

Tennessee Valley Authority  
Government Performance and Results Act (GPRA)

# **GPRA Annual Performance Plan For FY 2008**

*Submitted*  
**February 2007**



## Foreword

In January 2004, TVA issued its Strategic Plan outlining the areas TVA needed 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. TVA is currently working on a new strategic plan that will help guide the company for the short and long term. This plan was initiated by the TVA Board and will be approved by the Board in early 2007.

This document is TVA's GPRA Performance Plan for FY 2008. It contains the specific information that is required by the Government Performance and Results Act. This FY 2008 GPRA 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**

For more than seven decades, TVA has been improving the quality of life in the Tennessee Valley through its three fold mission of providing affordable and reliable power, promoting sustainable economic development, and acting as a steward of the Tennessee Valley's natural resources.

### **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.

### **Environmental Stewardship**

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

### **Economic Development**

TVA's economic development efforts work within existing community infrastructure, to help facilitate the efficient and effective utilization of resources to support economic gain for the valley population.

### **Technology Innovation**

Technology innovation includes activities that enable the other three components of TVA's mission to be carried out more effectively and efficiently.

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

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

TVA's general goals define how the three main components of TVA's mission are achieved.

### **Energy**

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

### **Environment**

Support a thriving river system to minimize flood damage, maintain navigation, support power production, improve water quality, protect public health and the environment, support recreational uses, and manage land to provide multiple public benefits.

### **Economic Development**

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

## 4.0 Strategic Objectives

The strategic areas of emphasis are those that are most needed to serve TVA's mission through time. TVA must continually assess strategic priorities within the context of its mission and its relative position within a changing business environment. TVA's five keys to the future, as outlined by Chief Executive Officer Tom Kilgore, bring clarity to strategic objectives and relate to the following key areas:

### **Operational excellence**

Operational excellence will be TVA's top priority. Employees can contribute to operational excellence by delivering products to customers efficiently and reliably.

### **Debt repayment**

TVA will live within its means by changing the budgeting process and taking a closer look at all expenditures. This will help TVA be frugal in a smart way and to ensure getting the right value for all the things we spend money on.

### **Reformed relationships**

Reforming relationships with power customers are extremely important. TVA needs to treat customers with respect and serve as a trusted partner.

### **Valley stewardship**

As stewards of the Tennessee River system, TVA is responsible for natural resource management and environmental compliance. TVA continues to deliver on its mission of economic development, partnering with public officials and community leaders to bring quality jobs to the region.

### **Leadership at the top**

Top management at any company sets the tone for the rest of the organization. TVA management will set the example by living the TVA Values.

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 should focus on 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 of total financing obligations (TFOs) and achieve higher interest coverage ratios 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 generation and transmission assets to fulfill supply obligations in a safe and reliable manner.

## 5.0 Performance Indicators

On March 31, 2006, six new directors were sworn in, joining William W. Baxter and Skila S. Harris as members of the TVA Board. The six new directors are: William B. Sansom, elected to serve as Chairman, Dennis C. Bottorff, Donald R. DePriest, Robert M. Duncan, Howard A. Thrailkill, and Susan Richardson Williams. A ninth director, Bishop William Graves, was sworn in as a director of TVA on October 10, 2006. In the fall of 2006, the new Board appointed TVA President and Chief Operating Officer Tom Kilgore as TVA's first Chief Executive Officer. The CEO serves at the pleasure of the Board. Given the new Board, several performance indicators have changed for fiscal year 2007 as indicated in Exhibit 1.

## 5.1 TVA-Level Performance Indicators

Performance indicators were placed into four categories with a total of nine measures as follows:

### 5.1.1 Financial

**Delivered Cost of Power Excluding Fuel Cost Adjustment (FCA)** - In order to be successful, TVA must continue its awareness and emphasis on controlling costs and increasing output to fulfill its mission of providing low-cost, reliable power. Further, controlling costs will help TVA improve its financial flexibility and competitiveness in the wholesale power market. The emphasis is placed on how employees can contribute to keeping TVA's power affordable. Employees can take steps to control costs and implement process efficiencies, and each employee is accountable for making prudent use of TVA's resources. This measure will reward employees for demonstrating effective cost management and generating production efficiencies.

**FCA Costs** - This is a measure of TVA's eligible FCA expenses per MWh of power sold. The eligible FCA costs are those approved by the Board for inclusion in the FCA mechanism. A continued awareness and emphasis on monitoring and quickly reacting to changes in eligible FCA costs allows TVA to improve its competitiveness and positioning for future success. Closely monitoring and responding to changes in eligible FCA costs will enable TVA to react more quickly in the power market. This measure will reward employees for effective cost and cash management.

**Productivity** - More competition in the electric utility and the energy services sector requires that we manage our production costs to effectively compete for and retain our customer base. The Productivity measure is the total TVA labor costs (straight time, overtime, premium and other pay, and benefits) and contractor labor costs (staff augmented, managed task and consultants) divided by the total TVA electric sales (MWh) for FY 2007. Both TVA and contractor labor exclude capital cost.

### 5.1.2 Customer-Stakeholder

**Connection Point Interruptions (CPI)** - CPI measures reliability from our customers' perspective. It tracks interruptions of power, including momentary, at connection points caused by the transmission system. Customers rank reliability the most critical in importance and are requesting improved performance in all aspects of reliability, including momentary interruptions. TVA recognizes that reliability is a critical customer satisfaction measure. A customer CPI event with a duration that exceeds one minute is also tracked as a Load Not Served (LNS) event. This critical LNS indicator is on the Power Systems Operations business unit scorecard.

**Customer Satisfaction Survey** - This is a quarterly measure of distributors' and directly served customers' satisfaction with TVA as a wholesale supplier. The customer satisfaction survey measures a variety of areas including wholesale/retail supplier, performance of local TVA customer service staff, and power quality and reliability of transmission service, pricing, contracts, and power supply mix. The baseline for this was established in FY06. Additional pricing questions will be added to establish a baseline for future inclusion, but will not be included in the FY07 calculation. Customer satisfaction with TVA as an electricity supplier is critical to retention of sales and maintaining and improving customer relationships. This measure allows for a snapshot view of performance in this area and provides the basis for continuous improvement.

**Economic Development** - The Economic Development Index is a monthly measure of the effectiveness of TVA's sustainable economic development efforts. It includes job growth 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, 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.

### 5.1.3 Operations Process

**Equivalent Availability Factor** - A monthly measure to provide a simple, yet effective, measure of asset performance. Equivalent Availability is the ratio of actual available generation from all TVA generating assets in a given period compared to maximum availability. This is an internal measure of achievement of the actual performance against the availability plan.

**Environmental Impact Index** - 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 23 elements (beginning in FY 2007) in five 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 measure, 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 safety. It tracks the number of recordable injuries incurred by TVA employees or staff-augmented employees 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. Any TVA employee or staff augmentation contractor fatality will prevent payout for this indicator at the TVA level as well as in the affected strategic business unit/business unit.

While each performance indicator is a distinct measurement, each may impact the outcome of multiple goals and objectives.

## 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 (SBU) Report cards (shown in Exhibit 2) 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) by the TVAN organization.

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

TVA uses the Institute of Nuclear Power Operations (INPO) index as its primary nuclear safety index. It is a weighted combination of ten 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 equipment be properly maintained, that 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) by the FPG organization.

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 Power System Operations (PSO) Connection Point Interruption (Interruptions Per Connection Point)**

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

The Connection Point Interruption rate measures reliability from our customers' perspective. It tracks interruptions of power, including momentary, at customer connection points that are caused by the transmission system.

#### **5.2.7 Power System Operations (PSO) 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 requires continued improvements in operating and maintenance processes and the ability to acquire new technologies that improve system performance. A highly skilled, flexible workforce is also required to provide demanded levels of service at reduced costs

#### **5.2.8 Power System Operations (PSO) Transmission Expense per Total Energy Delivery**

Operations and maintenance expense for the transmission system expressed in dollars per MWh of total energy delivered (sales + wheeling).

#### **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 business unit. The purpose of this measure is to focus on achieving reliable unit operation to meet power demands of the TVA system and ensure optimal use of available water resources.

Achievement of this objective requires that TVA institute and implement effective preventive and corrective maintenance programs and make capital investments in the system to ensure reliable hydro generation.

### **5.2.10 Flood Storage Availability (%)**

This indicator supersedes a similar indicator of the same name. Flood storage availability indicates TVA's readiness to reduce flood damage. The reservoir system is operated based on the TVA Act and broad policy last reviewed as part of the Reservoir Operations Study in 2004. Based on these guidelines, monthly flood storage availability targets were estimated. 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 to maintain and improve data collection and modeling capabilities.

### **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 performance goal monitors TVA's effectiveness in meeting customer expectations.

Achievement of this objective requires that TVA retain responsibility for integrated river operation, that the existing cooperation between TVA and the U.S. Army Corps of Engineers (USACE) be continued, and that resources be available to maintain locks and related facilities. The concrete growth problem at Chickamauga Dam Lock will make it necessary to complete the design and construction of a replacement lock prior to its projected forced closure by 2012. 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.

### **5.2.12 Land and Water Stewardship (Points)**

This metric is a combination of the performance of four functions associated with TVA's stewardship responsibilities: (1) Water Quality Objectives Completed, (2) Restored Shorelines, (3) Resource Management Projects Completed, and (4) Recreation Projects Completed. Water Quality Objectives Completed tracks the number of major milestones achieved in implementing targeted watershed initiatives and the number of milestones achieved in evaluating and reporting water resource conditions. Restored Shorelines tracks the number of critically impaired shoreline miles which are enhanced or stabilized through shoreline restoration and re-vegetation activities. Resource Management Projects Completed tracks the number of natural resources conservation projects implemented. Recreation Projects Completed tracks the number of reservoirs for which recreation data is updated. Data on informal recreation areas is collected and analyzed and campgrounds are assessed and evaluated.

Achievement of this objective requires that TVA maintains staff trained in water quality improvement, stabilization of shoreline, management of natural resources, and recreation.

## **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 essential stewardship activities previously funded by federal appropriations.

On July 22, 2005, the TVA Board approved a 7.52 percent increase in firm wholesale electric rates effective on October 1, 2005. The TVA Board approved the rate adjustment to fund increases in fuel and purchased power costs as well as increased fuel transportation costs. In 2006, fuel and purchased power costs represented about 38 percent of TVA's total costs. Costs continued to increase significantly, and on February 13, 2006, the TVA Board approved a 9.95 percent increase in firm wholesale electric rates effective

on April 1, 2006. The combined rate increases provided additional revenues of approximately \$873 million during 2006.

On July 28, 2006, the TVA Board approved a 4.50 percent decrease in firm wholesale electric rates effective on October 1, 2006. In connection with the same rate adjustment, the TVA Board also implemented a fuel cost adjustment (FCA) to be applied quarterly as a mechanism to adjust TVA's rates to reflect changing fuel and purchased power costs beginning in fiscal year 2007. The FCA is initially set to zero and had its first impact on rates effective January 1, 2007. The FCA amount implemented on January 1, 2007, was 0.01 cents per kilowatthour and is expected to produce an estimated \$3.9 million in revenue.

## **6.2 Physical Resources**

TVA's success in carrying out its mission requires 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 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 raising the bar on TVA's own performance related to reliability, forced outage rates, and overall cost.
- Continued training to develop a multi-skilled workforce 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**

The role TVA plays for generating prosperity in the Tennessee Valley is dictated by the mission. The mission serves as TVA's value proposition to the Tennessee Valley and is best defined through the TVA Act. We describe its mission in its three interrelated parts - Energy, the Environment, and Economic Development with Technology Innovation being the enabler for the other three components.

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.

TVA is currently working on a new strategic plan that will help guide the company for the short and long term. This plan was initiated by the TVA Board and will be approved by the Board in early 2007. During the interim,

the previously identified “Five Keys To The Future” will be the primary focus of TVA’s core business endeavors.

## 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 can be measured. TVA will 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. 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.
5. Govern to make strategy a continual process. Scorecards for TVA, the strategic business units and business units 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 achieving the goals outlined in the Strategic Plan. These plans include:

- Shorter Term (1-3 Year) Plans
  - Generation Plan (monthly updates based on revised market forecasts, fuel updates, and outages)
  - Power Supply Plan (quarterly updates for Fuel Cost Adjustments)
  - Strategic Business Unit Performance Plans (3-year outlook with Quarterly reviews)

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

- Longer Term (5-20 Years) Plans
  - Power Supply Plan (20-year forecast with plan updates twice annually)
  - Financial Outlook (20-year forecast)
  - Capital Project Plans (5-year outlook)

Regular Performance Management meetings are held with TVA's President/CEO, COO, and executive 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 has been named to the global Balanced Scorecard Hall of Fame for achieving exemplary performance results with its Winning Performance Balanced Scorecard program.

Balanced Scorecard Collaborative, Incorporated, (BSC) created the Hall of Fame to publicly acknowledge the results of organizations that implement balanced scorecards to create a strategy-focused organization.

BSC President David Norton and BSC's Robert Kaplan developed the Balanced Scorecard concept in 1992. BSC says the concept has been implemented in thousands of corporations, organizations, and government agencies worldwide. Based on the premise that "measurement motivates," BSC says the scorecard program is designed to put strategy at the center of the management process, allowing organizations to implement strategies rapidly and reliably.

Other Balanced Scorecard Hall of Fame organizations include the U.S. Army, the City of Charlotte, Hilton Hotels, UPS, Wendy's International, and the University of California at San Diego.

### **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 their 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.

### **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 Objectives. The critical success factors are defined within the four dimensions of TVA's Balanced Scorecard, which are (1) Financial, (2) Customer, (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 were 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 Website.

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 being 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 being equal, the lower the price of power, the higher customer satisfaction will be. But if we set prices too low, we could have insufficient revenue to cover costs, jeopardizing our ability to achieve two other goals: to reduce TFOs and to maintain reliability.

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

- (1) Delivered Cost of Power excluding FCA Costs = Total Income Statement Expenses (excluding FCA costs) +/- Other Income, net (excluding non-cash derivative gains and losses) divided by Total Sales Volume (MWh). Income Statement Expenses include non-FCA Fuel and Purchased power costs, O&M (excluding reagents and emission allowance expense), Depreciation & Amortization, Tax-Equivalents, and Interest Expense.

Note: Eligible FCA Costs (i.e. eligible Fuel, Purchased Power, Emission Allowance Expense, and Reagents Expense) are captured in a separate scorecard measure, thus they are excluded from the DCOP measure to avoid double counting of these costs on the TVA scorecard.

- (2) FCA Costs = FCA eligible fuel and purchased power expense plus emissions allowance expense plus reagent expense divided by total sales volume (MWh). Note that this measure includes eligible fuel and purchased power costs as approved by the Board and excludes certain items such as fixed capacity payments, fuel handling, etc. Also, the actual costs used in the calculation will exclude any deferral and amortization of costs related to the FCA.
- (3) Productivity = TVA Labor / MWh Sales; Where: TVA Labor = All Cost Class 11 (Straight time, over time, premium/other pay), plus All Cost Class 12 (Benefits); plus the labor only component of all Contractors Cost (Staff Augmented, Managed Task, and Consultants). Excludes: Capital Cost, TVA Winning Performance Pay, Workers' Compensation and Annual Leave Liability & new benefits timing accruals (IBNR). And Where: MWh Sales = total sales of electricity to distributors and direct serve customers.
- (4) Connection Point Interruptions = Number of Interruptions / Number of Connection Points (Number of interruptions includes all interruptions, regardless of duration.) (Excludes interruptions during declared major storms and is lightning normalized.)
- (5) Customer Satisfaction Survey = Percent of customers satisfied =  

$$\left[ \left( \sum \text{Applicable PD survey questions (\% satisfied)} \right) * (1/10) * (.85) \right] +$$

$$\left[ \left( \sum \text{Applicable DSI survey questions (\% satisfied)} \right) * (1/9) * (.15) \right]$$

- (6) Economic development index is a composite index, calculated as the sum of the following measures:  
 0.50 x (jobs added and retained actual/jobs added and retained target) +  
 0.25 (capital investment actual/capital investment target) +  
 0.25 (jobs impact actual/jobs impact target)

- (7) Equivalent Availability Factor =

$$\frac{\sum \text{of all units } ((AVH * NMC) - MWhL - SchMWhL)}{\sum \text{of all units } (PH * NMC)} * 100$$

AVH = Available Hours (Includes Service and Standby Hours)

PH = Period Hours

NMC = Net Maximum Capacity = Winter NDC for Thermal Units

MWhL = MWh Losses due to forced derating

SchMWhL = MWh Losses due to scheduled derating

- (8) Environmental Impact Index is also a composite index of 23 indicators grouped into 5 categories that are weighted as follows:

Air Quality	24.9 points
Water Quality	25.0 points
Land Impacts	1.0 points
Waste Production	15.0 points
Energy Consumption	10.0 points

- (9) Safe Workplace = Recordable Injury Rate, calculated as follows:

$$\frac{\text{Safe Workplace (ORIR)} = \text{Number of Recordable Injuries} \times 200,000}{\text{Hours worked during time period}}$$

NOTE: Hearing events are reported to OSHA as recordable injuries, but will be excluded from the TVA Winning Performance Safe Workplace Indicator. Hearing loss is an occupation illness, not a typical recordable workplace safety event.

200,000 = 100 employees working 40 hours/week for 50 weeks/year

ORIR = OSHA Recordable Injury Rate

### 8.5 COO and SBU Level Performance Indicator Definitions (Exhibit 2)

- (1) Net Electrical 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 ten 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) PSO Connection Point Interruption (Interruptions per Connection Point)

Connection Point Interruption measures reliability from our customers' 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) PSO Load Not Served (system minutes)

TVA load not served expressed in system minutes.

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

(8) PSO Transmission Expense per Total Energy Delivery

Operating cost for the transmission system. Expressed as a year-to-date cost in \$ per MWh sold.

Formula = Total TVA Transmission Expense / MWh Delivered

(9) RSO&E (River System Operations and Environment) Hydro Equivalent Forced Outage Rate (EFOR) (%)

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

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



(10) RSO&E Flood Storage Availability (%)

Formula =  $(11 \times (\% \text{ of project days when each individual reservoir elevation is within one foot of flood guide levels}) + \% \text{ of project days total flood storage allocation above Chattanooga is 97\% or greater}) / 12$ .

(11) RSO&E 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) RSO&E Land and Water Stewardship (points)

Each of the four components of this indicator addresses land or water stewardship activities of interest to TVA's stakeholders.

Formula = Water Quality Objectives Completed points + Shoreline Restored points + Resource Management Completed Points + Recreation Projects Completed 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 renew its Strategic Plan and corresponding Annual Performance Plans as more information becomes available.

# Exhibit 1. TVA Winning Performance FY 2007 Balanced Scorecard

Winning Performance									
TVA Balanced Scorecard for FY 2007									
	Weight	Target 2005	Actual 2005	Target 2006	Actual 2006	Target 2007	Target 2008	Target 2009	
<b>Financial</b>									
Delivered Cost of Power (\$/MWh Sales)						50.15	50.72	50.09	
Delivered Cost of Power Excluding FCA Costs (\$/MWh Sales)*	20%	N/A	N/A	N/A	N/A	32.61	32.59	TBD	
FCA Costs (\$/MWh Sales)*	5%	N/A	N/A	N/A	N/A	17.54	18.13	TBD	
Productivity (\$/MWh Sales)**	10%	153.7	160.9	9.15	10.72	9.47	TBD	TBD	
<b>Customer</b>									
Connection Point Interruptions (Interruptions per Connection Point)*	15%	0.89	0.785	0.89	0.742	0.84	0.84	0.84	
Customer Satisfaction Survey (Percent Satisfied)***	10%	N/A	N/A	92	94.2	82.0	82.0	82.0	
Economic Development (Jobs+Investments+Job Impact)	5%	100	123	100	123	100	100	100	
<b>Operations</b>									
Equivalent Availability Factor (Percent)*	15%	N/A	N/A	N/A	N/A	87.2	87.7	88.2	
Environmental Impact (Index)****	10%	78	54	66	70	65.2	63.0	62	
<b>People</b>									
Safe Workplace (Recordable Injuries/Hours Worked)*****	10%	2.12	1.82	1.82	1.26	1.82	1.82	1.82	
<p>* New Indicator for FY07</p> <p>** Productivity formula revised; denominator changed from kwhs to mwhs</p> <p>*** Formerly a part of the FY06 Customer Impact Indicator. FY06 Customer Satisfaction Survey based on distributor responses to three survey questions. FY07 Customer Satisfaction Survey based on distributor and directly served customer responses to a total of nineteen survey questions (ten distributor and nine directly served).</p> <p>**** FY2007 targets are based on composite of 23 elements</p> <p>***** Includes TVA and Staff Augmented Employees. Hearing events are excluded. Any TVA employee or staff augmentation contractor fatality will prevent payout for this indicator at the TVA level as well as the affected SBU/BU.</p>					<p><b>Status:</b></p> <p>↑ Forecast at or better than Target</p> <p>↔ Forecast worse than Target, but recovery is possible</p> <p>↓ Forecast worse than Target and recovery is unlikely</p>				

## Exhibit 2. COO/SBU Level Performance Indicators - FY 2008

COO Organization	PERFORMANCE INDICATORS	FY 05 Target	FY 05 Actual	FY 06 Target	FY 06 Actual	FY 07 Target	FY 08 Target
<b>COO</b>	1. Net Electric Generation	158.87	159.89	160.60	155.54	160.66	166.89
<b>TVAN</b>	2. Contribution to Delivered Cost of Power (mills/kWh)	15.02	14.47	13.69	13.74	14.44	14.72
	3. INPO Performance Index*	94.4	85.3	97.5	94.0	79.7	95.5
<b>FPG</b>	4. Contribution to Delivered Cost of Power (mills/kWh) (Excludes CTs)	21.00	22.12	24.36	25.78	27.44	29.09
	5. Equivalent Forced Outage Rate (EFOR)	7.4	4.6	5.0	6.8	5.3	5.3
<b>PSO</b>	6. Connection Point Interruptions (Interruptions Per Connection Point)	.89	.79	.89	.74	.84	.84
	7. Load Not Served (System minutes)	6.00	3.34	5.20	4.04	4.91	4.91
	8. Transmission Expense per Total Energy Delivery (\$ per MWh)	N/A	.81	.88	.84	.87	.90
<b>RSO&amp;E</b>	9. Hydro EFOR - Total System (%)	1.60	1.70	1.60	1.46	1.60	1.60
	10. Flood Storage Availability	N/A	N/A	70.0	91.3	70.0	70.0
	11. Days Navigable Waterway is Available from Knoxville, TN to Paducah, KY (Days)	357.0	352.2	332.0	365.0	308.0	331.0
	12. Land and Water Stewardship (Points)	N/A	N/A	100.0	108.0	100.0	100.0

\* Criteria revised for FY 07 to include ten performance indicators. Criteria for full points will be more restrictive. FY06 and earlier values cannot be compared to FY07 and later values.