performance on this goal was not achieved.

Performance Explanation: Rainfall totals continued to be significantly below normal in FY 2001. Despite limiting discharges during the spring, only four of the ten reservoirs attained their specified summer lake levels by June 1. Cherokee and Nottely reservoirs reached minimum summer lake levels the first week in June, and Douglas and Fontana reservoirs the first week in July. Hiwassee and Chatuge reservoirs never reached their target minimum summer levels. Minimum levels were maintained at or above target on 8 of the 10 tributary lakes through August 1.

Societal Value Indicator Capital Investment Leveraged

Goal/Strategic Objective/Critical Success Factor

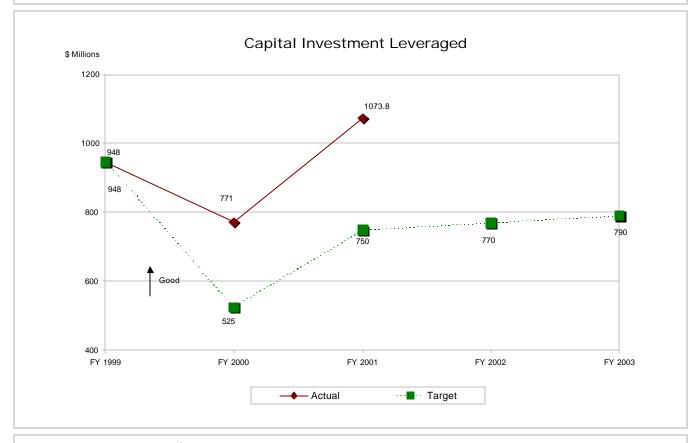
TVA Goal: Stimulate economic growth.

Strategic Objective 3.A: Support sustainable economic development in the Tennessee Valley.

Critical Success Factor 3.A.1: Promote development through targeted sustainable growth initiatives.

Description

Since 1933, TVA has played a significant role in economic and community development of the Tennessee Valley. Energy customers are interested in the economic development and vitality of their communities resulting from TVA's Economic Development projects, which focus on expanding and attracting industrial and commercial development and improving the economic competitiveness of Valley communities. In this performance goal, TVA is measuring the capital investment leveraged by public and private partners of projects in which TVA participates. The capital investment supports the generation of commerce in the distributor customer's market areas.



FY 2001 Target: \$750.00 million FY 2001 Performance: \$1,073.80 million

Targeted performance on this goal was achieved.

Performance Explanation: Initial capital investment forecasts were surpassed by actual performance in several regions. The location of IBP to Middle Tennessee leveraged \$74 million. The recruitment of Trex Company to the Northeast Valley brought \$50 million in investment while Ryan Foods in Kentucky brought \$50 million. Several loan projects in the Northeast Valley added to the strong performance as well as projects in West Tennessee such as the Drescher Corporation which leveraged \$60 million in capital investment.

Societal Value Indicator Jobs Added or Retained

Goal/Strategic Objective/Critical Success Factor

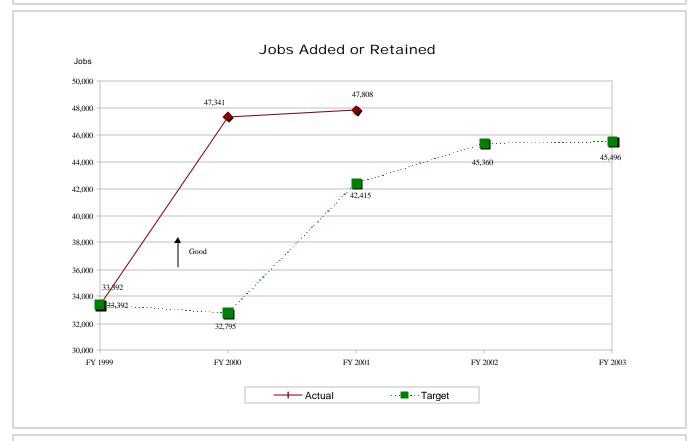
TVA Goal: Stimulate economic growth.

Strategic Objective 3.A: Support sustainable economic development in the Tennessee Valley.

Critical Success Factor 3.A.1: Promote development through targeted sustainable growth initiatives.

Description

TVA energy customers are interested in TVA's contribution to the economic development and vitality of their communities as it relates to jobs created and retained. This performance goal measures the number of jobs added or retained by firms that receive technical or financial assistance from TVA, as well as jobs added or retained with Regional Industrial Development Association (RIDA) assistance, in recognition of TVA's reimbursement to distributors of 50% of their support to RIDAs.



FY 2001 Target: 42,415 jobs FY 2001 Performance: 47,808 jobs

Targeted performance on this goal was achieved.

Performance Explanation: During FY 2001, TVA exceeded its target of assisting in the creation or retention of jobs by over 5,000 jobs. All regions had strong performance with Kentucky, Middle Tennessee, and Northeast Valley regions far surpassing performance forecasts. A principal contributor was the location of a major Wal-Mart distribution center in Kentucky employing 1,200 workers. The location of IBP in Middle Tennessee and the expansion of Nissan's facilities in Smyrna and Decherd had major impacts. Finally, several loan fund projects in the Northeast Valley contributed to the region's strong performance.

Appendix A:

Descriptions of Means to Verify and Validate Values Of Performance Goals

System Reliability (Load Not Served)

Measurement and Validation: This indicator shows the amount of time an average customer could expect to be interrupted if its load was constant throughout the year. The calculation uses current billing data to estimate the amount of load which was interrupted, the actual clock time of the interruption as related to TVA problems, the load actually served during the time period being examined, knowledge of load cycles for the customer, and the number of minutes in the interruption period.

The formula is:

((LNS in MWH)/(LS + LNS in MWH)) * the number of minutes in the period. For example, a 10 MW load is interrupted for 1 hour, resulting in 10 MWh of LNS. If the year long load served is 600,000 MWh, the LNS in minutes is: (10/(10+600,000))*525,600(minutes in a year)=8.76 minutes of LNS. The result is a normalized LNS in minutes that is calculated regardless of the load size.

Fossil Plant Equivalent Availability Factor

Measurement and Validation: TVA records the energy that can be provided by each fossil unit and divides it by the product of the unit's capacity and number of hours in the measurement period (nominally 8,760). The availability of all units is combined to determine the annual fossil system equivalent availability factor.

Conventional Hydro Equivalent Availability Factor

Measurement and Validation: TVA calculates the energy that can be produced by the hydro system based on individual unit capacity and availability and divides that sum by the product of the total system capacity at 100% availability and the number of hours in the measurement period (nominally 8,760). This provides a weighted average (equivalent availability factor) for all units in the hydro system.

Nuclear Plant Net Capacity Factor

Measurement and Validation: TVA records the energy produced by each nuclear plant and divides it by the product of the unit's capacity and number of hours in the measurement period (nominally 8,760). The availability of all units are combined to determine the annual net capacity factor.

Wholesale Customers with Continuing Contracts

Measurement and Validation: On the last day of the fiscal year, TVA will identify the number of its distributors that have continuing contracts (that have not provided notice of intent to terminate their contract).

Energy Sales (kWh)

Measurement and Validation: TVA's annual sales figures are published in its annual report which is audited by an independent accounting firm.

Delivered Cost of Power

Measurement and Validation: The electric power industry standard for measuring total cost is expressed in cents per kilowatt hours produced. TVA sums its total costs from its income statement and divides them by the total kWh sold. The FY 2003 target reflects a slight increase in total costs (excluding write-offs) and an increase in energy sales.

Debt/kW of Capacity

Measurement and Validation: TVA will report both its outstanding debt and the amount of generating capacity (owned and leased) in its annual report, which is audited by an independent accounting firm.

Bond Rating

Measurement and Validation: TVA will report its bond rating as reported by the major bond rating agencies as of the end of September each year.

Reportable Environmental Events

Measurement and Validation: Each organization is responsible for reporting occurrences of violations that trigger notifications to, or enforcement actions by, a regulatory agency. Data are reported monthly and accumulated throughout the year to determine annual performance.

Sulfur Dioxide Emissions

Measurement and Validation: SO2 is measured using certified stack Continuous Emissions Monitors and reported on an annual calendar year basis to the public through an EPA emissions database. Total tons of SO2 emitted are divided by total TVA system (calendar year) generation to determine the tons emitted per GWH of generation.

Nitrogen Oxide Emissions

Measurement and Validation: NOx is measured via certified stack Continuous Emissions Monitors and reported on an annual calendar year basis to the public through the EPA database. Total tons of NOx emitted are divided by total TVA system (calendar year) generation to determine the tons emitted per GWH of generation.

INPO Index

Measurement and Validation: The individual parameters measure performance in Unit capability and Losses, Safety System Availability and Reliability, Fuel Reliability, Water Chemistry, Radiation Exposure and Industrial Safety. These individual parameters are weighted and combined into a single measurement Index. This index provides an indication of overall plant performance as well as a benchmark measurement to other plants' performance. The INPO Index is tracked monthly. Each year's September calculation will be reported as the annual performance on this measure.

Environmental Research Center (ERC) Resource Conservation and Recovery Act (RCRA) Cleanup (Percent Complete)

Measurement and Validation: TVA has developed a plan for achieving cleanup and remediation of the ERC site based on regulator requirements. This indicator tracks completion of these planned cleanup activities. Performance is reported based on the following formula:

ERC Site Cleanup (percent Complete)= Percent Complete ERC RCRA Corrective Action project (times 0.5) plus Percent of Designated ERC Structures Demolished (times 0.45) plus Percent of Surplus Chemical Disposal (times 0.05).

Flood Storage Availability

Measurement and Validation: This performance measure is defined as the percent of project days when actual storage availability is > allocated storage. Eleven tributary storage projects are included in this measure; in addition, a measure of the composite eastern system is also included. TVA measures reservoir levels at midnight each day for each of the projects. In a 30-day month, each storage project has a maximum of 30 project days when actual reservoir storage can be equal to or greater than the allocated storage. TVA sums the days when storage meets or exceeds the guideline. For example, if all 11 projects and the eastern composite had reservoir storage levels above those required for 20 of the 30 days, monthly performance would be 240/360=66.7%. Data are reported monthly and are accumulated over the entire year to determine the annual performance on this measure.

Days Navigable Waterway is Available from Knoxville to Paducah Measurement and Validation: This indicator measures instances when any segment of the Tennessee River is closed to navigation traffic. Lock operation and maintenance reports are the source of this information.

Shipper Savings

Measurement and Validation: Shipper savings is calculated as the product of the tons being shipped on the Tennessee River and the savings per ton attributed to barge transportation. Barge transportation is the cheapest mode for movement of certain commodities, thus barge transportation is compared in the indicator to the next least expensive mode which is generally rail carriage. In the indicator, average savings per ton is estimated by TVA to be \$9.24 (\$2000 data - 1st guarter 2000 rates). This number was a product of a TVA study undertaken for the U. S. Army Corps of Engineers (USACE). Huntington District, in 1995 as a component of their update of the Kentucky Lock study. These modal transportation rates are a combination of survey data and estimates from TVA's Barge Costing Model and the Rebee Rail Costing model. The rates are estimated by component (line haul cost, transfer cost, loading and unloading cost) and do not include any "water compelled" rate effect, that is, what the rail rate would be expected to be without barge competition. Assumptions in the calculation reflect an estimated margin for carrier profit. The data used to estimate total current tonnage transported on the Tennessee River are a combination of river and lock data. The river data is published annually by the USACE Waterborne Commerce Statistical Center (WCSC) in New Orleans, Louisiana, with about a two year lag. The lock data are published by the USACE Water Resources Support Center in Fort Belvoir, Virginia with a two month lag. In the shipper savings indicator TVA navigation economists forecast Tennessee River traffic by year.

Dissolved Oxygen Deficit Due to Forced Outages

Measurement and Validation: Of the 16 tailwaters monitored, 9 sites have continuous sampling systems. Additionally, all 16 tailwaters are sampled on a weekly or biweekly schedule at designated compliance points. The measure is calculated by subtracting the actual DO concentration during aeration system forced outages from the targeted DO concentration and multiplying this value by the number of days the actual concentration is below the target because of equipment forced outages.

Minimum Flow Achievement

Measurement and Validation: The performance measure is defined as the percentage of location days actual flow met the minimum flow target. Locations included in this measure include both TVA dams and other river sites where minimum flow criteria have been established. Criteria may be hourly, daily, or bi-weekly average flow. Flow measurement devices are provided at dams and other locations. Operational records are checked daily for compliance. TVA sums the days when a violation occurred at each of the 29 locations and divides by 29 locations times the days/month. Data are reported monthly and accumulated over the entire year to determine annual performance of this measure.

Watershed Water Quality

Measurement and Validation: TVA periodically assesses water resource and shoreline conditions of watershed units. These assessments measure how well waters in these units support beneficial uses (fishing, swimming, support of fish and wildlife, water supply) and sensitive natural resource areas as desired by the various stakeholders. Quality of watershed condition is generally measured using ecological health indicators of streams and reservoirs, state water quality assessments, and indices of shoreline/streambank riparian conditions. Watershed unit ratings (Good, Fair, or Poor) are updated annually based on current information.

Discretionary Zone Attainment

Measurement and Validation: The performance measure is defined as the percent of project days actual reservoir storage is within the discretionary operating zone. Projects included in this measure are the 10 tributary storage projects with MOG curves. TVA measures reservoir levels at midnight each day for each of the 10 storage projects. In a 30-day month, each storage project has a maximum of 30 project days when actual reservoir storage can be within the discretionary operating zone. TVA sums the days when storage was within the zone and divides by the total number of project days. For example, if all 10 projects had reservoir levels within the discretionary operating zone for 25 of the 30 days, monthly performance would be 250/300=83.3%. Data are reported monthly and are accumulated over the entire year to determine the annual performance on this measure.

Completed Comprehensive Reservoir Land Management Plans Measurement and Validation: TVA will report each reservoir land plan completed when it is published and made available to the public

Summer Reservoir Level Attainment

Measurement and Validation: Reservoir levels for 10 tributary storage projects are measured at midnight from June 1 to July 31 and checked against August 1 levels specified in the Lake Improvement Plan. There is the potential of maintaining summer reservoir levels for 61 days at each of the 10 reservoirs (610 days total) per the Lake Improvement Plan. If one reservoir's level missed its target for 10 of the 61 days, the indicator calculation would be 600/610=98.4%.

Capital Investment Leveraged

Measurement and Validation: Data are reported based on agreements reached and commitments made to establish or expand industrial capacity in the Tennessee Valley.

Jobs Added and Retained

Measurement and Validation: Data are reported based on announcements of new jobs created/retained by firms that receive technical or financial assistance from TVA, as well as jobs created/retained with Regional Industrial Development Association (RIDA) assistance (Note: Previously this indicator included only one half of the jobs created/retained through RIDAs. The indicator was modified to reflect the increased focus TVA is placing on its business relationships with the RIDAs. Actuals and targets have been restated to include 100% of RIDA jobs created/retained).