

Tennessee Valley Authority  
Government Performance and Results Act (GPRA)

**GPRA Annual Performance Plan  
For FY 2006**

*Submitted*  
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# Foreword

In January 2004, TVA issued its Strategic Plan outlining the areas TVA needs to address in order to prepare for a competitive electricity wholesale market in the Tennessee Valley, the region served by TVA. That plan considers broad, fundamental questions:

- What will the future competitive environment be like?
- What will TVA need to do to be successful in that environment?
- How do we transition from a monopoly business model to a competitive business model?
- What do we need to do to get ready?

The Strategic Plan is directional and provides a framework for what TVA needs to do to preserve its core mission and remain financially sound in a more competitive market.

This document is TVA's GPRR Performance Plan for FY 2006. It contains the specific information that is required by the Government Performance and Results Act. This FY 2006 GPRR Performance Plan is based on TVA's 2004 Strategic Plan but describes in more detail how the broad goals in the Strategic Plan will be implemented.

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# **TVA Vision, General Goals, and Objectives**

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## **1.0 TVA Vision**

*Generating Prosperity in the Valley*

## **2.0 TVA Mission Statement**

TVA plays a vital role in improving the quality of life in the Tennessee Valley through the three interrelated parts of its mission:

### **Energy**

TVA is the largest public power provider in the nation and provides reliable, low-cost power for the residents and businesses in the Tennessee Valley.

### **Environment**

TVA manages the Tennessee River System, balancing the benefits of navigation, flood control, power production, water supply, water quality, recreation and land use.

### **Economic Development**

TVA further promotes economic development by providing technical assistance, research data, and financial assistance to communities and businesses.

## **3.0 Long-Term General Goals**

TVA's strategic plan was developed for the purpose of identifying what TVA needs to do to preserve its core mission and remain financially viable in a more competitive market.

TVA's general goals that define how the core mission is achieved are as follows:

### **Energy**

Supplying low-cost, reliable power. Meet the changing needs of power distributors and directly served customers for energy products and services in changing markets.

### **Environment**

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.

### **Economic Development**

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

## 4.0 Strategic Objectives

The general goals are supported by the following strategic objectives:

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

In addition to the long-term goals and strategic objectives needed to fulfill TVA's core mission, the Strategic Plan identified four specific areas that TVA needs to concentrate on in order to prepare for a more competitive market:

- 1) Pricing, Services and Products - Develop new, more highly differentiated prices, services and contract terms that more closely tie the cost and risk of the product to its terms and pricing.
- 2) Transmission Pricing - Address the range of issues related to wholesale market design and transmission pricing, including how TVA will interface with the markets that are expected to surround us, as well as how TVA will price transmission services within the Valley when distributors can choose other suppliers.
- 3) Improved Financial Flexibility - Accelerate reduction in total financing obligations (TFOs) and drive to higher interest coverage ratios in order to provide the financial flexibility needed to tolerate the higher levels of revenue and cost volatility associated with a more competitive market.
- 4) Maintain Assets - Maintain and operate its generation and transmission assets so that TVA fulfills its supply obligations in a safe and reliable manner.

## 5.0 Performance Indicators

In order to ultimately achieve its goals, TVA developed critical success factors and performance indicators (as shown in Exhibit 1) that would measure the direct relationship between activity at the operational level and TVA's ability to successfully complete its strategic objectives.

### 5.1 TVA-Level Performance Indicators

Performance indicators were broken down into four categories with a total of eight measures as follows:

#### 5.1.1 Financial

**Financial strength** - A measure of the reduction in debt-like instruments or TVA's total financing obligations (TFO). The electric utility industry has become increasingly competitive over the past decade. Competition is expected to intensify, and restructuring legislation may dramatically change the way electric utilities do business in the future. We need to build more financial flexibility so that TVA can weather the greater volatility of revenues that comes with competition. In order to produce a more financially flexible cost structure, TVA has expanded its resources for capital by entering in lease-leaseback transactions (for both Combustion Turbine units and certain technological equipment) and

arrangements with customers for prepayment of energy. Although these transactions provide favorable financing alternatives for TVA, they are debt-like in nature. The Financial Strength measure relates to TVA's strategic objective of continuing the trend of improving overall financial flexibility. Lowering debt and debt-like financial obligations over the long-term will produce a more flexible cost structure, allowing TVA to react more advantageously in the changing power market.

**O&M Costs** - Controlling Operating and Maintenance (O&M) expenses is an important financial measure of competitiveness and drives the rates that we charge customers for power. This measure is vital because customers view price as a deciding factor in whether or not they would switch suppliers. A continued awareness and emphasis on controlling costs allows TVA to focus on competitiveness in the wholesale power market and positioning for future success. TVA employees can individually contribute directly to lowering O&M costs and conserving cash through reduced material costs, travel, contract expenditures, etc.

**Productivity** - This measure is defined as planned available generation (i.e., total generation planned to be available, including combustion turbine, conventional hydropower, fossil, nuclear and pumped storage) per O&M labor cost dollar (TVA plus contract). This measure focuses on O&M labor cost incurred by TVA during a plan year for available electric generation. The components of TVA's Productivity measure are O&M labor costs for TVA employees (straight time, overtime, and benefits excluding pension cost) and O&M contract labor costs (labor only). These labor cost components are directly controlled by TVA and its employees and are not subject to outside influences such as fuel, financing costs, or capital project expenditures. Just as Asset Availability represents the plan TVA will use to meet the needs of its customers, the Productivity measure represents the labor costs associated with fulfilling that plan. Productivity will help employees understand how their job performance and the efficient utilization of resources contribute to TVA's ability to deliver reliable, affordable electric power.

### 5.1.2 Customer-Stakeholder

**Customer Impact** - Customer Impact is a monthly measure of key TVA performance elements that impact TVA's long-term relationship with its customers. The measure focuses on two elements that customers consistently rate as critical, power reliability and competitive price. It is a performance measure that allows TVA employees to see how the work they perform contributes to TVA's overall success at achieving customer satisfaction. The end result will be improved customer relationships/satisfaction and an increased likelihood of long-term relationships with customers.

**Economic Development** - The Economic Development Index is a monthly measure of the effectiveness of TVA's sustainable economic development efforts. It includes job growth (Jobs Added and Retained) in the Valley based on financial or technical assistance provided by TVA or its Regional Industrial Development Association (RIDA) partners, investments by economic development partners in projects receiving technical or financial assistance from TVA (Capital Investment Leveraged), and a measure of quality jobs, based on economic conditions, where the average wage exceeds the Valley's average annual wage (or is 10 percent greater than the county average wage) or the county unemployment rate is more than 25 percent higher than the Valley rate (Jobs Impact).

### 5.1.3 Operations Process

**Asset Availability** - A monthly 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 value factor that reflects market price.

- Actual GWh available is the actual Equivalent Availability Factor (EAF) for Fossil, Hydro, and Pumped Storage, and Running Reliability for Combustion Turbines. Nuclear Availability is the Net Capacity Factor (NCF).

- Planned GWh available is the planned Equivalent Availability Factor (EAF) for Fossil, Hydro, Pumped Storage, and Running Reliability for Combustion Turbines. Nuclear Availability is the Net Capacity Factor (NCF)
- Value factor is based on the monthly average of the projected market price for on-peak power in 2004. Market price is the Market Evaluation Price Forecast (MEPF).

This measure increases awareness that generation availability requires all assets to be managed as a whole, increases awareness of the effect of market prices on the value of generation availability, and reflects the effects of deviations in outage durations, derates, etc., on GWh available to serve load

**Environmental Impact** - A composite of environmental performance factors in terms of beneficial and detrimental impacts (or precursors) on Air Quality, Water Quality, Land, Waste Production, and Energy Consumption compared to a baseline of FY 2002. Environmental impacts, both positive and negative, come from many facets of TVA's operations. The Environmental Impact Index is a composite of 29 elements in 5 categories allowing greater "line of sight" for more employees and demonstrates the balance between the different types of impacts. Tradeoffs and mitigation are also visible in the index, providing a comprehensive view of TVA's overall environmental performance. The purpose of the measure is to improve environmental performance, increase employee awareness of operational impacts, and allow responsive modifications to operations.

#### 5.1.4 People

**Safe Workplace** - This is a rate-based measure of employee safety. It tracks the number and types of work-related injuries and illnesses reported by employees through TVA's record keeping system for safety statistics. The purpose of this measure is to strive for the protection and well-being of employees, the avoidance of costs associated with workers' compensation expenses, the strengthening of TVA's role as a corporate citizen, and the practice of teamwork.

While each performance indicator is a distinct measurement, each may impact the outcome of multiple goals and objectives (as reflected in Exhibit 2).

## 5.2 COO/SBU-Level Performance Indicators

In addition to the TVA-level indicators, measures from the Chief Operating Officer (COO) and Strategic Business Unit Report (SBU) cards (shown in Exhibit 5) will complement TVA's performance measure reporting requirements for the GPRA Annual Performance Plan.

### 5.2.1 Net Electrical Generation (Billion kWh)

Net Electrical Generation is the total electric energy produced by the generating units less energy consumed for the generating units use measured in billions of kWh. This measurement is a composite of the scores from each component of TVA's generation mix; TVA Nuclear (TVAN), the Fossil Power Group (FPG), and Hydro Power.

### 5.2.2 TVAN Contribution to Delivered Cost of Power (mills/kWh)

This measures the cost of generating power per unit of output (kWh)

The purpose is to focus on cost-effective operation of the nuclear plants by minimizing refueling outage durations and reducing unplanned scrams.

### 5.2.3 TVAN INPO Performance Index (INPO)



The Institute of Nuclear Power Operators (INPO) index is TVA's primary nuclear safety index. It is a weighted combination of nine overall performance indicators and is a useful tool for management in trending overall station performance. This measure is the recognized industry standard for trending operations performance based on safety and reliability.

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.

#### 5.2.4 FPG Contribution to Delivered Cost of Power (mills/kWh)

This measures the cost of generating power per unit of output (kWh)

The purpose is to focus on cost-effective operation of the fossil plants. Fossil production expense includes plant base and outage, O&M projects, reagents, yard, and central office. Fuel expense includes coal.

#### 5.2.5 FPG Equivalent Forced Outage Rate (EFOR) (%)

This measurement focuses on achieving reliable operation.

As an indicator of unit reliability, the percentage of generation lost due to forced outages and forced deratings is measured.

#### 5.2.6 Transmission Power Supply (TPS) Customer Point Interruptions (Interruptions Per Delivery Point)

Customers rank reliability as most critical in importance and are requesting improved performance in all aspects of reliability, including momentary interruptions.

The Customer Interruptions index measures reliability from our customer's perspective. It tracks interruptions of power, including momentary, at customer connection points that are caused by the transmission system.

#### 5.2.7 TPS Load Not Served (minutes)

Based on input from customers, TVA will continue to emphasize high reliability while meeting market price.

Load Not Served is a measure of the magnitude and duration of power outages that affect TVA customers expressed in system minutes.

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

#### 5.2.8 TPS Contribution to Delivered Cost of Power (mills/kWh)

Operating cost for the transmission system expressed as a year-to-date cost in mills per kWh sold.

#### 5.2.9 Hydro Equivalent Forced Outage Rate (EFOR) - Total System (%)

Electricity generation is a major function of the multipurpose assets within TVA's River Operations. The purpose of this measure is to focus on achieving reliable unit operation to meet power demands of the TVA system.

#### 5.2.10 Flood Storage Availability (%)

This metric 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 Reservoir Operations Study implemented in 2004. 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.

#### 5.2.11 Days Navigable Waterway is Available from Knoxville, TN, to Paducah, KY (Days)

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. This metric monitors TVA's effectiveness in keeping the navigation channel and locks available for use.

#### 5.2.12 Shoreline Management Performance (Points)

This Metric measures TVA Watershed Team performance in two areas of TVA's Shoreline Management Process: Shorelines Restored and Section 26a Permit Cycle Time. Shorelines Restored is the number of miles of critically impaired shorelines (severely eroded and/or denuded) restored annually on TVA reservoirs. Section 26a Permit Cycle Time is the number of days from the time a permit application is logged into the Reservoir Land Records system until the permit is issued or denied.

## **6.0 Resources and Skills Needed To Achieve Goals**

### **6.1 Financial Resources**

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.

In FY 2003, the TVA Board approved a 5.9 percent increase in average wholesale power rates, which became effective October 1, 2003. This rate increase is needed to pay for costs associated with reducing emissions at TVA's coal-fired plants, given regulations which were promulgated at that time.

### **6.2 Physical 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 responsibility.

### **6.3 Management and Human Resources**

TVA will need to maintain its existing skills and processes related to power supply, resource stewardship, and economic development. In addition, TVA will need to develop a number of new processes and skills in order to prepare for a competitive environment. The major initiatives include the following:

- Continued efforts across the organization to improve efficiency. The activities involved include not only benchmarking best-in-class performers, but also continually raising the bar on TVA's own performance related to reliability, forced outage rates, and overall cost.
- Continued training to develop a multi-skilled work force to improve labor productivity.
- Developing new tools to support the development of products and services consistent with a competitive market, including new methods for:
  - determining TVA's cost to provide different types of service
  - evaluating and quantifying risk, and
  - modeling the price of competitive alternatives.
- Developing new methods for evaluating future investments in generation and new financial criteria that reflect the uncertainty in future revenue available to recover those investments.
- Developing the processes to provide unbundled transmission service for distributors who want to choose other suppliers and developing the rules for implementing priority service for native-load transmission customers.

## 7.0 Relationship Between Annual Performance Goals and the Long-Term (General) Goals in the Strategic Plan

### 7.1 TVA's Mission and TVA's Strategic Plan

TVA's roles are described by its mission. The mission serves as TVA's value proposition to the Tennessee Valley and is best defined through its three interrelated parts - Energy, the Environment, and Economic Development.

This mission is TVA's unique "reason for being" and the primary focus of its core business endeavors. It provides the strategic context within which all internal processes and objectives are defined and prioritized.

The four priority areas identified in the TVA Strategic Plan focus on the general steps TVA must take in order to preserve its core mission and to ensure its financial viability in a more competitive market.

### 7.2 Translating TVA's Strategic Plan into Operational Terms

The mission and strategic objectives must be translated into operational terms so that the actions of management and employees can be supportive and aligned. TVA's critical success factors are the first step in this translation. They define the key factors and capabilities needed to generate sustainable performance consistent with the business themes implied by the mission and the priorities identified by the Strategic Plan. Performance goals identify specific, tangible objectives against which achievement with respect to the critical success factors can be measured. As illustrated in Exhibit 1, we develop a strategy in the context of the mission, map the strategy into operational initiatives, and ultimately develop performance plans for each part of the organization and scorecards for measuring success.

TVA follows the five Principles of a Strategy-Focused Organization<sup>1</sup> to implement its strategy throughout the operations of the organization.

The five principles have been successfully used by both public and private sectors and are defined as follows:

1. Mobilize the organization through visible, executive leadership. The TVA Board approves the Strategic Plan, performance plans, budgets, and performance targets. Executive leadership endorses the strategic plan and takes responsibility for ensuring its operational implementation.
2. Translate the strategy into operational terms. A key vehicle for translating TVA's strategy into operational terms is TVA's Leadership Standard, shown in Exhibit 3. The Leadership Standard translates strategy into operational terms by identifying TVA-level Strategic Objectives and Critical Success factors.
3. Align the organization around the strategy. TVA achieves strategy alignment by developing a balanced scorecard, which defines measurable corporate level and ultimate business-unit goals consistent with the Strategic Plan.
4. Motivate to make strategy everyone's job. Strategic awareness is created by "line of sight" mapping -- aligning individual performance goals with critical success factors and by TVA's Winning Performance Plan which ties incentive compensation to the achievement of goals.

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<sup>1</sup> Robert S. Kaplan and David P. Norton, The Strategy-Focused Organization, Harvard Business School Press, Cambridge, Massachusetts, 2000.

5. Govern to make strategy a continual process. Scorecards for TVA, the strategic business unit, and business unit are updated monthly as described in the following section.

### **7.3 Annual Goals, Long Term Goals and TVA's Strategic Plan**

Developing corporate short-term and long-term plans are key to actually achieving the goals outlined in the Strategic Plan. These plans include:

- Shorter Term (1-3 Year) Plans
  - Power Supply Plan (monthly updates based on revised market forecasts)
  - Strategic Business Unit Performance Plans (3-year outlook with Quarterly reviews)
- Longer Term (5-20 Years) Plans
  - Power Supply Plan (20-year forecast with plan updates twice annually)
  - Financial Outlook and Risk Management Plans (20-year forecast)
  - Capital Project Plans (5-year outlook)

Quarterly Performance Planning meetings are held with the Board of Directors and senior management. The strategic issues, the scorecard and financial outlook are tracked and reviewed.

## **8.0 Program Evaluations - Tracking Progress Against The Goals**

### **8.1 TVA Inducted into the Scorecard Hall of Fame**

TVA's efforts to implement its strategy were recognized in 2003 with a world-class honor. TVA was inducted into the Scorecard Hall of Fame in 2003 and is the only power company in the United States and one of three U.S. Government Agencies to receive this honor.<sup>2</sup>

TVA's strategy and performance management process is called "Winning Performance." It is similar to that described by the Balanced Scorecard Collaborative™.<sup>3</sup>

### **8.2 The Winning Performance Process**

TVA measures its success in achieving all of its strategic objectives. Therefore, in addition to the Strategic Plan's four areas of emphasis, the Scorecard is balanced with measures that represent other dimensions of performance. The Winning Performance program keeps TVA focused on the Strategic Objectives: It identifies the things that must be accomplished to be successful, measures and tracks our performance in these areas, and provides the incentives and feedback to employees to see the direct connection. All employees are involved in Winning Performance and are able to see how his or her day-to-day performance contributes to TVA's performance and success.

Employees can see how their work contributes to the direction set by their organization's performance plan and how that contributes to TVA's overall successful implementation of the agency's strategy. Additionally, line of sight for employees is from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's Strategic Objectives and Critical Success Factors

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<sup>2</sup> "While most organizations fail to execute their strategies, Balanced Scorecard Collaborative Hall of Fame organizations have succeeded . . . . To date 37 organizations from around the world have been inducted into the BSC Hall of Fame . . . [they] use the Balanced Scorecard in an exemplary manner to become strategy focused, successfully execute their strategies, and achieve breakthrough performance results . . . .Balanced Scorecard Hall of Fame [organizations serve] as a role model to others." "Balanced Scorecard Hall of Fame Report 2004," Harvard Business School Publishing Corp., Cambridge, MA, 2004.

<sup>3</sup> Robert S. Kaplan and David P. Norton, The Balanced Scorecard, Harvard Business School Press, Cambridge, MA, 1996.

### 8.3 TVA's Balanced Scorecard

While the Strategic Objectives identify what TVA must accomplish, the Critical Success Factors identify what TVA must do in order to achieve the Strategic Objective. The critical success factors are defined within the four dimensions of TVA's Balanced Scorecard, which are; (1) Customer, (2) Financial, (3) Operations, and (4) People. In turn, the performance measures are also defined within the same four dimensions. The performance measures on the TVA Balanced Scorecard are used to track overall TVA, Strategic Business Unit and Business Unit levels of performance. The 2005 Scorecard measures are the first to be aligned with the 2004 Strategic Plan.

Performance is monitored on each of the measures monthly and the scorecards are updated to reflect the results. These updates are available to employees through their organizations, in the monthly newsletter *Inside TVA*, and on the internal Winning Performance web site.

The Scorecard measures are reviewed and adjusted annually to reflect annual operating plans. Changes to the measures are made to reflect changes in priorities to improve TVA's performance. Additionally, the scorecard is designed to drive behavior that will result in improved performance. If a measure is not driving the right behavior, then it is changed.

TVA's scorecard, with its performance measures, clearly demonstrates that no one single organizational unit has complete responsibility for implementing strategy. The Balanced Scorecard provides a powerful process to formulate comprehensive integrated solutions.

### 8.4 Results

The performance indicators support multiple goals and strategic objectives. The most challenging aspect of establishing the performance targets, however, is that individual indicators cannot be set in isolation – achieving the right balance of all performance targets is critical to TVA's overall success.

For example, a number of performance indicators support the achievement of the objective to “reduce the delivered cost of power.” All else equal, reducing O&M costs will help reduce the cost of power. But if we set the O&M target too low, it could jeopardize our ability to maintain reliability, which would, in turn, reduce customer satisfaction.

A similar example is the objective to provide affordable, reliable power. All else equal, the lower the price of power, the higher customer satisfaction will be. But if we set prices too low, there could be insufficient revenue to cover costs, jeopardizing our ability to achieve two other goals: to reduce debt and to maintain reliability.

Given this general description of how performance targets must be optimized simultaneously, the individual performance indicators on the TVA-wide scorecard are calculated as follows:

- (1) O&M (Operation and Maintenance) Costs =  
O&M Base + O&M Outage + O&M Projects + Benefits + Depreciation + Tax Equivalent Payments + Net External Business.
- (2) Financial Strength = Change in TFOs including statutory debt, combustion-turbine lease obligations, prepaid energy obligations, and QTE (qualified technological equipment) leases.
- (3) Productivity = Planned generation unit availability (in kWhs) divided by Total O&M Labor Cost (including both TVA and contract labor) (in dollars)

- (4) Customer Impact =  $100\% * [50\% * \text{Power Reliability (target/actual)} + 50\% * \text{Competitive Price (target/actual)}]$
- (5) Economic development index is also a composite index, calculated as the sum of the following measures:  
 $0.50 \times (\text{actual jobs added or retained}/\text{target job additions}) +$   
 $0.25 \times (\text{actual capital investment leveraged}/\text{target capital investment leveraged}) +$   
 $0.25 \times (\text{actual jobs impact}/\text{target jobs impact})$
- (6) Asset Availability =  $(\text{actual GWh of generation available} / \text{the planned GWh available}) \times 100$
- (7) Environmental Impact Index is also a composite index of 29 indicators grouped into 5 categories that are weighted as follows:
- |                                  |      |
|----------------------------------|------|
| Air Quality                      | 40%  |
| Water Quality                    | 25%  |
| Land Impacts                     | 10%  |
| Waste Production                 | 15%  |
| Energy Consumption               | 10%  |
| Total Environmental Impact Index | 100% |
- (8) Safe Workplace = All Injury Rate, calculated as follows:
- $$\frac{[\text{Fatal} + \text{LT} + \text{MT} + \text{OCI}] \times 200,000}{\text{Hours worked during time period}}$$
- Where:
- Fatal = number of fatalities  
 LT = number of lost time injuries or illnesses  
 MT = number of medical treatment only injuries or illnesses  
 OCI = number of other compensable injuries or illnesses  
 200,000 = 100 employees working 40 hours/week for 50 weeks/year

### 8.5 COO and SBU Level Performance Indicator Definitions (Exhibit 4)

- (1) COO Net Generation (billion kWh)
- The total electric energy produced by the generating units measured at the generator terminals less energy consumed for the generating station use.  
 Formula = Gross Electrical Generation - Station Service Use.
- (2) TVAN Contribution to Delivered Cost of Power (mills/kWh)
- Formula = All Non-Fuel Expense (less any approved adjustments) + Fuel Expense divided by Net Generation.
- (3) TVAN INPO Performance Index (%)
- This indicator is a weighted combination of INPO's nine overall performance indicators. Each element is calculated based on a standard industry definition. The product of each calculation is given a weighted score with the maximum obtainable being 100 points.
- (4) FPG Contribution to Delivered Cost of Power (mills/kWh)
- O&M Expense per kilowatt-hour of fossil (coal-fired) generation. Fossil production expense includes plant base & outage, O&M projects, reagents, yard and central office. Fuel expense includes coal and fuel handling. Excludes combustion turbines.

Formula = Non-outage O&M + Outage O&M + Fuel Expense / Net kWh Generation

(5) FPG Equivalent Forced Outage Rate (EFOR) (%)

This is an indicator of unit reliability. The percentage of generation lost due to forced outages and forced deratings.

Formula =  $[(FOH \times NDC) + MWhL] / [(FOH + SH) \times NDC] \times 100$

Where:

FOH = Forced Outage Hours

SH = Service Hours

NDC = Winter Net Dependable Capacity

MWhL = MWh Losses during to forced derating

(6) TPS Customer Interruption (CI) Rate  
(Interruptions per Delivery Point)

CI measures reliability from our customer's perspective. It tracks interruptions of power, including momentary, at customer connection points caused by the transmission system.

Formula = Number of Interruptions / Number of Connection Points

(7) TPS Load Not Served (minutes)

TVA load not served expressed in system minutes.

Formula = (% of Total Load Not Served) X (Number of Minutes in the Period)

(8) TPS Contribution to Delivered Cost of Power (mills/kWh)

Operating cost for the transmission system. Expressed as a year-to-date cost in mills per kWh sold.

Formula = (O&M expense + Net External business {not including settlement income}) / (Total Electricity Sales)

(9) RSOE (River System Operations and Environment) Hydro Equivalent Forced Outage Rate (EFOR) (%)

$EFOR = \% = [(FOH * NDC) / (FOH * SH) * NDC] \times 100$

FOH = Forced Outage Hours, NDC = Net Dependable Capacity, SH = Service Hours

(10) RSOE Flood Storage Availability (%)

Formula = % of project days actual reservoir storage is below flood guide levels.

(11) RSOE Days Navigable Waterway is Available from Knoxville, TN to Paducah, KY (days)

Formula = (Number of days in a year) - (Days river closed to commercial barge traffic)

(12) RSOE Shoreline Management Performance (%)

This metric measures TVA Watershed Team performance in two areas of TVA's Shoreline Management Process: Shorelines restored and Section 26a Permit Cycle Time.



Formula = Shoreline Restored points + Category 1 points + Category 2 points + Category 3 points = Total Index Score.







## **9.0 Key Factors, External to TVA, that Could Significantly Affect the Achievement of General Goals**

Given the long lead times needed to build new generation and transmission 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 the following:

- Growth in the regional economy and its impact on electricity demand.
- Changes in the cost of fuel used to generate electricity.
- Changes in laws and regulations, particularly those related to environmental compliance, reliability, and security.
- Technological change.
- Changes in market 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, the way it achieves its mission and its ability to achieve the goals outlined in the Strategic Plan. There is great uncertainty about when legislation will be enacted that amends laws restricting competition in the Tennessee Valley, for example. Given the amount of work to be done to prepare for a more competitive market, the potential magnitude of change in the industry, and the high potential for significant forecast error, TVA will update its Strategic Plan, and corresponding Annual Performance Plans, as more information becomes available.

# Exhibit 1 - TVA Winning Performance Scorecard

<i>Winning Performance</i>							
FY05 TVA Balanced Scorecard							
		<i>Weight</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>		
<i>Financial</i>							
•	<b>O&amp;M Costs</b> (Total Operations and Maintenance Costs)	15%	3,644	3,584	3,642		
•	<b>Financial Strength</b> (Net Reduction in Total Financing Obligations)	15%	225	225	150		
•	<b>Productivity</b> (Planned Availability/Total O&M Labor Cost (TVA + Contract \$))	10%	147.8	153.7	TBD		
<i>Customer</i>							
•	<b>Customer Impact</b> (Power Reliability + Competitive Price)	10%	100	100	100		
•	<b>Economic Development</b> (Jobs+Capital+Job Impact)	10%	100	100	100		
<i>Operations</i>							
•	<b>Asset Availability</b> (Actual Availability/Planned Availability)	20%	98	98	99		
•	<b>Environmental Impact</b> (Index of Environmental Factors)	10%	89	78	72		
<i>People</i>							
•	<b>Safe Workplace</b> (Number of "All" Injuries and Illnesses/100 employees)	10%	2.41	2.12	2.11		

## Exhibit 2. Relationship Between Performance Indicators and Goals and Objectives

Performance Indicators								
Strategic Objectives/Goals	O&M Costs	Financial Strength	Productivity	Cust. Satis.	Econ. Develop.	Asset Avail.	Environ Impact	Safe Work Place
1. Improve financial flexibility	✓	✓		✓				
2. Reduce cost of power	✓	✓	✓	✓	✓	✓		✓
3. Strengthen stakeholder relations				✓	✓	✓	✓	✓
4. Provide affordable, reliable power	✓	✓	✓	✓	✓	✓		✓
5. Support thriving river system				✓	✓		✓	
6. Sustain economic development				✓	✓			
7. Develop new pricing		✓		✓	✓			

✓ = indicates an interrelationship between the performance target and the goals/objectives, i.e., the performance target may measure whether a goal is achieved or failure to achieve a particular goal may affect whether a performance target can be attained.

# Exhibit 3. TVA's Leadership Standard

Exhibit 2. TVA's Leadership Standard																												
Achieve Excellence in Business Performance and Public Service																												
TVA's Vision <i>(TVA's value proposition)</i>	TVA's Goals	Strategic Objectives <i>(Things that must be focused on to continue to serve the mission)</i>	Critical Success Factors <i>(Things that must be done to achieve the Strategic Objectives. Translates Strategy into operational terms)</i>																									
<p>Supplying Low-cost Reliable Power</p> <p>Generating Prosperity in the Valley</p> <p>Supporting a Thriving River System</p> <p>Stimulating Economic Growth</p>	✓	<p>Continue the trend of debt reduction</p> <p>Reduce TVA's delivered cost of power relative to the market</p>	<p><b>FINANCIAL</b></p> <p><b>What must we do financially?</b></p> <ul style="list-style-type: none"> <li>• Generate more for less</li> <li>• Invest prudently</li> </ul>																									
	✓	<p>Strengthen working relationships with all of TVA's stakeholders</p>	<p><b>CUSTOMER-STAKEHOLDER</b></p> <p><b>What do our customers and stakeholders want from us?</b></p> <ul style="list-style-type: none"> <li>• Improve power reliability to meet customer requirements</li> <li>• Provide flexible contracts and competitive pricing of products and services</li> <li>• Balance competing demands and optimize the river system</li> <li>• Promote development through targeted growth initiatives</li> </ul>																									
	✓	<p>Meet customers' needs with affordable, reliable electric power</p>	<p><b>OPERATIONS-PROCESS</b></p> <p><b>What must we do to improve operational/business process effectiveness?</b></p> <ul style="list-style-type: none"> <li>• Achieve excellence in the asset optimization and production processes</li> <li>• Achieve excellence in the customer value and relationship processes</li> <li>• Achieve excellence in stakeholder relations and communications processes</li> <li>• Manage the environmental and safety impacts TVA's operations have on employees and the region</li> </ul>																									
	<p>✓ = Alignment with Strategic Plan</p> <p><i>TVA is in the continual process of strengthening strategic alignment and plan to reflect the revisions to the Leadership Standard in 2005.</i></p>	<p>Improve life in the Tennessee Valley through integrated management of the river system and environmental stewardship</p>	<p><b>PEOPLE</b></p> <p><b>How must we improve the capabilities of our workforce to support our objectives?</b></p> <ul style="list-style-type: none"> <li>• Shape the culture to model TVA's values</li> <li>• Develop work force capabilities required to be the supplier and employer of choice</li> </ul>																									
			<p><b>Balanced Scorecard</b></p> <p><i>(Scorecards measures and targets provide clarity on the desired outcomes)</i></p> <table border="1"> <thead> <tr> <th>Measures</th> <th>Targets</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>•Financial Strength</td> <td rowspan="3">"Mid", and "Stretch" levels are shown on the Balanced Scorecard</td> <td>↑</td> </tr> <tr> <td>•O&amp;M Costs</td> <td>→</td> </tr> <tr> <td>•Productivity</td> <td>↑</td> </tr> <tr> <td>•Customer Satisfaction</td> <td></td> <td>↑</td> </tr> <tr> <td>•Economic Development</td> <td></td> <td>↑</td> </tr> <tr> <td>•Asset Availability</td> <td></td> <td>↑</td> </tr> <tr> <td>•Environmental Impact</td> <td></td> <td>↑</td> </tr> <tr> <td>•Safe Workplace</td> <td></td> <td>↑</td> </tr> </tbody> </table>	Measures	Targets	Status	•Financial Strength	"Mid", and "Stretch" levels are shown on the Balanced Scorecard	↑	•O&M Costs	→	•Productivity	↑	•Customer Satisfaction		↑	•Economic Development		↑	•Asset Availability		↑	•Environmental Impact		↑	•Safe Workplace		↑
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*(Illustrative: Scorecards are separate documents. Shown here to emphasize alignment.)*

## Exhibit 4. COO/SBU Level Performance Indicators - FY 2005

COO Organization	PERFORMANCE INDICATORS	FY 04 Target	FY 05 Target	FY 06 Target
COO	1. Net Electric Generation	157.98	158.87	160.67
TVAN	2. Contribution to Delivered Cost of Power (mills/kWh)	13.97	15.2	13.0
	3. INPO Performance Index	89.8	94.4	95.0
FPG	4. Contribution to Delivered Cost of Power (mills/kWh) (Excludes CTs)	20.42	21.37	22.32
	5. Equivalent Forced Outage Rate (EFOR)	8.2	7.4	7.3
TPS	6. Customer Interruption Rate (Interruptions Per Delivery Point)	.90	.89	.88
	7. Load Not Served (minutes)	4.22	6.0	5.9
	8. Contribution to Delivered Cost of Power (mills/kWh)	.95	.99	1.02
RSO&E	9. Hydro EFOR - Total System (%)	1.60	1.60	1.60
	10. Flood Storage Availability	80.0	80.0	80.0
	11. Days Navigable Waterway is Available from Knoxville, TN to Paducah, KY (Days)	345	357	360
	12. Shoreline Management Performance (%)	77.6	78.2	78.2