

Tennessee Valley Authority

Government Performance and Results Act  
(GPRA)

# Strategic Plan

FY 2000 - 2005

*Submitted to*

**Congress**

*and*

**The Office of Management and Budget**

**September 2000**



## Foreword

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This Strategic Plan covers fiscal years 2000 through 2005 and fulfills the requirements of the Government Performance and Results Act of 1993.

This plan reflects a continuation of TVA's traditional multi-purpose mission and describes how TVA meets its statutory responsibilities for river system management and low-cost power production through an integrated approach to the management of the entire Tennessee River watershed.

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

# Table of Contents

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<b><u>Section</u></b>	<b><u>Page</u></b>
Introduction .....	3
TVA Ten-Year Business Outlook .....	4
Mission Statement .....	5
Benefits TVA Brings To Stakeholders .....	6
TVA's Vision, General Goals and Objectives .....	7
Strategies to Achieve Goals .....	7
Relationship of TVA's General Goals to Annual Performance Goals.....	14
Approach to Achieve Goals .....	18
Accountability .....	19
Resources Required .....	19
Discussion of Key External Factors .....	20
Summary of Competitive Strengths and Weaknesses .....	21
Program Evaluations .....	22
Coordination of Cross Cutting Functions.....	23
Data Capacity.....	24
Treatment of Major Management Problems and High Risk Areas .....	24
Description of Consultation with Stakeholders .....	25
A. Congress .....	25
B. Energy Customers .....	25
C. Users of Natural Resources .....	26
D. Investors .....	26
Conclusion .....	27

## Introduction

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The Tennessee Valley Authority (TVA), a wholly owned U.S. government corporation, is the nation's largest wholesale producer of electricity, the operator of the nation's largest public power system, and the manager of the nation's fifth largest river system.

Congress created TVA in 1933 "...for the purpose of maintaining and operating the properties now owned by the United States in the vicinity of Muscle Shoals, Alabama, in the interest of the national defense and for agricultural and industrial development, and to improve navigation in the Tennessee River and to control the destructive flood water in the Tennessee River and the Mississippi River Basins..."

The Act gave TVA broad powers to carry out its mandate for the unified development of the Tennessee River system and to meet its statutory responsibilities which today include management of the nation's fifth largest river system, 480,000 surface acres of reservoirs, 11,000 miles of shoreline, 293,000 acres of public lands, and 35,000 acres of lands associated with power generation facilities. In the 1950's, TVA was given additional authority to acquire assets required to meet the growing electrical energy needs of customers in its service area. TVA's power system has grown to become one of the largest and most efficient power systems in the country. The TVA power system consists of 11 coal-fired plants, three nuclear plants, 29 hydroelectric dams, combustion turbine peaking units, and a pumped storage plant. Together these plants provide over 28,000 megawatts of net dependable generating capacity. TVA provides power to 158 municipal and cooperative power distributors and directly serves 62 large federal and industrial customers through its network of 17,000 miles of transmission lines. Through these local independent public power distribution companies TVA supplies the electricity for about eight million Americans across a seven-state region.

In FY1999, TVA earned revenues of nearly \$6.6 billion from the sale of electricity. TVA meets all its financial needs through revenue from power sales and issuing debt: it receives no U.S. tax dollars to support any of its electric power or river and lands management activities.

In its early days, TVA electrified rural areas which private utilities were reluctant to serve because they were not profitable. Public power historically has played an important role by focusing on the common good - environmental stewardship, economic development, universal access, reliability, and safety. These are areas where TVA has demonstrated industry leadership and has an impressive track record. Public power has played a huge role in the development of this country's infrastructure and economy. TVA will continue to play an important role as a public power provider and will evolve in the new competitive marketplace to remain a valuable asset for the Valley and the Nation.

## TVA Ten-Year Business Outlook

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In July 1997, TVA released a Ten-Year Business Outlook. The purpose of that effort was to ensure that TVA's prices for electricity would remain competitive in the restructured electricity market of the future. Unlike a privately owned utility, TVA has no obligation to create profit for stockholders. However, TVA has responsibilities to create *value* for a variety of *stakeholders*, and those responsibilities have evolved beyond the original mandate of the TVA Act to accommodate new congressional directives and the changing needs of stakeholders.

Three years have passed since the development of the original Ten-Year Business Outlook, and a number of events have occurred that impact TVA's earlier projections. However, the progress made since 1997 makes TVA management confident that TVA will accomplish the principal objective – to keep costs competitive while meeting the needs of customers.

In April 1999, the U.S. General Accounting Office released an assessment of TVA's Ten-Year Business Outlook concluding that it "is moving TVA in the right direction toward its strategic objectives by addressing the key issues it faces." The GAO report was in response to a request from Congress to review TVA's report and assess whether: 1) it addresses the key issues facing TVA; 2) it includes all major relevant costs; and 3) all of its goals and assumptions are achievable or reasonable. In summary, the GAO only found two out of the ten key assumptions it questioned as unachievable: 1) the projected level of debt reduction, and 2) the projected level of capital expenditures.

TVA management developed the Ten-Year Business Outlook using the best information available in July 1997. Events since then, some favorable and some unfavorable, have occurred including:

- refinancing \$3.2 billion of Federal Financing Bank debt
- loss of appropriations – requiring power system funding of all essential river and land stewardship activities
- lower interest rates than anticipated
- prospects for additional clean air regulations
- summer power supply and pricing volatility
- transmission system congestion limiting the ability to import power
- stronger regional growth than anticipated

Influenced by these developments, TVA management decided to invest capital in additional peaking capacity and additional pollution-control equipment. Although this investment requires the use of funds that would otherwise have been used to pay down the debt, in the long run these investments will reduce TVA's cost of power and increase system reliability.

The GAO report recommended that TVA should revise and reissue its Ten-Year Business Outlook to reflect evolving conditions and their impact on TVA's ability to meet its objectives. TVA is currently in the process of such an update which it plans to publish in Fall 2000.

TVA is committed to continually monitoring the changing landscape and will update its Business Outlook as assumptions change in material ways. TVA will ensure that stakeholders, including customers, investors, Congress, and the Administration, are informed about progress toward meeting its objectives. Adjustments in TVA's business plan will also be reflected in this strategic plan at the appropriate times.

## Mission Statement

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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 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, 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.

## Benefits TVA Brings to Stakeholders

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TVA exists to generate prosperity for the seven state Tennessee Valley region through its management of the nation's largest public power system and the Tennessee River system. 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.

TVA's integrated resource management approach optimizes the benefits available to all stakeholders, including taxpayers. Its focus on total quality and process improvement allows TVA to provide these governmental services in the Tennessee Valley in a cost-effective manner. Federal tax dollars do not fund any TVA operations. All TVA activities are funded through revenues from power customers unlike the remainder of the country where other federal agencies receive federal appropriations for flood control, navigation, and public land management activities.

In addition, TVA annually repays to the federal government both principal and interest on the government's original investment in TVA's power system. Since 1961, TVA has paid to the U.S. Treasury a total of \$3.2 billion. In FY 2000, TVA made a \$55 million payment.

TVA's power program supports public power distributors and benefits the public by providing highly reliable, low cost electric energy to customers in seven states. Low cost power stimulates economic development and raises the standard of living in a traditionally depressed region of the country.

## TVA's Vision, General Goals, and Objectives

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In January 1999, the TVA Board of Directors issued a new statement of Vision and agency goals.

### 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.*

## Strategies to Achieve Goals

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### Goal 1: Supplying low-cost, reliable power

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

**Objective 1.A.                      Reduce the delivered cost of power.**

Strategy 1.A.1.                      Improve TVA's Cost Structure while making prudent investments.

Performance Goals:              • Delivered Cost of Power  
  ▪ Debt / MW Capacity  
  ▪ Bond Rating

### Relationship between the General Goal, Strategy, and Performance Goals

TVA will remain the energy supplier of choice in a deregulated environment by selling electricity competitive with the market price. A major component (about 27%) of TVA's total cost of power is interest expense. As TVA reduces and manages its outstanding debt it will reduce interest costs thereby shifting its cost structure to one that is better able to adjust to the volatility of a deregulated energy market.



However, this need to reduce debt must be balanced against the need to invest in existing facilities and new generation to ensure a reliable supply of power for the Valley. In addition, TVA must continue to make investments to comply with environmental regulations.

Achievement of this objective will require continued reductions in interest costs through close scrutiny of capital expenditures, maintaining an excellent bond rating, and developing innovative financing options. Debt reduction will depend on TVA's ability to maximize cash flow through limiting capital spending, controlling costs, and continued improvement in operation and maintenance processes which is dependent on a highly skilled workforce.

**Objective 1.B. Retain customers and grow stakeholder support.**

Strategy 1.B.1. Maintain revenue base.

Performance Goal: • Wholesale Customers with Continuing Contracts

Relationship between the General Goal, Strategy, and Performance Goal

TVA's wholesale customers, themselves public power providers, must also prepare for the coming deregulated energy market. TVA must be proactive in developing contractual arrangements that provide needed flexibility while ensuring that cost obligations are fairly allocated. TVA's relationships with its customers must benefit all parties in order for TVA to maintain its position as the Valley's energy supplier of choice. The selected performance goal will monitor TVA's success in developing and maintaining these win-win relationships.

Achievement of this objective will require developing innovative pricing structures that provide opportunities for customers to control their costs and modifying contracting arrangements to provide customers with increased flexibility.

Strategy 1.B.2 Provide competitive products and services.

Performance Goal: • Energy sales (kWh)

Relationship between the General Goal, Strategy, and Performance Goal

Success in the marketplace is measured by whether customers continue to choose your products and services. As a federal wholesaler of electric power and related services, TVA's customers are its 158 distributors and 62 direct served industrial and governmental entities. As electric utility industry restructuring develops, these customers will have increased choices of energy products and service providers. Annual measurement of sales will be an indicator of how well TVA's combination of price, quality, reliability, corporate citizenship, and customer service meets or exceeds those offered by other suppliers.

Achievement of this objective will require the creation, development and delivery of competitively priced products and services with the attributes desired by wholesale and large direct-served customers in the Valley.

Strategy 1.B.3. Achieve excellence in the customer value and relationship process.

Performance Goal: • Customer Focus Index

Relationship between the General Goal, Strategy, and Performance Goal

TVA's most recent customer research reveals that our customers expect providers to meet their individual needs. With the advent of industry restructuring and changing business drivers, customers are requiring customization. No longer does one size fit all.

TVA will be able to meet changing customer needs through targeting customer segments and providing products and services that meet the unique needs of those segments. This will require TVA to change from its "customer service" approach to one of managing processes to ensure "customer value".

TVA is in the process of developing new ways of measuring the value of our relationships with all of our customers. The initial measurement for this strategy will be a customer focus index designed to measure how effectively we are interacting with customers and meeting their needs through products and services that add value to the customer.

Achievement of this objective will require the development of new processes for determining and forecasting changing customer needs, creating targeted products and services to meet those needs, and delivering those products and services in ways that maintain and strengthen the long-standing relationships with these customers.

Strategy 1.B.4. Achieve excellence in stakeholder relations and communications processes.

Performance Goal: • Stakeholder Process Satisfaction Index

Relationship between the General Goal, Strategy, and Performance Goal

Maintaining effective relationships with stakeholders is essential to TVA's success and to its continuing existence as a public enterprise. Stakeholders are those who are affected by TVA and those who affect and influence TVA. Stakeholders include employees and retirees, customers, federal, state and local elected officials and regulators, the financial community, environmental groups, river system interests, economic development leaders, community leaders, nuclear interests and regulators, and suppliers.

Through positive relations and communications with stakeholders, TVA can more effectively anticipate issues, maintain consistency in its internal and external communications, facilitate better stakeholder understanding of the issues, and be proactive rather than reactive on emerging issues. Long-term effective stakeholder relations will positively impact TVA's ability to succeed in a changing regulatory and legislative environment. Ongoing feedback on TVA's processes for working with its various stakeholder groups will help TVA ensure it is effectively meeting their diverse needs for information while providing consistent messages on TVA's intentions and issues.

Achievement of this objective will require the continuous improvement of processes for identifying and addressing the information and communication needs of a wide variety of stakeholder groups. It will also require the development of clear, consistent messages concerning TVA's intentions and positions concerning natural resource and power supply issues that are important to the people of the Tennessee Valley.

**Objective 1.C. Optimize the use of assets and ensure reliability.**

Strategy 1.C.1. Maintain power reliability to meet customer requirements.

Performance Goal: • System Reliability (Load Not Served)

Relationship between the General Goal, Strategy, and Performance Goal

As restructuring is implemented, the focus by some suppliers on maximizing profits may have detrimental effects on service reliability. Based on input from customers, TVA will continue to emphasize high reliability while meeting market price.

Achievement of this objective will require continued improvements in operating and maintenance processes and the ability to acquire new technologies that improve system performance. A highly skilled, flexible workforce will also be required to provide demanded levels of service at reduced costs.

Strategy 1.C.2. Manage the environmental and safety impacts of TVA's operations on employees and the region.

Performance Goals:

- Reportable Environmental Events
- Sulfur Dioxide Emissions
- Nitrogen Oxide Emissions
- INPO Index
- Environmental Research Center Resource Conservation and Recovery Act Cleanup (Percent Complete)

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Relationship between the General Goal, Strategy, and Performance Goal

A reportable environmental event (REE) is any occurrence violating regulatory requirements at any TVA facility that triggers a notification to or enforcement action by a regulatory agency. The combustion of fossil fuels results in the production of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NO<sub>x</sub>). TVA has made multi-million dollar investments resulting in significant reductions in the emissions of these pollutants. Additional reductions in emissions will occur in the future as TVA continues to invest in emissions controls at its fossil facilities.

The INPO index is TVA's primary nuclear safety index. It is a weighted average of safety system availability, plant reliability, radiation dose, radwaste generated and personnel (industrial) safety. This index is an indicator of overall plant performance as well as a benchmark measurement to the performance of other nuclear plants in the U.S.

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.

Achievement of this objective requires that TVA maintain a current understanding of applicable regulations, that investments in emissions control equipment be made and operating procedures ensuring regulatory compliance and employee and public safety be developed and implemented, that personnel be trained to carry out these procedures, and that a mechanism be in place to verify compliance.

Strategy 1.C.3. Achieve excellence in asset optimization and production processes.

Performance Goals: 

- Fossil Plant Equivalent Availability Factor
- Hydro Plant Equivalent Availability Factor
- Nuclear Plant Net Capacity Factor

Relationship between the General Goal, Strategy, and Performance Goal

Strong economic growth and the uncertainty caused by the expected transition to a restructured electric market have resulted in increased price volatility and shortages of capacity throughout much of the United States. Developing and managing processes to have existing assets available when they are needed most will be critical to ensuring sufficient energy supply. In addition, forecasting changes in load growth and making optimal decisions on acquiring new generation and transmission assets are essential to having power available when it is needed at the lowest possible cost.

Achievement of this objective will require continued improvements in operating and maintenance processes and the ability to acquire new technologies that improve system performance. Continued investment in existing assets will be required, as will continued availability of a skilled, flexible workforce to provide demanded levels of service at reduced costs.

Goal 2: 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.

**Objective 2.A. - Manage the competing demands on the river system.**

Strategy 2.A.1. Minimize flood damage by operating the river system according to best management practices with flood control as a priority.

Performance Goal: 

- Flood Storage Availability

Relationship between the General Goal, Strategy, and Performance Goal

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. Operation of the system in accordance with these targets ensures that the priority placed on flood damage avoidance is maintained.

Achievement of this objective requires that TVA retain responsibility for integrated river operation, that existing world-class expertise be retained, and that investments in information technology be made as needed to maintain and improve data collection and modeling capabilities.

Strategy 2.A.2. Maintain a navigable commercial waterway from Knoxville to Paducah.

Performance Goals: 

- Days Navigable Waterway Is Available from Knoxville to Paducah
- Shipper Savings

Relationship between the General Goal, Strategy, and Performance Goal

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. These performance goals monitor TVA's effectiveness in meeting customer expectations and document the transportation cost savings to shippers using the Tennessee River system.

Achievement of this objective requires that TVA retain responsibility for integrated river operation, that the existing cooperation between TVA and the US Army Corps of Engineers (USACE) be continued, and that resources be available to maintain locks and related facilities. The concrete growth problem at Chickamauga Dam Lock will make it necessary to complete the design and construction of a replacement lock prior to its projected forced closure by 2010. Otherwise, navigation above Chattanooga will be terminated, and the continuous Knoxville-to-Paducah navigable waterway authorized by the TVA Act and completed by TVA in the 1940's will no longer be provided.

Strategy 2.A.3. Provide acceptable water quality.

Performance Goal:

- Dissolved Oxygen Deficit Due to Forced Outages
- Minimum Flow Achievement
- Watershed Water Quality

Relationship between the General Goal, Strategy, and Performance Goal

Ensuring that aeration systems are functioning and that minimum water flow rates are maintained helps TVA minimize adverse environmental impacts to aquatic habitats and potable water quality associated with dam operations.

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/reservoir ecological health and shoreline conditions.

Achievement of this objective requires that TVA retain the responsibility for integrated river operation and that cooperative relationships between TVA, state and federal agencies, and various regional river system user groups be continued, that trained personnel be available to identify and implement correction and protection activities, and that TVA retains the capability to conduct watershed assessments.

Strategy 2.A.4. Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir-level constraints.

Performance Goal: • Discretionary Zone Attainment

Relationship between the General Goal, Strategy, and Performance Goal

The discretionary operating zone is bounded by the flood guide and the minimum operation guide. Under TVA's river system operation methodology, power value is optimized by operating tributary storage reservoir levels within the discretionary operating zone when possible.

Achievement of this objective requires that TVA retains the responsibility for integrated river operation and maintains the human and information technology capabilities required to provide an integrated daily operating plan based on real-time hydrologic information. It also requires the capability to maintain the operability of TVA's aging hydro generation infrastructure.

Strategy 2.A.5. Support recreational uses of the river system and associated federal lands.

Performance Goals: • Completed Comprehensive Reservoir Land Plans  
• Summer Reservoir Level Attainment

Relationship between the General Goal, Strategy, and Performance Goal

TVA manages 293,000 acres of land around reservoir projects spanning seven states. The reservoir system is a nationally important recreation and tourism resource that attracts millions of visitors per year 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 comprehensive reservoir land plans that establish allowable uses for TVA property.

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 development impacts for the Tennessee Valley. This performance goal measures TVA's effectiveness in meeting the identified expectations of these user communities.

Achievement of this objective requires that TVA retain the human and financial resources to develop comprehensive reservoir land plans, establish and monitor land use agreements, and maintain and operate recreation facilities. TVA must also retain the responsibility for integrated river operation and have available resources to maintain and operate these facilities.

Goal 3: 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.

**Objective 3.A. Create and expand opportunities for targeted business and industrial growth**

Strategy 3.A. Promote development through targeted sustainable growth initiatives.

Performance Goals: 

- Capital Investment Leveraged
- Jobs Created or Retained

Relationship between the General Goal, Strategy, and Performance Goal

TVA's power revenue-financed economic development initiatives focus on expanding and attracting industrial and commercial development based on TVA's low-cost, reliable electric power and the quality of life in the Tennessee Valley. These performance goals measure TVA's effectiveness in attracting capital investment by key public and private partners and new jobs created by firms receiving assistance from TVA or Regional Industrial Development Associations.

Achievement of this objective will require a continued supply of low-cost, reliable electric power, developing partnerships with community and business leaders, providing technical and business services, and marketing the Tennessee Valley power service area.

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

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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, Strategies, and Performance Goals / Measures.

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

<b>Goals</b>	<b>Objectives</b>	<b>Strategies</b>	<b>Performance Measures</b>
<b>1. Supplying low-cost, reliable power</b> Meet the changing needs of power distributors and directly served customers for energy products and services in changing markets.	1.A. Reduce the delivered cost of power.	1.A.1. Improve TVA's cost structure while making prudent investments.	<ul style="list-style-type: none"> <li>• Delivered Cost of Power</li> <li>• Debt / MW of Capacity</li> <li>• Bond Rating</li> </ul>
	1.B. Retain customers and grow stakeholder support.	1.B.1. Maintain revenue	• Wholesale Customers with Continuing Contracts
		1.B.2. Provide competitive products and services.	• Energy sales (kWh)
		1.B.3. Achieve excellence in the customer value and relationship process.	• Customer Focus Index
		1.B.4. Achieve excellence in the stakeholder relations and communications processes.	• Stakeholder Process Satisfaction Index



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

Goals	Objectives	Strategies	Performance Measures
	1.C. Optimize the use of assets and ensure reliability.	1.C.1. Maintain power reliability to meet customer requirements.	<ul style="list-style-type: none"> <li>• System Reliability (Load Not Served)</li> </ul>
		1.C.2. Manage the environmental and safety impacts of TVA's operations 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>• ERC RCRA Cleanup (Percent Complete)</li> </ul>
		1.C.3. Achieve excellence in asset optimization and production processes.	<ul style="list-style-type: none"> <li>• Fossil Plant Equivalent Availability Factor</li> <li>• Hydro Plant Equivalent Availability Factor</li> <li>• Nuclear Plant Net Capacity Factor</li> </ul>

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

<b>Goals</b>	<b>Objectives</b>	<b>Strategies</b>	<b>Performance Measures</b>
<p><b>2. Supporting a thriving river system</b> Minimize flood damage, maintain navigation, support power production, improve water quality, protect public health and the environment, and support recreational uses.</p>	<p>2.A. Manage the competing demands on the river system.</p>	<p>2.A.1. Minimize flood damage by operating the river system according to best management practices with flood control as a priority.</p>	<ul style="list-style-type: none"> <li>• Flood Storage Availability</li> </ul>
		<p>2.A.2. Maintain a navigable commercial waterway from Knoxville to Paducah.</p>	<ul style="list-style-type: none"> <li>• Days Navigable Waterway Is Available from Knoxville to Paducah</li> <li>• Shipper Savings</li> </ul>
		<p>2.A.3. Provide acceptable water quality.</p>	<ul style="list-style-type: none"> <li>• Dissolved Oxygen Deficit Due to Forced Outages</li> <li>• Minimum Flow Achievement</li> <li>• Watershed Water Quality</li> </ul>
		<p>2.A.4. Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir- level constraints.</p>	<ul style="list-style-type: none"> <li>• Discretionary Zone Attainment</li> </ul>
		<p>2.A.5 Support recreational uses of the river system and associated federal lands.</p>	<ul style="list-style-type: none"> <li>• Completed Comprehensive Reservoir Land Plans</li> <li>• Summer Reservoir-level Attainment</li> </ul>

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

<b>Goals</b>	<b>Objectives</b>	<b>Strategies</b>	<b>Performance Measures</b>
<b>3. Stimulating economic growth</b> Provide services based on core expertise to solve regional problems, protect natural resources, create jobs, and build partnerships for the public benefit.	3.A. Create and expand opportunities for targeted business and industrial growth.	3.A.1. Promote development through targeted sustainable growth initiatives.	<ul style="list-style-type: none"> <li>• Capital Investment Leveraged</li> <li>• Jobs Created or Retained</li> </ul>

## Approach to Achieve Goals

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TVA has always been a results-oriented agency, from its early achievements in flood control and agriculture to more recent accomplishments in river operations and power generation. In FY 1999, TVA established its new Vision and Goals. In FY 2000, TVA is implementing a new performance management process that translates those goals into objectives, and then into strategies (or critical success factors). Action plans are being developed to identify how these objectives will be accomplished and how advancement toward those objectives will be measured. At this time, many new performance measures are still under development or have insufficient historical data to allow targets to be set. As experience is gained with these measures, the intention is to incorporate these measures as replacements for or additions to the present set of GPRA measures.

Measures will be monitored and reported monthly and reviewed by senior management. Resources are reallocated as necessary to ensure that objectives are met. Some of these measurements will be linked to employee and management compensation beginning in FY 2001.

TVA management recognizes that a critical factor in the successful implementation of any strategic plan is organizational transformation. Major initiatives in employee education, culture change, and labor relations are underway to prepare TVA's workforce to understand, accept, and implement changes necessary to become a performance-based, competitive organization. One of TVA's corporate values is "Innovation and Continuous Improvement". Employees are constantly working to increase value to customers and stakeholders, improve cycle time, and reduce cost.

TVA recognizes the need to continue to improve and develop workforce skills. As competitive pressures emerge, we will develop and retain a diverse workforce that is flexible, adaptable, highly skilled, and customer-focused. TVA will address employee challenges through its Integrated Staffing Plan (ISP), which will ensure that employees have the right skills available to do the right job at the right time. The ISP plan includes programs and processes for detailed workforce analysis and planning, recruiting, selection, diversity, succession planning, attrition management, education and development, and the retention and/or transfer of critical institutional knowledge and experience. The TVA University provides curricula and training opportunities to help employees prepare themselves for success in the workforce of the future.

## Accountability

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As a federal corporation, TVA is accountable to the President, to Congress, and to the people of the United States for meeting its statutory responsibilities and providing critical federal services effectively and efficiently. All of TVA's programs, from power generation and transmission to river and public lands management are designed and carried out to meet the needs of Tennessee Valley residents and visitors.

TVA also emphasizes employee accountability. TVA is moving its workforce toward annual performance objective-setting activities that provide a linkage between the employee's job duties and TVA's strategic goals. Currently for a majority of TVA's employees, the most critical work tasks required to support organizational objectives are documented. Achievement of these objectives is a prerequisite for merit raises and other financial rewards. Beginning in FY 2001, all of TVA's salary policy employees will participate in these annual performance-setting activities.

Corporate Values are translated into core competencies that are used in developing position descriptions and are evaluated by supervisors in annual performance evaluations and by peers and subordinates through a 360-degree feedback process. These mechanisms serve to reinforce desired behaviors that align with TVA's Values.

These programs emphasize accountability and focus employees on both personal and organizational achievement of performance objectives.

## Resources Required

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In FY 1998, TVA raised its firm power prices resulting in a 5.5 percent increase in power revenues. This rate increase, the first such increase since 1987, is a critical part of TVA's strategy to keep its prices competitive in the future restructured market by ensuring the reduction of its debt and interest payments. In other efforts to reduce costs, TVA has reduced its workforce from 34,000 to approximately 13,100 and tripled productivity since 1987.

The TVA Act gives the TVA Board both the authority and the responsibility to set electric rates at a level that enables it to cover all power system costs while also keeping rates as low as feasible. The Energy and Water Development Appropriations Bill of 1998 authorized TVA to use power revenues to pay for certain essential stewardship activities previously paid for through federal appropriations. TVA's operational and financial plans support the generation of revenues sufficient to meet all of TVA's financial needs.

In addition, TVA's success in carrying out its mission will require that TVA retain management and operational responsibility for the Tennessee River system and for other federal assets crucial to its statutory obligations. TVA must be able to develop and retain a highly trained, increasingly productive workforce. Also, TVA must implement process improvements and innovative work structures, acquire technology that allows automation and improved efficiency of facilities, and develop competencies in the areas of cost management and operating efficiency.

## Discussion of Key External Factors

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### **Utility Industry Restructuring**

The Energy Policy Act of 1992 (EPAct) signaled an intensified movement toward competition in the electric utility industry. The EPAct cleared the way for open transmission access for wholesale power transactions and also provided flexibility for IOU's to enter the global electric power development market. In addition to legislative changes affecting electric utility industry structure, technological developments created declining cost structures for new generation. Lessons learned from other deregulated industries indicate that the electric utility industry may be closer to the beginning of the transition to competition than to the end, but all of these factors lead to an environment that requires an efficient "business like" management style for future success.

In 1997, a Department of Energy advisory committee, with input from a wide range of stakeholders, set forth the Administration's principles for TVA's role in a restructured environment. In 2000, specific legislative language was agreed upon by TVA, the Tennessee Valley Public Power Association (representing TVA's 158 distributors) and the Tennessee Valley Industrial Council (representing many of TVA's direct served customers) for inclusion in any restructuring legislation. This legislative "title" fits within the principles espoused by the DOE advisory committee. It was introduced in Congress as S. 2570 by Senators Frist, Thompson, and Cochran.

To assure continued success in a restructured competitive market, TVA continues to identify opportunities for cost reduction, process improvement, and value creation. In its 1997 *Ten Year Business Outlook* TVA adopted a conservative approach by assuming the market price of power will be 3.46 cents per kilowatt-hour (kWh) in 2007. Recent projections from Resource Data International and the Energy Information Administration estimate market prices will increase to 4.09 and 3.69 cents per kWh, respectively. TVA is taking into consideration a range of future market prices for power in its current planning.

In anticipation of a more volatile market environment, TVA established a Risk Management Committee in 1999 to review and approve procedures for TVA-wide risk management. The committee will enable TVA to manage and mitigate risk associated with commodity markets, interest rates, and foreign currency exchange rates. All, in turn, contributing to a lower cost of reliable, delivered power.

TVA's operations are subject to various Federal, state, and local environmental statutes and regulations. During 1998, TVA adopted a new clean air strategy that is designed to reduce nitrogen oxide (NOx) emissions from its coal fired plants. This new strategy will raise TVA's cumulative investment in clean air to about \$3 billion. TVA is committed to improving the air quality of the region and nation.

Building on this commitment to deliver clean and reliable power, TVA established the Public Power Institute in the spring of 1999, in part, to help fulfill TVA's resource stewardship responsibility. In close coordination and collaboration with other federal and private entities, the institute will develop and demonstrate technologies and strategies for improving air quality and sustaining a reliable energy supply for TVA and other public power providers.

TVA will continue to monitor legislative actions at both the federal and state levels as well as actions by investor owned utilities. In addition, TVA will identify potential legislative changes that may be necessary to enable TVA to continue to meet its statutory responsibilities to bring the benefits of low cost power to its customers while continuing its traditional multi-purpose mission.

## Summary of Competitive Strengths and Weaknesses

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As TVA has developed and considered alternative strategies for success in a deregulated utility environment, it has examined its competitive strengths and weaknesses. A table summarizing these factors is shown below.

### TVA Strengths & Weaknesses

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Employee expertise and abilities</li> <li>• Integrated resource management approach and capabilities</li> <li>• Productive relationships with regional natural resource interests</li> <li>• Strong credit rating</li> <li>• Low production costs</li> <li>• Large generation capacity</li> <li>• Location of transmission system</li> <li>• Existing contracts with distributor customers</li> <li>• Self regulation / rate setting</li> </ul>	<ul style="list-style-type: none"> <li>• Aging infrastructure</li> <li>• Aging workforce</li> <li>• High fixed costs (interest, depreciation)</li> <li>• Low north/south transmission system transfer capability</li> <li>• Limitations on energy sales (Fence)</li> <li>• Lack of experience in unregulated markets</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>• Distributed generation</li> <li>• Transmission hub</li> <li>• Diversified energy services to distributor/direct served customers</li> <li>• Partnerships with public power distributor customers</li> </ul>	<ul style="list-style-type: none"> <li>• Customer loss</li> <li>• Predatory price cuts or other unfair practices by competition</li> <li>• Distributed generation</li> <li>• Fuel price increases</li> <li>• Cost of additional environmental regulation</li> <li>• Unfavorable restructuring legislation</li> </ul>

These strengths and weaknesses combined with consultations with stakeholders were taken into consideration in developing TVA's goals, objectives, strategies, and performance targets.

## Program Evaluations

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TVA conducts annual evaluations of the effectiveness of its program performance as part of its planning and budgeting process. Performance measures focused on the achievement of program objectives are established and results are tracked and reviewed on a monthly or quarterly basis. Gaps between targeted and actual performance achieved is one factor used in prioritizing projects and establishing resource requirements.

TVA uses comparative data to identify best-in-class performance levels that are used to evaluate the effectiveness and efficiency of TVA programs. Benchmarking projects are selected to learn how higher performance levels are achieved and whether redesign of TVA processes is appropriate to make similar gains.

TVA also conducts major evaluations of program areas when needed. Examples of such major efforts include the Lake Improvement Plan completed in 1991 and Energy Vision 2020, TVA's integrated resource plan completed in 1995, which addressed energy supply issues.

TVA is the subject of studies and audits by government agencies including the Government Accounting Office (GAO), Congressional Audit Staff, and the Office of Management and Budget (OMB). The following reports were issued over the last three years:

- GAO report "Federal Electricity Activities" – September 1997
- GAO report "TVA: Information on Nonpower programs" – March 1998
- GAO report "Federal Power: Options for Selected Power Marketing Administrations Role in a Changing Electric Industry" – March 1998
- GAO report "TVA: Assessment of the 10-Year Business Plan" – April 1999
- GAO report "TVA: Future Study of Reservoir Levels Should Involve Public and Consider Costs and Benefits" – May 1999
- DOE Energy Information Administration report "Federal Financial Interventions and Subsidies in Energy Markets 1999: Energy Transformation and End Use" – May 2000

In FY 1999, TVA's Office of the Inspector General performed audits on six of the indicators included in TVA's GPRA performance plan. These audits determined that the information used to calculate the indicators was adequate and reliable. The review of one indicator identified opportunities to improve the reliability of the data collection process for that indicator. The IG's recommendations have been implemented.

The results from all of these program evaluation efforts are used to identify opportunities for improvement and to set performance benchmarks that drive work process improvement efforts. TVA also utilized this information as the basis for its Performance Plan.

TVA will continue its annual evaluations of program effectiveness based on the performance measures identified in its annual performance plans. Benchmarking against other government agencies and industry will be used to establish best-in-class performance and TVA activities will be measured against the highest standards to ensure that critical services continue to be provided at the lowest cost to TVA's customers.

## Coordination of Cross-Cutting Functions

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TVA carries out a number of resource management functions in the Tennessee Valley that are the responsibilities of other agencies in other parts of the country. These functions include:

- Federal land management
- Flood control
- Navigation
- Recreation
- Water quality
- Regulated waterway shoreline construction permitting
- Management of cultural and natural resources

All of TVA's programs are coordinated as necessary to ensure that efforts are complementary and that duplication of effort is minimized. Examples of coordination mechanisms are described below.

TVA and the US Army Corps of Engineers (USACE) have a Memorandum of Understanding addressing responsibility for approving construction along regulated waterways in the Tennessee Valley. TVA and the USACE use a joint application and TVA forwards necessary information to the USACE to support their requirements.

TVA and the USACE also share responsibilities for navigation on the Tennessee River System according to a 1962 Memorandum of Agreement (MOA). As owner of the dams, TVA is the lead agency. TVA has primary responsibility for work of a capital nature on the navigation system while the USACE has primary responsibility for operation and maintenance work. The MOA allows the interchange of these responsibilities in order to achieve efficient and cost effective use of each agency's resources. A separate MOA was implemented in 1991 for the design and construction of a new lock at Kentucky Dam. Since the purpose of this project was to resolve problems associated with the Kentucky-Barkley navigation system, the USACE was the lead agency. TVA and the USACE are also collaborating in efforts to ensure that concrete growth problems at Chickamauga Lock are addressed through an aggressive program of maintenance and repair and to evaluate options to ensure the long-term viability of navigation on the Tennessee River.

TVA and the USACE work closely to coordinate operations on the Tennessee and Cumberland River systems as appropriate. TVA provides flow forecasts for all projects on the Tennessee River and for Great Falls Reservoir which is located on a Cumberland River tributary. The USACE provides flow forecasts and release schedules for all other projects on the Cumberland River system, working with TVA power scheduling personnel as necessary to develop detailed hourly release schedules since TVA is responsible for power system transmission from the USACE Cumberland projects. In cooperation with the USACE, TVA also schedules releases from the USACE's Barkley Dam because Barkley and Kentucky Lakes are interconnected by an ungated canal.

During major floods on the Ohio or lower Mississippi Rivers, TVA releases from Kentucky Dam are coordinated through the USACE's regional office in Cincinnati, which has flood control responsibilities for the Ohio River.

TVA and the US Coast Guard share responsibilities for navigation system marking on the Tennessee River system. The Coast Guard maintains the marker systems on the primary commercial navigation channel and TVA maintains the system on secondary channels.



TVA conducts activities to monitor and protect threatened and endangered species and maintains critical databases in coordination with the US Fish and Wildlife Service.

TVA conducts site evaluation studies on TVA lands in cooperation with state agencies and in accordance with requirements of the National Archaeological Resources Protection Act and the National Historic Preservation Act, and then obtains concurrence by state Historic Preservation officers as needed.

TVA conducts conferences with US Forest Service Ranger Districts concerning land located on reservoir projects on an as-needed basis.

TVA coordinates with state wildlife resources agencies on the development of annual wildlife resource plans covering TVA lands under license to the states.

## Data Capacity

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TVA's data collection and reporting systems are accurate, complete, and timely and have been proven through years of use. In support of its total quality and business planning initiatives, TVA has established thorough and reliable information systems that provide all data necessary to report on identified performance measures. Accountability for data accuracy, completeness, and timeliness is assigned to the sponsors identified for each performance goal.

TVA's data collection and reporting systems provide performance data on a monthly basis, and these data are utilized by TVA managers and employees.

TVA's mission critical data systems were certified Y2K compliant through a comprehensive program of review and testing. No material Y2K failures were experienced.

TVA manages its accounting systems in accordance with Generally Accepted Accounting Principles and is required to have an independent audit on an annual basis. For FY99, TVA received an unqualified opinion from the accounting firm of PricewaterhouseCoopers LLP.

## Treatment of Major Management Problems and High Risk Areas

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TVA is not aware of any GAO or Inspector General-identified high-risk areas concerning TVA operations or management. TVA is not identified on GAO's High-Risk List.

## Description of Consultation with Stakeholders

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TVA uses many stakeholder consultation mechanisms to gather public comment on proposed initiatives. TVA uses data from these consultations in its decision-making processes and in identifying opportunities for improving performance. Examples include public meetings and focus groups for individuals interested in siting of new TVA facilities, flood control, water quality, shoreline management, public land utilization, and lake improvement. The public is invited to review and comment on formal public use plans and associated Environmental Impact Statements for projects like the Chickamauga Lock replacement. TVA holds frequent meetings with distributor and industrial customers as well as public meetings to discuss issues of general interest such as proposed transmission line routing.

In developing this strategic plan, TVA invited comments from its major stakeholder groups during FY 1999 and FY 2000.

### A. Congress

In accordance with GPRA requirements, TVA provided draft copies of this document to the following committees to obtain congressional input concerning this strategic plan:

House Transportation and Infrastructure Committee  
Senate Environment and Public Works Committee  
Senate Governmental Affairs Committee

TVA will continue to consult with these committees as well as other members from the TVA region as this plan continues to evolve.

### B. Energy Customers

TVA's energy customers are 158 municipal and cooperative power distributors and 62 directly served industries.

TVA continuously consults with its energy customers to obtain input on TVA products and services as well as key issues affecting the electric utility industry. The TVA Board members and senior executives regularly meet with individual power distributors and distributor and industrial customer associations. Also, TVA's Board Meetings are open to the public and are held throughout the Valley.

In addition, each customer has a high-level account manager dedicated to ensuring quality customer service and addressing key issues. Customer Service Managers each have from two to ten power distributors that they continuously contact to provide information and receive input. Industrial Account Managers, each with 12 to 15 accounts, perform the same function with directly served industries.

TVA has a variety of other methods to gather customer input. Account plan meetings are held annually with power distributors and TVA sponsors the Fall Industrial Conference for the directly served industries. Regional and individual power supply meetings are held regularly with power distributors to plan future power system requirements. Power supply meetings are also held with directly served industries as needed. Other methods include eliciting distributor participation in focus groups, pilot projects, and joint teams to provide input on new products and services or changes to existing products and services.

Yet another key link with customers is through their customer associations. There are 158 power distributor members of the Tennessee Valley Public Power Association (TVPPA). The TVPPA has a committee system that TVA utilizes to obtain input on various issues. Examples include the Rates and Contracts, Electricity Marketing, Power Supply, and Operations committees. TVA

also works closely with the Tennessee Valley Industrial Committee (TVIC), which is composed of many of the directly served industries.

### C. Valley Stakeholders

In FY 2000, TVA formed the Regional Stewardship Council under the Federal Advisory Council Act as a consultative body charged with providing input concerning TVA's river and public land management programs. At the initial meeting of this council in April 2000, TVA requested that members of the council, representing a wide range of stakeholders including power distributors, environmental groups, wildlife advocates, and members appointed by the governors of the seven states, review TVA's draft strategic plan and provide comments.

TVA interacts with special interest groups such as environmental organizations and lake user groups on a frequent basis. Formal public participation efforts such as those associated with TVA's Shoreline Management Initiative, Lake Improvement Plan, and public use plans are used when program-specific public input is needed, consistent with NEPA regulations pertaining to public notice and hearing requirements.

Meetings with representatives of environmental interest organizations serve to inform these stakeholders about TVA initiatives and to gather information on stakeholder concerns related to the environmental implications of TVA decisions. TVA's Green Power pilot and its planning for compliance with future environmental regulations are two examples of programs where stakeholder input is incorporated into planning efforts.

TVA also publishes on its website information monthly concerning future public meetings in regional and local media as part of the "Conversations With America" program.

Data from these interactions were taken into consideration in developing this strategic plan and establishing the associated performance targets.

### D. Investors

TVA initiated an Investor Relations Program in 1996 to assist TVA in attracting and retaining investors, which results in lower costs to TVA to service its debt. Investor Relations was also established to ensure that TVA's more than 370,000 individual and institutional investors receive timely, accurate and complete information about TVA's financial and competitive position, business strategies and goals, while also providing a mechanism for investors to ask questions and provide feedback.

Several avenues of communication have been established to enable a two-way exchange of information:

- TVA distributes annual and quarterly financial reports to investors, customers, financial analysts, investment bankers, members of Congress and other key stakeholder groups.
- TVA established a toll-free investor line and an investor webpage to respond to investor needs and concerns and to provide additional information about TVA. In response to those needs, investors receive a variety of information including financial statements, bond offering circulars, and general information on the corporation.
- TVA is providing financial and investor information through its home page on the Internet. Documents available on the Web include the Annual Report, quarterly reports, TVA Fact Sheet, Corporate Profile, and bond offering circulars.
- TVA holds periodic meetings in a variety of locations with financial analysts and investors to provide information about TVA and answer questions they may have about the corporation.

## Conclusion

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TVA has overcome many challenges in its long proud history. TVA's partnership with the residents of the Tennessee Valley has demonstrated the success of TVA's integrated approach to regional natural resource management. TVA's public power partnerships with its municipal and cooperative distributors have provided the low-cost, reliable electric energy that has generated prosperity in the Tennessee Valley and improved the standard of living for millions of Americans.

TVA is preparing to face the challenges of the future by developing closer partnerships with its stakeholders. TVA will meet customer demands for the delivery of quality products and services at competitive prices. TVA will be a steward of federal assets in the Tennessee Valley, fueling sustainable development today while preserving natural resources for future generations.

As new information becomes available on national policy and stakeholder preferences concerning TVA's resource management responsibilities and on the role of public power under electric utility restructuring, TVA will revise this plan to ensure that it continues to meet the needs of the Tennessee Valley.