

*Tennessee Valley Authority*

Government Performance and Results Act (GPRA)

# **Annual Performance Report**

## **FY 2003**

For the Fiscal Year Ending  
September 30, 2003

Submitted to Congress  
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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 Tennessee Valley Authority's (TVA) actual performance and progress in achieving the goals and objectives identified in its annual performance plan for FY 2003. 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 GPRA Strategic Plan submitted to Congress for the period 2003-2008.

While TVA is a government agency, it is unique in that it receives no federal appropriations and must finance itself through sales revenue and borrowing. In addition to the normal challenges of operating and financing a \$7 billion business, TVA is now preparing for the transition from a monopoly to a competitive business model. To guide the organization through this transition, TVA has developed a corporate strategic plan consistent with and complementary to the plan required by GPRA.

A corporation of the federal government, TVA exists to improve the quality of life for the 8.5 million people of the Tennessee Valley. Now operating in an increasingly vigorous and competitive marketplace, TVA fulfills its mission of public service by making prudent business decisions and using the best practices of private enterprise.

## Mission Statement

The Tennessee Valley Authority was established to develop and operate the Tennessee River system to improve navigation, minimize flood damage, and provide energy and related products and services safely, reliably, and at the lowest feasible cost to residents and businesses in the multi-state 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 and water supply, 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.

# TVA Vision, General Goals, and Objectives

## **Vision**

*Generating Prosperity in the Valley*

## **Goals**

*TVA employees will set the standard for . . .*

### **Supplying low-cost, reliable power**

Meet the changing needs of power distributors and directly served customers for energy products and services in changing markets.

### **Supporting a thriving river system**

Minimize flood damage, maintain navigation, support power production, improve water quality, protect public health and the environment, and support recreational uses.

### **Stimulating economic growth**

Provide services based on core expertise to solve regional problems, protect natural resources, create jobs, and build partnerships for the public benefit.

*. . . to improve the quality of every life.*

## **Strategic Objectives:**

- Meet customers' needs with affordable, reliable electric power;
- Reduce TVA's delivered cost of power relative to the market;
- Continue the trend of debt reduction;
- Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship;
- Demonstrate leadership in sustainable economic development in the Valley; and
- Strengthen working relationships with all of TVA's stakeholders.

## Relationship of TVA's General Goals and Strategies to Performance Goals

Performance Goals are selected to support attainment of the General Goals and Strategies and are expressed as performance indicators and annual targets. The following table summarizes information from the previous section and demonstrates the linkages between TVA's General Goals, Objectives, Strategies, and Performance Goals / Measures.

### TVA GENERAL GOALS, OBJECTIVES, STRATEGIES, AND PERFORMANCE MEASURES

Goals	Objectives	Strategies	Performance Measures	
<b>1. Supplying low-cost, reliable power</b>	1.A Reduce TVA's delivered cost of power relative to the market.	1.A.1 Generate more for less.	<ul style="list-style-type: none"> <li>Delivered Cost of Power</li> <li>Productivity</li> </ul>	
	1.B Continue the trend of debt reduction.	1.B.1 Invest prudently.	<ul style="list-style-type: none"> <li>Debt Burden</li> <li>Bond Rating</li> </ul>	
	1.C Meet customers' needs with affordable, reliable electric power.	1.C.1 Improve power reliability to meet customer requirements.	1.C.1.1	<ul style="list-style-type: none"> <li>System Reliability (Load Not Served)</li> </ul>
			1.C.1.2 Achieve excellence in asset optimization and production processes.	<ul style="list-style-type: none"> <li>Asset Availability</li> <li>Fossil Plant Equivalent Availability Factor</li> <li>Hydro Equivalent Availability Factor</li> <li>Nuclear Plant Net Capacity Factor</li> </ul>
		1.C.3 Provide flexible contracts and competitive pricing of products and services.	<ul style="list-style-type: none"> <li>Energy Sales (kWh)</li> </ul>	
		1.C.4 Manage the environmental and safety impacts TVA's operations have on employees and the region.	<ul style="list-style-type: none"> <li>Reportable Environmental Events</li> <li>Sulfur Dioxide Emissions</li> <li>Nitrogen Oxide Emissions</li> <li>INPO Index</li> <li>Environmental Impact Index</li> </ul>	
		1.C.5 Achieve excellence in the customer value and relationship process.	<ul style="list-style-type: none"> <li>Customer Satisfaction Survey</li> </ul>	

Goals	Objectives	Strategies	Performance Measures
<b>2. Supporting a thriving river system</b>	2.A Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.	2.A.1 Minimize flood damage by operating the river system according to best management practices with flood control as a priority.	<ul style="list-style-type: none"> <li>• Flood Storage Availability</li> </ul>
		2.A.2 Maintain a navigable commercial waterway from Knoxville to Paducah.  2.A.3 Provide acceptable water quality.	<ul style="list-style-type: none"> <li>• Days Navigable Waterway Is Available from Knoxville to Paducah</li> <li>• Shipper Savings</li> <li>• Dissolved Oxygen Deficit Due to Forced Outages</li> <li>• Minimum Flow Achievement</li> </ul>
		2.A.4 Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir-level constraints.  2.A.5 Support recreational uses of the river system and associated federal lands.	<ul style="list-style-type: none"> <li>• Discretionary Zone Attainment</li> <li>• ERC RCRA Cleanup (percent complete)</li> <li>• Watershed Water Quality</li> <li>• Completed Reservoir Plans</li> <li>• Summer Reservoir Level Attainment</li> </ul>
<b>3. Stimulating economic growth</b>	3.A Demonstrate leadership in sustainable economic development in the Valley.	3.A.1 Promote development through targeted growth initiatives.	<ul style="list-style-type: none"> <li>• Economic Development Index</li> </ul>

## Economic Value Indicator

# Delivered Cost of Power

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.A:** Reduce TVA's delivered cost of power relative to the market.

**Critical Success Factor 1.A.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 the 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, relative to the market, enables TVA to remain competitive in a potentially deregulated and openly competitive environment. This assures TVA's customers competitively priced electricity.

### Delivered Cost of Power



**FY 2003 Target:** 4.12 cents/kWh  
**FY 2003 Performance:** 4.11 cents/kWh

Targeted performance on this goal was achieved.

Performance Explanation: Although kWh sales ended the year 1.7 percent less than plan, operational expenses were better than target, and lower interest expense offset higher pension financing and contributed to lower Delivered Cost of Power.

This indicator will be replaced by the O&M Costs indicator in the Budget Proposal and Management Agenda for FY 2005.

# Economic Value Indicator

## Productivity

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

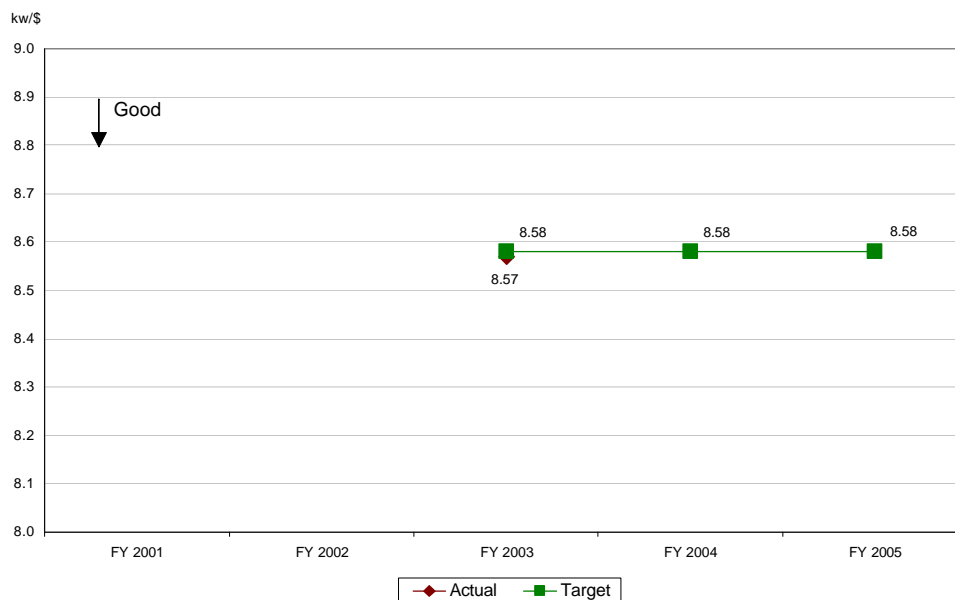
**Strategic Objective 1.A:** Reduce TVA's delivered cost of power relative to the market.

**Critical Success Factor 1.A.1:** Generate more for less.

### Description

Productivity measures the planned available generation per unit of labor and material costs (O&M). Planned available generation includes combustion turbine, conventional hydro, fossil, nuclear and pumped storage. This measure provides a direct line of sight for all employees by demonstrating their individual contribution in producing TVA's principal source of revenue—electricity. This measure is directly impacted by management decisions in managing labor and non-fuel O&M contract costs relative to electricity sold.

### Productivity



**FY 2003 Target:** 8.58  
**FY 2003 Performance:** 8.57

Targeted performance on this goal was achieved.

The variables and formula for this indicator will change in FY 2004 as described in the Budget Proposal and Management Agenda submitted for FY 2005.



## Economic Value Indicator

### Debt Burden

#### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

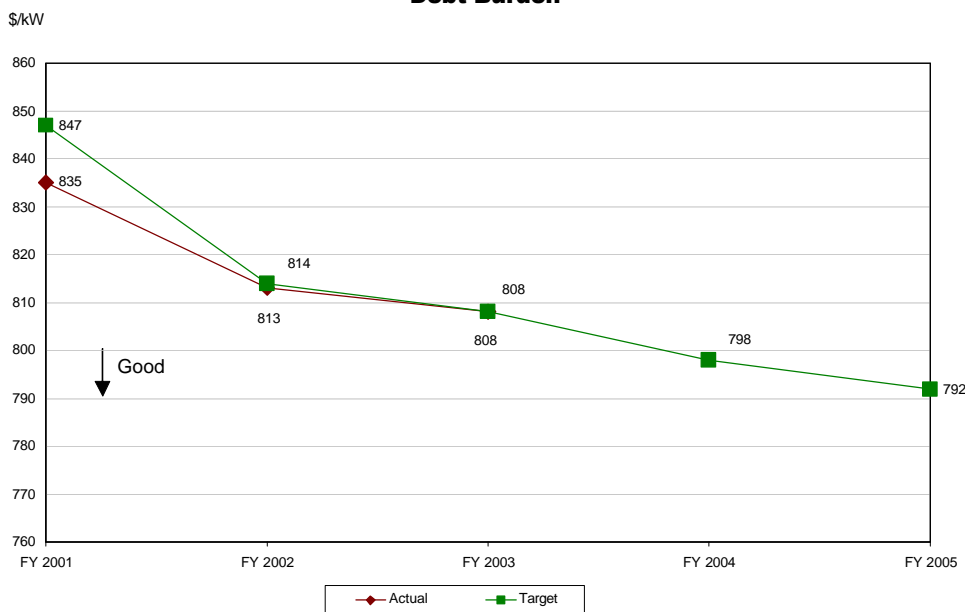
**Strategic Objective 1.B:** Continue the trend of debt reduction.

**Critical Success Factor 1.B.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 20 percent 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 support the changing demands on 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.

#### Debt Burden



**FY 2003 Target:** \$808 / kW  
**FY 2003 Performance:** \$808 / kW

Targeted performance on this goal was achieved.

Performance Explanation: Actual increases to capacity were 50MW. This reflects a 31 MW reduction at Bull Run, and reductions for various hydro projects. Actual debt reduction, excluding \$300 million reduced as a result of alternative financing, was \$80 million which is \$5 million more than the target of \$75 million. This indicator will be replaced by the Financial Strength indicator as described in TVA's Budget Proposal and Management Agenda for FY 2005.

## Economic Value Indicator

# Bond Rating

### Goal/Strategic Objective/Critical Success Factor

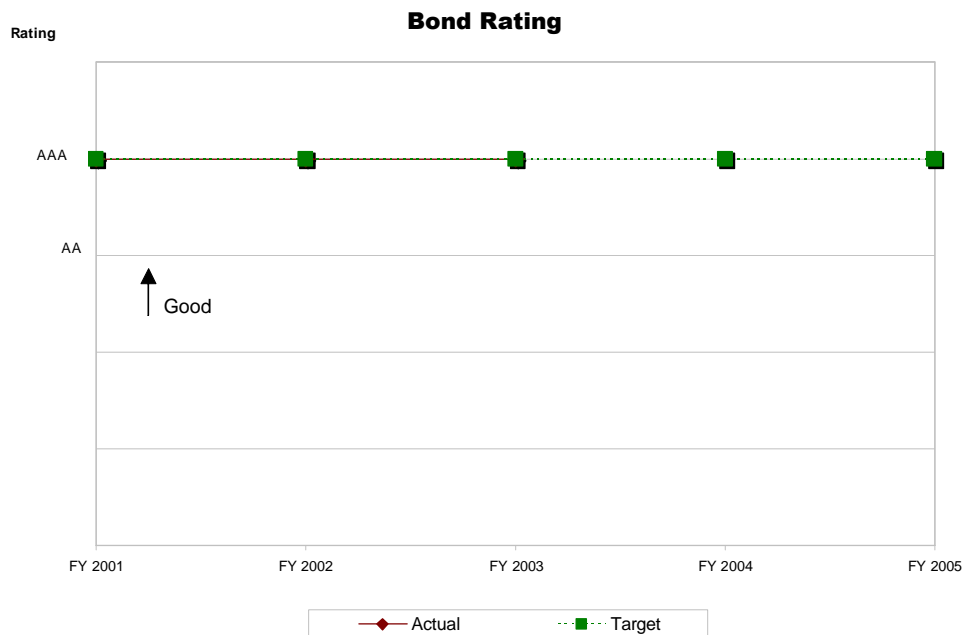
**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.B:** Continue the trend of debt reduction.

**Critical Success Factor 1.B.1:** Invest prudently.

### Description

This performance measure monitors TVA's success in maintaining its Triple-A rating. According to Moody's Investors Service, "The Aaa ratings on the Tennessee Valley Authority (TVA) power bonds derive from the legislation defining its business charter and authority, its strong operational performance and its status as a wholly-owned corporate agency of the U.S. Government although TVA's bonds are not guaranteed by the U.S. Government."



**FY 2003 Target:       AAA**  
**FY 2003 Performance:   AAA**

Targeted performance on this goal was achieved.

Performance Explanation: Independent bond ratings issued by Moody's Investors Service during FY 2003 documented TVA's continuing triple-A rating.

## Economic Value Indicator

# System Reliability (Load Not Served)

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

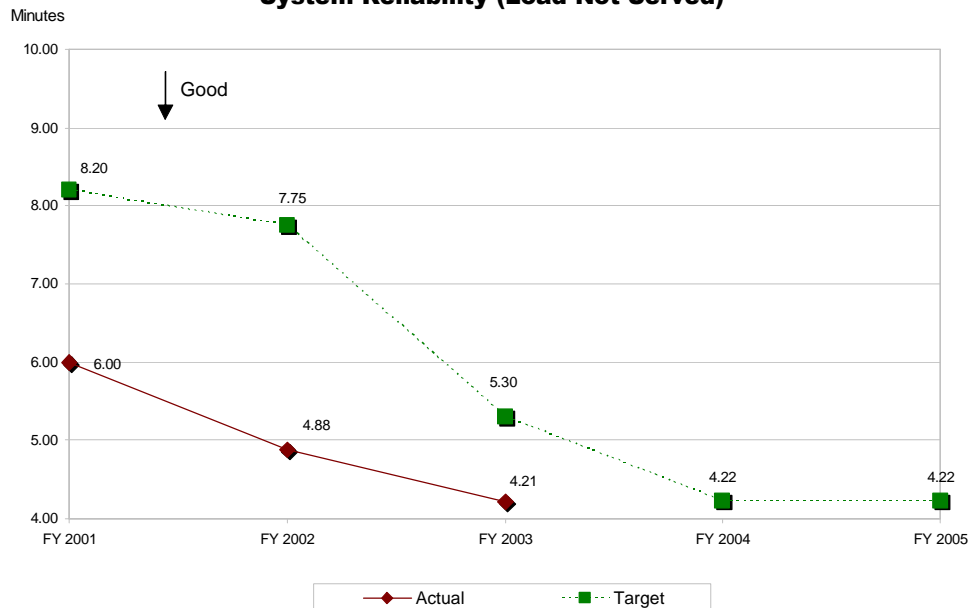
**Strategic Objective 1.C:** Meet our customers' needs by providing affordable, reliable electric power.

**Critical Success Factor 1.C.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 the number of minutes the average customer is without power each year.

### System Reliability (Load Not Served)



**FY 2003 Target:** 5.30 minutes

**FY 2003 Performance:** 4.21 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. Performance targets are based on maintenance efforts to maintain present reliability with an expanding and aging system without an increase in costs.

## Economic Value Indicator

# Asset Availability

### Goal/Strategic Objective/Critical Success Factor

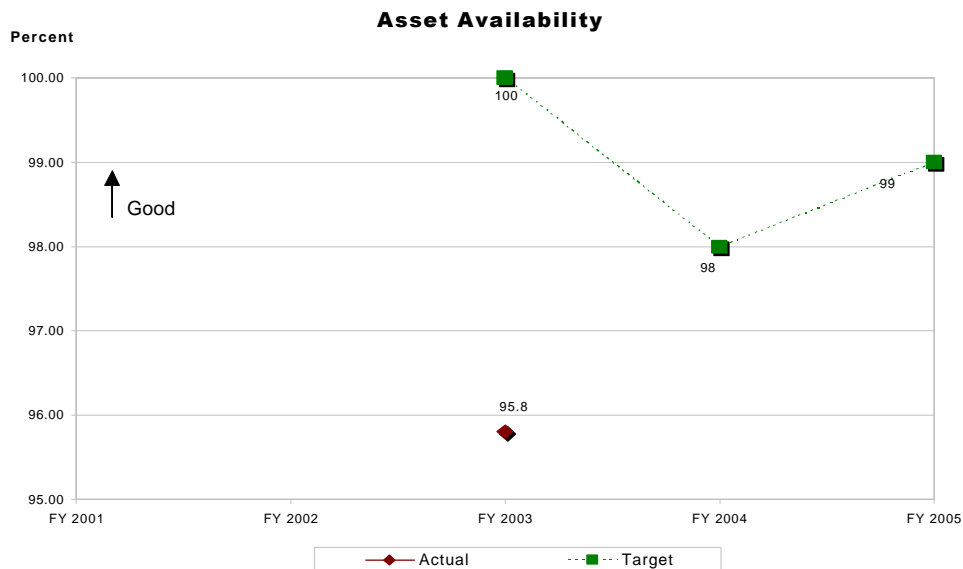
**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.C:** Meet customers' needs with affordable electric power.

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

### Description

Asset Availability is a monthly measure of how well TVA's generation system (excluding purchase contracts) performed compared to availability and price forecasts. It is the ratio of actual to planned availability multiplied by a value factor that reflects market price.



**FY 2003 Target:** 100  
**FY 2003 Performance:** 95.8

Targeted performance on this goal was not achieved.

**Explanation:** This goal was not met largely due to planned and forced outages. Forced outages included a fire at the Watts Bar Hydroelectric plant and two generator failures at Cumberland Fossil Plant. Three units at the Wilson Hydroelectric Plant were out of service for planned generator rotor inspections, and the steam generator outage at Sequoyah Nuclear plant exceeded schedule.

**Corrective Action:** Continuous improvement in operations and maintenance processes, acquisition of technologies, continued investment in existing assets, improved outage planning, scheduling and monitoring, and optimization of workforce/labor management.

*Economic Value Indicator*

**Fossil Plant Equivalent Availability Factor**

**Goal/Strategic Objective/Critical Success Factor**

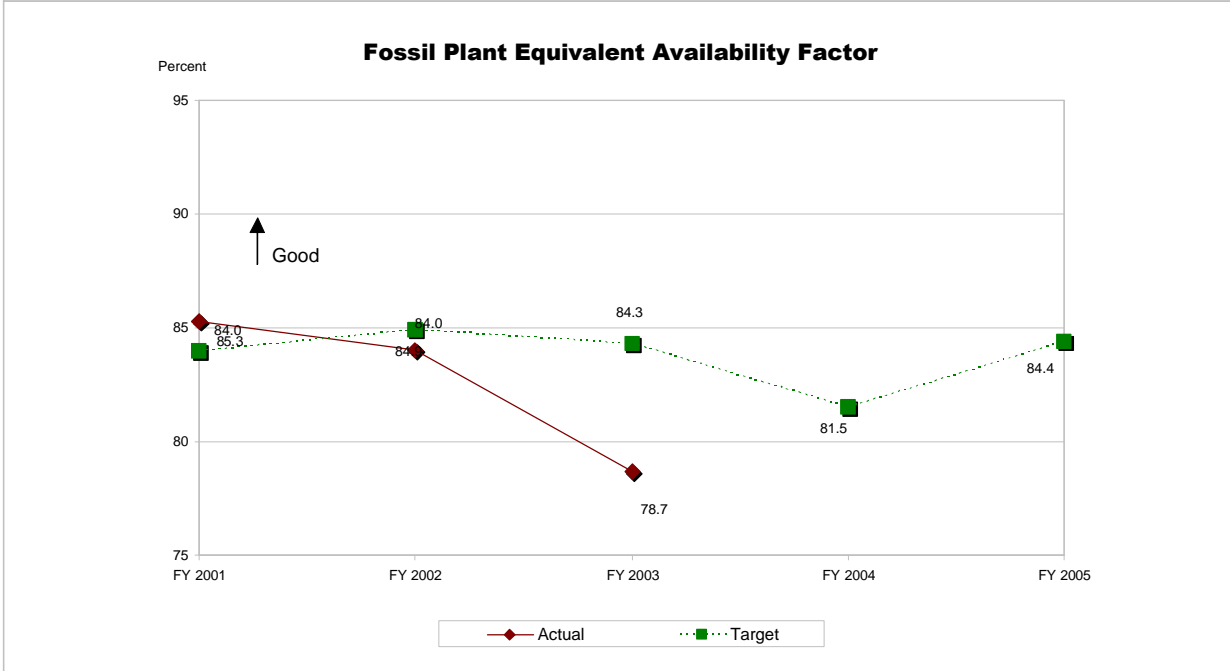
**TVA Goal:** Supplying low-cost, reliable power.

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

**Critical Success Factor 1.C.2:** Achieve excellence in the asset optimization and production processes.

**Description**

The retail distributors and industries that buy power from TVA require an adequate supply of electricity at lowest price in order to add value to their customers. To ensure that TVA can meet this 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 2003 Target: 84.3%**  
**FY 2003 Performance: 78.7%**

Targeted performance on this goal was not achieved.

Performance Explanation: The actual performance for FY 2003 was less than target primarily due to equipment problems that resulted in unplanned unit shutdowns and derates at Cumberland, Colbert, and Paradise Fossil Plants.

Corrective Action: Implement capital projects to update equipment resulting in improved plant performance. Action plans also include improved planned-outage scheduling and monitoring and continued focus on workforce performance, procedure, and compliance.

# Economic Value Indicator

## Hydro Equivalent Availability Factor

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

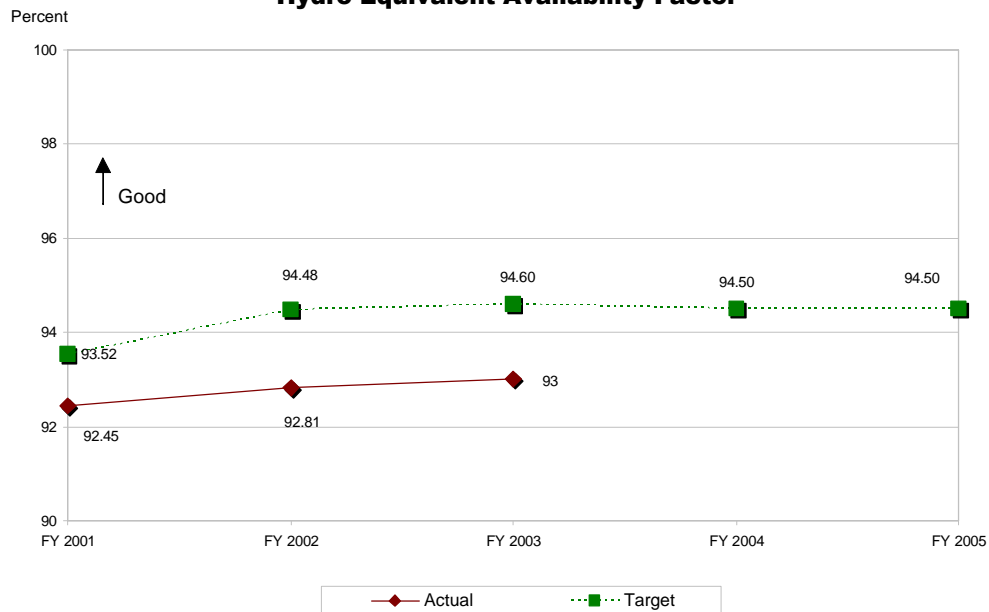
**Strategic Objective 1.C:** Meet our customers' needs by providing affordable, reliable electric power.

**Critical Success Factor 1.C.2:** Achieve excellence in the 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.

### Hydro Equivalent Availability Factor



**FY 2003 Target:** 94.6%

**FY 2003 Performance:** 93.0%

Targeted performance on this goal was not achieved.

**Performance Explanation:** Fiscal year 2003 EAF actual was below target due to forced outages and unplanned maintenance outages. Nickajack Unit 1, Ocoee Hydro #2, Watts Barr Units 1-5 experienced forced outages. Fort Loudon Hydro Unit 3, Ocoee Hydro #1, Ocoee Hydro #3 and Wilson Hydro experienced unplanned maintenance outages. These were unusual, non-recurring events.

**Corrective Action:** TVA has a long-term hydro-modernization program in process to address issues of reliability and equipment obsolescence.

## Economic Value Indicator

# Nuclear Plant Net Capacity Factor

### Goal/Strategic Objective/Critical Success Factor

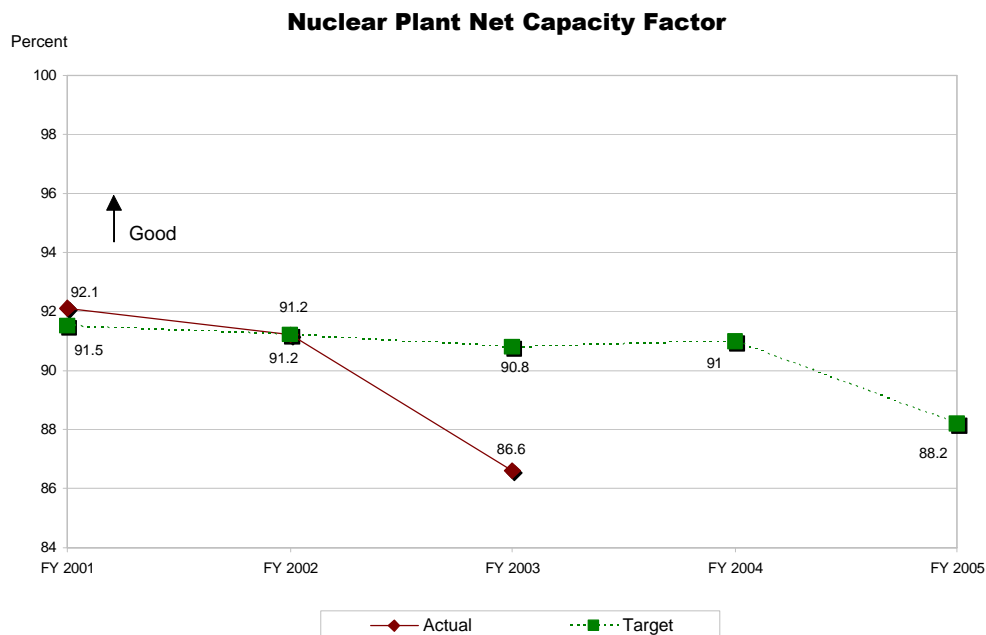
**TVA Goal:** Supplying low-cost, reliable power.

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

**Critical Success Factor 1.C.2:** Achieve excellence in the 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 2003 Target:** 90.8%  
**FY 2003 Performance:** 86.6%

Targeted performance on this goal was not achieved.

**Performance Explanation:** In FY 2003, the main contributor to not meeting the target was the occurrence of 15 outages (planned refueling, planned maintenance, and forced) during the fiscal year.

**Corrective Action:** Actions are being taken to minimize refueling outage duration and reduce unplanned outages.

## Economic Value Indicator

# Energy Sales (kWh)

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

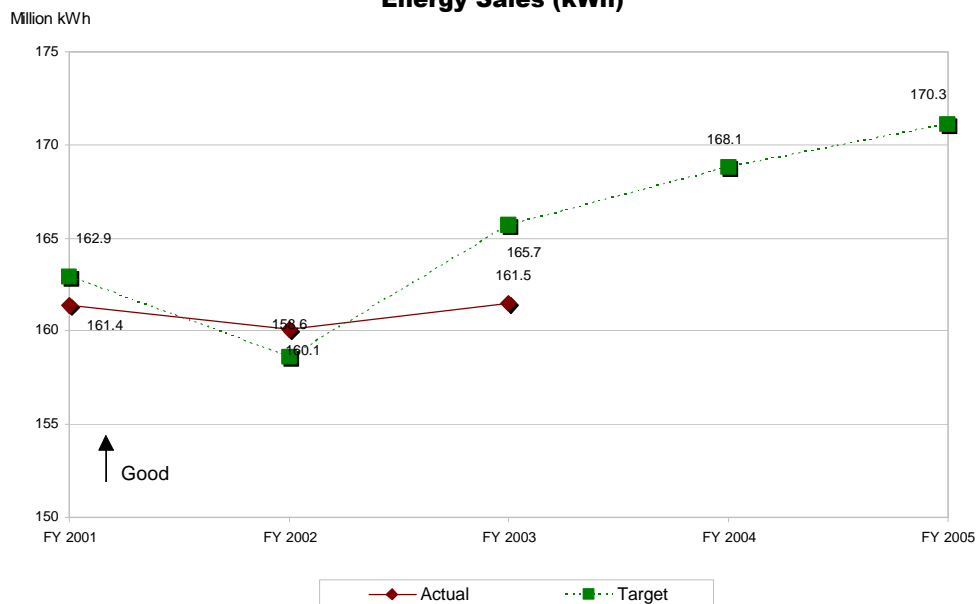
**Strategic Objective 1.C:** Meet our customers' needs by providing affordable, reliable electric power..

**Critical Success Factor 1.C.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 provides a broader base over which to spread TVA's fixed costs and thereby reduce the average cost of power delivered.

**Energy Sales (kWh)**



**FY 2003 Target:** 165.7 million kWh

**FY 2003 Performance:** 162.0 million kWh

Targeted performance on this goal was not achieved.

**Performance Explanation:** Energy sales were lower than target primarily due to the fact that cooling degree days were down 10.9 percent compared to plan.

**Corrective Action:** Weather is expected to return to normal ranges in FY 2004, therefore, no changes in targets or processes are necessary.



## Environmental Value Indicator

# Reportable Environmental Events

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

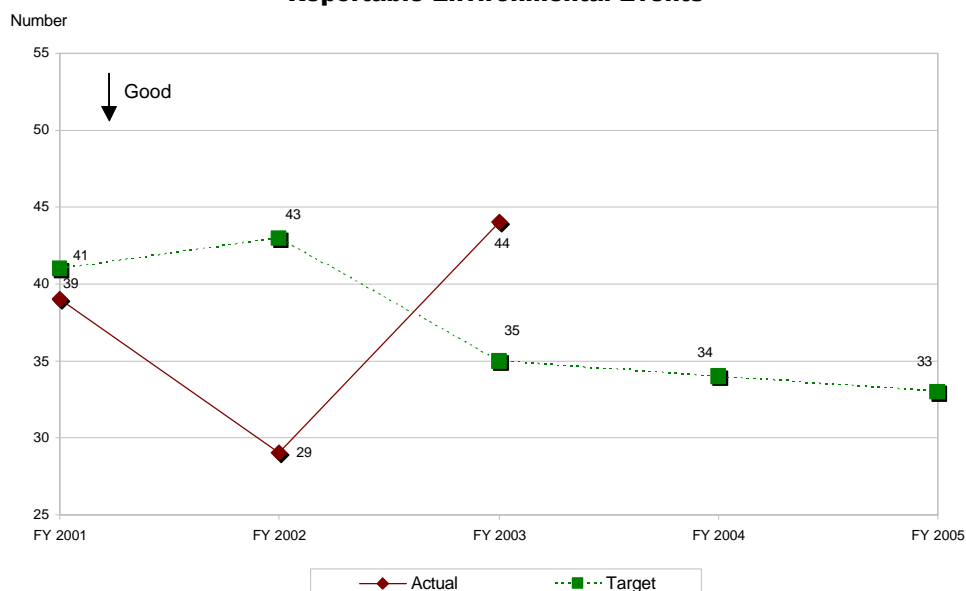
**Strategic Objective 1.C:** Meet our customers needs with affordable, reliable electric power.

**Critical Success Factor 1.C.4:** Manage the environmental and safety impacts TVA's operations have 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.

### Reportable Environmental Events



**FY 2003 Target:** 35

**FY 2003 Performance:** 44

Targeted performance on this goal was not achieved.

**Performance Explanation:** Actual performance was worse than target partially due to a change in the state regulator's practice of classifying paperwork errors in Hazardous Waste Reports as a "Notice of Violation" rather than as a "Notice of Deficiency." Additionally, water permit exceedances were higher than expected due to additional construction work at generating sites and flood conditions during 2003.

**Corrective Action:** TVA is working to maintain current understanding of applicable regulations. Investments in equipment, development of operating procedures, and personnel training implemented to ensure regulation compliance and employee and public safety. A mechanism for verifying compliance must be implemented.

## Environmental Value Indicator

# Sulfur Dioxide Emissions

### Goal/Strategic Objective/Critical Success Factor

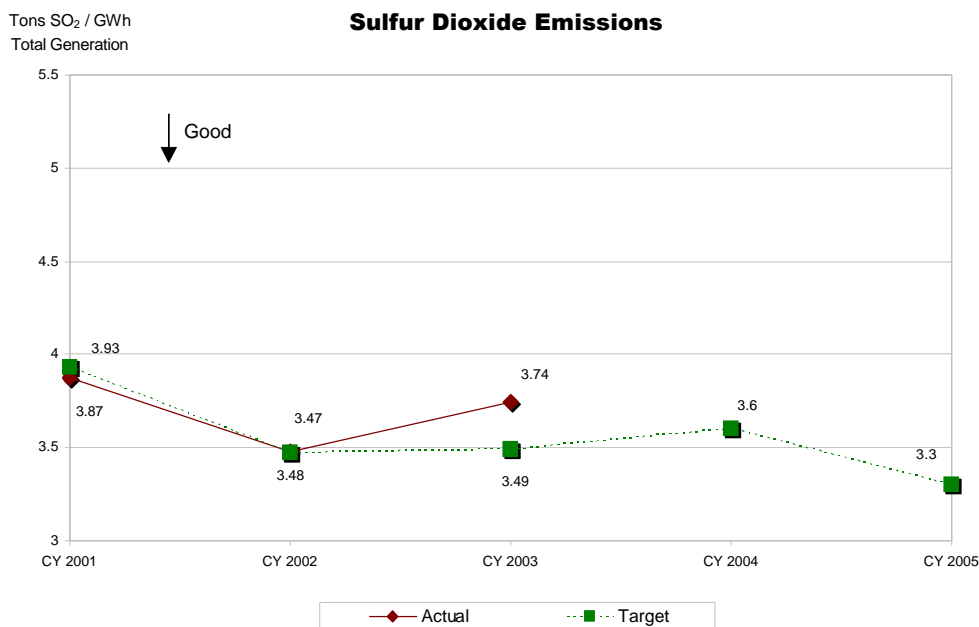
**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.C:** Meet our customers' needs with affordable, reliable electric power.

**Critical Success Factor 1.C.4:** Manage the environmental and safety impacts TVA's operations have 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 SO<sub>2</sub> emissions by using scrubbers and switching to lower sulfur fuels. TVA monitors its emissions to verify compliance with the Clean Air Act.



**CY 2003 Target:** 3.49 tons SO<sub>2</sub> / GWh

**CY 2003 Performance:** 3.74 tons SO<sub>2</sub> / GWh

Targeted performance on this goal was not achieved.

**Performance Explanation:** Performance was worse than target due to an extended outage at Cumberland U1, and burning a higher sulfur coal during part of the summer to alleviate SCR operational problems at Paradise U3.

**Corrective Action:** Implement the planned SO<sub>2</sub> reductions through fuel switches and scrubbers per the Spring 2002 Clean Air Strategy.

# Environmental Value Indicator

## Nitrogen Oxide Emissions

### Goal/Strategic Objective/Critical Success Factor

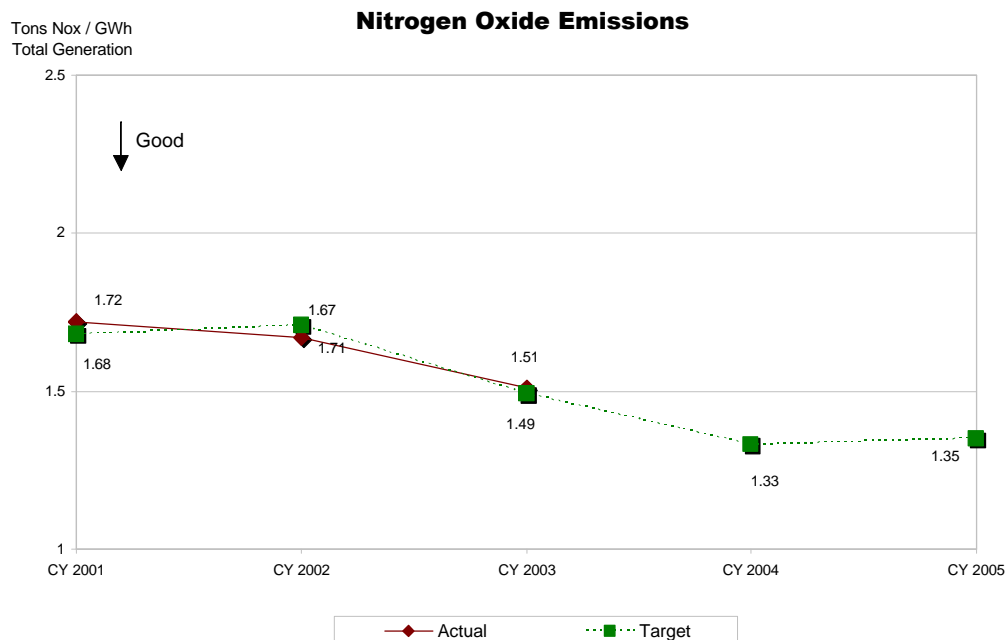
**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.C:** Meet our customers' needs with affordable, reliable electric power.

**Critical Success Factor 1.C.4:** Manage the environmental and safety impacts TVA's operations have 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 2003 Target:** 1.49 tons NO<sub>x</sub> / GWh  
**CY 2003 Performance:** 1.51 tons NO<sub>x</sub> / GWh

Targeted performance on this goal was not achieved.

**Performance Explanation:** Actual performance was slightly worse than target. Targeted goal was not achieved due to higher than planned NO<sub>x</sub> emissions during the Ozone Season as a result of operational issues encountered with new SCR systems coming online.

**Corrective Action:** Implement the planned NO<sub>x</sub> reductions of the Spring 2002 Clean Air Strategy through Selective Catalytic Reduction (SCRs) and Low NO<sub>x</sub> Burns (LNBs).

## Economic Value Indicator

# Institute of Nuclear Power Operators (INPO) Index

### Goal/Strategic Objective/Critical Success Factor

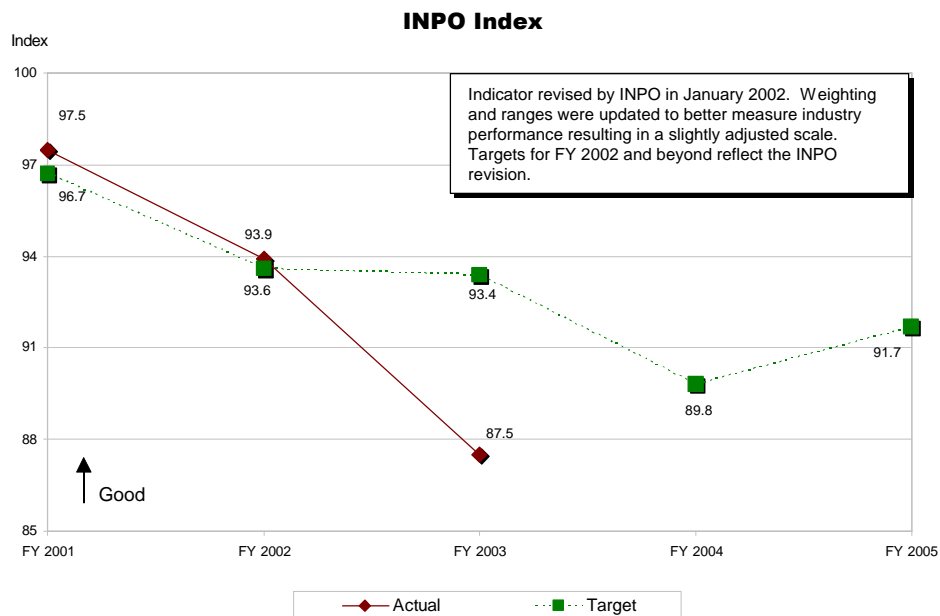
**TVA Goal:** Supplying low-cost, reliable power.

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

**Critical Success Factor 1.C.4:** Manage the environmental and safety impacts TVA's operations have 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 100.



**FY 2003 Target:** 93.4

**FY 2003 Performance:** 87.5

Targeted performance on this goal was not achieved.

**Performance Explanation:** Forced outages, four unplanned automatic scrams, were the largest contributor to not achieving the target goal. A planned steam generator replacement at Sequoyah Unit 1 also negatively impacted the indicator. In addition to forced outages, there were additional planned refueling and planned maintenance outages for a total of 15 outages.

**Corrective Action:** Implement actions to achieve top deciles in each of the ten INPO components. Report progress each month.

## Economic Value Indicator

# Customer Satisfaction Index

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supplying low-cost, reliable power.

**Strategic Objective 1.C:** Strengthen working relationship with all of TVA' stakeholders.

**Critical Success Factor 1.C.5:** Achieve excellence in the customer value and relationship process.

### Description

TVA's customers have provided consistent feedback on the importance they place on ease of conducting business with TVA and on the importance of quickly responding to their issues. Measuring these areas provides a basis for continuous improvement of each area and ultimately the relationships with the customers. Consistent with the American Customer Satisfaction Index, a basic tenet of the measure is that satisfied customers represent a real, albeit intangible, economic asset to an organization.



**FY 2003 Target:** 80.0  
**FY 2003 Performance:** 81.1

Targeted performance on this goal was achieved.

Beginning in FY04 Customer Satisfaction will not rely on customer feedback but will measure TVA's actual performance in the key areas identified as important by the customers. These key areas include power reliability, billing reliability, product timeliness and competitive price.

## Environmental Value Indicator

# Flood Storage Availability

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

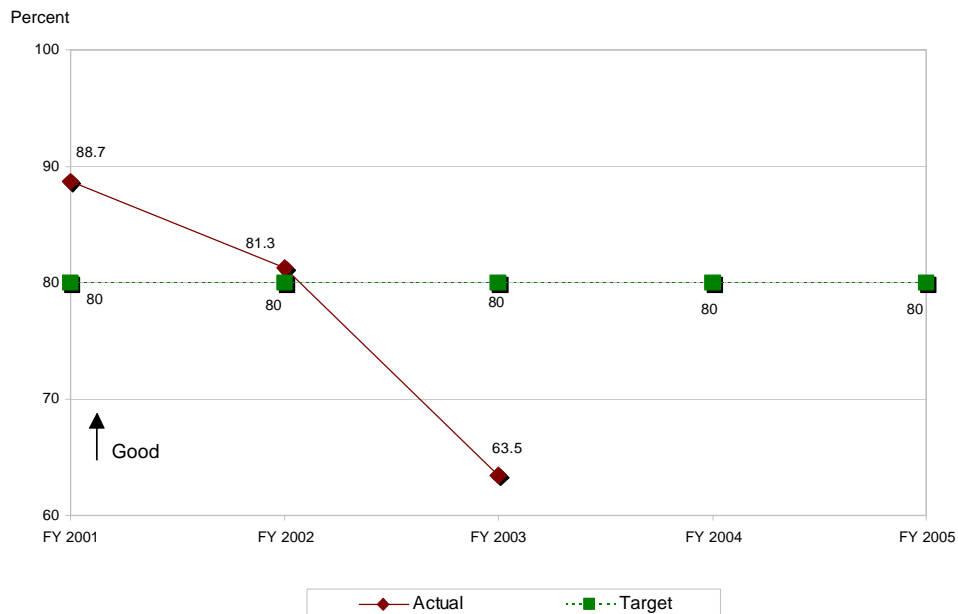
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.1:** 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.

### Flood Storage Availability



**FY 2003 Target:** 80.0%  
**FY 2003 Performance:** 63.5%

Targeted performance on this goal was not achieved.

**Performance Explanation:** Rainfall and runoff above Chattanooga were significantly above normal for the year, making it necessary to use all available flood storage space on the tributary and mainstream reservoirs. The major flood event in May required use of all available flood storage space throughout the system and spill events at most dams to prevent extensive flood damage.

**Corrective Action:** Rainfall and runoff are expected to return to normal ranges in FY 2004; therefore, no changes in targets or processes are necessary.

## Environmental Value Indicator

# Days Navigable Waterway is Available from Knoxville to Paducah

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

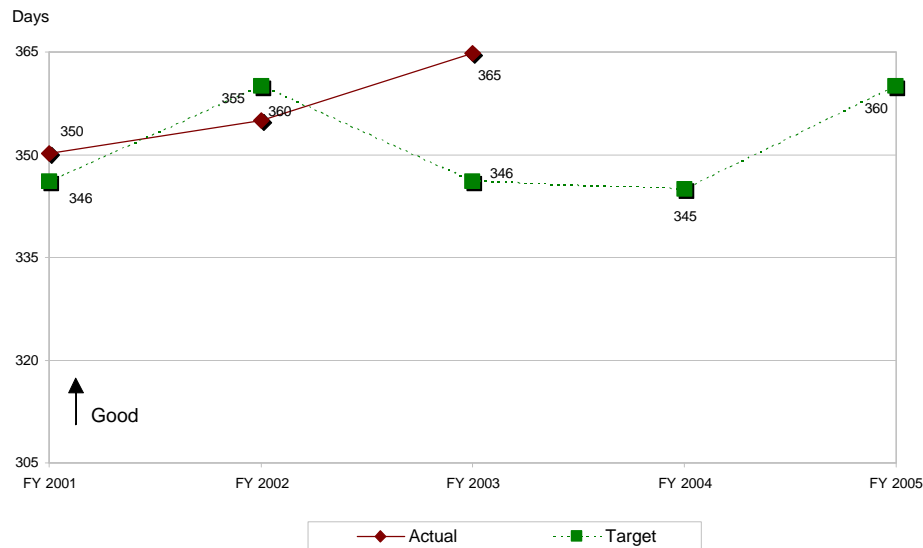
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.2:** 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 (9 foot) channel along the Tennessee River from Knoxville to Paducah.

**Days Navigable Waterway is Available from Knoxville to Paducah**



**FY 2003 Target:** 346.0 days

**FY 2003 Performance:** 364.8 days

Targeted performance on this goal was achieved.

**Performance Explanation:** Due to a change to the definition of this indicator, decisions by the U. S. Coast Guard to close the waterway to navigation due to high river flows were excluded from the measurement. Major flood events in February and May warranted closure of the river by the Coast Guard for 17 days and 9 days, respectively. However, due to the change in the definition of the indicator, these days were not included in our actual days available.

# Environmental Value Indicator

## Shipper Savings

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

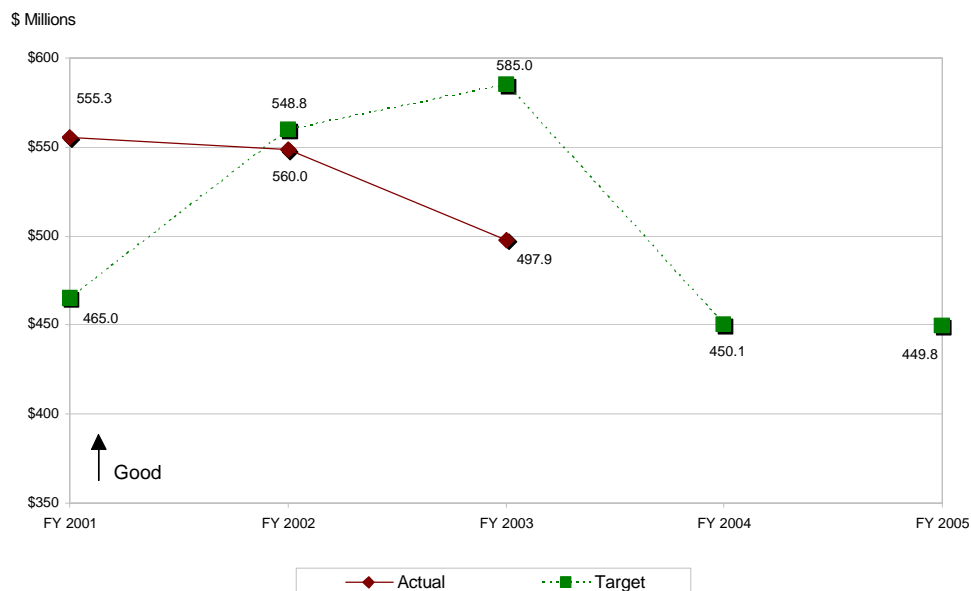
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**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.

### Shipper Savings



**FY 2003 Target:** \$585.0 million

**FY 2003 Performance:** \$497.9 million

Targeted performance on this goal was not achieved.

**Performance Explanation:** High water conditions resulted in several prolonged river closures and decreased barge traffic on the Tennessee River. Economic conditions were not favorable for barge transportation of raw materials. Manufacturing in several industries was reduced, and mild weather led to reduced coal use by TVA. These conditions reduced barge traffic and, in turn, shipper savings from barge use.

**Corrective Actions:** It is expected that weather and economic conditions will return to normal ranges in FY 2004.



## Environmental Value Indicator

# Dissolved Oxygen Deficit Due to Forced Outages

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

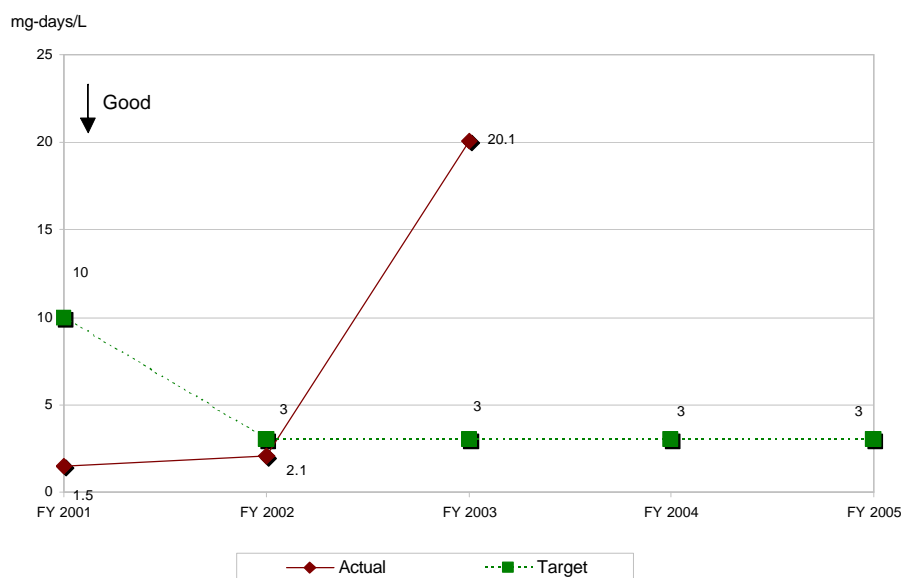
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.3:** Provide acceptable water quality.

### Description

Dissolved oxygen is an important component of water quality and vital to aquatic health. Dams have a detrimental impact on dissolved oxygen. The Reservoir Releases Improvement program initiated in the 1990's involved the installation of 15 aeration systems to reduce the negative impacts of TVA dams on tailwaters. These aeration systems are operated 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.

### Dissolved Oxygen Deficit Due to Forced Outages



**FY 2003 Target:** 3.0 mg-days/L  
**FY 2003 Performance:** 20.1 mg-days/L

Targeted performance on this goal was not achieved.

**Performance Explanation:** A change in the configuration of the aeration system at Nottely Hydro resulted in reduced air flow into the turbine during certain operating conditions when both air blowers were operating. In order to maximize air flow to the turbine, one of the air blowers was turned off. Consequently, the tail water dissolved oxygen target could not be met during most of August and September.

**Corrective Action:** A study is under way to determine how to correct the air flow problem. It is anticipated that problem identification and corrective action will occur before the beginning of the 2004 aeration season at Nottely.

## Environmental Value Indicator

# Minimum Flow Achievement

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

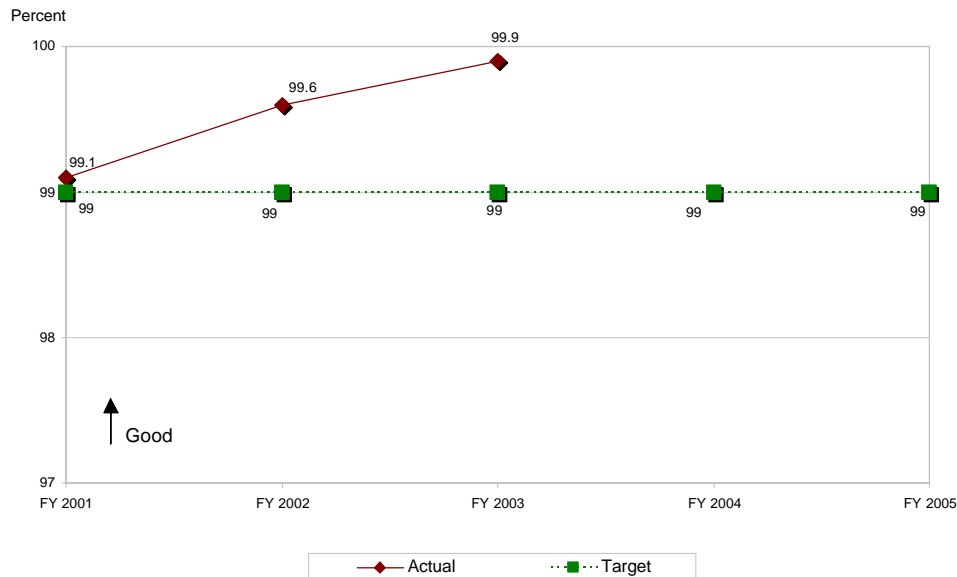
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.3:** 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.

### Minimum Flow Achievement



**FY 2003 Target:** 99.0%

**FY 2003 Performance:** 99.9%

Targeted performance on this goal was achieved.

Performance Explanation: TVA maintained required minimum flows at facilities.

# Environmental Value Indicator

## Discretionary Zone Attainment

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

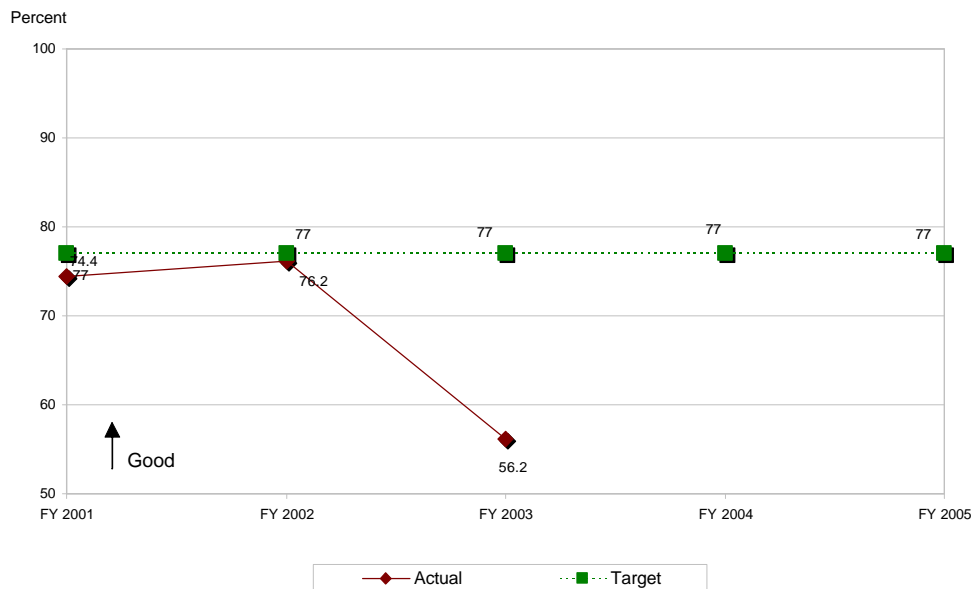
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.4:** 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.

### Discretionary Zone Achievement



**FY 2003 Target:** 77.0%

**FY 2003 Performance:** 56.2%

Targeted performance on this goal was not achieved.

**Performance Explanation:** Rainfall and runoff above Chattanooga were significantly above normal, making it difficult to achieve the discretionary zone target in flood-prone areas. A major flood event in May resulted in higher-than-normal pool levels throughout the reservoir system.

**Corrective Action:** It is expected that weather and economic conditions will return to normal ranges in FY 2004.

## Environmental Value Indicator

# Summer Reservoir Level Attainment

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system.

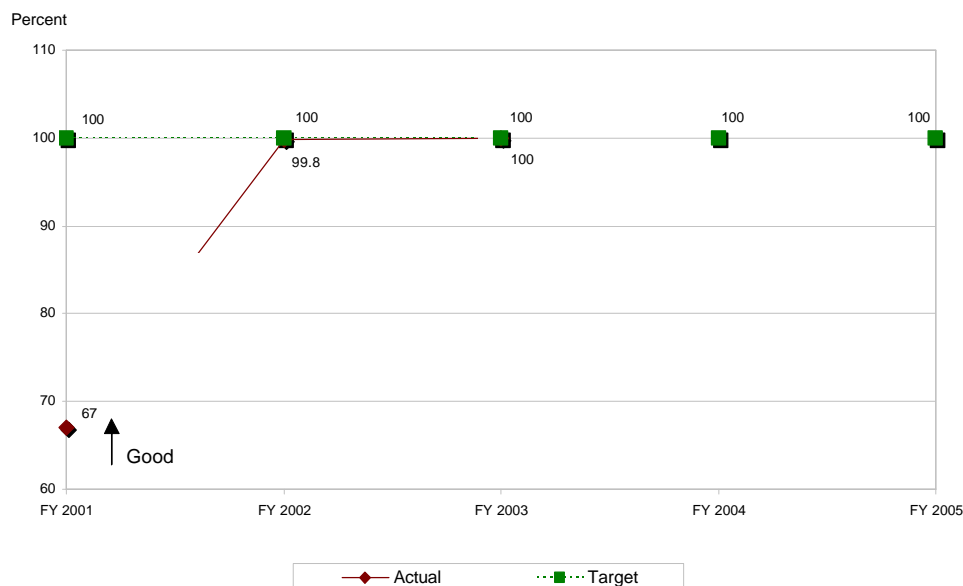
**Strategic Objective 2.A:** Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

**Critical Success Factor 2.A.5:** 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 that 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.

### Summer Reservoir Attainment Level



**FY 2003 Target:** 100%

**FY 2003 Performance:** 100%

Targeted performance on this goal was achieved.

Performance Explanation: Targeted minimum water levels were maintained.

*Environmental Value Indicator*

## Environmental Research Center RCRA Cleanup

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system

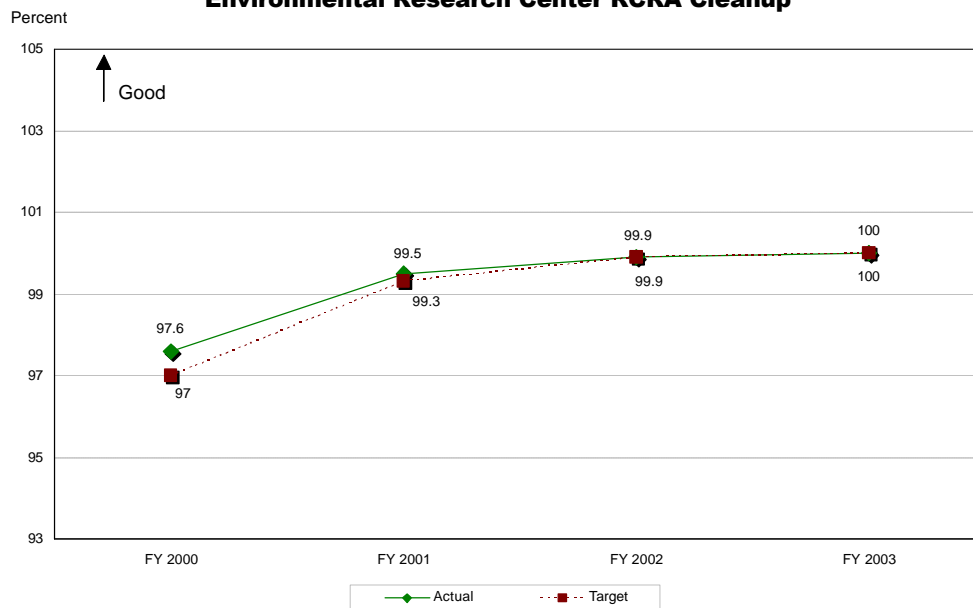
**Strategic Objective 2.A:** Enhance the quality of life in the Tennessee Valley through environmental stewardship and balanced, integrated management of the Tennessee River System.

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

### 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.

**Environmental Research Center RCRA Cleanup**



**FY 2003 Target: 100**  
**FY 2003 Performance: 100**

Targeted performance on this goal was achieved.

Performance Explanation: Cleanup activities were completed during FY 2003.

This indicator will be discontinued in FY 2004.

# Environmental Value Indicator

## Watershed Water Quality

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system

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

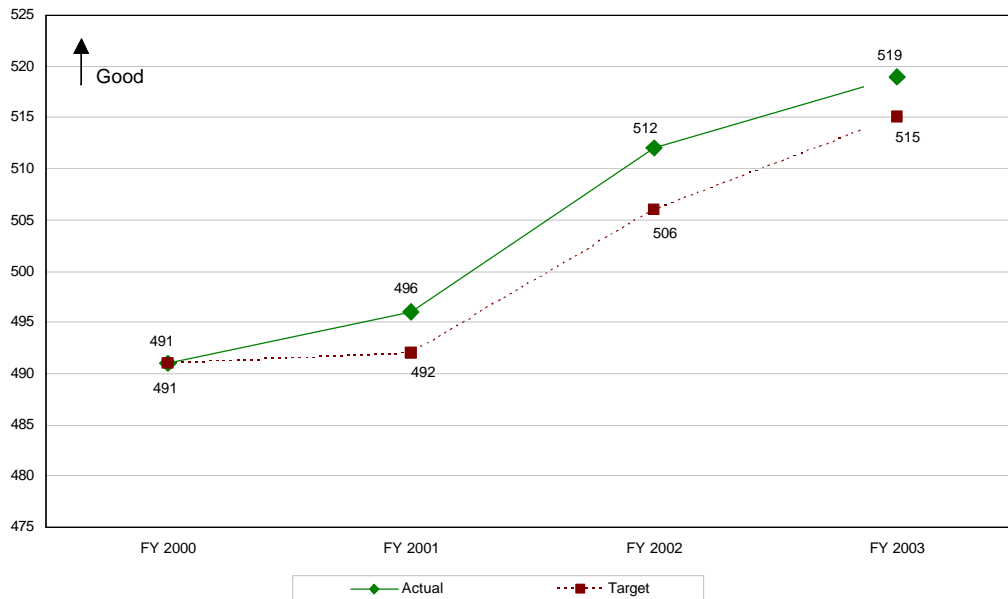
**Critical Success Factor 2.A.4:** Provide acceptable water quality.

### 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.

### Watershed Water Quality

# of Reservoirs Complete



**FY 2003 Target: 515**  
**FY 2003 Performance: 519**

Targeted performance on this goal was achieved.

Performance Explanation: At the end of FY 2003, 519 of 611 watersheds had in good or fair conditions.

This indicator will be discontinued in FY 2004. Components of this measure will be captured in the Environmental Impact Index indicator beginning in FY2004.

## Environmental Value Indicator

# Completed Comprehensive Reservoir Plans

### Goal/Strategic Objective/Critical Success Factor

**TVA Goal:** Supporting a thriving river system

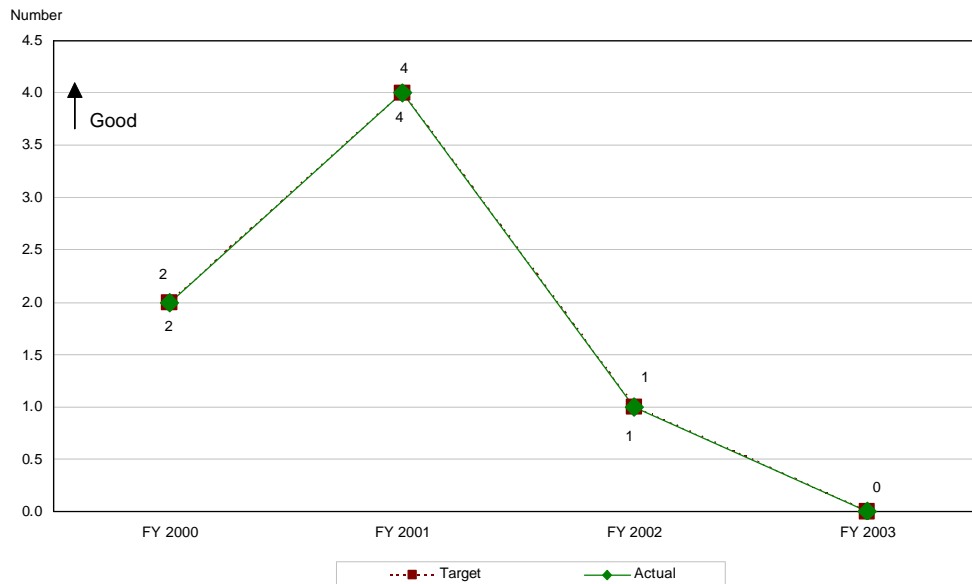
**Strategic Objective 2.A:** Enhance the quality of life in the Tennessee Valley through environmental stewardship and balanced, integrated management of the Tennessee River System.

**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.

### Completed Comprehensive Reservoir Land Plans



**FY 2003 Target:** 0

**FY 2003 Performance:** 0

Targeted performance on this goal was achieved.

Performance Explanation: After management review, it was determined that this indicator does not impact TVA's core business.

This indicator will be discontinued in FY 2004.

## Economic Growth

# Economic Development Index

### Goal/Strategic Objective/Critical Success Factor

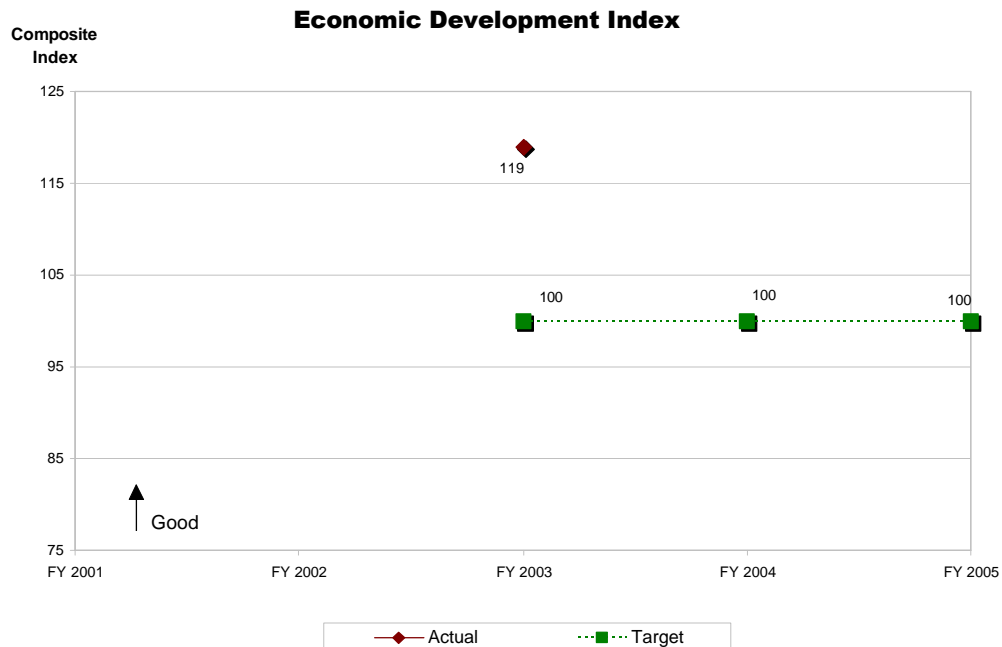
**TVA Goal:** Stimulating economic growth.

**Strategic Objective 3.A:** Demonstrate leadership in sustainable economic development in the valley.

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

### Description

Since 1933, TVA has played a significant role in economic and community development in the Tennessee Valley. Energy customers are interested in the economic vitality of their communities resulting from projects which focus on business growth and industrial development. In this performance goal, TVA is measuring the overall impact of employment opportunities, financial investment, and quality of life improvements for Valley residents.



**FY 2003 Target: 100**

**FY 2003 Performance: 119**

Targeted performance on this goal was achieved.

Performance Explanation: The target index consists of three components: jobs added or retained, capital investment leveraged, and jobs impact. While jobs added or retained achieved 99 percent of the target goal, capital investment exceeded the target goal by 150 percent and quality jobs was at 84 percent versus a target goal of 70 percent.

This indicator replaces Capital Investment Leveraged and Jobs Added and Retained.



## Appendix A

### Descriptions of Means to Verify and Validate Values Of Performance Goals

#### 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. Delivered Cost of Power will be replaced by the O&M Costs indicator in FY 2004.

#### Productivity

Measurement and Validation: This indicator demonstrates the impact of managing labor and material and services costs required to generate, transmit, and sell power in a competitive energy services marketplace. The target is based on TVA's adjusted non-fuel O&M annual budget cost (performance plan) divided by forecast planned availability. The variables and formula for the Productivity indicator will change for FY 2004.

#### Debt Burden

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. The Debt Burden indicator will be replaced by the Financial Strength Indicator in FY 2004.

#### 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.

#### 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:

$$\left(\frac{\text{LNS in MWh}}{\text{LS} + \text{LNS in MWh}}\right) * \text{the number of minutes in the period.}$$
 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:  
$$\left(\frac{10}{10+600,000}\right)*525,600(\text{minutes in a year})=8.76 \text{ minutes of LNS.}$$
 The result is a normalized LNS in minutes that is calculated regardless of the load size.

#### Asset Availability

Measurement and Validation: Asset Availability is calculated monthly as the ratio of actual to planned availability (in GWh) multiplied by a value factor. The value factor is based on the forecast monthly price for on-peak power for each month relative to the average forecast monthly price for the year.

#### 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.

#### 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 percent 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 is combined to determine the annual net capacity factor.

#### 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.

### **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: SO<sub>2</sub> 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 SO<sub>2</sub> 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: NO<sub>x</sub> 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 NO<sub>x</sub> 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 and the targets are determined based on industry top quartile performance. Each year's September calculation will be reported as the annual performance on this measure.

### **Environmental Impact Index**

Measurement and Validation: The Environmental Impact Index is a composite of environmental performance factors in terms of beneficial and detrimental impacts (or precursors) on Air Quality, Water Quality, Land, Waste Production, and Energy Consumption compared to a baseline of FY 02. The 29 elements forming the index are dispersed throughout the agency and data is provided by the owners on a quarterly basis. Measurements are made using a variety of methods: monitors, meters, scales, calculation, direct observation, utility bills, number of contracts, project planning, billing, and more.

### **Customer Satisfaction Index**

Measurement and Validation: Customer Satisfaction is a quarterly measure of customers' perceptions of TVA's performance in creating value for power distributor and directly served customers in the areas of account management, billing, transmission, contracts (Ease of Doing Business), and customer issue resolution (Issue Resolution). Ease of Doing Business is measured via quarterly surveys of power distributor and directly-served customers. Issue Resolution measures (quarterly) customers' perceptions of how well TVA performed in resolving customer issues. Targets for percent-satisfied scores are based on baseline data and comparative industry best-in-class performance. Ease of Doing Business and Issue Resolution scores are weighted based on revenue contribution (80 percent distributor, 20 percent directly served). This indicator will be replaced by the Customer Satisfaction indicator in FY 2004.

### **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 quarter 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 USACE's 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, nine 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.

#### **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 ten tributary storage projects with minimum operating guide (MOG) curves. TVA measures reservoir levels at midnight each day for each of the ten 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 ten 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.

#### **Summer Reservoir Level Attainment**

Measurement and Validation: Reservoir levels for ten 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 ten reservoirs (610 days total) per the Lake Improvement Plan. If one reservoir’s level missed its target for ten of the 61 days, the indicator calculation would be  $600/610=98.4\%$ .

#### **Economic Development Index**

Measurement and Validation: Data are reported based on commitments with strategic partners to support job growth, leverage project investments, and enhance job quality in the region.

## Appendix B

### Program Assessment Rating Tool (PART) — Status Update

#### *Power Program*

TVA's power program is entirely self-financed and does not receive any federal appropriations. The power program budget is, however, included in the consolidated Budget of the United States Government. TVA is the fifth largest electric utility in the country and the nation's largest public power provider. TVA generated power utilizing a diverse mix of coal-fired, hydro-electric, nuclear, and combustion-turbine plants to meet the electricity needs of 8.5 million people.

In the 2003 PART assessment, TVA received solid ratings for its operational performance; however, the power program scored less well in terms of strategic planning and debt reduction. The specific findings of OMB from the 2003 PART Assessment were as follows:

1. *“TVA does an excellent job generating power at its existing power plants. A decade ago TVA's nuclear power plants posed serious technical and safety problems. TVA has overcome these problems and today TVA's nuclear power plants set industry standards.”*
2. *“TVA lacks a strategic plan. This makes it hard to assess TVA's plans to spend billions of dollars on additional power plants and transmission lines.”*
3. *“TVA lacks a debt reduction plan, and has a high level of debt compared to many of its potential competitors in the electricity industry. ‘Debt’ includes both traditional notes and bonds and equivalent long-term liabilities such as lease/leaseback arrangements. The high level of debt increases TVA's financial risk and compromises its competitive position in a restructured electricity market.”*

#### TVA's response and actions related to these findings are as follows:

1. TVA continues to strive for, and achieve, operational excellence in the three areas of (a) supplying low-cost, reliable power to customers, (b) supporting a thriving river system, and (c) stimulating economic growth. Specific strategies, action plans, goals, and performance measures related to these three areas of operational performance are contained in TVA's FY 2005 Performance Budget.
2. In July 2002, TVA began an extensive strategic planning effort designed to identify how existing and proposed changes in the electricity sector business environment could impact its ability to carry out its core mission of power supply, integrated resource management, and economic development. The results of this effort are included in TVA's Strategic Plan that was included in its FY 2005 Performance Budget. TVA's Performance Budget incorporates, among other things, corporate business plans, power resources and operations plans, and environmental compliance plans. The TVA strategic planning process will continue as an iterative and adaptive process as market conditions and customer needs change.
3. The purpose of TVA's strategic planning effort is to address, in the context of larger changes in the market, how TVA can continue to balance (1) TVA's current mission of providing low-cost power, promoting economic prosperity in the Valley, and serving as steward of the Tennessee River system, and (2) its financial goal of continuing the trend of debt reduction. It is extremely difficult to predict the ultimate market structure that will evolve, the timing of its evolution, and its likely impact on TVA. Thus, while debt reduction is a primary strategic objective for TVA, these uncertainties mean that annual targets for debt reduction will need to be updated each year, as business conditions and legal mandates change.

### ***Non-Power Program - Water and Land Stewardship***

TVA serves the seven-state Tennessee Valley region through its management of the nation's largest public power system and the nation's fifth-largest river system, the Tennessee River. TVA dams and locks are operated as a fully integrated system to deliver multipurpose benefits. Navigation, flood control, and electric power generation are achieved while sustaining a balance between economic progress and protection of the environment. Public lands are managed to provide flood control, wildlife habitat, and recreation benefits.

In FY 2003, OMB gave TVA's stewardship program the highest rating awarded to any federal program and stated that TVA does an effective job in managing these activities at a reasonable cost. The Administration encouraged TVA to "continue to make a good program better and to continue to be responsible to the constituencies TVA serves."

TVA will continue to meet its obligation to operate and maintain its system of dams, reservoirs, and adjacent lands. Based on the authority provided in the Energy and Water Development Appropriations Act of 1998, TVA will fund its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA since FY 1999 and none are being requested for FY 2005. TVA funding levels for these activities are expected to continue at about the same level as in FY 1999 when TVA received appropriations of \$43 million to support this work.

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March 2004