# Tennessee Valley Authority Government Performance and Results Act

Strategic Plan FY 2003 - 2008

Submitted to
Congress
and
The Office of Management and Budget
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#### Foreword

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. Because results of this planning effort will not be available until FY 2004, TVA is submitting this interim document to meet the requirements of the Government Performance and Results Act of 1993 for tri-annual revisions to agency strategic plans.

This document is a minor revision to TVA's previous GPRA Strategic Plan. Strategic objectives and performance measures have been updated to reflect changes that have occurred since the previous Plan was issued in FY 2000. 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 will issue a major revision to its GPRA Strategic Plan in FY 2004.

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

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## Introduction

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, 49 dams, 11,000 miles of shoreline, and 293,000 acres of public lands. 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 in the country. The TVA power system consists of 11 coal-fired plants, three nuclear plants, 29 hydroelectric dams, combustion turbine peaking units, a pumped storage plant, and renewable resources including wind, solar, and methane-fired generation. Together these plants provide over 31,500 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 8.3 million people across a sevenstate region. Current law restricts TVA's ability to sell electricity outside the region and restricts the ability of other suppliers to sell electricity inside the region (the Fence).

In FY 2002, TVA earned revenues of nearly \$6.8 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 that private utilities were reluctant to serve because they were not profitable. Public power historically has played an important role in our nation's development by focusing on the common good environmental stewardship, economic development, universal access, reliability, and safety. These are areas where TVA has demonstrated national leadership and established an impressive track record. 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.

## Planning for an Uncertain Environment

Electricity is one of the most capital-intensive industries in the country. Asset lives are typically in the range of 30 to 60 years, and lead times needed for construction are, at best, three to six years for new generation plants and can be two or more times longer for permitting and constructing new transmission lines. Given the long lead times needed to build new facilities, the electricity business is inherently subject to forecast error, and planning under uncertainty is the norm, not the exception. Normal planning uncertainties include those associated with projections about load growth, fuel costs, environmental regulations and associated compliance costs, technological change, and interest rates.

In addition to these normal uncertainties in electric power planning, the electric utility industry is continuing to evolve in ways that could have wide-ranging impacts on TVA and the way it achieves its mission.

This strategic plan is an update of the FY 2000 Strategic Plan that was filed in September 2000. It reflects the normal planning uncertainties described above but does not address the potential for more fundamental change in the structure of wholesale electricity markets. To assess how fundamental changes in the industry might affect the the federal corporation, TVA launched a major strategic planning initiative in July 2002. Its purpose 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. The plan will help TVA prepare for a new business environment by considering such factors as where TVA is in the industry today, what is changing in our industry, what our stakeholders want today and tomorrow, and how these changes might affect TVA and the operations it conducts to achieve its mission.

The strategic planning initiative under way is focused on several potential industry end-states. The ultimate outcome of restructuring is highly uncertain at this time and will depend upon legislative and regulatory initiatives which, in turn, will require greater national consensus than appears to exist at present. Thus, it is extremely difficult to predict the ultimate market structure that will evolve, the timing of its evolution, and its likely impact on TVA. These uncertainties mean that targets for debt reduction and other performance indicators will need to be updated each year, as business conditions and legal mandates change. When results from the strategic planning initiative become available in FY 2004, TVA will issue a major revision to its Strategic Plan.

#### 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.
- Research and technology development that addresses environmental problems related to TVA's statutory responsibilities for river and land management and power generation.

## TANGIBLE BENEFITS TVA BRINGS TO THE NATION

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 outputs. 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, and its focus on total quality and process improvement allows TVA to provide these governmental services in the Tennessee Valley in a cost-effective manner. All TVA activities are funded through revenues from power customers. This is in contrast to elsewhere in the country where federal appropriations fund flood control, navigation, and public land management activities.

In FY 2003, the Office of Management and Budget 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."

OMB made the following statements about TVA's stewardship functions:

"TVA makes an important contribution to the well-being of the people it serves. These services are not unique since they could be provided by other federal agencies, state and local governments, or a non-federal, interstate organization. Similar services are in fact provided elsewhere in the country. But the system managed by TVA is doing an effective job delivering these services and little or no purpose would be served by changing the current system."

"There are alternate ways to organize and finance this activity. But it makes sense to stick with the current organizational design and financing arrangements. TVA's integrated river management system is recognized as an efficient and effective way to manage the entire watershed. TVA has managed this program this way since TVA was created 70 years ago. There are no obvious advantages to changing the current program design."

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

## 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.
- Strengthen working relationships with all of TVA's stakeholders.

## STRATEGIES TO ACHIEVE GOALS

## 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.

## Strategic Objective 1.A

## Reduce TVA's delivered cost of power relative to the market.

Strategy 1.A.1: Generate more for less.

Performance Goals: • Delivered Cost of Power (cents/kWh)

Productivity (\$/MWh)

Relationship between the Vision, Strategic Objective, and Strategy

TVA will be the energy supplier of choice in a deregulated environment by selling electricity competitive with the market price.

Delivered Cost of Power is calculated by dividing TVA's total cost to deliver power (excluding any accounting write-offs) by total power sales. Productivity is calculated by dividing TVA's non-fuel operations and maintenance (O&M) cost by planned availability (i.e., total generation planned to be available). This measure focuses on the labor and material costs TVA expends over a plan year for electric generation availability.

Achievement of this objective will require continued reductions in costs, as well as 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.

## Strategic Objective 1.B

## Continue the trend of debt reduction.

Strategy 1.B.1: Invest prudently.

Performance Goals: • Debt Burden (\$ millions / kW)

Bond Rating

## Relationship between the Vision, Strategic Objective, and Strategy

A major component (about 21 percent) of TVA's total cost of power is interest expense. As TVA reduces and manages its outstanding debt, it is reducing interest costs, thereby shifting its cost structure to one that can better adjust to the volatility of a deregulated energy market.

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

Debt Burden is calculated by dividing TVA's total debt by the net winter generation capacity of its generation assets. Bond Rating is reported by the major bond rating agencies.

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.

## Strategic Objective 1.C

Meet customers' needs with affordable, reliable electric power.

Strategy 1.C.1: Improve power reliability to meet customer

requirements.

Performance Goal: •System Reliability (Load Not Served)

Relationship between the Vision, Strategic Objective, and Strategy
Based on input from customers, TVA will continue to emphasize high
reliability while meeting market price.

Load Not Served shows the amount of time an average customer could expect to be interrupted if its load was constant throughout the year.

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: Achieve excellence in asset optimization and

production processes.

Performance Goals: • Asset Availability

Fossil Plant Equivalent Availability FactorHydro Plant Equivalent Availability Factor

Nuclear Plant Net Capacity Factor

Relationship between the Vision, Strategic Objective, and Strategy
Strong economic growth and the uncertainty caused by the expected transition to a restructured electric market have resulted in increased price volatility throughout much of the United States. Developing and managing processes so that existing assets are available when needed most will be critical to ensuring that customers benefit from TVA's lowest-cost generation units. 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.

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

Equivalent Availability Factor is the energy that can be provided by a fossil or hydro generating asset (based on its being available for dispatch) divided by the maximum amount of energy that could have been provided by that asset (based on its capacity) over a specified period of time.

Net Capacity Factor is the amount of electricity that was actually generated by TVA's nuclear plants divided by the maximum amount of energy that could have been produced by the plant over a specified period of time.

The difference in the two calculations is that nuclear units are always operated when they are available (baseload) while some fossil and hydro units may not always be operated when they are available.

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.

Strategy 1.C.3: Provide flexible contracts and competitive pricing of products and services.

Performance Goal: • Energy sales (kWh)

Relationship between the Vision, Strategic Objective, and Strategy

Success in the marketplace is measured by whether customers continue to choose a company's products and services. As a federal wholesaler of electric power and related services, TVA's customers are 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. 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. 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.

Energy Sales is the total kWh sold each year.

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 when TVA's Fence is removed and TVA is subject to increased competition.

Strategy 1.C.4: Manage the environmental and safety impacts

TVA's operations have on employees and the

region.

Performance Goals: • Reportable Environmental Events

Sulfur Dioxide EmissionsNitrogen Oxide Emissions

• INPO Index

Environmental Impact Index

Relationship between the Vision, Strategic Objective, and Strategy

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  $(SO_2)$  and nitrogen oxide (NOx). TVA tracks its total amounts of these emissions. 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 Institute of Nuclear Power Operations (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's Environmental Impact Index tracks environmental impacts (detrimental and beneficial) of TVA's operations in the areas of air, water, land, waste, and energy.

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 regulatory compliance.

Strategy 1.C.5: Achieve excellence in the customer value and

relationship process.

Performance Goal: • Customer Satisfaction Index

Relationship between the Vision, Strategic Objective, and Strategy
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 by targeting customer segments and providing products and services that meet the unique needs of those segments. The Customer Satisfaction Index is based on surveys of customer perceptions of the "Ease of Doing Business" with TVA and how well TVA does in resolving customer issues.

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.

## 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.

## Strategic Objective 2.A

Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship.

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 Vision, Strategic Objective, and Strategy
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 Vision, Strategic Objective, and Strategy
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 continued cooperation between TVA and the U.S. Army Corps of Engineers (USACE) and that resources be available to maintain locks and related facilities. To maintain commercial navigation above Chattanooga, the concrete growth problem at the Chickamauga Dam Lock must be addressed 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 1940s 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

Relationship between the Vision, Strategic Objective, and Strategy
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.

Achievement of this objective requires that cooperative relationships between TVA, state and federal agencies, and various regional river system user groups be continued and that trained personnel be available to identify and implement correction and protection activities.

Strategy 2.A.4: Optimize the value of hydro generation subject to

flood control, navigation, water quality, and summer

reservoir-level constraints.

Performanc@oal: • Discretionary Zone Attainment

Relationship between the Vision, Strategic Objective, and Strategy

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

Achieving this objective requires that TVA maintain 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: • Summer Reservoir Level Attainment

Relationship between the Vision, Strategic Objective, and Strategy
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 billion-dollar industry. Waterfront
properties are highly valued and produce demands for growth that often
conflict with the protection of public resources and wildlife habitat.

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 and update 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.

## Strategic Objective 3.A

Demonstrate leadership in sustainable economic development in the Valley.

Strategy 3.A.1: Promote development through targeted growth

initiatives.

Performance Goals: • Economic Development Index

Relationship between the Vision, Strategic Objective, and Strategy
Stimulating economic growth in the Valley is essential for the long-term competitiveness of TVA and the people we serve. In addition to TVA's low-cost, reliable electric power, TVA works with regional economic development partners to recruit industry, expand opportunities for existing business, and improve community preparedness for growth. TVA will address changing economic conditions by providing programs and services that meet the unique needs of our customers and stakeholders.

The Economic Development Index measures TVA's effectiveness in supporting job attraction and retention through assistance by TVA and the Regional Industrial Development Associations and stimulating capital investment by public and private partners. The index also measures job quality by targeting jobs that pay higher-than-average wages and focusing on areas of high unemployment.

Achievement of this objective will require a continued supply of affordable reliable electric power, industrial development expertise, strategic partnerships with community and business leaders, technical and business services, and a sound marketing plan for the Tennessee Valley power service area.

## Strategic Objective 3.B

Strengthen working relationships with all of TVA's stakeholders.

Strategy 3.B.2: Achieve excellence in stakeholder relations and

communications processes.

Performance Goal: • Stakeholder Index

Relationship between the Vision, Strategic Objective and Strategy
Building and strengthening effective relationships with stakeholders is
essential to TVA's success in achieving excellence in its business
performance and public service, which is the company's standard for
attaining its vision, meeting its goals and objectives, and executing its
critical strategies. Stakeholders are those who are affected by TVA and
those who influence them, as well as those who affect and influence the
TVA organization. Stakeholders include legislators and regulators at all
levels of government, influencers (e.g., local leaders, non-governmental
organizations, financial and business community and media), and internal
and external audiences (e.g., employees, retirees, customers, suppliers,
general public in TVA communities).

Through positive relations and communications with stakeholders, TVA increases its ability to succeed in a changing regulatory and legislative environment. Also, 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 concerns. Long-term effective stakeholder relations will positively impact TVA's image and reputation, which is an intangible asset that translates into real value: It makes consumers more favorable to the company's products and services; it prompts talented employees to join and remain with the firm; it contributes to a strong market valuation and attracts investors; and it bestows credibility and influence among industry peers.

TVA will measure its objective to strengthen working relationships with all TVA's stakeholders through public opinion research. This research will help the company to identify, measure, and manage positive and negative perceptions in an effort to strengthen TVA's image, reputation, and brand. TVA's stakeholder measurement process is under way and will produce a stakeholder index system that will help to monitor and track opinions and perceptions of TVA through periodic research.

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 about TVA's intentions and positions about natural resource and power supply issues important to the people of the Tennessee Valley.

## RELATIONSHIP OF TVA'S GENERAL GOALS AND STRATEGIES TO THE 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
1.	Supplying low-cost, reliable power	1.A	Reduce TVA's delivered cost of power relative to the market.	1.A.1	Generate more for less.	<ul><li>Delivered Cost of Power</li><li>Productivity</li></ul>
		1.B	Continue the trend of debt reduction.	1.B.1	Invest prudently.	Debt Burden     Bond Rating
		1.C	Meet customers' needs with affordable, reliable electric power.	1.C.1	Improve power reliability to meet customer requirements.	<ul> <li>System         Reliability         (Load Not         Served)</li> </ul>
				1.C.2	Achieve excellence in asset optimization and production processes.	<ul> <li>Asset     Availability</li> <li>Fossil Plant     Equivalent     Availability     Factor</li> <li>Hydro Plant     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.	• Energy Sales (kWh)

Goals	Objectives	3		Performance Measures
		1.C.4	Manage the environmental and safety impacts TVA's operations have on employees and the region.	<ul> <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.	Customer     Satisfaction Index
2. Supporting a thriving river system	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.	• Flood Storage Availability
		2.A.3	Maintain a navigable commercial waterway from Knoxville to Paducah. Provide acceptable water quality.	<ul> <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>

Goals	Obje	ectives			Performance Measures
			2.A.5	Optimize the value of hydro generation subject to flood control, navigation, water quality, and summer reservoir-level constraints. Support recreational uses of the river system and associated federal lands.	Discretionary     Zone     Attainment      Summer     Reservoir Level
3. Stimulating economic growth	3.A 3.B	Demonstrate leadership in sustainable economic development in the Valley. Strengthen working relationships with all of TVA's	3.B.1	Promote development through targeted growth initiatives.  Achieve excellence in the stakeholder relations and	Economic     Development     Index      Stakeholder     Index
		stakeholders.		communication processes.	

## **APPROACH TO ACHIEVE GOALS**

TVA has always been results-oriented from its early achievements in flood control and agriculture to more recent accomplishments in river operations and power generation. Performance is monitored and reported monthly and reviewed by senior management. Resources are reallocated as necessary to ensure that objectives are met. Some of these measurements have been linked to employee and management compensation since 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 under

way 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 <u>Innovation and Continuous Improvement</u>. Employees are constantly working to increase value to customers and stakeholders, improve cycle time, and reduce cost.

## **ACCOUNTABILITY**

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. The majority of TVA's workforce participates in setting annual performance objectives that provide a line of sight from the employee's job duties to TVA's strategic goals. The employee's most critical tasks required to support organizational objectives for that year are documented. Achieving these objectives is a prerequisite for merit raises and other financial rewards.

Corporate Values are translated into core competencies that are used in developing position descriptions and that are evaluated by supervisors in annual performance evaluations. These mechanisms serve to reinforce desired behaviors that align with TVA's Values.

TVA's goals and strategic objectives are communicated to employees through many mechanisms. TVA's Leadership Standard, which is used in internal communications and posted in workspaces, shows the linkage between TVA's three goals, six strategic objectives, and strategies (Critical Success Factors). Each strategy identified in TVA's GPRA strategic plan is associated with at least one performance measure. Seven of these measures are included on TVA's corporate Balanced Scorecard which is the basis for its Winning Performance incentive payment system. Performance on these measures is closely monitored and communicated to all employees on a monthly basis - information is posted in workplaces and is available on TVA's internal website. The remainder of TVA's GPRA performance measures is tracked on Business Unit scorecards or report cards and is also monitored on a monthly basis. (Scorecards are used to track performance measures included in the TVA performance incentive payment system while report cards are used to track other important measures not directly tied to incentive payments.)

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

## **RESOURCES REQUIRED**

In FY 2003, TVA proposed a 5.9 percent increase in average wholesale power rates to become effective in FY 2004. This would be only the second increase in power rates in 16 years. This rate increase is needed to pay for TVA investments in emission-control equipment at coal-fired plants.

The TVA Act gives the TVA Board both the authority and the requirement to set electric rates at a level to cover all power system costs while being responsible to the Act's objective that power be sold at rates as low as feasible. The Energy and Water Development Appropriations Bill of 1998 authorized TVA to use power revenues to pay for statutory responsibilities previously paid for through federal appropriations. The power system will continue to generate revenues sufficient to meet all TVA resource needs.

In addition to these financial resources, TVA's success in carrying out its mission will require that TVA retain management and operational responsibility for the Tennessee River system and other federal assets crucial to its statutory responsibilities. 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

## 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 Investor Owned Utilities (IOUs) 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, the 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 distributors), and the Tennessee Valley Industrial Council (representing TVA's direct-served customers) for inclusion in any restructuring legislation.

This legislative "Title," which was further revised in 2003, fits within the principles espoused by the DOE Advisory Committee.

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 enables TVA to manage and mitigate risk associated with commodity markets, interest rates, and foreign currency exchange rates. All, in turn, contribute to a lower cost of reliable, delivered power.

## **Environmental Regulations**

TVA's operations are subject to various Federal, state, and local environmental statutes and regulations. TVA's coal plant emissions meet all EPA requirements for protecting public health and safety as part of the Clean Air Act. Since 1977, TVA has invested more than \$3 billion to reduce sulfur dioxide emissions by 76 percent and nitrogen oxide emissions by 50 percent. By the end of the decade TVA will have spent \$5 billion to reduce SO2 emissions by 85 percent and NOx emissions by 75 percent, relative to the 1977 baseline. According to a report issued in January 1998 by the Tennessee Department of Environment and Conservation and the annual air quality trends reports issued by the Environmental Protection Agency, air quality in the Tennessee Valley and the nation has steadily improved over the last ten years.

In 2002, TVA became the first federal agency to have all of its facilities covered under a comprehensive environmental management system (EMS). TVA's EMS provides a standardized methodology to manage the agency's environmental impacts. This system provides key environmental information to TVA employees, provides a line-of-sight to corporate objectives by defining individual roles and responsibilities, standardizes employee environmental training, shares organizational best practices, and includes an extensive environmental database for the collection and reporting of the agency's environmental performance. This comprehensive approach to environmental management enables TVA to be more proactive in addressing potential environmental issues and be more consistent in its environmental compliance. For example, TVA has already seen reductions in audit findings and reportable environmental events since the system was implemented.

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 affordable power to its customers while continuing its traditional multi-purpose mission.

## SUMMARY OF COMPETITIVE STRENGTHS AND WEAKNESSES

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> <li>Employee expertise and abilities</li> <li>Integrated resource-management approach and capabilities</li> <li>Integrated power/river system</li> <li>Productive relationships with regional natural-resource interests</li> <li>Strong credit rating</li> <li>Aggressive economic development programs</li> <li>Low production costs</li> <li>Large generation capacity</li> <li>Diversified fuel sources</li> <li>Location of transmission system</li> <li>Existing contracts with customers</li> <li>Self regulation/rate setting</li> </ul>	<ul> <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> <li>Transmission hub</li> <li>Diversified energy services to distributor/directly served customers</li> <li>Partnerships with public power distributor customers</li> </ul>	<ul> <li>Customer loss</li> <li>Predatory price cuts or other unfair practices by competition</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

TVA conducts annual evaluations of the effectiveness of 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. Analysis of 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 demonstrate 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.

In accordance with the National Environmental Policy Act, TVA solicits public input prior to the initiation of programs or projects that have the potential to affect the natural environment. The number of these public reviews conducted at the program/project level varies from year to year based on the kinds of activities being proposed. For example, developing or revising reservoir land management plans involves extensive public input and review, as well as input from other federal and state agencies. TVA evaluates this input at both the programmatic and project level in order to be responsive to changing stakeholder concerns.

## Ongoing or planned program reviews include:

- TVA is conducting an in-depth review of its Reservoir Operations policy.
  This study will identify whether alternative reservoir operating strategies
  would provide greater public benefits from the Tennessee River system.
  The study is evaluating navigation, flood control, power generation, water
  quality, recreation, and economic development benefits provided by the
  current and various alternative operating policies. The study is scheduled
  for completion in early FY 2004.
- The Regional Resource Stewardship Council was renewed for a second term. In 2003-2004, the Council reviewsTVA's policies and activities in the areas of public lands management, recreation, water quality, and water supply.
- Hydro Board of Consultants review of TVA's Dam Safety program.
- Review of flood risk calculations by the consulting firm of Baker, Inc.
- Annual review of TVA's aquatic weed management plans by reservoir stakeholder groups.
- The Public Power Institute Review Group provides guidance and insight from stakeholders on TVA's science and technology strategy; research, development, and technology transfer activities; and technology project portfolio.
- The Institute of Nuclear Power Operations (INPO) to promotes the highest levels of safety and reliability in the operation of nuclear plants. INPO, under the oversight of its member utilities, is endowed with authority and independence to bring pressure for change on individual members. The primary method for promoting excellence is the regular on-site team evaluation visit to each nuclear site. These evaluations are conducted as indicated by plant performance, but typically on an 18-month to 2-year cycle. During the reviews, the independent INPO evaluation team (consisting of INPO representatives, accompanying industry peer evaluators, and host site

evaluators) compares plant performance to established performance objectives and criteria and notes strengths and areas for improvement.

- TVA's Office of the Inspector General (OIG) has lead responsibility for operational or performance audits of TVA's programs, organizations, and activities. These audits encompass a wide variety of objectives, including assessing program effectiveness and results, economy and efficiency, internal controls, and compliance with legal or other requirements. Major areas of concentration for FY 2003 included:
  - TVA's power planning process
  - o Emission-control equipment performance guarantees
  - o PCB remediation
  - Enterprise-wide risk management
  - Generation dispatch data
  - o Fossil plant heat rate calculations
  - National Energy Policy Act requirements
  - TVA's hearing conservation program
  - Coal freight payment process
  - TVA's GPRA Performance Indicators

## COORDINATION OF CROSS-CUTTING FUNCTIONS

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 (Section 26a)
- · 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 U.S. 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 permitting requirements.

TVA and the USACE 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 to provide for 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 is to resolve problems associated with the Kentucky-Barkley navigation system, the USACE is 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 construct a replacement lock 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 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 as 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 U.S. 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 U.S. 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 has discussions, as needed, with U.S. Forest Service ranger districts about land located on reservoir.

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

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 in the course of doing business.

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 FY 2002, TVA received an unqualified opinion from the accounting firm of PricewaterhouseCoopers LLP.

## TREATMENT OF MAJOR MANAGEMENT PROBLEMS AND HIGH RISK AREAS

TVA is not aware of any GAO-identified management problems or high-risk areas concerning TVA operations or management. Neither the GAO nor the TVA Office of the Inspector General has identified any significant problems of fraud, waste, abuse, or mismanagement in TVA's programs or operations, and TVA is not identified on GAO's High-Risk List.

## **DESCRIPTION OF CONSULTATION WITH STAKEHOLDERS**

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 and the Reservoir Operations Study. 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. For the Reservoir Operations Study, a dozen public meetings are being conducted across the region in FY 2003 to encourage public participation , and TVA's website is being promoted extensively as an additional avenue for public comment.

Because this plan is a minor revision to previous plans, TVA's consultation efforts are focusing on discussions with stakeholders as part of the strategic planning initiative previously discussed that will result in a major revision to TVA's strategic plan in FY 2004. Consultations about the FY 2004 plan are being held with Congress, OMB, TVA's distributor and directly served customers, and local and state officials.

## **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 2 to 10 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. Another method is having distributors participate 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 157 power distributor members of the Tennessee Valley Pubic Power Association (TVPPA). The TVPPA has a system of committees TVA works with to obtain input on various issues. Examples of committees include the Rates and Contracts, Electricity Marketing, Power Supply, and Operations. TVA also works closely with the Tennessee Valley Industrial Committee (TVIC), which is composed of the directly served industries.

## Valley Stakeholders

During FY 2003, TVA began public opinion research to identify, measure and manage TVA's overall image, reputation and brand, in an effort to help the company build and strengthen effective relationships with stakeholders across the valley. TVA's stakeholder measurement process is underway and will produce a stakeholder index system that will help TVA to monitor, track and act on opinions and perceptions of TVA through periodic research.

With positive relations and communications with stakeholders, TVA is better positioned to increase its ability to succeed in a changing regulatory and legislative environment. Also, 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 concerns.

In FY 2000, TVA formed the Regional Resource Stewardship Council under the Federal Advisory Council Act as a consultative body charged with providing input on TVA's river and public land management programs. The Council was re-authorized for a second term in FY 2002.

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, Reservoir Operations Study, and public use plans are used when program-specific public input is needed.

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

TVA publishes information about upcoming public meetings in regional and local media and in its monthly "Conversations With America" reports. In addition, TVA makes information on its activities available through its www.tva.gov website.

## Investors

TVA initiated an Investor Relations Program in 1996 to assist TVA's Treasurer 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 85,000 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 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 provides 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.

## CONCLUSION

TVA has a 70-year history of partnership with the residents of the Tennessee Valley, which demonstrates the success of TVA's integrated approach to regional natural resource management. TVA's public power partnerships with its municipal and cooperative distributors provide the affordable, reliable electric energy that generates prosperity in the Tennessee Valley and improves 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 about TVA's resource management responsibilities and on the role of public power under electric utility restructuring, TVA will revise its strategic plan to ensure that it continues to meet the needs of the Tennessee Valley.