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From: FOIA <foia@tva.gov>
Sent: Thu, Jul 20, 2017 3:36 pm
Subject: TVA response to your FOIA request #5055

This responds to your FOIA request to TVA numbered #5055.

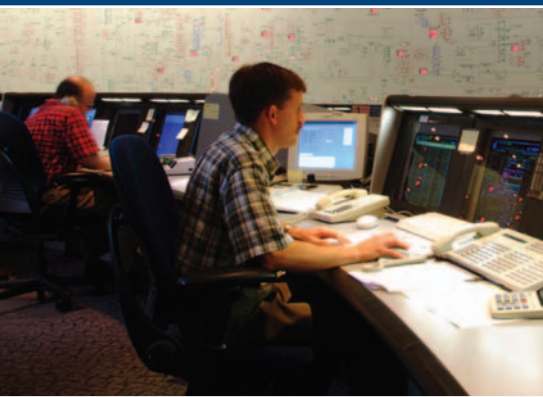
You requested a digital/electronic copy of the TVA Performance Budget for years 2010-2017. Attached are PDF copies of the requested budget reports.

If you have questions, you may contact me.

Sincerely,

Denise Smith
FOIA Officer
Tennessee Valley Authority
400 W. Summit Hill Drive WT 7D
Knoxville, TN 37902-1401

Budget Proposal and Management Agenda



For the Fiscal Year Ending
September 30, 2010

Submitted to Congress
May 2009



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Introduction

The Tennessee Valley Authority (“TVA”) serves the nation and nearly nine million people of the Tennessee Valley region by achieving measurable success in the three major areas of TVA’s mission — energy, the environment, and economic development. A corporation of the federal government, TVA operates like a business. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. In fact, through 2008, TVA has returned to the U.S. Treasury approximately \$3.5 billion, including interest, on the government’s appropriation investment in TVA’s power program of \$1.4 billion. Established by Congress in 1933, TVA is charged with improving the quality of life in the seven-state Tennessee Valley region by providing navigation, flood control, agricultural and industrial development, and electric power.

Power Generation System. TVA provides power for Valley residents through local power distributors and sells power directly to large industries and government entities. As the nation’s largest public power system, TVA is committed to meeting the region’s growing needs for reliable, affordable, and environmentally sound energy. TVA’s power system is setting performance records as it meets power demand.

Transmission System. The 2,400 miles of 500kV lines in TVA’s approximately 15,860-mile transmission system are a critical link for the movement of electricity throughout the eastern United States. TVA continues to strengthen system reliability with technology that gives a clearer picture of grid conditions over a wider area at any given time.

Natural Resource Stewardship. Another vital part of TVA’s mission is management of the Tennessee River system, the fifth-largest river system in the United States. TVA primarily funds resource stewardship services from power receipts. User fees are also used to a much smaller extent. The 652-mile-long river, the 42,000 miles of streams and tributaries, and the 49 dams and 14 navigation locks operated by TVA are a vital part of the nation’s navigation system, providing for the shipping of over 50 million tons annually. In addition to commercial navigation, TVA’s management of the river system includes reducing flood risk, producing hydro power, and providing cooling water for TVA’s fossil and nuclear plants. Encompassing 41,000 square miles, the river and its 12 tributary watersheds touch 125 counties in portions of seven states. In addition, TVA has direct stewardship responsibility for 650,000 reservoir surface acres available for recreation, 11,000 miles of shoreline, and 293,000 acres of public land.

Economic Development. In 1933, TVA was tasked by Congress and President Roosevelt to help develop a vibrant regional economy for the benefit of the people of the Tennessee Valley region. To fulfill this mission, TVA serves as a catalyst for sustainable economic development by assisting states, communities, and distributor customers in recruiting and retaining targeted businesses and industries that provide high economic impact, while balancing TVA’s anticipated future system needs. By providing technical and community development related services to TVA’s various stakeholders, TVA’s economic development strives to help create and retain quality, high-paying jobs and increase the capital investment in the business community to the benefit of the community, the Valley, and TVA as a whole.

Strategic Plan. In Fiscal Year (“FY”) 2007, the Board developed a new Strategic Plan in conjunction with TVA staff and consultant support. The Strategic Plan leverages and realigns TVA’s strengths in five key areas: Customers, People, Financial, Assets, and Operations. First, TVA will continue to strengthen relationships with customers by providing reliable and competitively priced power, partnering with them in energy efficiency, power supply, and economic development, and building trust by communicating openly and honoring commitments. Second, it recognizes the importance of TVA’s people by building pride in TVA’s performance and reputation, treating everyone with integrity and respect, and making TVA a safe and desirable place to work. Third, the Strategic Plan emphasizes the necessity of adhering to sound guiding financial principles, spending money when and where it is a good investment to do so, while at the same time adhering to disciplined economic practices. Fourth, TVA’s strategy for assets is to balance production capabilities and load requirements by promoting conservation (i.e., demand reduction), efficient use of electricity, and by adding assets, including renewables. TVA will also continue to manage land and water resources to provide multiple benefits to the Valley. Fifth, through the Strategic Plan, TVA plans to improve its performance to be an industry leader – among the top 25 percent in key areas of operations. A vital part of the Strategic Plan is the metrics by which the Board

will evaluate progress, motivate improvement, and measure success. For each of the five key areas, the Strategic Plan identifies corporate-level metrics to monitor TVA's performance toward successfully implementing its strategy.

Challenges. TVA is governed by the TVA Board which is responsible for approving an annual budget. The information included in this document is based on the 2009 Annual Budget which was approved by the TVA Board in August 2008. The following challenges occurred after the 2009 Annual Budget was approved:

Kingston Fossil Plant Ash Spill. During the first quarter, an event at the Kingston Fossil Plant ("Kingston"), which TVA operates pursuant to the TVA Act, was reportable to federal, state, and local environmental and emergency response agencies. On December 22, 2008, a dike failed at Kingston located near Kingston, Tennessee, allowing approximately five million cubic yards of water and coal fly ash to flow out onto approximately 300 acres, including approximately 8 acres of land not managed by TVA. TVA currently believes the recovery process will take several years and has prepared an estimate of the total cost of clean up. Some of the material flowed into the nearby Watts Bar Reservoir at Emory River mile 2.5. TVA does not currently have an estimate as to how long the recovery process will take, but has begun to estimate the cost of associated cleanup and recovery activities. TVA has recognized a charge of \$675 million for the six months ended March 31, 2009, in connection with the current expected cleanup costs related to the event. Costs incurred through March 31, 2009, totaled \$77 million. This estimate does not include any amounts for regulatory actions, litigation, fines and/or penalties that may be assessed, final remediation activities or other settlements because TVA cannot estimate these at this time.

Case Brought by North Carolina Alleging Public Nuisance. On January 30, 2006, North Carolina filed suit against TVA in the United States District Court for the Western District of North Carolina alleging that TVA's operation of its coal-fired power plants in the states of Tennessee, Alabama, and Kentucky constitute public nuisances. North Carolina asked the court to impose caps on emissions of certain pollutants from TVA's coal-fired plants that North Carolina considers to be equivalent to caps on emissions imposed by North Carolina law on North Carolina's two largest electric utilities. On January 13, 2009, the court held that emissions from the Bull Run Fossil Plant ("Bull Run"), the Kingston Fossil Plant ("Kingston"), the John Sevier Fossil Plant ("John Sevier"), and the Widows Creek Fossil Plant ("Widows Creek") constitute a public nuisance. The first three plants are located in Tennessee, and Widows Creek is located in Alabama. The court declined to order any relief as to the remainder of TVA's coal-fired plants, holding that their emissions did not significantly impact North Carolina. TVA currently estimates that the total cost of taking all of the actions required by the court would be approximately \$1.7 billion through 2014. Of this amount, TVA was already planning to spend approximately \$0.8 billion before the court issued its order. There could be other cost impacts, including fuel, variable operation and maintenance ("O&M"), and fixed O&M, and those costs are under evaluation. TVA is currently reviewing the decision and considering its options.

Decreased Electric Power Demand. The effects of the economic downturn are resulting in less demand for electric power by certain customer types. Sales of electricity are about six percent below 2008 levels and could decline further if commercial and industrial employers continue to reduce production in response to the downturn. Through March 2009, directly served industrial sales are down approximately 14.9 percent, while municipal and cooperative sales have experienced a 3.1 percent decline compared to the prior year.

Investment Performance. The performance of debt, equity, and other markets in 2008 negatively impacted the asset values of investments held in TVA's pension system and nuclear decommissioning trust ("NDT"). During the period September 30, 2008, through March 31, 2009, the change in the Standard & Poor's ("S&P") 500 benchmark index was a decrease of 31 percent.

Lower Commodity Prices and Effects on Fuel Cost Adjustment. Due to falling commodity prices across domestic and international markets, TVA experienced lower-than-expected costs in short-term markets for natural gas, fuel oil, and electricity during the second quarter of 2009. The average market prices for these commodities for the six months ended March 31, 2009, were 47 percent, 52 percent, and 41 percent lower, respectively, as compared to the average market prices for the six months ended March 31, 2008. Coal markets have reacted more slowly than other fuel markets and remain well above the previous year's levels. Average market prices for coal for the six months ended March 31, 2009, were 15 percent higher as compared to the average market prices for the six months ended March 31, 2008.

Weather Conditions. Rainfall in the eastern Tennessee Valley was 86 percent of normal and runoff was 66 percent of normal for the six month period ended March 31, 2009. Hydroelectric generation increased during the six month period ended March 31, 2009, as compared to the same period in 2008. Hydroelectric generation was 5.3 billion kilowatt-hours during the six month period ended March 31, 2009, which was nearly 2 billion kilowatt-hours higher than the same period of 2008.

Pending Legislation. There is currently pending federal legislation in Washington involving clean or renewable energy, and depending on the bill that gets approved, TVA might have to ensure that anywhere from four percent to 25 percent of the energy it sells is produced by clean or renewable sources.

Management Initiatives

Overview

In striving for higher standards of performance, TVA is implementing several management initiatives to further improve the quality of its services and the efficiency with which those services are delivered. The following sections highlight TVA's management efforts:

- 1 – Strategic Management of Human Capital**
- 2 – Commercial Services Management**
- 3 – Improved Financial Performance**
- 4 – Expanded Electronic Government**
- 5 – Budget and Performance Integration**

1. Strategic Management of Human Capital

Many of the challenges the Federal Government faces in managing people have already been identified within TVA, and improvement initiatives that are well under way are achieving measurable results and identifying opportunities for further improvement.

TVA's comprehensive performance management process, which is called "Winning Performance," tracks TVA's performance on 24 critical success factors ("CSFs") and reports results monthly on the TVA-wide Balanced Scorecard. In line with TVA's performance-management initiatives, TVA's Human Resources ("HR") practices are characterized by a focus on measurement.

Integrated Staffing Planning

Effective workforce management is a key principle of TVA's overall management strategy. As the scope and nature of TVA's business has changed during the past 20 years, so has the agency's staffing needs. For example, as TVA's focus shifted away from building power plants, staffing levels have been adjusted. During the past two decades, TVA's employment level has dropped from about 47,000 to about 12,000 — a reduction of 74 percent. Today, as a result of past downsizing actions and attrition, TVA's fundamental human resource challenge is identifying, retaining, and developing a capable workforce for the future. The TVA employee average age is 46 years, slightly older than the electric utility employee average of 45 years cited in the American Public Power Association study. In addition, average employee tenure is 15 years.

Knowledge Retention

TVA has developed and begun to implement a process to capture the most critical undocumented knowledge of employees nearing retirement. This process enables line managers to identify critical knowledge and skills that may be lost through attrition, to evaluate the risk associated with losing the knowledge and skills, as well as develop, implement and evaluate action plans for managing the risk.

Craft Pipeline Training

After many years of relying on a traditional single-discipline maintenance workforce, TVA transitioned to a new multi-craft / multiple-skill pipeline training program for maintenance workers at the fossil and nuclear power plants. Likewise, operations as well as maintenance skills are now included in a single pipeline program for workers at TVA's hydro generating facilities. In both cases, TVA was able to reduce the training program length from 4 years to 2.5 years, supporting improvements in labor expense as well as increased flexibility in workforce planning.

Recruiting

Along with addressing the ongoing trend in retirements, TVA is fine-tuning its recruiting efforts. Trades-and-labor employees and experienced supervisors and managers are the majority of new hires at TVA, and this trend is expected to continue. Major TVA business efforts are anticipated that will significantly increase the need for additional talent (i.e. nuclear resurgence initiatives, transformation of certain business units and their functions, etc.).

Succession Planning/Talent Management

In addition to its efforts to develop all its employees, TVA has implemented a focused talent management process to help identify and develop future leaders. The intent of this effort is to ensure that TVA has qualified internal candidates ready to meet its future leadership needs.

In 2006, TVA executives began utilizing a common, structured process for evaluating talent and identifying potential successors for key positions. Current talent assessment efforts utilize the "Nine-Box" model of assessing employees' current performance and future leadership potential. Particular attention is then paid to the development (training, rotational assignments, mentoring, etc.) of identified high potential employees and to improving the performance of the lowest performers.

New Employee Engagement

TVA continues to improve and standardize the orientation experience for new employees. TVA uses Gallup research to guide its emphasis on improved employee engagement as a direct contributor to critical success factors for TVA. Benchmark data shows that a positive and content-rich orientation experience contributes to employees becoming productive faster and more effectively.

Integrated Performance Management

TVA's success depends on the performance and productivity of every employee. To ensure that performance expectations are met, TVA established an Integrated Performance Management ("IPM") system that aligns job performance with compensation awards, employee development activities, and TVA's strategic objectives. A standardized IPM calendar of activities is followed.

Winning Performance

Winning Performance is the process TVA uses to manage performance. This process reflects the Strategic Objectives and Critical Success Factors identified in the Strategic Plan, identifies TVA-wide implementation plans needed to achieve the expected results, closely monitors performance, and rewards successful achievement of results.

The Winning Performance Team Incentive Plan ("WPTIP") has introduced the concept of pay for performance to employees to give everyone a stake in the performance of the agency. TVA awards employees a lump-sum payment ranging from 0 to 16 percent depending on the composite performance results that are tracked on the TVA-wide and organization-specific scorecards. Individual WPTIP awards depend on the performance of TVA and the Business Units against goals set at the threshold, target, and stretch levels.

Corporate Learning and Organizational Effectiveness

TVA's Training and Development Organizational ("T&D") group provides leadership in the areas of Corporate Learning and Organizational Effectiveness, and provides a suite of services ranging from supervisory and leadership development to craft pipeline training. Other products and services include culture change and organizational effectiveness consulting. T&D serves the TVA workforce which is spread over a seven-state service area and works across a 24-hour, seven-day schedule. TVA uses a Performance Consulting model to identify and deliver appropriate solutions.

Human Resource Information Systems

Technology is also improving productivity in TVA's HR function and is enabling HR to revolutionize its paper-driven administrative tasks. Since 1997, HR has changed its focus from conducting administrative activities to serving as a strategic business partner with a focus on Human Capital Asset Management. A key element in this transition is *Self-Service Solutions*, which puts information and accountability in the hands of the decision-makers. *Self-Service Solutions* include interactive voice response, Web tools, and an Employee Service Center.

2. Commercial Services Management

TVA's supply chain philosophy includes focusing on overall contracting strategy rather than individual transactions. This emphasis on an overall contracting strategy requires obtaining the lowest total ownership cost for goods and services. This practice looks beyond purchase cost or price alone as the driving factor; in fact, many factors determine the lowest total ownership cost.

Strategic Sourcing

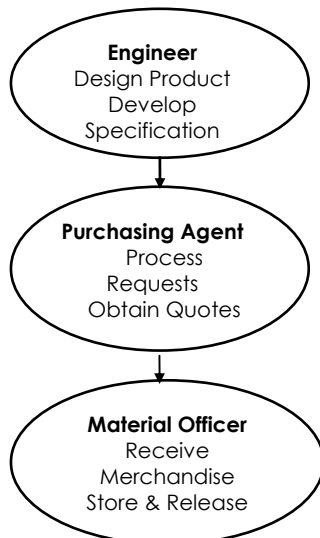
In using this focus on lowest total ownership costs, TVA follows a six-step process for "strategic sourcing." Strategic sourcing refers to a systematic methodology in which the total ownership costs of goods and services required by TVA are reduced while quality, service, and technology are improved.

Sourcing Group Strategy

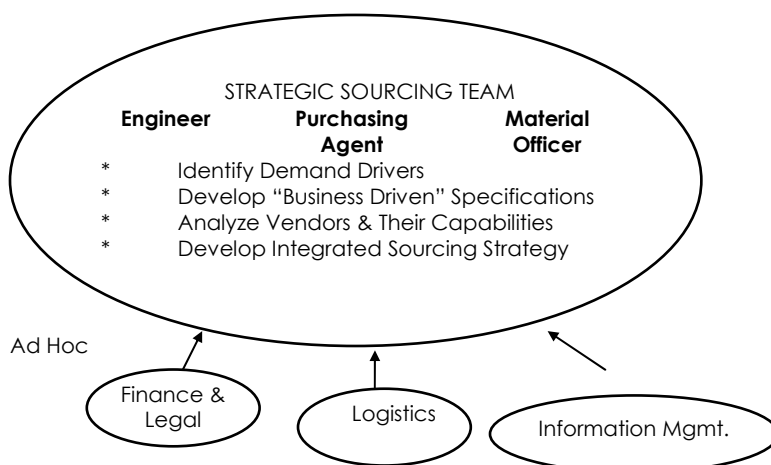
TVA has also developed a sourcing group strategy in which materials and services are grouped into 44 commodity families and a sourcing group manager is assigned to each family. The sourcing group manager is typically a contract manager or contract agent tasked with ensuring that a product or service is efficiently managed. In this role, the sourcing group manager calls upon cross-functional teams from the supply chain and customer organizations to manage the commodity. This approach is characterized by joint team responsibilities, enhanced communications, consistent supplier interface, short cycle times, common focus, and ownership.

The model below shows an example of strategic sourcing and how it differs from a traditional procurement approach:

TRADITIONAL HIERARCHICAL APPROACH



STRATEGIC SOURCING MODEL



Standardized Business Practice

TVA has standardized its business practice governing the supply chain to help lower total costs. The improved business practice includes all activities, processes, and systems related to sourcing strategy; supplier relations; contracting for products and services; transportation and logistics; and materials management, including receipts, warehousing, distribution, inventory strategy, inventory management, disbursement, and disposal of surplus personal property.

TVA's Supply Chain policy outlines criteria on which TVA bases its supply management decisions. As mentioned, TVA considers not only price but also other factors essential to achieving the best value. These include cost, quality, competition, leverage, standardization, inventory optimization, and supplier relations.

3. Improved Financial Performance

Oversight and Governance

TVA is committed to conducting business in an open and forthright manner that earns the confidence of the Executive Branch, Congress, and TVA's investors and customers. Investors in TVA benefit from oversight, auditor independence, corporate responsibility, and TVA's commitment to timely, accurate, and comprehensive financial disclosure.

In December 2004, the President signed the Consolidated Appropriations Act, 2005, which amends the Securities Exchange Act of 1934. This act requires TVA to file annual reports with the Securities and Exchange Commission (SEC), beginning with the 2006 Annual Report filed on Form 10-K, as well as periodic, current, and supplementary information, documents, and reports. In December 2006 and June 2008, the SEC adopted rules which provide further deferrals of the reporting requirements of Sarbanes-Oxley Section 404 for non-accelerated filers such as TVA. Under these rules:

- The management reporting requirements of Section 404 became effective for non-accelerated filers for fiscal years ending on or after December 15, 2007.
- The auditor reporting requirements of Section 404 become effective for non-accelerated filers for fiscal years ending on or after December 15, 2009.

TVA Oversight – A Different Mission with Different Oversight

TVA is a government-owned corporation, and its mission is fundamentally different than that of publicly traded companies. TVA is governed by the TVA Board. The Consolidated Appropriations Act, 2005, amended the TVA Act by restructuring the TVA Board from three full-time members to nine part-time members, at least seven of whom must be legal residents of the TVA service area. TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board, among other things, establishes broad goals, objectives, and policies for TVA; establishes long-range plans to carry out these goals, objectives, and policies; approves annual budgets; establishes and oversees rates; and establishes a compensation plan for employees.

Chief Executive Officer – Tom Kilgore was named President and Chief Executive Officer (“CEO”) in October 2006 after having served as President and Chief Operating Officer since joining TVA in March 2005.

An Audit Committee – The TVA Board established the Audit, Governance, and Ethics Committee. The committee is responsible for recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and Inspector General, among other activities.

An Independent Auditor – TVA's independent auditor audits TVA's financial statements in accordance with standards of Public Company Accounting Oversight Board (United States) and with *Government Auditing Standards* issued by the Comptroller General of the United States. The auditor also provides an opinion on whether those statements are presented in conformity with U.S. Generally Accepted Accounting Principles (“GAAP”).

An Independent Inspector General – TVA has an independent Office of Inspector General (“OIG”), that conducts ongoing audits of TVA's operational and financial matters in accordance with *Government Auditing Standards*, which incorporate the American Institute of Certified Public Accountants’ (“AICPA”) generally accepted auditing standards. The OIG's staff has about 104 employees, including more than 50 auditors. TVA's Inspector General was previously appointed by the TVA Board, but pursuant to legislation enacted in November 2000, is now appointed by the President of the United States. The OIG provides semiannual reports to Congress on the results of its audit and investigative work. Additional reports will be reviewed by the Audit, Governance, and Ethics Committee.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the Government Accountability Office (“GAO”), also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to the Office of Management and Budget (“OMB”), and TVA's budget is included in the consolidated budget of the U.S. Government. Additionally, TVA's financial results are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by the GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act ("GPRA"), which requires that a strategic plan and annual performance reports be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the Environmental Protection Agency, state environmental agencies, the SEC, and the Nuclear Regulatory Commission. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. Additionally, while TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission ("FERC"), FERC has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Council and the industry-based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to ensure compliance with generally accepted government auditing standards. To ensure that the OIG performs its audits in accordance with generally accepted government auditing standards, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Accounting and Financial Reporting

TVA's financial transactions are subject to audit by the Comptroller General under various statutes. Further, TVA's financial statements are annually audited by independent auditors. TVA also submits financial information to OMB, the U.S. Treasury, Energy Information Agency, Nuclear Regulatory Commission, and others, in accordance with regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board.

Financial Reporting and Disclosure

TVA publishes an annual report that contains audited financial statements and an opinion letter from the independent auditors. TVA's Annual Report includes comparative financial information, and in 1990, TVA began publishing quarterly financial statements reviewed by independent auditors. In 2003, TVA began including its complete Information Statement with its annual report. In December 2006, TVA filed its first Annual Report (10-K) with the SEC and now files all annual reports ("10-Ks"), quarterly reports ("10-Qs"), and current reports ("8-Ks") with the SEC.

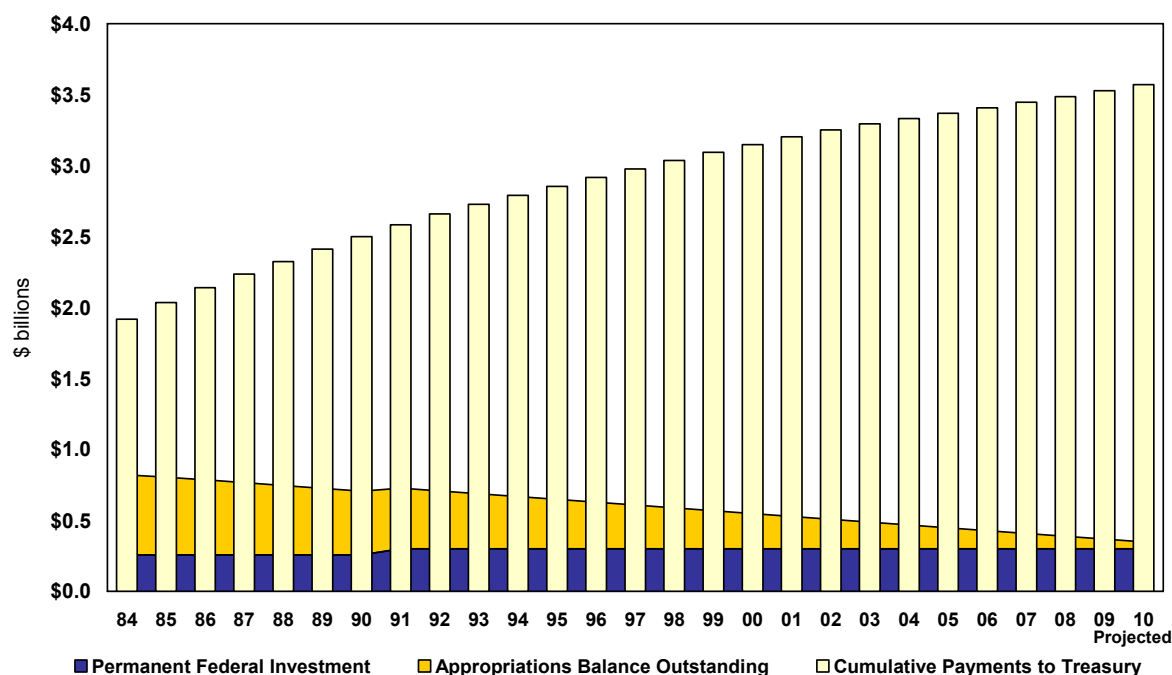
Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise and on a weekly basis within some business units. The monthly financial performance reports contain explanations of actual-versus-budget and prior-year spending for each line item on the cash flow statement and statement of capital expenditures. In addition, the income statement contains explanations on actual versus budget for the current fiscal year. The reports also include a balance sheet analysis detailing significant changes during the reporting period and non-financial performance indicators comparing actual results versus targets. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

Financing the Business

For more than 40 years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return payment. Through 2010, these payments are expected to total an estimated \$3.6 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA.

Power Program Appropriation Repayment



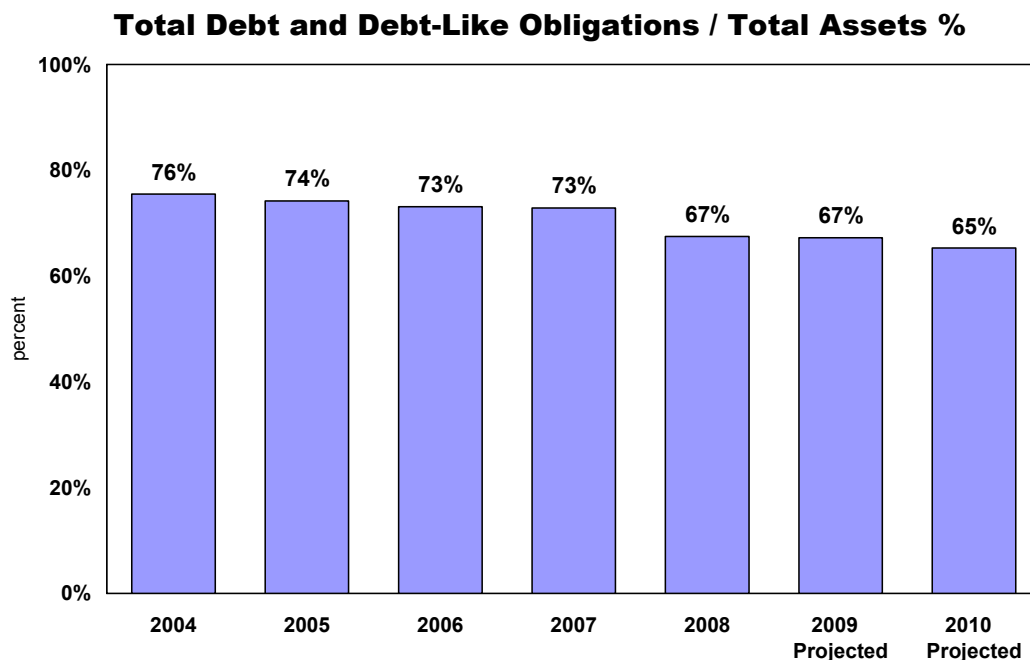
TVA uses a Debt Service Coverage (“DSC”) methodology for calculating its revenue requirement. The DSC methodology provides for recovery of normal operating costs, debt service (i.e., both annual principal and interest payments), and other required costs (i.e., decommissioning, pension contributions) necessary to maintain TVA’s credit quality. TVA also uses a cost of service methodology. Several components in the revenue requirement changed significantly from FY 2004 to FY 2007. Many of these costs, such as fuel and purchased power expense, and nuclear security measures, experienced increases that are largely beyond the control of TVA.

Financial Health

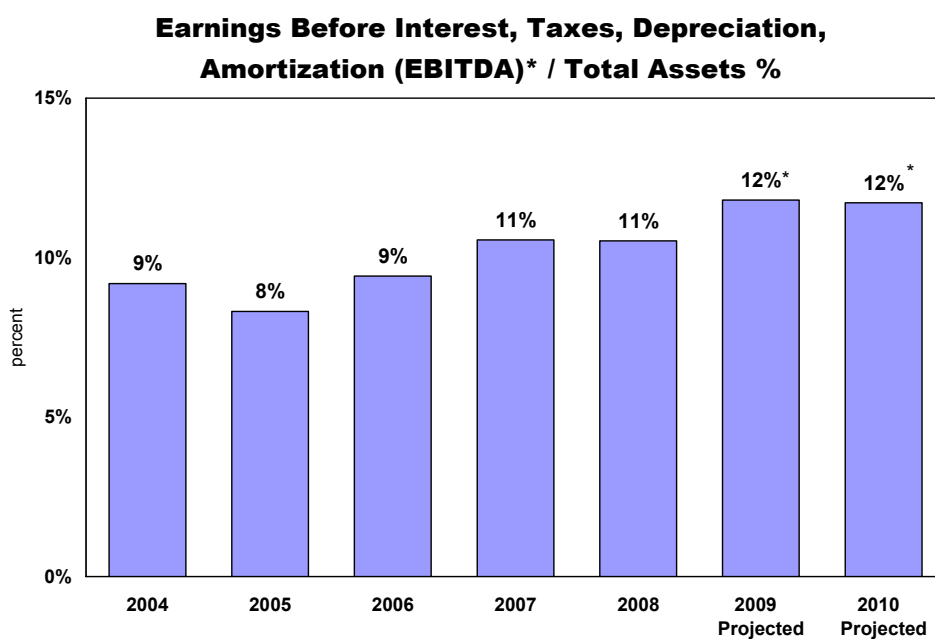
TVA’s financial information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA’s sources of capital are more limited. Maintaining TVA’s AAA credit rating is a key component of TVA’s financial strategy. This strategy is centered on applying sound decision criteria to new investments; retiring debt before the associated assets are retired; improving the balance sheet by improving the ratio of financing obligations to total assets; and improving cash return on total assets for the purpose of debt payment, asset investment and investments to improve environmental performance. TVA plans to continue to make decisions necessary to further sound financial performance. TVA’s liquidity is enhanced by several factors. The TVA Board has the ability to adjust rates on a quarterly basis, if needed. Additionally, the fundamentals of TVA’s business and high credit rating allow ready access to capital markets when needed, while TVA’s discount-note program provides TVA the short-term capital it needs to fund daily operations. TVA plans to:

- Invest in new capital projects and leases when economically justified or needed to meet regulatory requirements, such as clean air compliance;
- Pay down new financial obligations through revenue or savings generated from the investments they were used to fund; and
- Retire financial obligations before the value of the associated assets in the portfolio is depleted.

These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets. TVA will track its financial health by measuring Total Debt and Debt-Like Obligations as a percent of Total Assets.



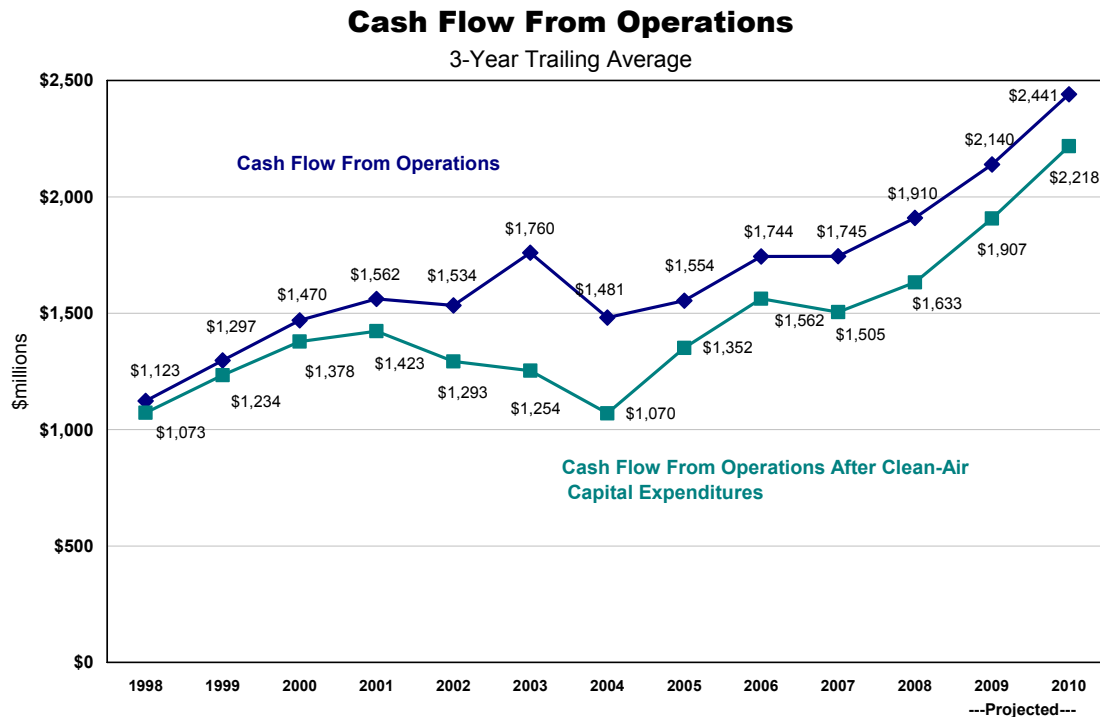
In addition to sound criteria for new investments, improving non-fuel O&M expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. TVA intends to achieve top-quartile performance in non-fuel O&M expenses. The measure of this goal will be a ratio of Earnings before Taxes, Interest, and Depreciation and Amortization ("EBITDA") to Total Assets. See Appendix for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.



*See Appendix for a reconciliation of EBITDA to the most directly comparable GAAP measure.

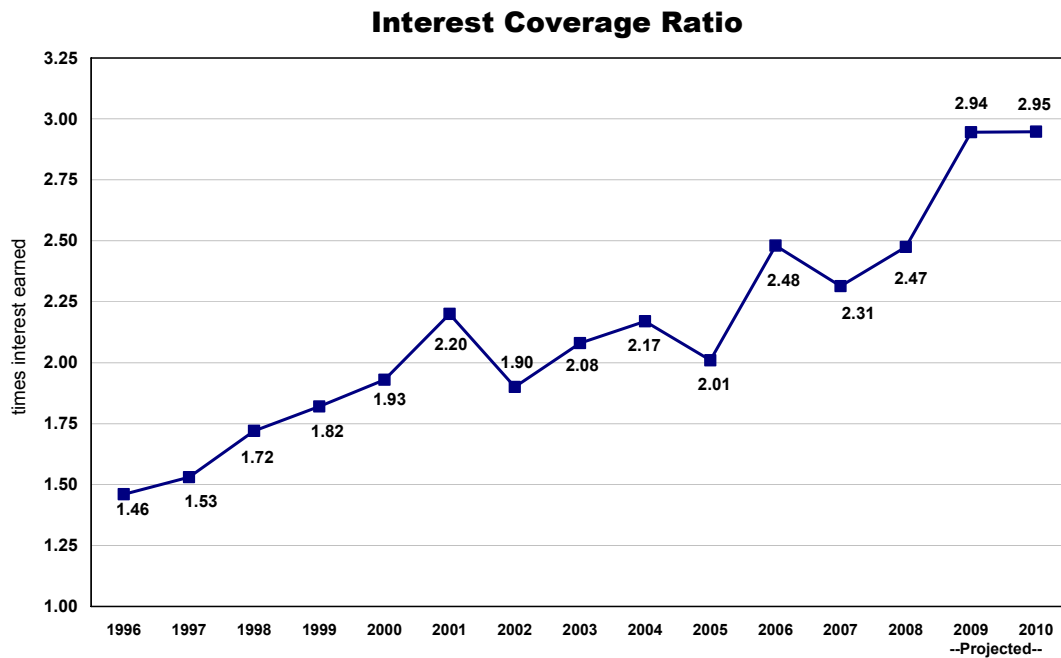
Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a three-year average cash flow to provide a measure of its financial health.



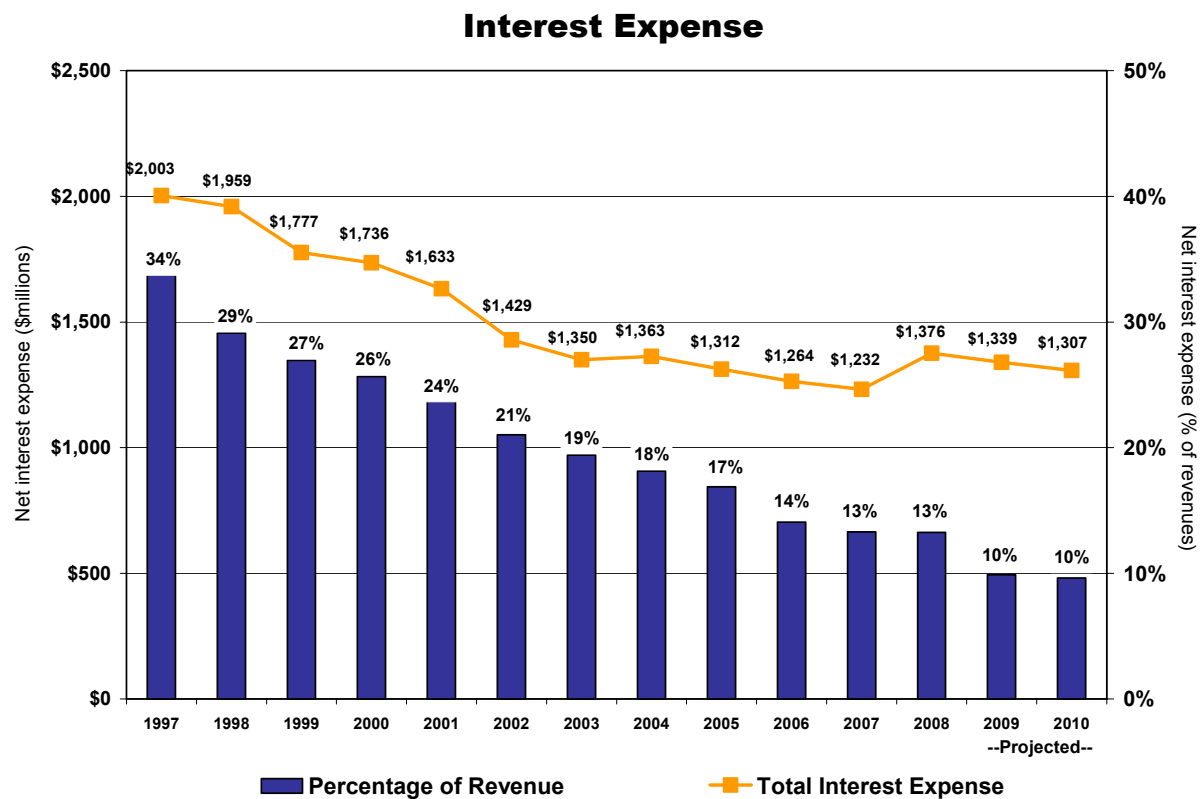
Interest Coverage

TVA's ability to service its statutory debt, measured by the degree to which annual cash flow covers interest obligations, has also improved over the past several years as annual cash flow has generally increased and debt has been reduced.



Interest Expense

TVA intends to continue to manage fixed costs including interest expense. Annual interest expense was more than \$2 billion at its peak. This amount has declined 31 percent, to \$1.4 billion in 2008. In 1997, annual net interest expense as a percentage of total revenues was 34 percent. That figure has been reduced to only 13 percent of revenues for 2008 and is expected to decrease to 10 percent in 2009 and 2010.

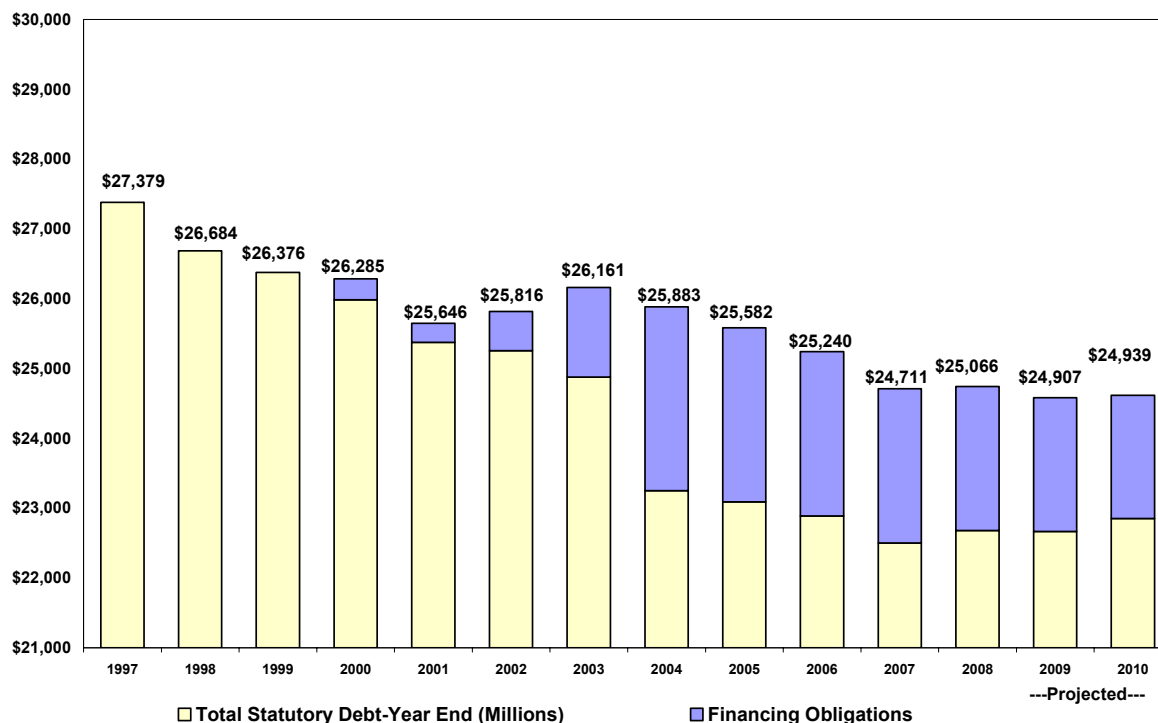


Financing Obligations

From 1997 through 2008, TVA has reduced its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by nearly \$2.3 billion. This includes a net reduction of statutory debt of approximately \$4.7 billion during that same period.

Total Debt and Debt-Like Obligations at Year End

(in millions)



Credit Facilities

The TVA Board has approved TVA entering into a credit facility or facilities not to (collectively) exceed \$5 billion. Thus far, TVA has entered into two such facilities, which allow TVA to borrow up to \$2.25 billion. This is not intended to be used as a tool to manage daily cash operations or as a primary source of funding. Any outstanding obligations on the facilities count towards TVA's statutory debt limitation. TVA has not borrowed any money under the credit facilities.

In December 2008, TVA and the U.S. Treasury replaced a \$150 million note with a memorandum of understanding under which the U.S. Treasury provided TVA with a \$150 million credit facility. There were no outstanding borrowings under the facility at March 31, 2009.

Risk Management

As the power industry continues to change, companies across all aspects of the industry are exposed to new challenges and new risks. TVA meets these challenges by managing risk in order to keep power rates in the Tennessee Valley as low as feasible. Other industry participants, such as investor-owned utilities, energy marketers, and independent power producers, seek to increase shareholder wealth and sometimes accept higher risk in order to maximize profit.

Power Supply & Fuels

The Power Supply & Fuels group manages TVA's fuel and purchased power portfolio (which is expected to be \$6 billion in FY2010). This is done in part through buying and selling power in the wholesale electricity market, with the goal of ensuring the optimum utilization of TVA's system assets, thus supporting TVA's objective of providing reliable and affordable power. The Fuels Supply group also manages the supply of natural gas, coal, and fuel oil for the fossil fleet. It also purchases natural gas for the combustion turbine generation units and the energy conversion agreements. The Fuels Supply group is responsible for buying coal and fuel oil for meeting system requirements or, on rare occasions, selling surplus fuel in the coal and fuel oil markets.

4. Expanded Electronic Government

Information technology ("IT") is a critical tool for TVA. The reliability and safeguarding of information, information systems, and telecommunications equipment is a top priority. TVA is committed to the continuous improvement of the agency's IT systems. TVA directs its efforts at developing and maintaining IT solutions to serve the interests of our stakeholders, and most importantly, serving the citizens of the Tennessee Valley. As the initiatives described in this report illustrate, TVA's resources are focused on developing and maintaining solutions that provide innovative business solutions through IT. The result has been an improvement in both TVA's business processes and its community relationships.

TVA also supplies the public with electronic information about the power program, the river system, campground reservations, financial stability, environmental impacts, employment opportunities, and other topics of interest.

TVA's expanded Electronic Government initiatives fall into six specific areas:

Major Process Improvements include: Implementation of Federal Information Security Management Act, NERC Critical Infrastructure Protection standards, NRC cyber security, Federal Desktop Core Configuration, agency-wide cyber security governance, access and identity management, vulnerability management, control system security, Online Connection, Enterprise-Wide Supply Chain, Enterprise Asset Management, Contractor Workforce Management, Electronic Corrective Action Program, Primavera Project Scheduling (P3e), Enterprise Performance Management, and TVA Enterprise Lessons Learned Database.

Financial e-Government initiatives include: Financial Systems Replacement, TVA Information Factory, and Self-Service Solutions.

Financial e-Government Applications include:

- Ninety-nine percent (99 percent) of all dollars are disbursed electronically.
- Ninety-seven percent (97 percent) of all payment transactions (payroll, vendor, and other) are electronic.
- A Web-based Cash Management System is used to record and account for all funds received by TVA.
- A Web-based payment system is used by distributors and directly served customers in the Automated Clearing House Program or Prepayment Program.
- A Web-based Vendor Invoice Query System allows vendors to see, via the Internet, the status of their invoices, as well as the payment date and check number.
- A Web-based system is used to auction short-term discount notes among TVA's selling-group members in a competitive, fees-inclusive environment, allocating the discount notes by the lowest rate bid being awarded first.

Customer-Centered Initiatives include: Real Time Pricing Applications and e-Distributor Annual Reporting.

Citizen-Centered Initiatives include: Recreation use of TVA reservoirs and TVA's external Web site. The following are examples of information available on TVA's site and routinely requested by the public:

- General TVA information data, such as the history and leadership biographies;
- Employment opportunities, including tips on applying for positions within TVA;
- Overviews of the TVA power system, including fossil fuel generation, hydroelectric power, nuclear energy and transmission;
- Environmental management data, such as air emissions and water quality ratings for plants or reservoirs, as well as federal environmental standards and scientific papers authored within TVA;
- Land management issues;
- TVA's Clean Water, Clean Marina, and Clean Boating campaigns, with links to resources such as EPA;
- Valley precipitation and stream-flow data for recreational users and commercial barge traffic;
- Highlights of the Spring Sport Fish Survey, of interest to local anglers;
- Opening and closing dates for TVA campgrounds;
- Financial news and information, including TVA's Annual Report, as well as an automatic e-mail alert system for investors interested in TVA financial news; and
- Links to TVA's Web site for TVA's retiree community.

TVA has also established an Environmental Information Center ("EIC"), a single source for answers to questions about a variety of environmental topics. The EIC may be accessed either via telephone during business hours or electronically via e-mail. The environmental topics normally addressed by the EIC include:

- Recreation, including boating, hunting, fishing, and camping;
- Shoreline actions and issues;
- Permitting procedures;
- Reservoir land plan information;
- Water quality;
- Archaeological information;
- Natural resources information;
- Environmental education;
- Sport fishing; and
- Other environmental issues

If an inquiry is outside the EIC's area of expertise, it is provided to the appropriate TVA organization for a response.

Major IT Initiatives include: HSPD-12, DNSSec, control system network segmentation, intrusion prevention system, centralized security monitoring, network access control, security information and event management, Governance Risk Compliance tool, Enterprise Systems Program, Unified Communications Strategy, Enterprise Information Management Strategy, Enterprise Document Management, and Service Level Management.

5. Budget and Performance Integration

Integrated Performance Management – “Winning Performance”

The enterprise-wide performance management program, called Winning Performance, uses a process-based methodology tracked by a balanced scorecard to: *establish priorities for key objectives, measure and report performance in the key areas, provide line-of-sight between priorities and individual activities, and link individual compensation to company-wide results.* Winning Performance enables TVA to stay on top of strategic situations and ensure that new challenges and issues are addressed. It helps measure TVA's performance and it identifies the areas of commitment for employees, financial health, and company resources.

Measuring Winning Performance

The Balanced Scorecard

The balanced scorecard is the measure of TVA's success. It gives employees monthly and yearly status updates on how TVA is meeting its critical objectives as a company and as Strategic Business Units (“SBUs”). The metrics are balanced between customers, people, financial, and assets / operations and reflect TVA's overall performance. Six SBUs and many individual Business Units (“BUs”) have metrics that align with and support the TVA level scorecard. In addition, these scorecards are accompanied by variance analysis and action plans to ensure the SBUs and BUs are working toward the company's overall goals. The TVA scorecard, which outlines the performance of the company as a whole, is distributed monthly to employees through InsideTVA (the company newsletter), posters and bulletin boards, and in individual SBU and BU newsletters. The information also is available on TVA's intranet.

TVA Balanced Scorecard								
FY 2009								
Customers	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Retail Price (¢ / kWh Sales)						8.40		
TVA Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)						35.89		
TVA Fuel Cost Adjustment Costs (\$ / MWh Sales)						33.85		
TVA Economic Health Index (Percent)*						100		
TVA Participation in Energy Efficiency & Peak Shaving Initiatives (Percent)*						98		
TVA Customer Satisfaction Survey (% Satisfied)*						82		
TVA Connection Point Interruptions (Interruptions / Connection Point)	20%						1.12	0.78
People	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Cultural Health Index*						66.3		
TVA Safe Workplace (Injuries / Hours Worked)						1.62		
Financial	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Debt-like Obligations / Asset Value (Percent)						67.3		
TVA Funds From Operations / Interest (Ratio)						2.6		
TVA Net Cash Flow from Operations less Investing (\$ Millions)*	35%					Budget less Revenue Adjustment	Budget	Exceed Budget by \$50M
Assets / Operations	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Key Environmental Metrics (Index)*						100		
TVA Megawatt Demand Reduction (MW Reduced)						154	162	170
TVA Demand Reduction (\$ / kW Reduced)*	10%					643	611	582
TVA Equivalent Availability Factor - Coal, CC & Nuclear (Percent)	35%					85.8	87.1	88.0

Translating TVA's Strategic Plan into Operational Terms

TVA's mission and strategic objectives are translated into operational terms to align the actions of management and employees. Defining the critical success factors (“CSFs”) is the first step. CSFs define the key factors and capabilities needed to generate sustainable performance consistent with the business themes of the mission and the priorities identified by the Strategic Plan.

Performance goals identify specific, tangible objectives for measuring achievement. TVA develops a strategy in the context of the mission, maps the strategy into operational initiatives, and ultimately develops performance plans for each part of the organization and scorecards for measuring success.

Performance Goals and Results

Goal 1: Supplying Low-Cost, Reliable Power

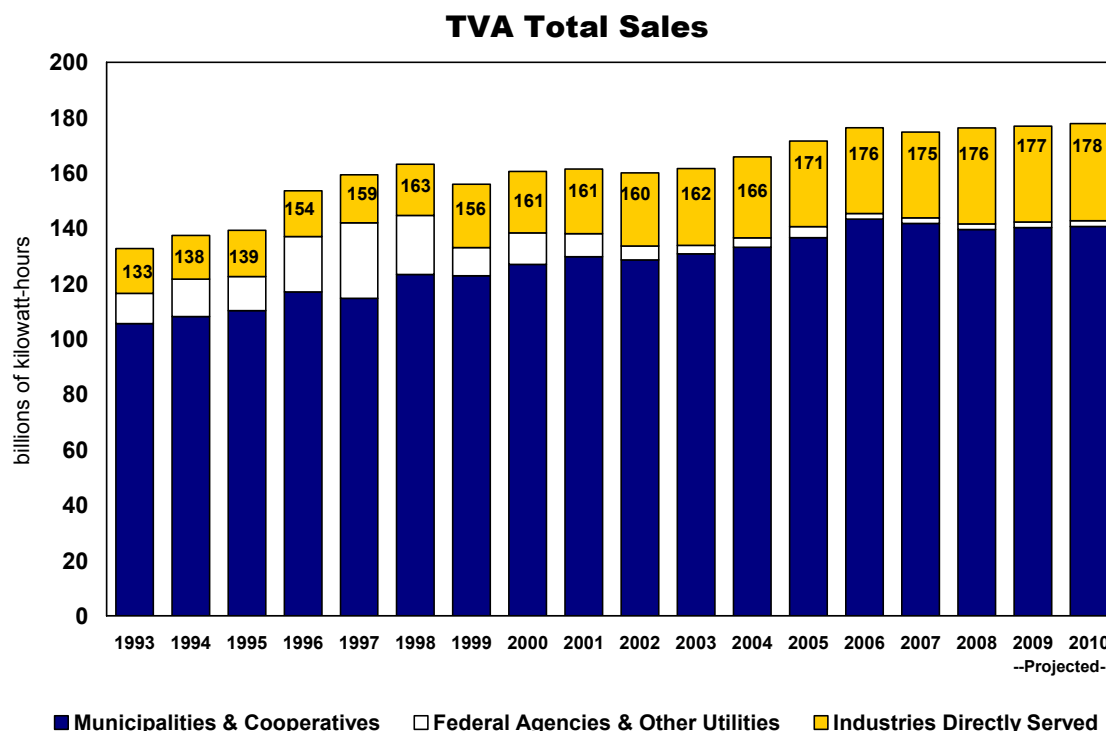
Power Sales and Revenue

The Tennessee Valley Authority sells electricity to three main customer groups:

Distributors: TVA delivers power to wholesale customers, which include municipal utility companies and cooperatives, who resell that power to consumers. The municipal utilities make up the largest block of TVA customers. Cooperatives are customer-owned companies, many of which were originally formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative distributors represent the majority of TVA's business. The Tennessee Valley Public Power Association is an organization that represents their interests.

Directly Served Customers: TVA also sells power to directly served customers, consisting primarily of federal agencies and customers with large or unusual loads.

Off-System Customers: TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring systems. Sales to these companies typically represent less than 1 percent of TVA's total power sales.



Note: TVA is currently experiencing less demand for power than projected.

Demand in the Valley

In 2008, TVA sold 176 billion kilowatt-hours of electricity and is estimated to sell 177 billion kilowatt-hours in 2009, and 178 billion kilowatt-hours in 2010. Most of TVA's sales growth in the past several years has come from customers who are municipal and cooperative distributors of TVA power, which has offset reduced demand from federal agencies and other customers. Demand for electricity in the TVA region grew at 2 percent annually from 1995 through 2008. By 2010, the population of the TVA service region is expected to surpass 9 million, growing at a rate slightly higher than the national average.

TVA System Capability		
<i>Net summer dependable (MW) at September 30, 2008</i>		
Fossil	14,469	39%
Nuclear	6,671	18%
Hydro	5,503	15%
Combustion Turbine (owned or leased)	7,266	20%
Power Purchase Agreements	2,789	8%
Other*	<u>16</u>	<u><1%</u>
Capacity**	36,714	100%

* Other includes 13 MW of Diesel Generator capacity and 3 MW of Renewable Resources Owned by TVA.

**Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP. Hydro capacity represented includes pumped-storage.

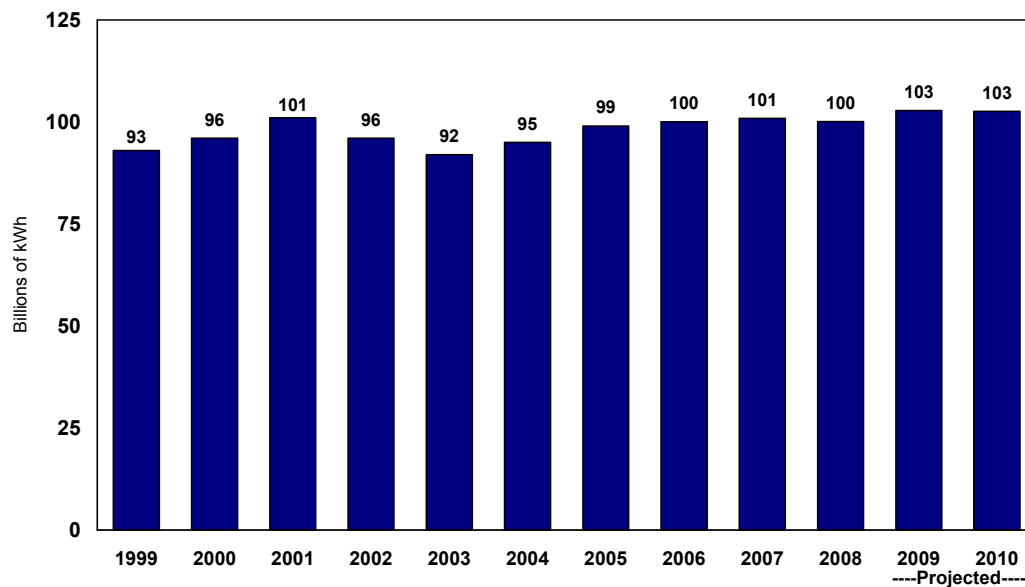
Operational Performance

TVA is the largest public power provider in the nation and ranks among the largest generators of power in the country. TVA plays a vital role as a public power provider, dedicated to protecting the public interest in a rapidly changing industry. In recognition of the vital role it plays and its status as a public power entity, TVA is committed to excellence in operational performance and efficiency. TVA's commitment to operational excellence includes operating in an environmentally responsible manner. TVA is making appropriate investments in clean-air controls to further protect the environment of the Tennessee Valley.

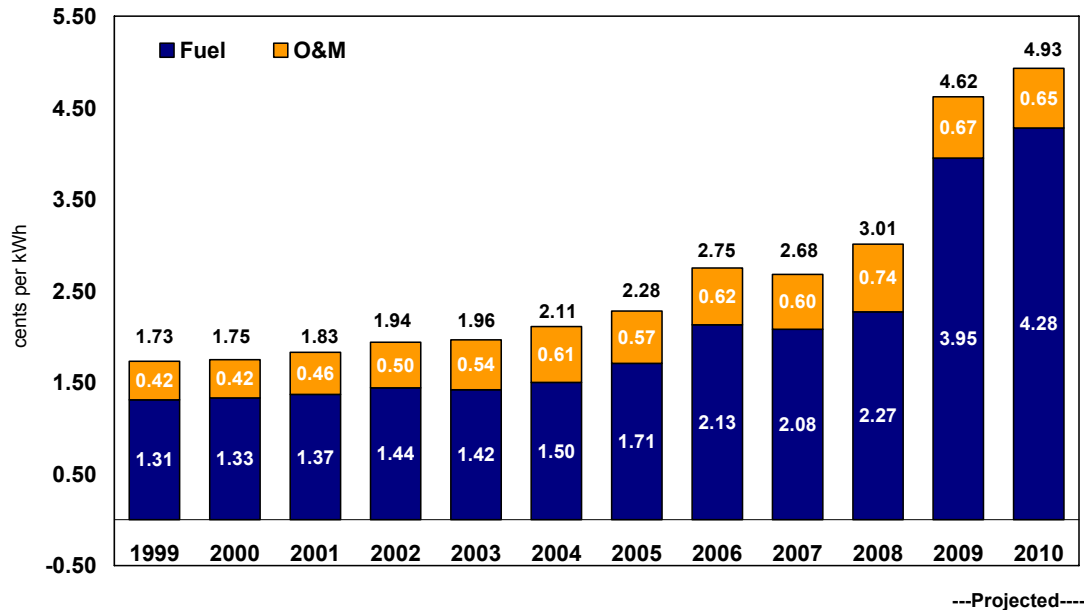
Fossil Power Highlights

The mainstay of TVA's power production portfolio is its fleet of 11 coal-fired fossil plants, which represent a combined 14,469 megawatts of net summer capability. TVA's fossil system also includes 87 simple-cycle combustion turbine units at eight different plant sites and six natural gas combined-cycle units. The simple-cycle combustion turbine sites are peaking sites that are designed to start quickly and help meet demand for electricity during peak operating periods. TVA's total fossil-system production expense on a per-kilowatt-hour basis is expected to increase in 2010 due to higher fuel costs. Operation and maintenance costs are projected to decrease. Several of TVA fossil plants set continuous-run records and received awards for efficiency and reliability.

TVA Fossil Power Generation



Fossil Power Production Expense

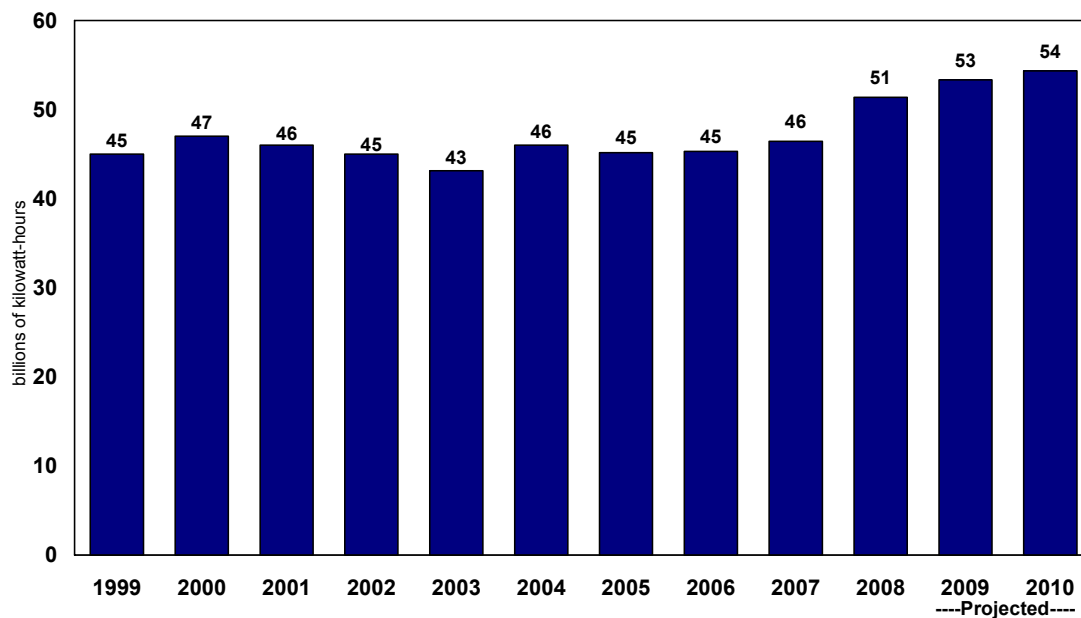


Note: TVA is experiencing increased coal costs as well as other significant levels of uncertainty primarily relating to the weather and the economy.

Nuclear Power Group Highlights

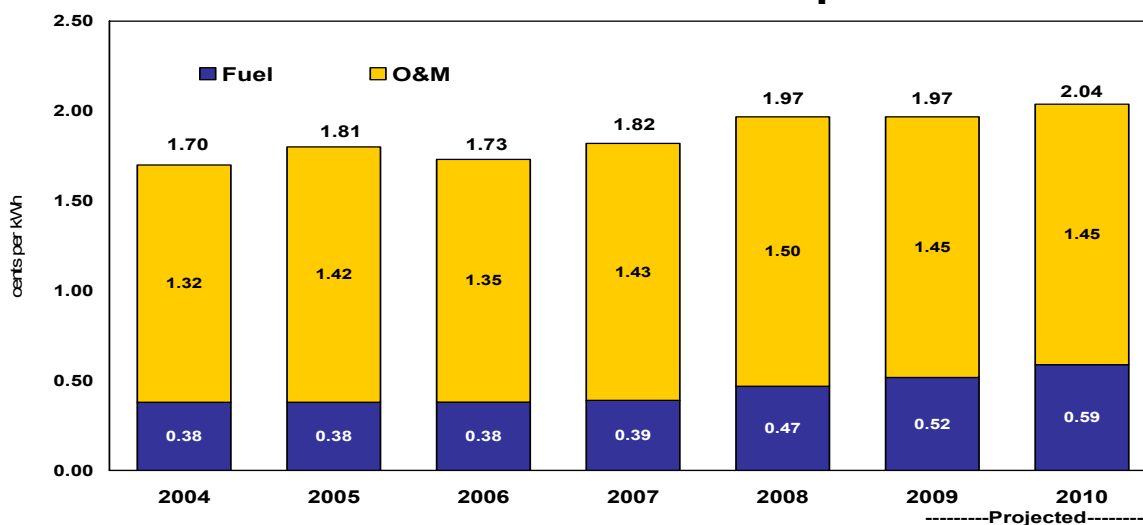
TVA's nuclear operations are critical to meet the region's power needs. In 2010, TVA's nuclear units are expected to generate 54 billion kilowatt-hours of electricity, which should represent approximately 33 percent of TVA's total net generation.

TVA Nuclear Generation



TVA's total nuclear production expense on a per-kilowatt-hour basis is expected to increase in 2010 due to higher fuel costs. Operation and maintenance costs are projected to decrease.

Nuclear Power Production Expense



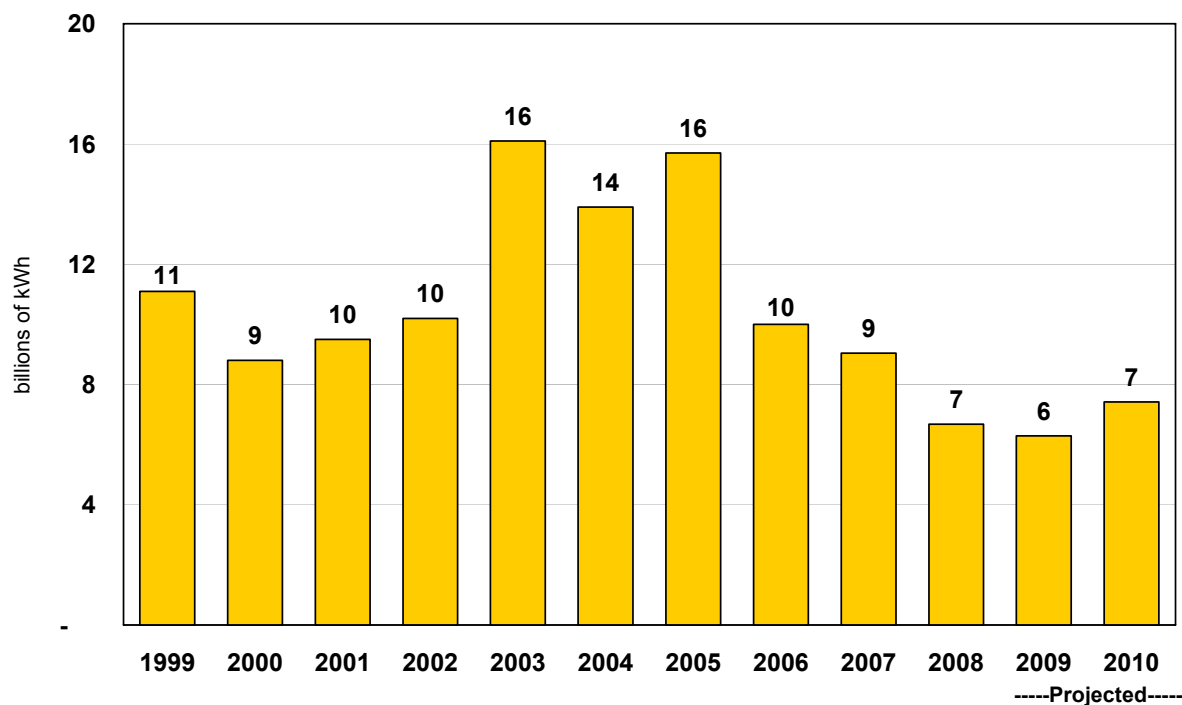
Hydro Power Highlights

In 2008, TVA's integrated hydropower system of dams and pumped-storage units generated approximately 6.7 billion kilowatt-hours of electricity – approximately 4 percent of TVA's total net generation, and in 2010 it is estimated to produce approximately 7.4 billion kilowatt-hours – approximately 4.5 percent of TVA's total net generation. Generation in FY 2008 decreased 26.1 percent from FY 2007 due to below normal rainfall and run-off levels. In FY 2009, the historic drought conditions continued and are expected to keep hydro production lower until at least 2010. While hydropower represents a smaller amount of total net generation than other sources, hydropower represents a very important element in TVA's total portfolio.

TVA's hydro facilities have very low operating costs and can be used as base-load, intermediate, or peaking units,

depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountain-top reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

TVA Hydro-System Net Power Generation

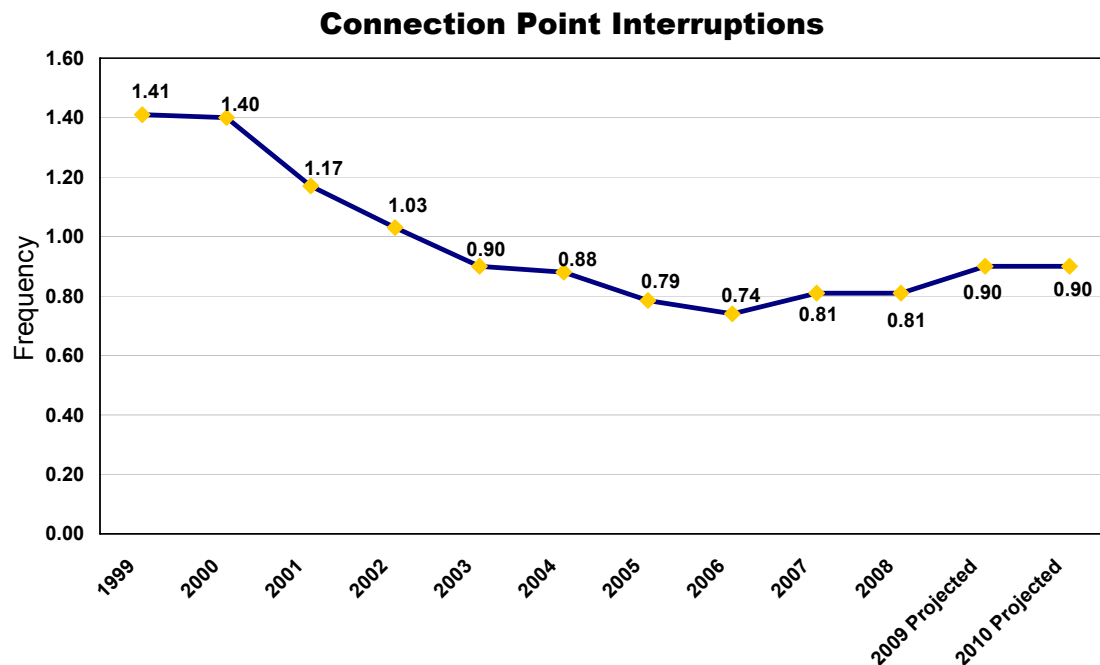


TVA Transmission Highlights

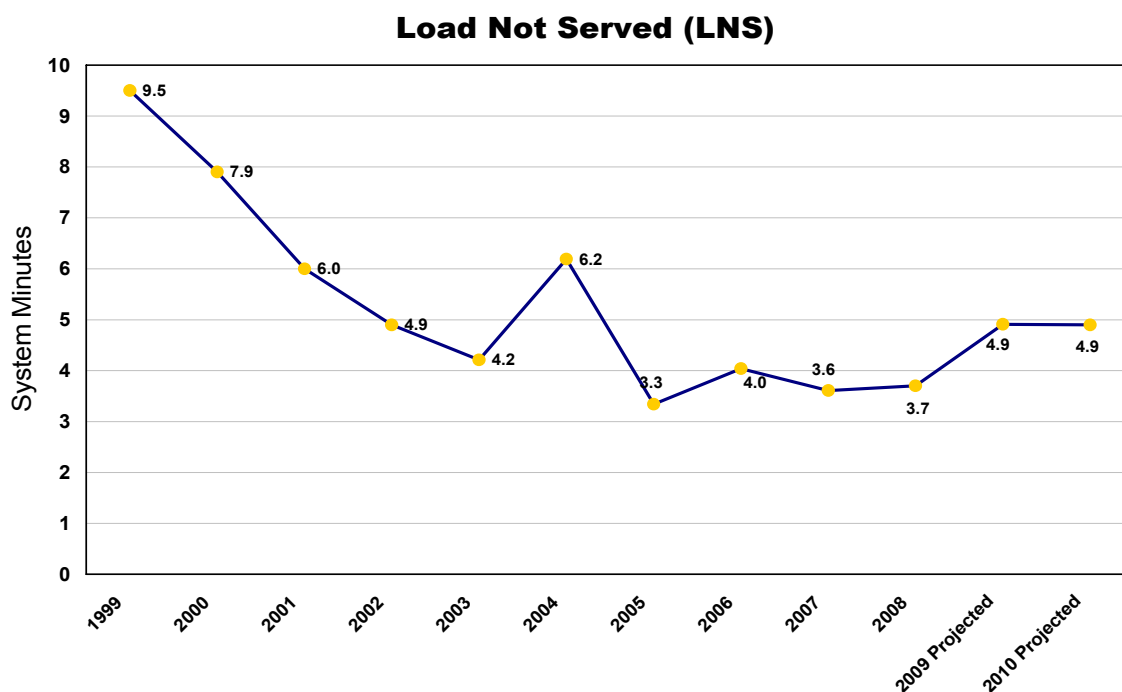
The TVA transmission system, one of the largest in North America, delivered nearly 176 billion kilowatt-hours of electricity sales in 2008 and maintained 99.999 percent reliability over the past nine years for delivering electricity to customers. In 2010, the transmission system is expected to deliver nearly 178 billion kilowatt-hours of electricity sales. This system is comprised of approximately 15,860 circuit miles of transmission lines, including 2,400 miles of extra-high-voltage (500,000 volt) transmission lines, 487 substations, power switchyards and switching stations, 1,070 individual interchange and customer connection points, and 260,000 right-of-way acres.

The TVA transmission organization offers transmission services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate its transmission functions from TVA's marketing functions.

Connection point interruptions are driven primarily by weather, and it can be particularly difficult to reduce the number of interruptions across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by investing in more than 160 lightning mitigation projects. These projects have helped reduce connection point interruptions caused by lightning by more than 53 percent since 1995.



Another measure of reliability is Load Not Served ("LNS"), which is a measure of the magnitude and duration of interruptions that affect TVA customers. LNS applies to interruptions that exceed one minute and is calculated by multiplying the percentage of total load not served (in megawatt-hours) by the number of minutes in the fiscal year. TVA is taking proactive steps to maintain an improved level of LNS by (1) working on its transmission preventative maintenance program, (2) identifying equipment that is nearing the end of its service life and replacing it before failure and (3) rapid recovery from interruptions.



TVA and Security

TVA takes seriously the safety and security of its employees, facilities, and the public. TVA is committed to doing even more to ensure that its facilities and processes are secure and that its operations will continue uninterrupted. TVA has developed a color-coded system of levels of security, and TVA has implemented an Agency Emergency Response Plan to provide a Valley-wide response to emergency threats requiring integrated action, from predicted severe weather to terrorist activity. Other measures TVA has implemented include tighter restrictions on access to TVA facilities, an increased presence of TVA Police ("TVAP") officers and contract security officers, and physical barriers around some facilities. TVA also has established agreements with state emergency management agencies to provide support from local law-enforcement agencies, highway patrol, Department of Transportation, and National Guard units.

Goal 2: Environmental Stewardship and Supporting a Thriving River System

As a regional resource development agency, TVA is charged with stewardship of the natural resources of the Tennessee River watershed. TVA manages the Tennessee River system to provide public benefits including navigation, flood damage reduction, power production, water supply, and recreation. TVA involves the public in its environmental decision-making. Improvements in environmental performance are driven through a systematic, standardized approach based on TVA's Environmental Management System ("EMS"). Due to the increasing level and complexity of environmental requirements and expectations, TVA completed a new high-level environmental policy to align with and execute the direction in the Strategic Plan. The Environmental Policy was approved by the TVA Board on May 19, 2008, and is intended to be an integrated framework which provides policy-level guidance to carry out TVA's mission.

In light of increasing national focus on renewable and clean energy and TVA's desire to reduce its environmental footprint, on May 19, 2008, the TVA Board approved guiding principles for an Energy Efficiency and Demand Response Plan and a Renewable and Clean Energy Assessment.

The Energy Efficiency and Demand Response Plan seeks to slow the current rate of growth in the region's power demand by providing opportunities for residential, business, and industrial consumer groups to use energy more efficiently. In the short term, the plan proposes reducing the growth in peak demand by up to 1,400 megawatts by the end of the 2012 fiscal year.

The Renewable and Clean Energy Assessment strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions while minimizing costs and maintaining a reliable power supply. The assessment proposes to review TVA's generation mix and identify a road map for pursuing additional renewable and clean energy supply in the region, and recommends consideration of different sources of renewable energy and a reduction in carbon intensity in TVA's generation mix, along with additional energy conservation by everyone who uses electricity.

River System

TVA has federal jurisdiction for managing America's fifth-largest river system, the Tennessee River and its tributaries, to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth. TVA has direct stewardship responsibility for 293,000 acres of public land, 11,000 miles of shoreline, and 650,000 acres of reservoir water surface available for recreation and other purposes. TVA reservoirs and public lands provide outdoor recreation opportunities for millions of visitors each year.

Navigation on the Tennessee River—made possible by the system of dams and locks operated by TVA—provides significant contributions to the regional economy. TVA also manages the river system to provide water for hydro generation and cooling water for TVA nuclear and fossil power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at its dams to provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use and implements a number of activities such as the Targeted Watershed Initiative Program, Tennessee Valley Clean Marina Initiative, Tennessee Growth Readiness Program, Strategic Partnership Initiative, and Shoreline Stabilization Program. TVA performs year-round monitoring and analysis of the 41,000-square-mile watershed and reports to the people of the Valley on the health of the river system.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the Environmental Protection Agency ("EPA") shows air quality in the nation has steadily improved since 1990 for all six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Air quality data for the Tennessee Valley region also shows reductions in all of these pollutants. TVA is significantly reducing emissions from its coal-fired plants while continuing to supply affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance, and TVA is continuing to make further improvements. By the end of this decade, TVA expects to have spent about \$5.5 billion on clean air controls at its 11 coal-fired power plants.

Goal 3: Stimulating Economic Growth

Demonstrating leadership in sustainable economic development in the Tennessee Valley means helping communities recruit and retain quality jobs and making the Valley a better place to live and work.

TVA Economic Development's goal is to be a source for economic development information and services across the seven-state Tennessee Valley region. TVA's effective partnerships with its customers and communities have helped produce quality jobs and resulted in significant capital investments in new and existing companies. Economic development efforts are performed in partnership with various private and public organizations, including regional and state agencies. TVA helps meet the needs of its stakeholders to achieve the bigger picture of regional economic development that results in a better life for Tennessee Valley residents today and into the future. TVA's innovative programs and services combine to create powerful tools for sustainable economic development. These programs and services include the following:

Global Business and Community Development

Industrial Recruiting Services

TVA works with distributor customers and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

A regional development specialist with economic development expertise is assigned to serve counties in a specific TVA region to create, sustain, and foster job growth.

Community Development

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders and by providing economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Business Resources

Existing Industry Support

An array of products and services are geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

These funds are designed to stimulate job creation and leverage capital investment in the TVA power service region. The loan funds are open to primary manufacturing companies and other institutions in the Valley, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties ("SOC") Loan Fund

This revolving loan fund is available to the Valley's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide the support that many companies need to survive the challenging early stages of business start-up. Over the years, TVA has provided financial and technical assistance to help communities establish incubators where clients can share services, equipment, and building space.

Consumer Connection

Consumer Connection is an economic development program that links Valley communities with business opportunities, expansions, and retentions.

Valley Business Ventures

TVA helps the Tennessee Valley's high-growth sectors of woman-owned and minority-owned businesses to increase their job creation and capital investment opportunities.

Technical Services

Engineering and Design Assistance

TVA offers general engineering design services to help industrial prospects make sound location decisions.

Appalachian Regional Commission Project Administration

TVA serves as the basic agency to administer grants for the Appalachian Regional Commission in the Tennessee Valley.

Budget Overview

Power Program

TVA's power program is entirely self-financing and does not receive any federal appropriations. The power program budget is, however, included in the Consolidated Budget of the United States Government. TVA is experiencing increased coal costs as well as other significant levels of uncertainty relative to the weather, the economy and other factors. TVA's financial information includes estimates which are subject to these changing conditions.

TVA projects revenue to exceed \$13 billion in FY 2010, including the estimated impacts of the 2008 rate adjustments and fuel cost adjustment related to the recovery of fuel and purchased power expense increases. In FY 2010, TVA projects to invest \$2.2 billion in capital projects for the power system, including \$223 million for clean air projects and \$267 million for transmission system projects. TVA's debt and debt-like obligations increased by \$355 million in FY 2008 and are expected to decrease by \$159 million in FY 2009 and increase by \$32 million in FY 2010.

TVA power sales have increased an average of two percent annually during the past decade. To keep pace with this growth, TVA has added 8,497 megawatts of generating capacity over the past ten years and entered into purchase power agreements with independent power generators. TVA has also upgraded its transmission system to maintain reliability and added new customer delivery points to serve the growing load. With power demand in the Valley expected to grow at approximately 1.3 percent annually through 2028, TVA will continue to explore the full range of options available to meet the growing demand. Between 2006 and 2008, the TVA Board authorized the purchase of three combustion-turbine generating plants and one combined-cycle plant, executed a fifteen-year operating lease on a second combined-cycle plant and approved construction of a third for 2010 operations. Excluding the future 2010 construction, these actions added an additional 1,791 megawatts of winter peaking capacity and 2,373 megawatts of intermediate capacity to the TVA system. Additionally, Browns Ferry Nuclear Plant Unit 1 returned to service in May of 2007 and currently supplies additional generating capacity of approximately 1,150 megawatts with an eventual expected supply of 1,280 megawatts. On August 1, 2007, the TVA Board approved completing the construction of Watts Bar Unit 2. When completed, Watts Bar Unit 2 is expected to provide 1,180 megawatts of capacity.

TVA's 2010 annual interest expense is expected to be \$696 million lower than in 1997. As mentioned, annual net interest expense that once consumed 34 percent of TVA's revenue has been reduced to only 13 percent in 2008 and is expected to drop to 10 percent in 2009 and 2010.

Water and Land Stewardship

TVA meets its obligation to operate and maintain its system of dams, reservoirs, and adjacent lands. Based on the provisions in the Energy and Water Development Appropriations Act of 1998, TVA funds its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA for Water and Land Stewardship since FY 1999, and none are requested for FY 2010. Long-term TVA funding levels for these activities are expected to continue at about the same level as in FY 1999. FY 2008 stewardship expenditures were approximately \$130 million, and FY 2010 funding of this program is estimated at \$86 million.

Budget Details

TVA Operating Budget

(millions of dollars)

	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Revenue	\$ 10,382	\$ 13,543	\$ 13,567
Operating Expenses			
Fuel & Purchased Power	(4,176)	(6,650)	(6,508)
Operating, Maintenance, & Other	(2,307)	(2,555)	(2,620)
Depreciation & Amortization	(1,224)	(1,474)	(1,528)
Tax Equivalents*	<u>(491)</u>	<u>(627)</u>	<u>(669)</u>
Total Operating Expenses	<u>(8,198)</u>	<u>(11,306)</u>	<u>(11,325)</u>
Operating Income	2,184	2,237	2,242
Other Income	9	33	36
Interest Expense	<u>(1,376)</u>	<u>(1,339)</u>	<u>(1,307)</u>
Net Income	<u>\$ 817</u>	<u>\$ 931</u>	<u>\$ 971</u>

* Tax equivalents are based on the prior year's base revenue and current year FCA revenue.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board is scheduled to approve the FY2010 budget in August of 2009.

Note 2: The above budget information include estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

Budget Details

(continued)

Capital Budget & Cash Flow

(millions of dollars)

	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Operating Activities			
Net Income	\$ 817	\$ 931	\$ 971
Items not requiring cash	<u>1,140</u>	<u>1,743</u>	<u>1,720</u>
Total Cash Provided from Operating Activities	1,957	2,674	2,691
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(143)	(142)	(140)
Fossil	(282)	(212)	(221)
Hydro	(56)	(48)	(47)
Transmission	(81)	(32)	(45)
Other Capital	<u>(73)</u>	<u>(109)</u>	<u>(78)</u>
Subtotal	(635)	(543)	(531)
Clean Air	(277)	(232)	(223)
Watts Bar Unit 2	(245)	(649)	(681)
Capacity Expansion	<u>(827)</u>	<u>(665)</u>	<u>(773)</u>
Total Capital Projects	(1,984)	(2,089)	(2,208)
Other Sources (Requirements)	<u>(112)</u>	<u>(530)</u>	<u>(625)</u>
Total Cash Used in Capital Budget	(2,096)	(2,619)	(2,833)
Cash Payments to U.S. Treasury	<u>(40)</u>	<u>(42)</u>	<u>(43)</u>
Net Cash Available for Statutory Debt Reduction/(Increase)	<u>\$ (179)</u>	<u>\$ 13</u>	<u>\$ (185)</u>
Reduction/ (Increase) in Debt and Debt-Like Obligations	<u>\$ (355)</u>	<u>\$ 159</u>	<u>\$ (32)</u>
Receipts Less Disbursements*	\$ 273	\$ (196)	\$ 47

*For Federal reporting purposes Payments to U.S. Treasury are not considered disbursements.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board is scheduled to approve the FY2010 budget in August of 2009.

Note 2: The above budget information include estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

Program Assessment Rating Tool (PART) - Status Update

Power Program

TVA's power program is entirely self financing and does not receive any federal appropriations. The power program budget is, however, included in the Consolidated Budget of the United States Government. TVA is the fifth-largest electric supplier in the country, generating power from a diverse mix of coal-fired, hydro-electric, nuclear, and combustion-turbine plants to meet the electricity needs of nearly nine million people.

In the 2004 PART assessment, TVA received solid ratings for its Operational Performance, Strategic Planning, Program Management, and Program Results. In particular, the Program Management section received a 91 percent rating, with an overall average rating of 74 percent for the entire assessment.

Stewardship Programs - Water and Land

TVA serves the Tennessee Valley region, which includes parts of seven states, through its management of the nation's largest public power system and the nation's fifth-largest river system, the Tennessee River. The dams and locks are operated as a fully integrated system to deliver multipurpose outputs. Public lands are managed to provide flood control, wildlife habitat, and recreation benefits.

TVA meets its obligation to operate and maintain the system of dams, reservoirs, and adjacent lands. Based on the authority provided in the Energy and Water Development Appropriations Act of 1998, TVA funds its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA for Water and Land Stewardship since FY 1999, and none is being requested for FY 2010. Long-term TVA funding levels for these activities are expected to continue at about the same level as in FY 1999. FY 2008 stewardship expenditures were approximately \$130 million, and FY 2010 funding of this program is estimated at \$86 million.

NO_x Emission Reduction

The TVA NO_x emissions-reduction program is designed to remove nitrogen oxide compounds from emissions produced at TVA coal plants in compliance with all NO_x-related Clean Air Act regulations at the lowest overall cost to TVA ratepayers. The program's activities involve construction of selective catalytic reduction (SCR) and selective non-catalytic reduction ("SNCR") equipment at coal plants as well as monitoring NO_x emissions for regulatory compliance. Since 1995, TVA has reduced its NO_x emissions during the summer by 82 percent by installing various controls and has plans for further reductions going forward which include operation of NO_x controls year-around beginning in October 2008. This will be achieved at the same time energy demand continues to grow in the Tennessee Valley region.

In 2007, OMB gave TVA's NO_x Emissions Reduction PART an average overall 95 percent rating for the entire assessment and stated that, "TVA has been largely effective in achieving its annual and long-term goals to meet NO_x reduction targets and comply with Clean Air Act mandates." OMB also gave TVA an "Effective" performance rating for the program. This is the highest rating a program can achieve. Programs rated Effective set ambitious goals, achieve results, are well-managed and improve efficiency.

In 2005, TVA installed SNCR systems on two units to demonstrate long-term technology capability, and continues to operate the SNCR on one of the units. In 2007, TVA began operating the High Energy Reagent Technology ("HERT") system on two additional units. HERT is similar to SNCR technology but has higher removal capabilities. Similar HERT equipment is planned for installation on five additional units in 2009, and TVA has announced plans to install SCRs at John Sevier by 2015. In October 2008, TVA began operating installed NO_x control equipment year round (except for maintenance outages).

Tennessee Valley Authority

GPRA Annual Performance Plan
for FY 2010

Submitted
June 2008



Foreword

The Tennessee Valley Authority's Strategic Plan was approved by the TVA Board of Directors on May 31, 2007. TVA's Board and executive leadership recognized the need to articulate TVA's overall strategic direction for the next decade as a result of market trends, a new national energy policy, rising fuel costs and other changes since the previously issued strategic plan. The Strategic Plan outlines actions TVA must accomplish to align with this direction. The Strategic Plan also identifies aspects of TVA's current business structure that must be fine-tuned for TVA to strengthen its ability to continue to serve the people of the Tennessee Valley region.

This document is TVA's GPRA Annual Performance Plan for FY 2010. It contains the specific information that is required by the Government Performance and Results Act. This FY 2010 GPRA Annual Performance Plan builds upon the strategic objectives and critical success factors identified in the Strategic Plan and describe the metrics that will be used to monitor TVA's performance toward achieving successful implementation of its strategy.

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1. TVA Mission Statement

The mission of TVA is to improve the quality of life in the Tennessee Valley through its work in three key areas: energy, the environment, and economic development. TVA provides reliable, competitive power; manages the Tennessee River system and associated lands to meet multiple needs; and partners with Valley communities and states for economic development. For nearly 75 years, TVA's unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.

Energy

Provide electric power to the Tennessee Valley

- TVA supplies reliable, affordable electricity to the Tennessee Valley. It strives to meet the changing needs of power distributor customers and directly served industrial customers for electricity and related products and services in a dynamic marketplace.

Environment

Act as steward of the Valley's water resources and associated public lands

- To fulfill its environmental stewardship mission, TVA manages water resources and associated public lands in the Valley for the benefit of the region and the nation. It manages the Tennessee River system and associated public lands to reduce flood damage, maintain navigation, support power production and recreational uses, improve water quality and supply, and protect shoreline resources.

Economic Development

Serve as a catalyst for sustainable economic development

- TVA works with its power distributor customers; state, regional, and local economic development organizations; and other federal agencies to build partnerships that help bring jobs to the Tennessee Valley and make the economy stronger to benefit the people of the region.

2. Strategic Objectives and Critical Success Factors

In its 2007 Strategic Plan, TVA identified five broad strategic objectives on which it will focus as it moves forward, and twenty-four corresponding critical success factors that support those objectives. These strategic objectives, along with their corresponding critical success factors, are as follows:

CUSTOMER: Maintain power reliability, provide competitive rates, and build trust with TVA's customers

Critical Success Factors:

- Strengthen relationships and trust by being responsive to stakeholder needs
- Develop a portfolio of product and pricing structures that more accurately reflect the costs of serving load at different times and levels of use.
- Partner with distributors and directly served customers to encourage conservation, promote energy efficiency, and reduce peak demand
- Partner with customers to limit volatility in rates and participate in power supply through shared generation ownership
- Assist states, communities, and distributors in sustaining economic development programs

PEOPLE: Build pride in TVA's performance and reputation

Critical Success Factors:

- Safeguard the health and safety of employees and the public
- Strengthen workforce knowledge and skills and management processes to motivate performance and successfully implement the strategic objectives
- Treat employees, customers, and other stakeholders with integrity and respect
- Communicate clearly and consistently

FINANCIAL: Adhere to a set of sound guiding financial principles to improve TVA's fiscal performance

Critical Success Factors:

- Apply sound economic and financing practices to new investments
- Pay financing obligations before assets are fully depreciated
- Strengthen TVA's balance sheet by improving the ratio of financing obligations to total assets
- Improve TVA's cash return on total assets in order to service debt, preserve existing assets, reinvest in new assets, and improve environmental performance
- Achieve top-quartile performance in non-fuel operation and maintenance ("O&M") expenses and then hold increases to be less than unit sales growth ("kWhs")

ASSETS: Use TVA's assets to meet market demand and deliver public value

Critical Success Factors:

- Balance TVA's production capabilities and load by adding assets (buy, build or through long-term contracts) and encouraging the use of energy in ways that reduce the need for new generation
- Preserve, maintain, repower or retire existing assets where appropriate
- Manage land and water resources to provide multiple benefits to the Valley
- Reduce fuel supply risk with a diverse portfolio of generation assets

OPERATIONS: Improve performance to be recognized as an industry leader

Critical Success Factors:

- Deliver reliable electric power generation and transmissions products and services
- Benchmark the industry's best performers to develop metrics for top-quartile performance
- Make nuclear safety the overriding priority for each nuclear facility and for each individual associated with it
- Continue to reduce the impacts of TVA's operations on the environment
- Serve as a responsible steward of the Tennessee River system
- Apply science and technological innovation to improve operational performance

3. Program Evaluations - Tracking Progress Against the Goals

3.1 Corporate Level Metrics

The 2007 Strategic Plan outlined the Board of Directors' policy-level direction for TVA over the next decade and highlighted several actions that are needed for successful implementation of the strategy. In support of the strategic objectives and critical success factors outlined in the Strategic Plan, fourteen corporate-level metrics are in place to monitor TVA's performance toward achieving successful implementation of its strategy (Exhibit 1). These metrics will be reviewed and systematically updated to maintain alignment with the strategic focus. TVA's scorecard, with its performance metrics, clearly demonstrates that no one single organizational unit has complete responsibility for implementing strategy.

The TVA-wide performance metrics are as follows:

- (1) **Retail Price (¢ / kWh Sales)** = distributor reported retail power revenue and directly served power revenue divided by distributor reported retail power sales and directly served power sales

Calculation:

$$\frac{\text{Distributor reported power revenue} + \text{Directly Served power revenue}}{\text{Distributor reported sales} + \text{Directly Served power sales}}$$

- (2) **Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)** = TVA's total costs in dollars per MWh of power sold to customers

Calculation:

$$\frac{\text{Total Income Statement Expenses (Excluding FCA Costs) +/- Other Income, net}}{\text{Total Sales Volume (MWh)}}$$

- (3) **Fuel Cost Adjustment Costs (\$ / MWh Sales)** = TVA's FCA expenses per MWh of power sold

Calculation:

$$\frac{\text{FCA Costs}}{\text{Total Sales Volume (MWh)}}$$

- (4) **Economic Health Index (Percent)** = percentage growth of the weighted average wage of jobs created and/or retained in the Valley as compared to the percentage growth of the weighted average wage of all states in the Southeast

Calculation:

$$\frac{\text{TVA Project Average Wage}}{\text{Southeastern Average Wage}}$$

- (5) **Participation in Energy Efficiency & Peak Shaving Initiatives (Percent)** = quarterly measure of distributors' participation in DSM programs and pilots

Calculation:

$$\frac{\text{\# of Distributor Customers Participating in DSM initiatives}}{\text{Total \# of Distributors}}$$

- (6) **Customer Satisfaction Survey (% Satisfied)** = quarterly measure of distributors' and directly served customers' satisfaction with TVA in 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

Calculation:

$$\left[\left(\sum \text{PD survey questions (\% satisfied)} \right) * \left(1/14 \right) * \left(0.85 \right) \right] + \left[\left(\sum \text{DSI survey questions (\% satisfied)} \right) * \left(1/13 \right) * \left(0.15 \right) \right]$$

- (7) **Connection Point Interruptions (Interruptions / Connection Points)** = tracks interruptions of power, including momentary, at connection points caused by the transmission system

Calculation:

$$\frac{\text{Number of interruptions}}{\text{Number of connection points}}$$

- (8) **Cultural Health Index** = measures alignment, capability and engagement of the employee work force

Calculation:

Measured by the percent favorable responses (agree or strongly agree) on the Cultural Health Index. Item favorabilities are averaged within each respective dimension (alignment, capability, engagement). The CHI score is the average of the dimension favorability averages.

- (9) **Safe Workplace (Injuries / Hours Worked)** = a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty / job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and Staff Augmentation contractors

Calculation:

$$\frac{\text{ORIR} \times 200,000}{\text{Number of Hours worked during time period}}$$

NOTE: Hearing loss events are reported as recordable injuries on the OSHA 300 Log, but are excluded from the TVA Winning Performance Safe Workplace indicator.

- (10) **Debt-like Obligations / Asset Value (Percent)** = TVA's flexibility in a competitive market place

Calculation:

$$\frac{\text{Statutory debt} + \text{lease obligations} + \text{prepaid energy obligations}}{\text{Total Assets}}$$

- (11) **Funds From Operations / Interest (Ratio)** = credit quality

Calculation:

$$\frac{(\text{Net Income} + \text{Depreciation} + [\text{Other Non-Cash Items} - \text{AFUDC}] - \text{Changes in Working Capital} + [\text{Interest Expense} + \text{AFUDC}] + \text{Industry Defined Pension Adjustment})}{([\text{Interest Expense} + \text{AFUDC}] + \text{Industry Defined Pension Adjustment})}$$

- (12) **Net Cash Flow from Operations less Investing (\$ Millions)** = management's ability to control net cash flow (in millions) during the year by focusing attention on both cash inflows and outflows being balanced throughout the year

Calculation:

$$(\text{Cash Flow from Operations}) + (\text{Investing Cash Flow}) - (\text{Net Cash Flow from Change in FCA Deferral Account})$$

- (13) **Key Environmental Metrics (Index)** = a composite of the following environmental performance factors: Air (3 elements); Water (2 elements); Clean Water Act Nonconformances, Notices of Violation, and Office Recyclables (1 element each)

Calculation:

The sum of 6 element scores. The 6 elements are: CO₂, NO_x, SO₂, CWA nonconformances, Notices of Violation, and office recyclables. The 6 element scores are the result of percent of target performance met. This percentage is determined by dividing the actual performance by the target or vice versa based on whether the preferred performance is declining or increasing. If threshold performance is achieved, the appropriate number of points are obtained. The maximum number of points which can be achieved are the points assigned to meeting the stretch performance.

- (14) **Megawatt Demand Reduction (MW Reduced)** = total incremental megawatt (MW) demand reduction potential from TVA-initiated energy efficiency and demand reduction activities, programs, projects, and pilots

Calculation:

[(Individual product kW impacts) * (FY 09 individual product installations) / 1000] + [(Individual FY 09 project kW impacts) / 1000] + (Individual FY 09 pilot kW impacts) / 1000] + FY 09 Demand Response MW reduction

- (15) **Demand Reduction (\$ / kW Reduced)** = quarterly measure of cumulative annual expenditures for energy efficiency and demand response activities divided by cumulative annual demand reduction potential identified

Calculation:

$$\frac{\text{YTD EE\&DR Expenditures}_{\text{qtr}}}{\text{Monthly potential demand reduction reported YTD}_{\text{qtr}}}$$

- (16) **Equivalent Availability Factor - Coal, CC, & Nuclear (Percent)** = a ratio of actual available generation from all TVA Coal, Combined Cycle & Nuclear generating assets in a given period compared to maximum availability

Calculation:

$$\frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((\text{AVH} * \text{NMC}) - \text{MWhL} - \text{SchMWhL}) * 100}{\sum \text{of all Coal, Combined Cycle \& Nuclear units } (\text{PH} * \text{NMC})}$$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand Hours)

PH = Period Hours

NMC = Net Maximum Capacity = Winter NDC for Thermal Units

MWhL = MWh Losses due to forced outage or derating

SchMWhL = MWh Losses due to scheduled outages (planned or maintenance) or derating

3.2 The Winning Performance Process

The Winning Performance process 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. Employees' involvement in Winning Performance enables them to understand how

their day-to-day performance contributes to TVA's performance and success.

TVA's Winning Performance Team Incentive Plan ("WPTIP") is a pay-for-performance program similar in structure to incentivized performance-based profit-sharing programs used by private companies. The program is based on the principle that operational and process improvements, reduced costs, and improved revenues can be obtained by applying appropriate management focus and offering appropriate monetary incentives.

Employees can see how their work contributes to the direction set by their SBU's performance plan and how that contributes to TVA's overall successful implementation of the agency's strategy (Exhibit 2). Additionally, employees have line-of-sight from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's strategic objectives and critical success factors.

All full time employees are eligible to participate in WPTIP, except those approved by the Board of Directors or delegate(s) to participate in the Executive Annual Incentive Program. WPTIP is a compensation plan (lump sum payment) tied to performance results based on scorecard metrics at the TVA, SBU, and BU levels. The SBUs are Fossil Power Group, Nuclear Generation, Development and Construction, Nuclear Power Group, Power Supply & Fuels, Power System Operations, and River Operations. For FY 2009, the payouts are expected to be funded through the financial benefits incurred by TVA's improved performance when the targets on the TVA, SBU, and BU scorecards are achieved.

The TVA scorecard represents at least 30 percent of each employee's potential payout. The remaining potential employee payout is tied to the performance of an employee's SBU or BU scorecards, whichever is applicable. Corporate organizations are incented based off of a weighted average of TVA's SBU and BU scorecards as they support multiple groups. Executives also have performance incentives linked to the same scorecards.

3.3 TVA's Balanced Scorecard

The TVA, SBU, and BU scorecards contain targets at three levels, corresponding to different incentive payouts: Threshold, Target, and Stretch.

The scorecard basis sheets contain the year-to-date actual values of the metrics, as well as historical and future forecasts, where applicable. Adverse trends and improvement plans are discussed during normal reviews with executive management.

Performance is monitored on each of the metrics, and the scorecards are updated to reflect actual results and updated forecasts. These updates are available to employees through their organizations, in the monthly newsletter InsideTVA, and TVA's intranet.

4. Strategy Implementation

4.1 TVA's Mission and Strategic Plan

The five strategic objectives identified in the TVA Strategic Plan focus on the general steps TVA must take to preserve its core mission. The outcomes are areas that TVA must focus on to continue fulfilling its mission within the evolving business environment.

4.2 Principles of a Strategy Focused Organization

TVA follows the five Principles of a Strategy Focused Organization¹ 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, 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 Business Planning Process. These objectives translate 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 balanced scorecard which ties incentive compensation to the achievement of goals.
5. Govern to make strategy a continual process. TVA, SBU, and BU scorecards are updated monthly as described in section 3.3.

4.3 Translating the Strategic Plan into Operational Terms

TVA's mission and strategic objectives must be translated into operational terms to align the actions of management and employees. Defining the critical success factors ("CSFs") is the first step. CSFs define the key factors and capabilities needed to generate sustainable performance consistent with the business themes of the mission and the priorities identified by the Strategic Plan.

Performance goals identify specific, tangible objectives for measuring achievement. TVA develops a strategy in the context of the mission, maps the strategy into operational initiatives, and ultimately develops performance plans for each part of the organization and scorecards for measuring success.

4.4 Annual Goals, Long Term Goals and the Strategic Plan

Developing corporate short-term and long-term plans are key to achieving the goals outlined in the Strategic Plan. TVA's Long-Term Plans cover a minimum of 5 years and maximum of 20 years. These plans include:

- Shorter Term (1-3 Year) Plans

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

- Bi-Annual Power Supply Plan
- TVA Business Plans (3-year outlook with Quarterly reviews)
- Longer Term (5-20 Years) Plans
 - Bi-Annual Long-Term Power Supply Plan (20-year forecast)
 - Long-Range Financial Plans (10 years or more), and associated risk analyses
 - Capital Project Plans (5-year outlook)
 - Enterprise Risk Assessments (5-year outlook)

At a minimum, quarterly briefings are held with the Board of Directors, which include a review of corporate performance. The strategic issues, the scorecard and financial outlook are tracked and reviewed. Annually these reviews include 3-year trending and 3-year forecast.

5. 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 subject to forecast error, and planning under uncertainty is inherent. Normal planning uncertainties include those associated with projections about:

- 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
- change in operating and maintenance cost

In addition to these uncertainties in electric power planning, the electric utility industry continues 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. Given the potential for change in the industry and the high potential for significant forecast error, TVA planning evolves as more information becomes available.

6. 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.

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 while also developing a number of new processes and skills. Major initiatives include the following:

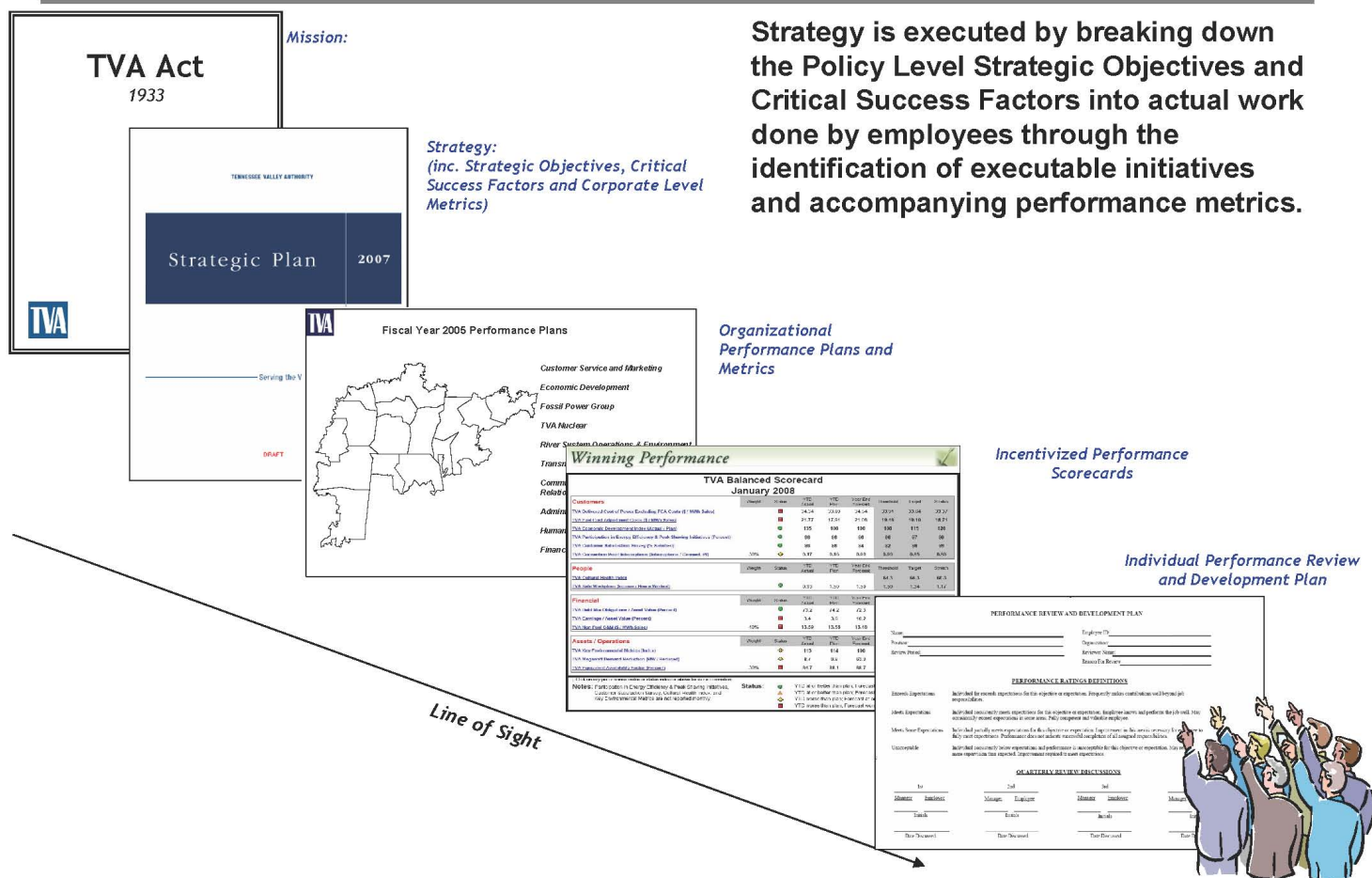
- Continued efforts across the organization to improve efficiency. The activities involved include not only benchmarking best-in-class performers, but also raising the bar on TVA's own performance related to reliability, forced outage rates, and overall cost.
- Continued training to develop a multi-skilled workforce to improve labor productivity.
- Developing new tools to support the development of products and services, including new methods for determining TVA's cost to provide different types of service and evaluating and quantifying risk.
- Developing new methods for evaluating future investments in generation that reflect the uncertainty in future revenue available to recover those investments.

Exhibit 1. TVA Strategic Plan Corporate Level Metrics

TVA Balanced Scorecard								
FY 2009								
Customers	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Retail Price (\$ / kWh Sales)						8.40		
TVA Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)						35.89		
TVA Fuel Cost Adjustment Costs (\$ / MWh Sales)						33.85		
TVA Economic Health Index (Percent)*						100		
TVA Participation in Energy Efficiency & Peak Shaving Initiatives (Percent)*						98		
TVA Customer Satisfaction Survey (% Satisfied)*						82		
TVA Connection Point Interruptions (Interruptions / Connection Point)	20%						1.12	0.78
People	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Cultural Health Index*						66.3		
TVA Safe Workplace (Injuries / Hours Worked)						1.62		
Financial	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Debt-like Obligations / Asset Value (Percent)						67.3		
TVA Funds From Operations / Interest (Ratio)						2.6		
TVA Net Cash Flow from Operations less Investing (\$ Millions)*	35%					Budget less Revenue Adjustment	Budget	Exceed Budget by \$50M
Assets / Operations	Weight	Status	Actual YTD	Plan YTD	Year End Forecast	Threshold	Target	Stretch
TVA Key Environmental Metrics (Index)*						100		
TVA Megawatt Demand Reduction (MW Reduced)						154	162	170
TVA Demand Reduction (\$ / kW Reduced)*	10%					643	611	582
TVA Equivalent Availability Factor - Coal, CC & Nuclear (Percent)	35%					85.8	87.1	88.0

Exhibit 2. Translating Strategy into Operational Terms

Line Of Sight



Appendix

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles ("GAAP"). EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY							
Unaudited Reconciliation of Net Income to EBITDA							
(in millions)							
	2004	2005	2006	2007	2008	2009 Projected	2010 Projected
Net Income	\$ 386	\$ 85	\$ 113	\$ 423	\$ 817	\$ 931	\$ 971
Add back:							
Interest Expense	1,363	1,312	1,264	1,232	1,376	1,339	1,307
Tax Equivalents	338	365	376	451	491	627	669
Depreciation & Amortization	1,115	1,154	1,500	1,473	1,224	1,474	1,528
Total EBITDA	<u>\$ 3,202</u>	<u>\$ 2,916</u>	<u>\$ 3,253</u>	<u>\$ 3,579</u>	<u>\$ 3,908</u>	<u>\$ 4,371</u>	<u>\$ 4,475</u>



Tennessee Valley Authority

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Budget Proposal and Management Agenda



For the Fiscal Year Ending
September 30, 2011

Submitted to Congress
February 2010



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Introduction

The Tennessee Valley Authority ("TVA") serves the nation and nearly nine million people of the Tennessee Valley region in the three major areas of TVA's mission — energy, the environment, and economic development. A corporation of the federal government, TVA operates like a business. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. In fact, through fiscal year ("FY") 2011, TVA expects to have returned to the U.S. Treasury approximately \$3.6 billion, including interest, on the government's appropriation investment in TVA's power program of \$1.4 billion. Established by Congress in 1933, TVA provides navigation, flood control, agricultural and industrial development, and electric power.

Power Program

TVA provides power through local power distributors and sells power directly to large industries and government entities. As the nation's largest public power system, TVA is committed to meeting the region's growing needs for reliable, affordable, and environmentally sound energy. The TVA system includes three nuclear, 11 fossil, 29 hydroelectric, 11 combustion turbine sites, and one pumped storage plant. TVA's renewable energy program, Green Power Switch®, includes 15 solar sites, one wind-energy site, and a methane gas facility. In FY 2009, TVA sold nearly 164 billion kilowatt-hours of electricity.

As of September 30, 2009, the coal-fired generating facilities of TVA's Fossil Power Group have 14,711 megawatts of net summer capability. They have been the backbone of the power system since the 1950s, when TVA first began using coal to make electricity for the Tennessee Valley. The eleven fossil plants generated about 53 percent of the electricity TVA produced for its customers. TVA's fossil system also includes 93 generators powered by combustion turbines with a total net summer capability of 6,871 megawatts. These generators can be quickly started and are vital for meeting peak electricity demands.

TVA operates six nuclear units at three sites with a combined net summer capability of 6,624 megawatts. These units generated nearly 53 billion kilowatt-hours in FY 2009, or 37 percent of TVA's power, an increase of more than 3 percent from 2008.

In FY 2009, about 8 percent of TVA's generation was from hydroelectric power and overall about 45 percent of TVA's generation was from clean energy sources which TVA defines as low or zero carbon emitting resources including hydro, renewables, nuclear and demand reduction. TVA is striving to have low and zero carbon emission sources comprise at least 50 percent of its generation portfolio by FY 2020.

Transmission System

The 2,437 miles of 500kV lines in TVA's approximately 15,954-mile transmission system are a critical link for the movement of electricity throughout the eastern United States. TVA continues to strengthen system reliability with technology that gives a clearer picture of grid conditions over a wider area at any given time.

Natural Resource Stewardship

Another vital part of TVA's mission is management of the Tennessee River system, the fifth-largest river system in the United States. TVA primarily funds resource stewardship services from power receipts. User fees are also used but to a much smaller extent. The 652-mile-long river, the 42,000 miles of streams and tributaries, and the 49 dams and 14 navigation locks operated by TVA are a vital part of the nation's navigation system, providing for the shipping of over 50 million tons annually. In addition to commercial navigation, TVA's management of the river system includes reducing flood risk, producing hydro power, and providing cooling water for TVA's fossil and nuclear plants. Encompassing 41,000 square miles, the river and its 12 tributary watersheds touch 125 counties in portions of seven states. In addition, TVA has direct stewardship responsibility for, 11,000 miles of shoreline, 293,000 acres of public land, and 650,000 reservoir surface acres available for recreation.

Economic Development

TVA serves as a catalyst for sustainable economic development by assisting states, communities, and distributor customers in recruiting and retaining targeted businesses and industries that provide high economic impact, while balancing TVA's anticipated future system needs. By providing technical and community development related services to TVA's various stakeholders, TVA's economic development activities strive to help create and retain quality, high-paying jobs and increase the capital investment in the business community to the benefit of the community and the Valley.

Budget and Challenges

TVA is governed by the TVA Board which is responsible for approving an annual budget. The information included in this document is based on the FY 2010 annual budget which was approved by the TVA Board in August 2009. The following challenges were considered in preparing the FY 2010 annual budget:

Kingston Fossil Plant Ash Spill. During the first quarter of FY 2009, an event at the Kingston Fossil Plant ("Kingston"), which TVA operates pursuant to the TVA Act, was reportable to federal, state, and local environmental and emergency response agencies. On December 22, 2008, a dike failed at Kingston located near Kingston, Tennessee, allowing approximately five million cubic yards of water and coal fly ash to flow out onto approximately 300 acres. Only approximately 8 acres of this land was not managed by TVA. Some of the material flowed into the nearby Watts Bar Reservoir at Emory River mile 2.5. TVA currently estimates the ash removal will be completed in 2013. TVA has recorded an estimate in the amount of \$933 million in connection with the current expected cleanup costs related to the event. Costs incurred through September 30, 2009, totaled \$231 million. Due to actions of the TVA Board in August 2009, the TVA Board reclassified the amount as a regulatory asset during the fourth quarter of 2009 and will be charged to expense as it is collected in future rates over 15 years, beginning October 1, 2009.

Due to the uncertainty at this time of the final methods of remediation, a range of reasonable estimates has been developed by cost category and either the known amounts, most likely scenarios, or the low end of the range for each category has been accumulated to determine the total estimate. The range of estimated costs varies from approximately \$933 million to approximately \$1.2 billion. This range could change significantly depending on factors including whether new coal ash laws and regulations are implemented at the state or federal level. Items not currently in the estimates above include future regulatory actions, litigation, fines or penalties that may be assessed, final remediation activities, or other settlements because TVA cannot estimate the costs associated with these items at this time. Also, all of the regulatory requirements for the final closure of the site, the continued ground water monitoring requirements, and any ongoing environmental impact studies that may be required are not known at this time and are not included in the estimate. As ash removal continues, it is possible that other environmentally sensitive material potentially in the river sediment before the ash spill may be uncovered. If other materials are identified, additional remediation not included in the above estimates may be required.

Case Brought by North Carolina Alleging Public Nuisance. On January 30, 2006, North Carolina filed suit against TVA in the United States District Court for the Western District of North Carolina alleging that TVA's operation of its coal-fired power plants in the states of Tennessee, Alabama, and Kentucky constitute public nuisances. North Carolina asked the court to impose caps on emissions of certain pollutants from TVA's coal-fired plants that North Carolina considers to be equivalent to caps on emissions imposed by North Carolina law on North Carolina's two largest electric utilities. On January 13, 2009, the court held that emissions from the Bull Run Fossil Plant ("Bull Run"), the Kingston Fossil Plant ("Kingston"), the John Sevier Fossil Plant ("John Sevier"), and the Widows Creek Fossil Plant ("Widows Creek") constitute a public nuisance. The first three plants are located in Tennessee, and Widows Creek is located in Alabama. The court declined to order any relief as to the remainder of TVA's coal-fired plants, holding that their emissions did not significantly impact North Carolina. TVA currently estimates that the total cost of taking all of the actions required by the court would be approximately \$1.7 billion through 2014. Of this amount, TVA was already planning to spend approximately \$0.6 billion before the court issued its order. There could be other cost impacts, including fuel, variable operation and maintenance ("O&M"), and fixed O&M, and those costs are under evaluation. On May 29, 2009, TVA appealed the district court's decision to the United States Court of Appeals for the Fourth Circuit.

Decreased Electric Power Demand. The effects of the economic downturn are resulting in less demand for electric power by certain customer types. Sales of electricity in the twelve months ended September 30, 2009, were about seven percent below 2008 levels for the same period and could decline further if commercial and industrial employers continue to reduce production in response to the downturn. In the twelve months ended September 30, 2009, directly served industrial sales were down approximately 17 percent compared to the same period of 2008, while municipal and cooperative sales experienced a nearly five percent decline compared to the same period of 2008. The sales decline is impactful on the operating budget due to the reduction in fixed cost recovery through power sales. The timing of economic recovery estimated as occurring through 2010-11 in the Valley will significantly influence the magnitude of the revenue impacts from decreased sales.

Investment Performance. The performance of debt, equity, and other markets in 2008 and 2009 negatively impacted the asset values of investments held in TVA's pension system and nuclear decommissioning trust ("NDT").

At its August 20, 2009 meeting, the TVA Board approved a contribution to the TVA Retirement System of \$1.0 billion on September 24, 2009 that constitutes an advance on its contributions for FY 2010 through FY 2013 to help stabilize the TVA Retirement System for the short-term and strengthen it for the future. The TVA Retirement System Board also implemented a temporary change in the cost of living adjustment which will decrease the TVA Retirement

System's liability approximately \$300 million. The \$1 billion contribution, along with the liability reductions, has improved the system's funded status.

Lower Commodity Prices and Effects on Fuel Cost Adjustment. TVA's electricity rates are adjusted as fuel and purchased power costs increase or decrease. The fuel cost adjustment is referred to as the "FCA". Due to falling commodity prices across domestic and international markets, TVA experienced lower-than-budgeted costs in short-term markets for natural gas, fuel oil, coal, and electricity during FY 2009.

Although the FCA provides a mechanism to regularly alter rates to reflect changing fuel and purchased power costs, there is a lag between the occurrence of a change in fuel and purchased power costs and the reflection of the change in rates. As a result, TVA's cash flows can be positively or negatively affected by the FCA. As of September 30, 2009, TVA had collected excess revenues to offset fuel and purchased power costs. The excess revenue was driven by market commodity prices being lower than those forecasted. At September 30, 2009, TVA recognized a short-term regulatory liability of \$822 million because of the change in market conditions and no long-term regulatory liability related to the FCA. These regulatory liabilities represent amounts collected to date in rates that will be refunded to customers in the future through FCA rate reductions.

On August 20, 2009, the TVA Board approved a change to the FCA mechanism from a quarterly to a monthly calculation. This should result in more frequent and more accurate forecasting of fuel and purchased power costs, as well as less dramatic swings in the FCA amounts.

Weather Conditions. Rainfall in the eastern Tennessee Valley was 103 percent of normal and runoff was 85 percent of normal for the twelve month period ended September 30, 2009. This resulted in a 64 percent increase in conventional hydroelectric generation during the period compared to the same period in 2008, which partially offset less economical fossil-fueled generation. While TVA's conventional hydroelectric generation has increased since 2008, it is at 85 percent of normal for the twelve month period ended September 30, 2009.

Debt Ceiling. The TVA Act specifies that TVA's Bonds may not exceed \$30 billion outstanding at one time. As of September 30, 2009, TVA had \$22.8 billion of Bonds outstanding (not including noncash items of foreign currency valuation loss of \$30 million and net discount on sale of Bonds of \$224 million). Increased future capital expenditures along with a debt ceiling may challenge TVA's ability to maintain low and competitive power rates.

Environmental Regulation. TVA expects increased environmental regulation in the future, including but not limited to the regulation of mercury and the emission of greenhouse gases such as carbon dioxide. TVA has considered, and intends to continue considering, fuel mix in making decisions about additional generation. The restart of Browns Ferry Unit 1, the decision to complete Watts Bar Unit 2, the filing of a Combined Construction and Operating License Application for two new units at the Bellefonte Nuclear Plant ("Bellefonte"), and the reactivation of the construction permits for existing Bellefonte units are examples of TVA's activities to pursue or consider generation sources that do not emit greenhouse gases. The nature or level of future regulation of greenhouse gases is unclear at this time. Accordingly, the costs associated with such regulation are currently unknown but could be substantial. TVA would have to recover such costs in rates or pursue some other action which, among other options, might include removing some coal-fired units from service.

Renewable Portfolio. There is currently pending federal legislation involving renewable energy and energy efficiency. Depending on the bill that gets enacted, TVA might have to ensure that, over the CY 2011 to CY 2039 timeframe, anywhere from 3 percent to 20 percent of the electricity it sells is produced by renewable sources (as defined by Congress), or make alternative compliance payments for any deficiencies. In addition, H.R. 2454, American Clean Energy and Security Act of 2009, which was passed by the House of Representatives, would cut U.S. greenhouse gas emissions 17 percent by CY 2020 from CY 2005 levels and 83 percent by CY 2050. Utilities are a source of greenhouse gas emissions and would likely be impacted by such legislation. Under most proposed legislation, renewable power generation resources include solar, wind, incremental hydroelectric, biomass, and landfill gas. Generating power with renewable sources instead of coal-fired plants could help reduce the carbon dioxide intensity of TVA's generation. Power generated using renewable sources, with current technologies, may not be economically competitive compared to existing power generation assets. Technology advancements will be needed to address some of the operational issues associated with renewable energy, such as energy storage to address intermittency and interconnection technologies to address onsite, non-grid connected renewables and efficiencies.

Most renewable energy resources are geographically specific. Some regions of the United States have an abundance of wind and solar resources whereas other regions have hydroelectric resources. Regional differences and limitations play a primary role in the types and amount of renewable and clean energy developed across the country. Within the area served by TVA, two of the most abundant renewable resources are hydroelectric and biomass. Feasible wind energy in this region is primarily associated with mountain top and ridgeline installations, and the total potential capacity is limited when compared to other parts of the nation where wind energy is more

abundant. If TVA is required to increase its use of renewable resources and the cost of doing so is greater than the costs of other sources of generation, TVA's costs may increase significantly.

In accordance with TVA's 2008 Environmental Policy, TVA is working towards obtaining 50 percent of its power supply from clean (low or zero carbon-emitting) or renewable sources by 2020. TVA defines its clean energy portfolio as energy that has a zero or near-zero CO₂ emission rate, such as nuclear. TVA defines renewables as energy production that is sustainable and often naturally replenished. In terms of reaching this goal, TVA also counts items such as, energy efficiency improvements including demand reduction, or waste heat recovery.

In October 2009, TVA entered into two 20-year contracts for the purchase of up to 450 MW of renewable wind energy from wind farms located in North Dakota and South Dakota. Power under these contracts is scheduled to be delivered beginning in CY 2012. In November 2009, TVA entered into two additional contracts for the purchase of renewable wind energy. The two contracts will provide a total of up to 350 megawatts from wind projects at the White Oak Energy Center in McLean County, Illinois, and the Bishop Hill Energy Center in Henry County, Illinois, both beginning in January 2012. In December 2009, TVA entered into two more contracts for the purchase of renewable wind energy. One of these contracts will provide up to 165 megawatts of wind energy from the Cimarron project in Gray County, Kansas, beginning as early as January 2012. The other contract is for the delivery of up to 300 megawatts from Illinois, starting in mid-2010. Construction is scheduled or under way on all of these projects. With the execution of these contracts, TVA now has 1,265 MW of power under contract. Power delivery is subject to applicable environmental requirements and firm transmission paths being secured.

Budget Overview

Power Program

TVA's power program is entirely self-financing and does not receive any federal appropriations. The power program budget is, however, included in the Consolidated Budget of the United States Government. TVA is experiencing significant levels of uncertainty relative to the weather, the economy and other factors. TVA's financial information includes estimates which are affected by these changing conditions.

TVA projects revenue to exceed \$12 billion in FY 2011, which includes the estimated impacts of the FY 2010 rate adjustment and fuel cost adjustment. In FY 2011, TVA projects to invest \$2.7 billion in capital projects for the power system, including \$297 million for clean air projects and \$228 million for transmission system projects. TVA's debt and debt-like obligations increased by \$99 million in FY 2009 and are expected to increase \$931 million in FY 2010, and \$533 million in FY 2011.

TVA power sales have increased an average of one percent annually during the past decade. To keep pace with this growth, TVA has added 8,497 megawatts of generating capacity over the past ten years and entered into purchase power agreements with independent power generators. TVA has also upgraded its transmission system to maintain reliability and added new customer delivery points to serve the growing load. Despite a recent decline in power sales, TVA expects power demand in the Valley to grow at approximately 1.1 percent annually through FY 2029, and will continue to explore the full range of options available to meet the growing demand. Between FY 2006 and FY 2008, the TVA Board authorized the purchase of three combustion-turbine generating plants and one combined-cycle plant, executed a fifteen-year operating lease on a second combined-cycle plant and approved construction of two more combined cycle plants; one for 2010 and one for 2012 operation. Including the 2010 and 2012 plants, the actions add an additional 1,813 megawatts of winter peaking capacity and 3,354 megawatts of intermediate winter capacity to the TVA system. Additionally, Browns Ferry Nuclear Plant Unit 1 returned to service in May of 2007 and currently supplies additional generating capacity of approximately 1,150 megawatts with an eventual expected supply of 1,280 megawatts. On August 1, 2007, the TVA Board approved completing the construction of Watts Bar Unit 2. When completed, Watts Bar Unit 2 is expected to provide 1,150 megawatts of capacity. In June 2009, the TVA Board approved construction of a combined-cycle gas plant in northeastern Tennessee. The 880 megawatt facility, which is scheduled to be in service in 2012, should provide TVA with the flexibility to meet future power needs in the Tennessee Valley while maintaining transmission reliability in the eastern part of its service area.

TVA's FY 2011 annual interest expense is expected to be \$669 million lower than in FY 1997. Annual net interest expense that once consumed 34 percent of TVA's revenue has been reduced to only 11 percent in FY 2009 and is expected to remain at 11 percent in FY 2010 and FY 2011.

Water and Land Stewardship

TVA meets its obligation to operate and maintain its system of dams, reservoirs, and adjacent lands. Based on the provisions in the Energy and Water Development Appropriations Act of 1998, TVA funds its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA for Water and Land Stewardship since FY 1999, and none are requested for FY 2011. Long-term TVA funding levels for these activities are expected to continue at about the same level as in FY 1999. FY 2009 stewardship expenditures were approximately \$93 million, and FY 2011 funding of this program is estimated at \$90 million.

Budget Details

TVA Operating Budget

(millions of dollars)

	FY 2009 Actual	FY 2010 Estimate	FY 2011 Estimate
Revenue	\$ 11,255	\$ 10,998	\$ 12,278
Operating Expenses			
Fuel & Purchased Power	(4,745)	(3,816)	(4,947)
Operating, Maintenance, & Other	(2,395)	(3,043)	(3,015)
Depreciation & Amortization	(1,598)	(1,635)	(1,723)
Tax Equivalents*	<u>(544)</u>	<u>(502)</u>	<u>(588)</u>
Total Operating Expenses	<u>(9,282)</u>	<u>(8,996)</u>	<u>(10,273)</u>
Operating Income	1,973	2,002	2,005
Other Income	25	21	23
Interest Expense	<u>(1,272)</u>	<u>(1,253)</u>	<u>(1,334)</u>
Net Income	<u>\$ 726</u>	<u>\$ 770</u>	<u>\$ 694</u>

*Tax equivalents are based on the prior year's base revenue and current year fuel cost adjustment ("FCA") revenue.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2010 budget August 20, 2009.

Note 2: The above budget information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

Budget Details

(continued)

Capital Budget & Cash Flow

(millions of dollars)

	FY 2009 Actual	FY 2010 Estimate	FY 2011 Estimate
Operating Activities			
Net Income	\$ 726	\$ 770	\$ 694
Items not requiring cash	<u>1,415</u>	<u>1,079</u>	<u>1,925</u>
Total Cash Provided from Operating Activities	2,141	1,849	2,619
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(113)	(129)	(125)
Fossil	(226)	(412)	(509)
Hydro	(50)	(60)	(64)
Transmission	(41)	(35)	(39)
Other Capital	<u>(150)</u>	<u>(107)</u>	<u>(129)</u>
Subtotal	(580)	(743)	(866)
Clean Air	(171)	(145)	(297)
Watts Bar Unit 2	(477)	(681)	(635)
Capacity Expansion	<u>(537)</u>	<u>(683)</u>	<u>(916)</u>
Total Capital Projects	(1,765)	(2,252)	(2,714)
Other Sources (Requirements)	<u>(497)</u>	<u>(643)</u>	<u>(561)</u>
Total Cash Used in Capital Budget	(2,262)	(2,895)	(3,275)
Cash Payments to U.S. Treasury	<u>(33)</u>	<u>(37)</u>	<u>(36)</u>
Net Cash Available for Statutory Debt Reduction/(Increase)	<u>\$ (154)</u>	<u>\$ (1,083)</u>	<u>\$ (692)</u>
Reduction/ (Increase) in Debt and Debt-Like Obligations	<u>\$ (99)</u>	<u>\$ (931)</u>	<u>\$ (533)</u>
Receipts Less Disbursements*	<u>\$ 55</u>	<u>\$ 894</u>	<u>\$ 498</u>

*For Federal reporting purposes Payments to U.S. Treasury are not considered disbursements.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2010 budget August 20, 2009.

Note 2: The above budget information include estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

Oversight, Governance and Financial Performance

Oversight and Governance

TVA is committed to conducting business in an open and forthright manner. Investors in TVA securities benefit from oversight, auditor independence, corporate responsibility, and TVA's commitment to timely, accurate, and comprehensive financial disclosure.

In December 2004, the President signed the Consolidated Appropriations Act, 2005, which amends the Securities Exchange Act of 1934. Section 37 of this act requires TVA, a non-accelerated filer under Securities and Exchange Commission ("SEC") rules, to file financial reports with the SEC, beginning with the 2006 Annual Report on Form 10-K, as well as periodic, current, and supplementary information, documents, and reports. As an SEC filer, the following actions are required:

- The management reporting requirements of Section 404 of the Sarbanes Oxley Act became effective for TVA for FY 2008, and
- The auditor reporting requirements of Section 404b of the Sarbanes Oxley Act are effective for FY 2010. However, TVA implemented the auditor reporting requirements of Section 404b in FY 2009 – a year earlier than required.

TVA Oversight – A Different Mission with Different Oversight

TVA is a government-owned corporation, and its mission is fundamentally different than that of publicly traded companies. TVA is governed by the TVA Board. The TVA Board has up to nine part-time members, two of whom may reside outside the TVA service area. TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board, among other things, establishes broad goals, objectives, and policies for TVA; establishes long-range plans to carry out these goals, objectives, and policies; approves annual budgets; establishes and oversees rates; and establishes a compensation plan for employees.

Chief Executive Officer – Tom Kilgore was named President and Chief Executive Officer ("CEO") in October 2006 after having served as President and Chief Operating Officer since joining TVA in March 2005.

Audit Committee – The TVA Board established the Audit, Governance, and Ethics Committee. The committee is responsible for recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and Inspector General, among other activities.

Independent Auditor – An independent auditor audits TVA's financial statements in accordance with standards of the Public Company Accounting Oversight Board (United States) and with *Government Auditing Standards* issued by the Comptroller General of the United States. The auditor also provides an opinion on whether those statements are presented in conformity with U.S. Generally Accepted Accounting Principles ("GAAP").

Independent Inspector General – An independent Office of Inspector General ("OIG") conducts ongoing audits of TVA's operational and financial matters in accordance with *Government Auditing Standards*, which incorporate the American Institute of Certified Public Accountants ("AICPA") generally accepted auditing standards. The OIG's staff has about 104 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States. The OIG provides semiannual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$20.4 million for FY11, which includes \$120,000 for OIG training and \$45,000 in support of the Council of the Inspectors General on Integrity and Efficiency. TVA's 2011 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the Government Accountability Office ("GAO"), also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to the Office of Management and Budget ("OMB"), and TVA's budget is included in the consolidated budget of the U.S. Government. Additionally, TVA's financial results are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by the GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act ("GPRA"), which requires that a strategic plan and annual performance reports be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the Environmental Protection Agency, state environmental agencies, the SEC, and the Nuclear Regulatory Commission. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. Additionally, while TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission ("FERC"), FERC has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Council and the industry-based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted government auditing standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Accounting and Financial Reporting

TVA's financial transactions are subject to audit by the Comptroller General under various statutes. Further, TVA's financial statements are annually audited by independent auditors. TVA also submits financial information to OMB, the U.S. Treasury, Energy Information Agency, Nuclear Regulatory Commission, and others, in accordance with regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board.

Financial Reporting and Disclosure

TVA publishes an annual report that contains audited financial statements and an opinion letter from the independent auditors. TVA's annual report also includes comparative financial information. In 2003, TVA began including its complete Information Statement with its annual report. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files all annual reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise and on a weekly basis within some business units. The monthly financial performance reports contain analysis for the income statement, cash flow statement and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

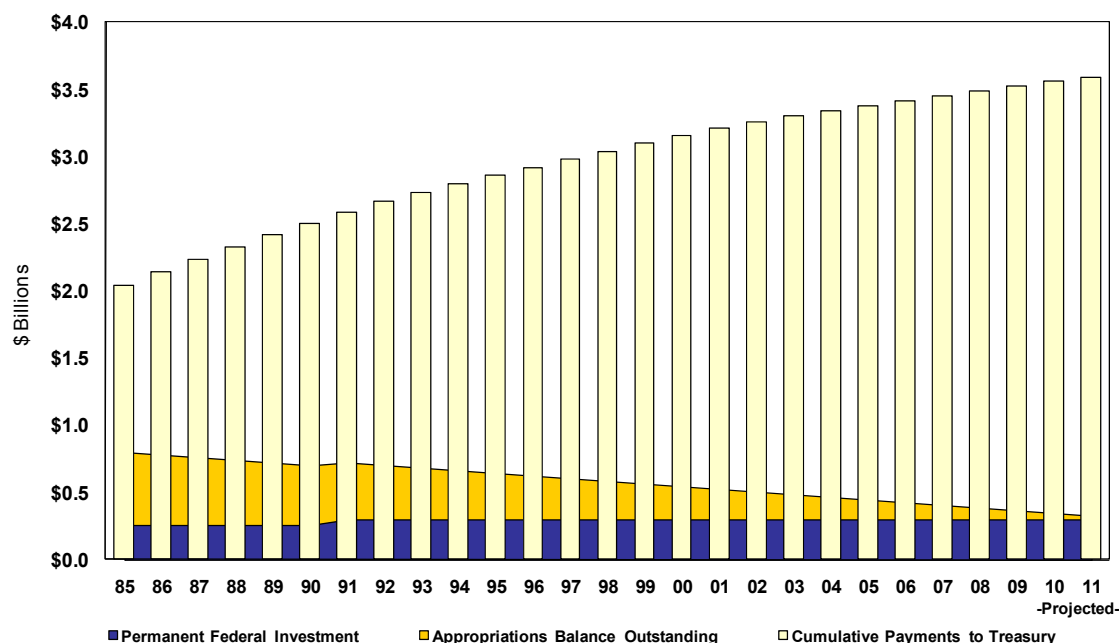
Enterprise Risk Management

TVA has a designated Enterprise Risk Management organization within its Financial Services organization, responsible for (1) coordinating risk assessment efforts at TVA organizations, (2) facilitating enterprise risk discussions at all levels of the organization, and (3) developing and improving risk governance structure and risk assessment processes and methodologies.

Enterprise Risk Management at TVA is an ongoing and evolving process to protect the value of the enterprise and realize opportunities for stakeholders by promoting the efficient and effective management of risk across TVA. TVA is committed to the management of risk using an enterprise-wide approach. The TVA Enterprise Risk Management Policy provides overarching guidance on all risk management activities within TVA, including but not limited to personnel safety, operational contingency, risk control and financial hedging.

TVA has cataloged major short-term and long-term enterprise level risks across the organization. TVA will further integrate risk management practices into all aspects of the business as Enterprise Risk Management continues to evolve in a manner best suited to support TVA's mission.

Power Program Appropriation Repayment



Financing the Business

For more than 40 years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on appropriation payment. Through FY 2011, these payments are expected to total an estimated \$3.6 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA.

TVA uses a debt service coverage ("DSC") methodology for calculating its revenue requirement. The DSC methodology provides for recovery of normal operating costs, debt service (i.e., both annual principal and interest payments), and other required costs (e.g., decommissioning, pension contributions) necessary to maintain TVA's credit quality. TVA also uses a cost of service methodology. Many of these costs, such as fuel and purchased power expense, and nuclear security measures, experience fluctuations that are largely beyond the control of TVA.

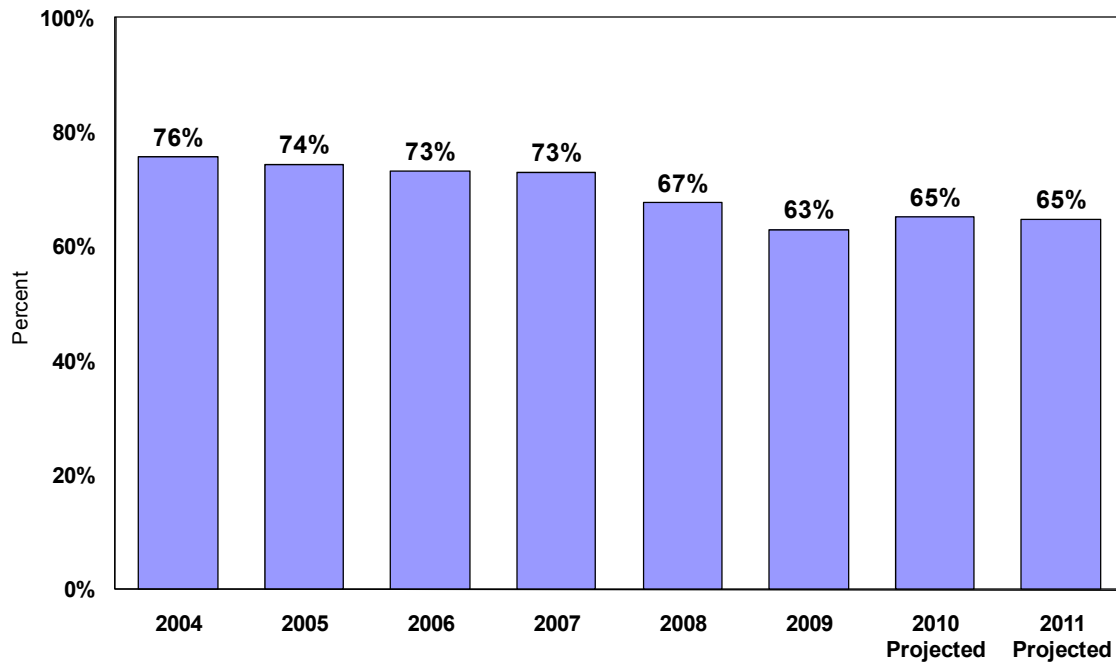
Financial Health

TVA's financial information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. Maintaining TVA's AAA credit rating is a key component of TVA's financial strategy. This strategy is centered on applying sound decision criteria to new investments; retiring debt before the associated assets are retired; improving the balance sheet by improving the ratio of financing obligations to total assets; and improving cash return on total assets for the purpose of debt payment, asset investment and investments to improve environmental performance. TVA plans to continue to make decisions necessary to further its sound financial performance. TVA's liquidity is enhanced by several factors. The TVA Board has the ability to adjust rates on a quarterly basis, if needed. Additionally, the fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's discount-note program provides TVA the short-term capital it needs to fund daily operations. TVA plans to:

- Invest in new capital projects and leases when economically justified or needed to meet regulatory requirements, such as clean air compliance;
- Pay down new financial obligations through revenue or savings generated from the investments they were used to fund; and
- Retire financial obligations before the value of the associated assets in the portfolio is depleted.

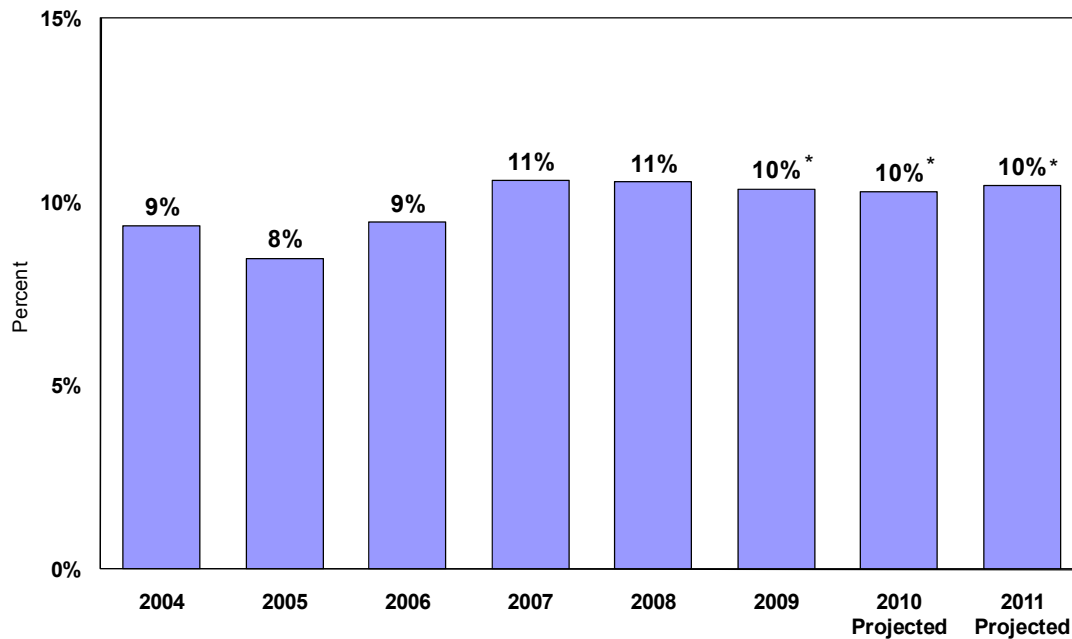
These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets. TVA will track its financial health by measuring Total Debt and Debt-Like Obligations as a percent of Total Assets.

Total Debt and Debt-Like Obligations / Total Assets %



In addition to sound criteria for new investments, improving non-fuel O&M expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of Earnings before Taxes, Interest, and Depreciation and Amortization ("EBITDA") to Total Assets. See Appendix for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.

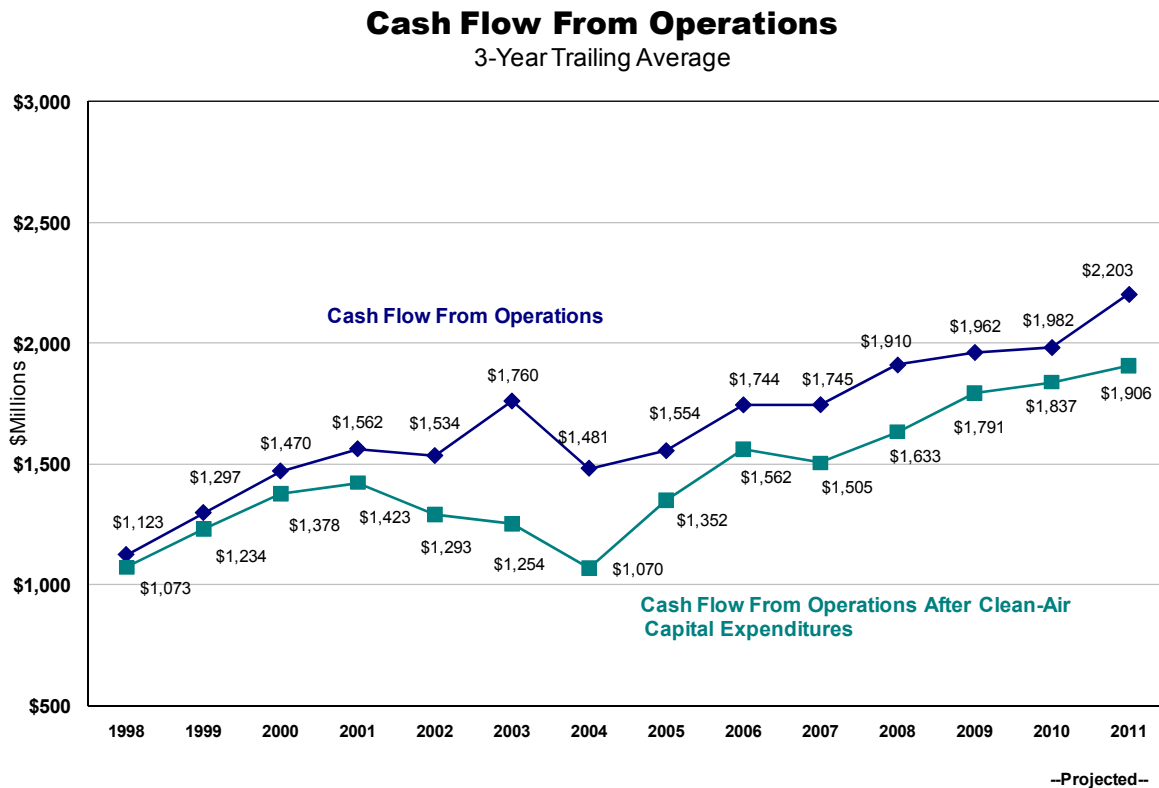
**Earnings Before Interest, Taxes, Depreciation,
Amortization (EBITDA)* / Total Assets %**



*See Appendix for a reconciliation of EBITDA to the most directly comparable GAAP measure.

Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a three-year average cash flow to provide a measure of its financial health.

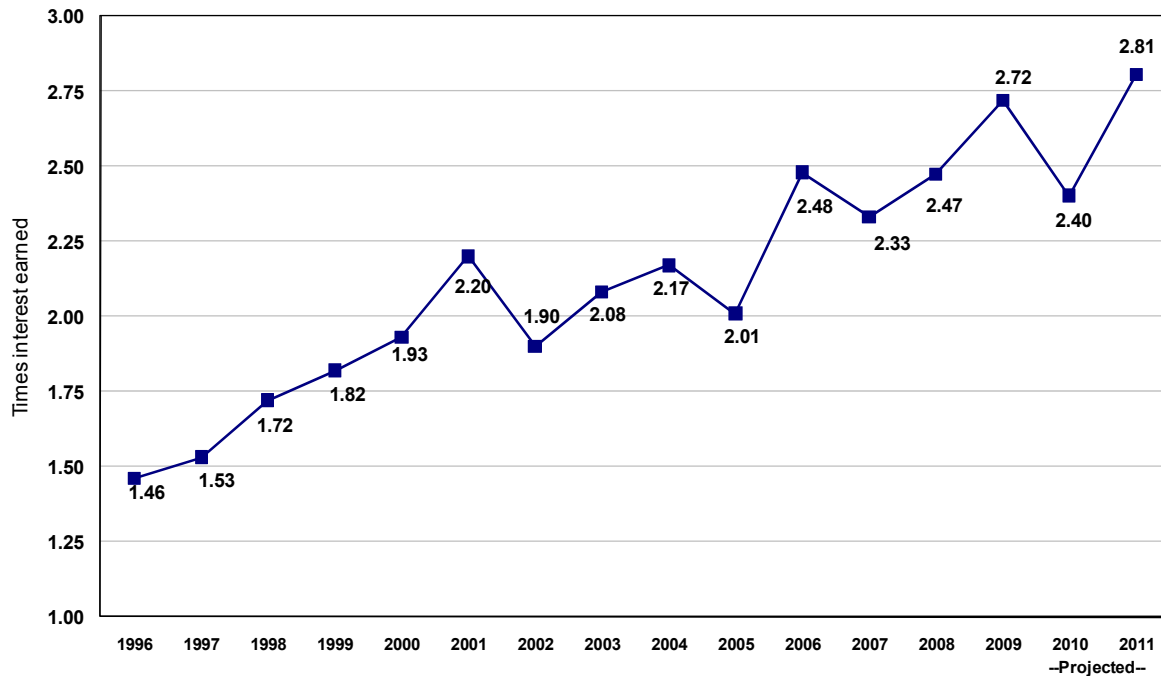


Interest Coverage

TVA's ability to service its statutory debt, measured by the degree to which annual cash flow covers interest obligations, has also improved over the past several years as annual cash flow has generally increased and debt has been reduced.

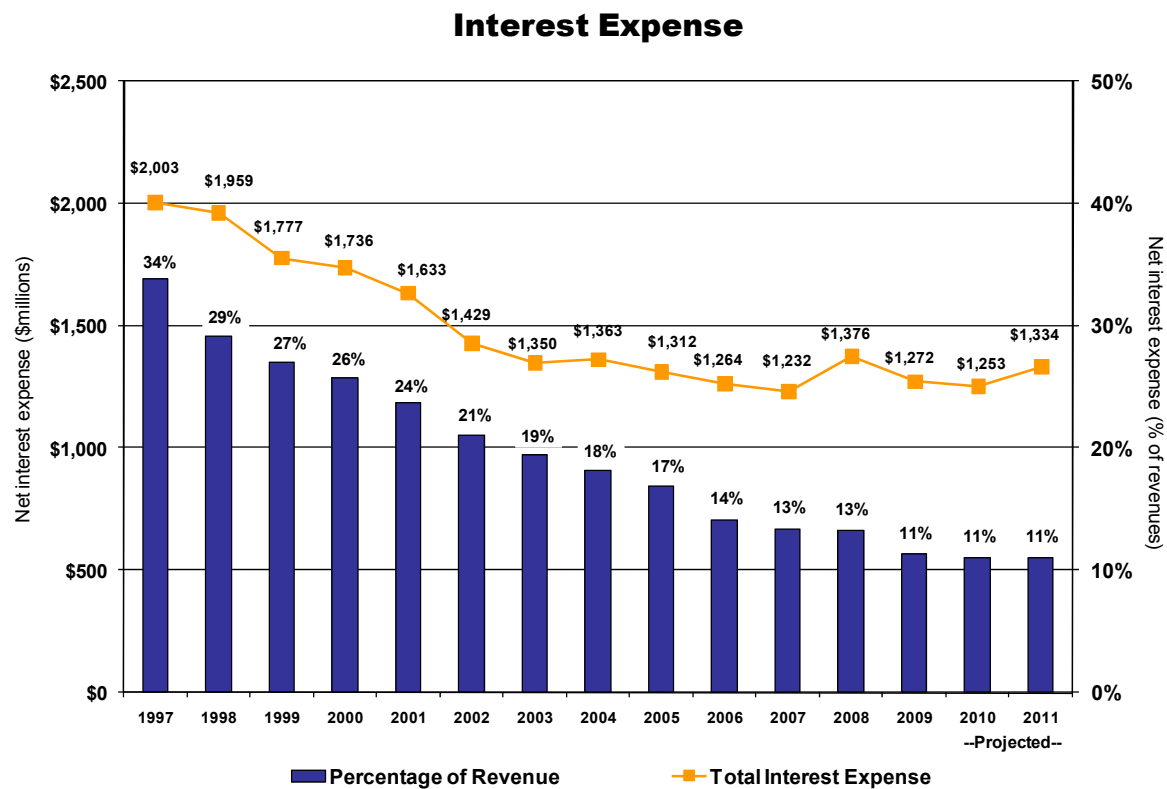
TVA's interest coverage sharply improved in FY 2009 due to the large FCA liability balance recognized at September 30, 2009. This liability will be refunded to customers in FY 2010 reducing the ratio to approximately the FY 2008 level. Interest coverage for FY 2011 is higher than historical trends due to increased cash flow.

Interest Coverage Ratio



Interest Expense

TVA intends to continue to manage fixed costs including interest expense. Annual interest expense was more than \$2 billion at its peak. This amount has declined 37 percent, to \$1.3 billion in FY 2009. In FY 1997, annual net interest expense as a percentage of total revenues was 34 percent. That figure has been reduced to only 11 percent of revenues for FY 2009 and is expected to remain at 11 percent in FY 2010 and FY 2011.

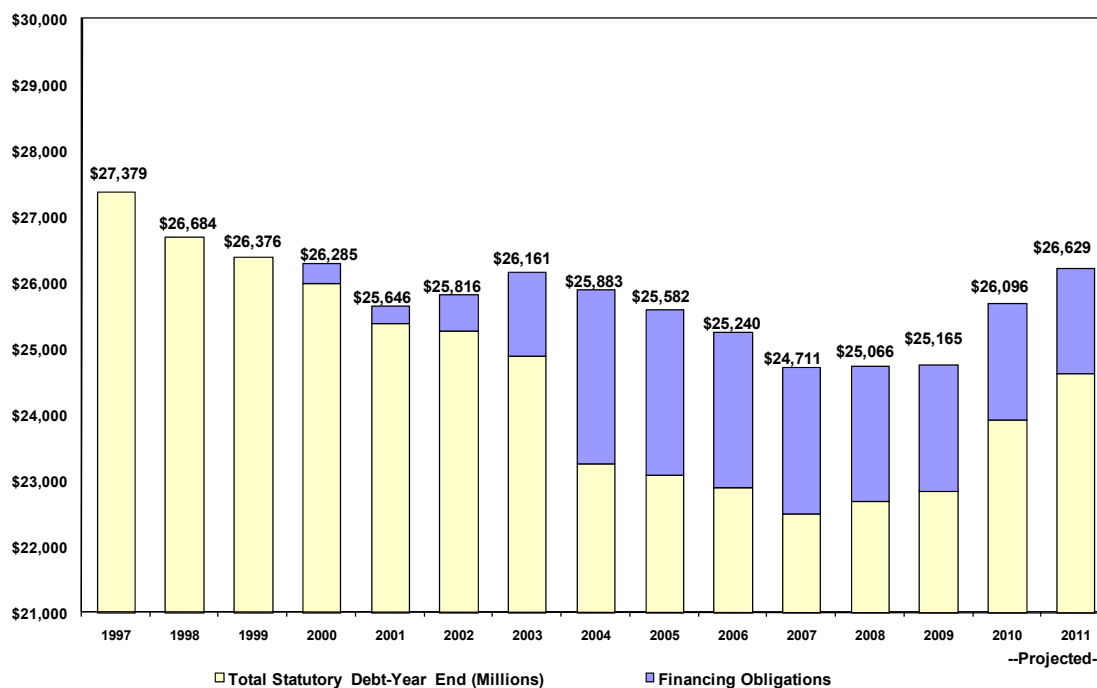


Financing Obligations

From FY 1997 through FY 2009, TVA has reduced its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by more than \$2.2 billion. This includes a net reduction of statutory debt of approximately \$4.6 billion during that same period. Total Debt and Debt-Like Obligations are expected to increase in FY 2010 and FY 2011 to fund capacity expansion and the Kingston ash spill recovery.

Total Debt and Debt-Like Obligations at Year End

(in millions)



Credit Facilities

The TVA Board has approved TVA entering into a credit facility or facilities not to (collectively) exceed \$5 billion. Thus far, TVA has entered into two such facilities, which allow TVA to borrow up to \$2.0 billion. This is not intended to be used as a tool to manage daily cash operations or as a primary source of funding. Any outstanding obligations on the facilities count towards TVA's statutory debt limitation. TVA has not borrowed any money under the credit facilities, although TVA has arranged for a letter of credit to be issued under one of the credit facilities.

In December 2008, TVA and the U.S. Treasury replaced a \$150 million note with a memorandum of understanding under which the U.S. Treasury provided TVA with a \$150 million credit facility. There were no outstanding borrowings under the facility at September 30, 2009.

Performance Goals and Results

Goal 1: Supplying Low-Cost, Reliable Power

Power Sales and Revenue

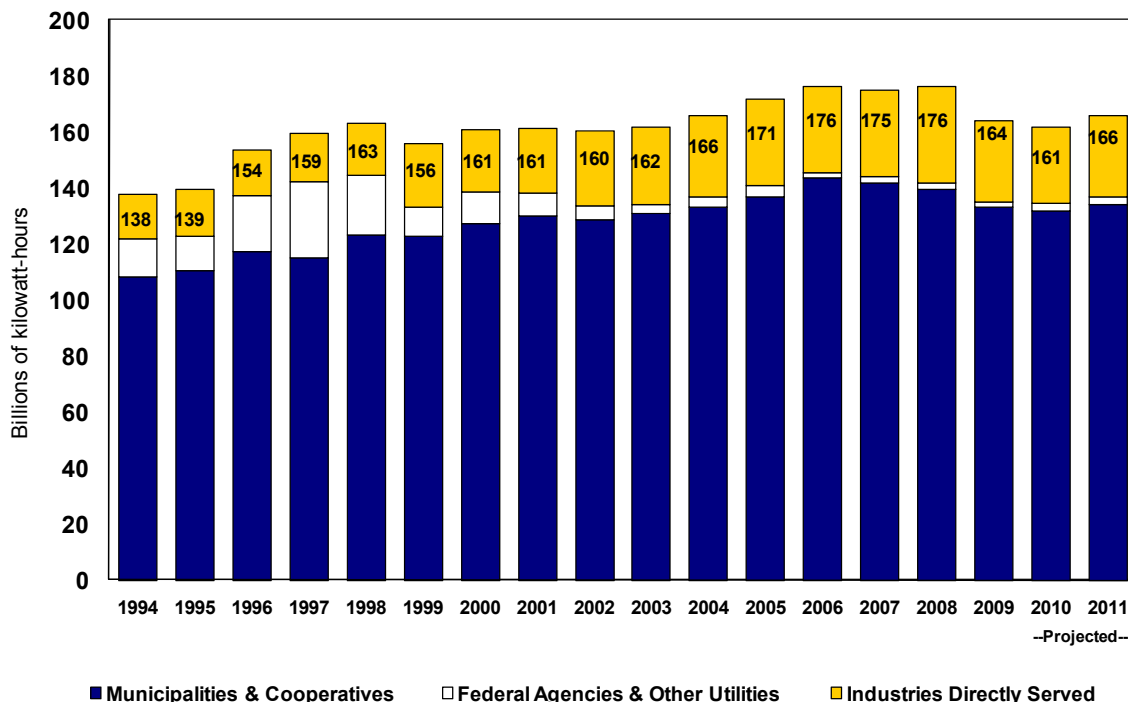
TVA sells electricity to three main customer groups:

Municipalities & Cooperatives: TVA delivers power to wholesale customers, which include municipal utility companies and cooperatives, who resell that power to consumers. The municipal utilities make up the largest block of TVA customers. Cooperatives are customer-owned companies, many of which were originally formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative distributors represent the majority of TVA's business.

Industrial Directly Served Customers: TVA also sells power directly to industrial customers, consisting of customers with large or unusual loads.

Federal Agencies and Others: TVA sells power directly to Federal Agencies. Included in other is Off-System sales. TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring systems. Sales to these companies typically represent less than 1 percent of TVA's total power sales.

TVA Total Sales



Demand in the Valley

In FY 2009, TVA sold 164 billion kilowatt-hours of electricity and is estimated to sell 161 billion kilowatt-hours in FY 2010 and 166 billion kilowatt-hours in FY 2011. Most of TVA's sales growth in the past several years has come from customers who are municipal and cooperative distributors of TVA power, which has offset reduced demand from industrial customers. Demand for electricity in the TVA region grew at approximately 2 percent annually from FY 1995

through FY 2009. By FY 2011, the population of the TVA service region is expected to surpass 9 million, growing at a rate slightly higher than the national average.

TVA System Capability		
<i>Net summer dependable (MW) at September 30, 2009</i>		
Fossil	14,711	40%
Nuclear	6,624	18%
Hydro	5,494	15%
Combustion Turbine (owned or leased)	6,871	19%
Power Purchase Agreements	2,774	8%
Other*	<u>16</u>	<u><1%</u>
Capacity**	36,490	100%

* Other includes 13 MW of Diesel Generator capacity and 3 MW of Renewable Resources Owned by TVA.

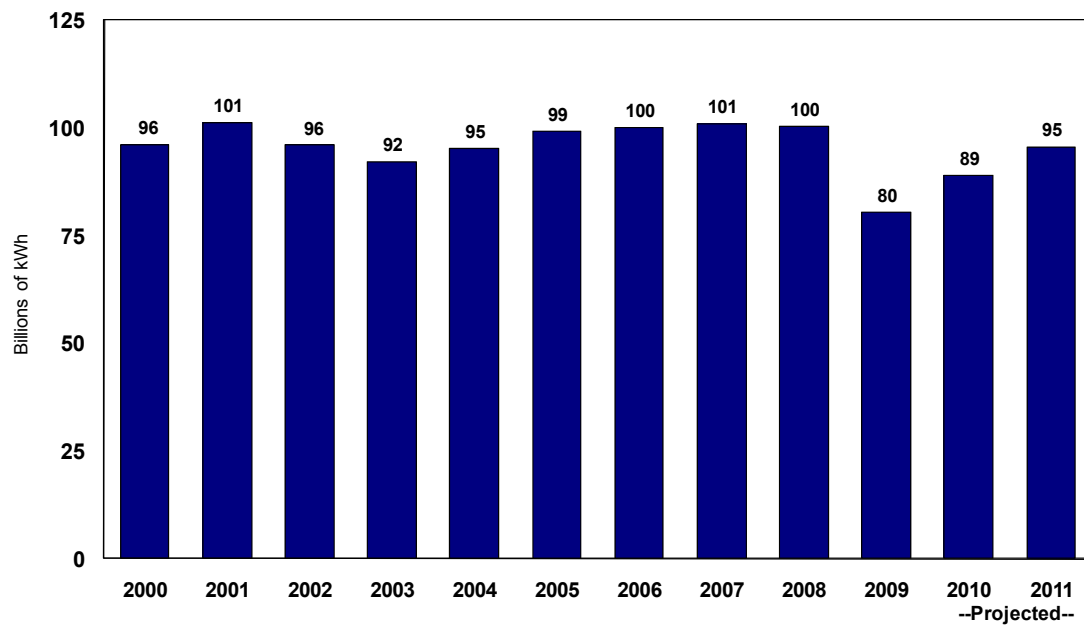
**Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP. Hydro capacity represented includes pumped-storage.

Operational Performance

Fossil Power Highlights

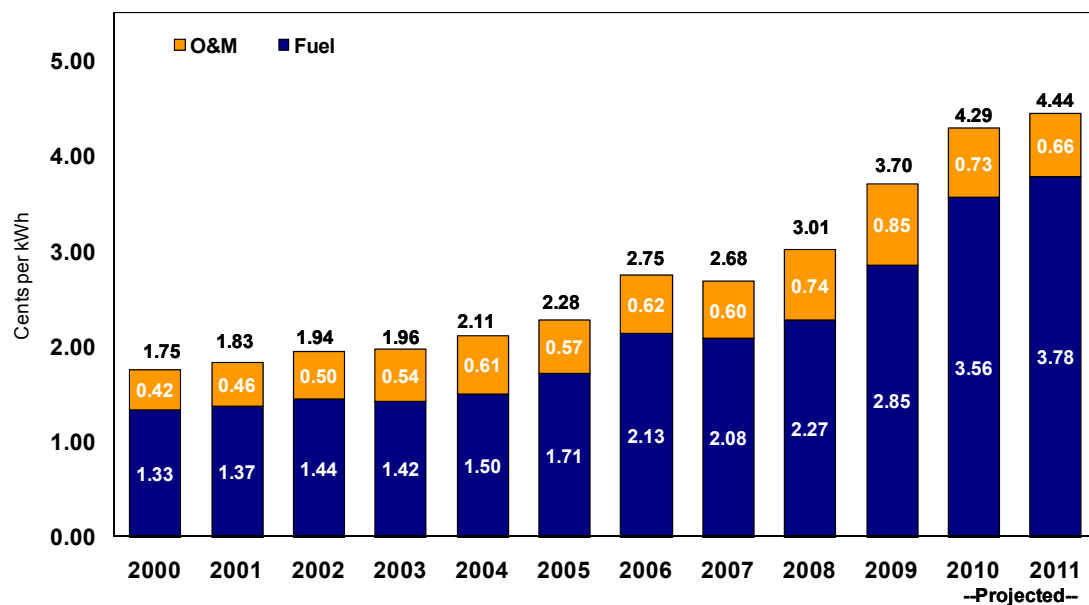
The mainstay of TVA's power production portfolio is its fleet of 11 coal-fired fossil plants, which represent a combined 14,711 megawatts of net summer capability. TVA's fossil system also includes 87 simple-cycle combustion turbine units at eight different plant sites and six natural gas combined-cycle units. The simple-cycle combustion turbine sites are peaking sites that are designed to start quickly and help meet demand for electricity during peak operating periods. Operation and maintenance costs are projected to decrease.

TVA Fossil Power Generation



TVA's fossil power generation declined in FY 2009 due to reduced demand and significant increases in coal prices.

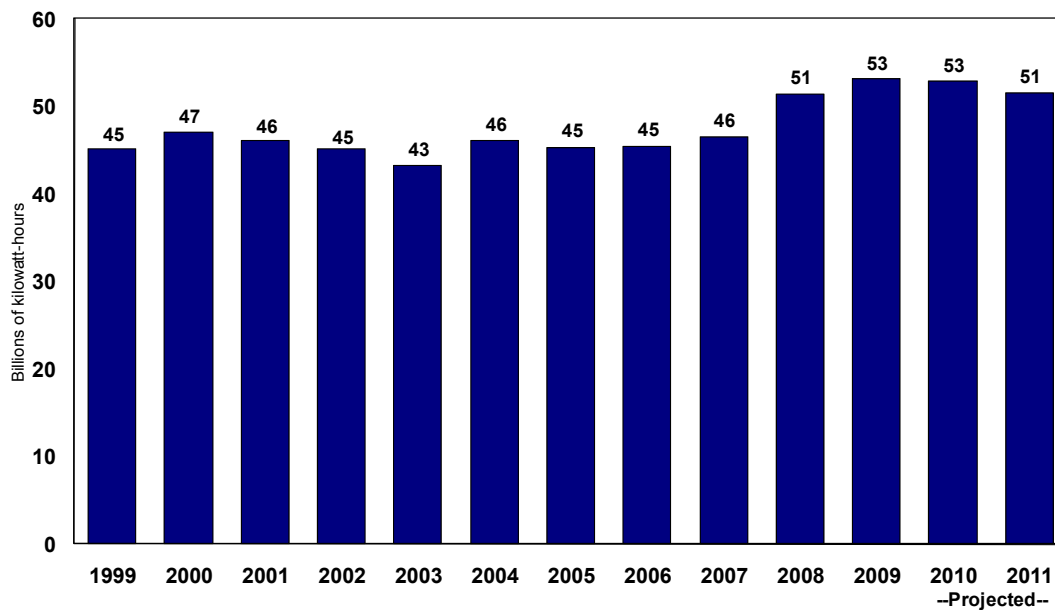
Fossil Power Production Expense



Nuclear Power Group Highlights

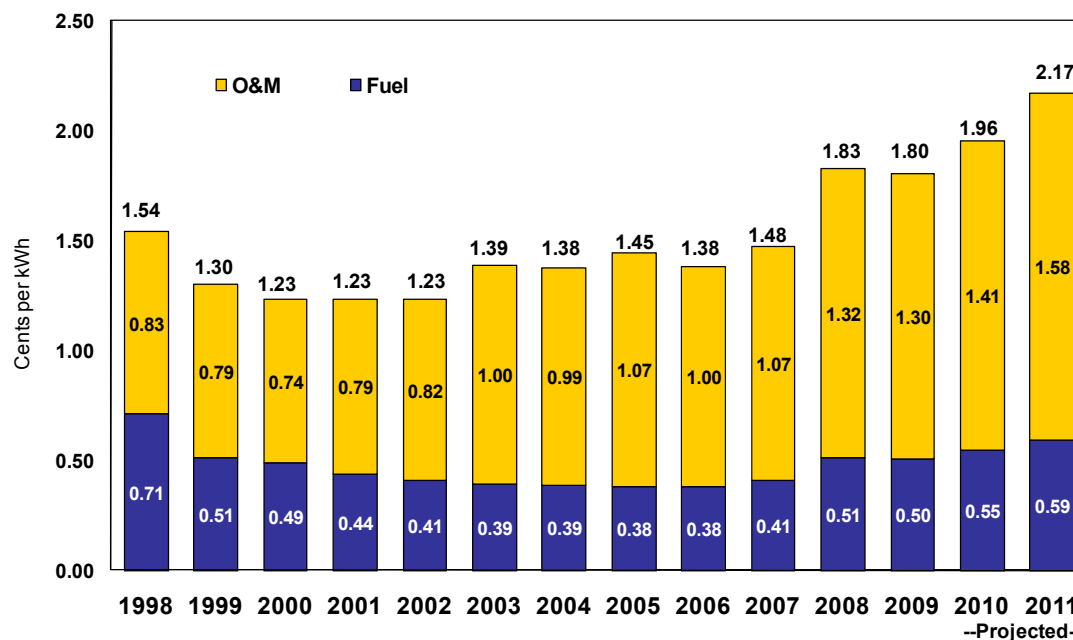
TVA's nuclear operations are critical to meet the region's power needs. In FY 2011, TVA's nuclear units are expected to generate 51 billion kilowatt-hours of electricity, which should represent approximately 33 percent of TVA's total net generation.

TVA Nuclear Generation



TVA's total nuclear production expense on a per-kilowatt-hour basis is expected to increase in 2011 due to higher fuel costs and higher operation and maintenance costs due to the timing of outages.

Nuclear Power Production Expense

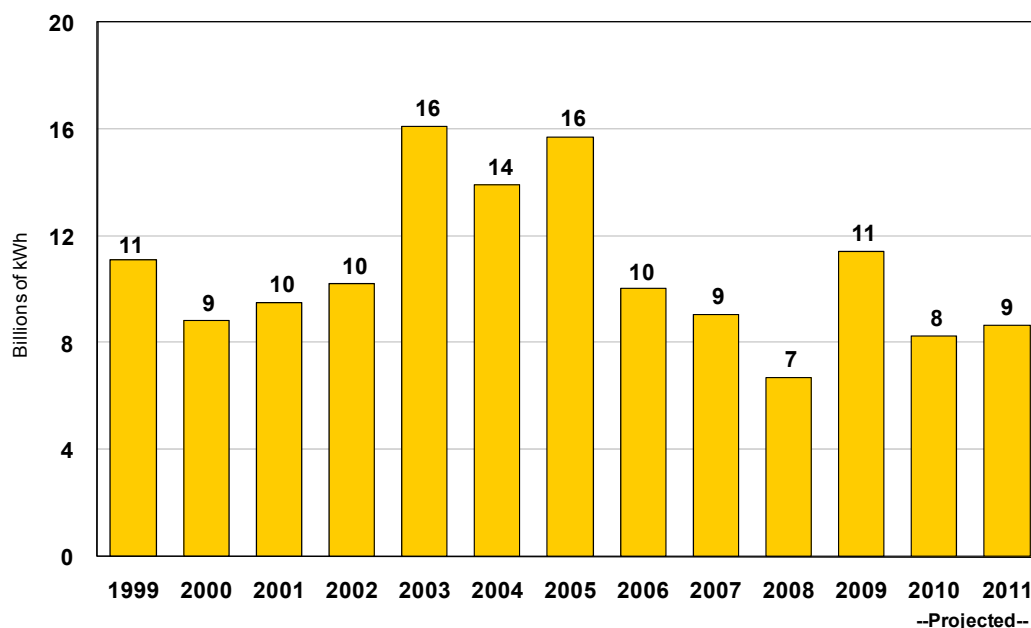


Hydroelectric Power Highlights

In FY 2009, TVA's integrated hydroelectric power system of dams and pumped-storage units generated approximately 11.4 billion kilowatt-hours of electricity – approximately 8 percent of TVA's total net generation, and in FY 2011 it is estimated to produce approximately 9 billion kilowatt-hours – approximately 5 percent of TVA's total net generation. Generation in FY 2009 increased approximately 71 percent from FY 2008 due to a return to more normal rainfall and run-off levels. FY 2011 generation is lower than FY 2009 because of the uncertainty around weather conditions. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power represents a very important element in TVA's total portfolio.

TVA's hydroelectric facilities have very low operating costs and can be used as base-load, intermediate, or peaking units, depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountain-top reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

TVA Hydro-System Net Power Generation

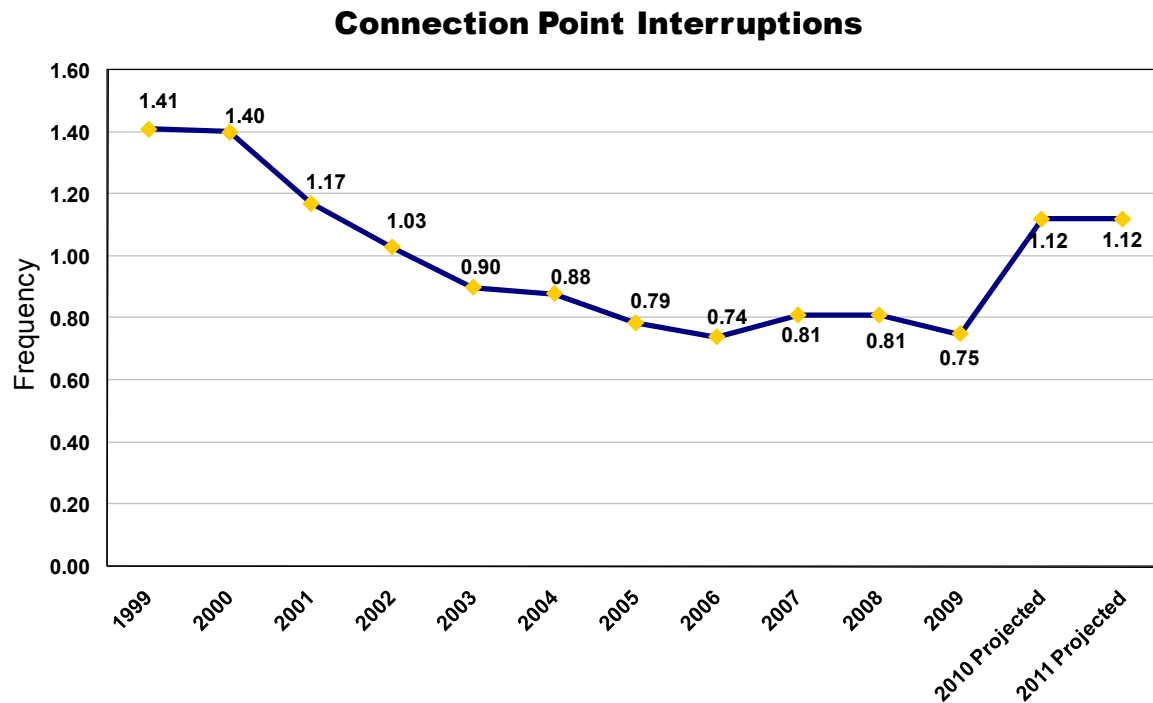


TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, delivered more than 164 billion kilowatt-hours of electricity sales in FY 2009 and maintained 99.999 percent reliability over the past ten years for delivering electricity to its local power distributors and direct served large industrial and government customers. In FY 2011, the transmission system is expected to deliver nearly 166 billion kilowatt-hours of electricity sales. This system is comprised of approximately 15,954 circuit miles of transmission lines, including 2,437 miles of extra-high-voltage (500,000 volt) transmission lines, 487 substations, power switchyards and switching stations, 1,086 individual interchange and customer connection points, and 235,000 right-of-way acres.

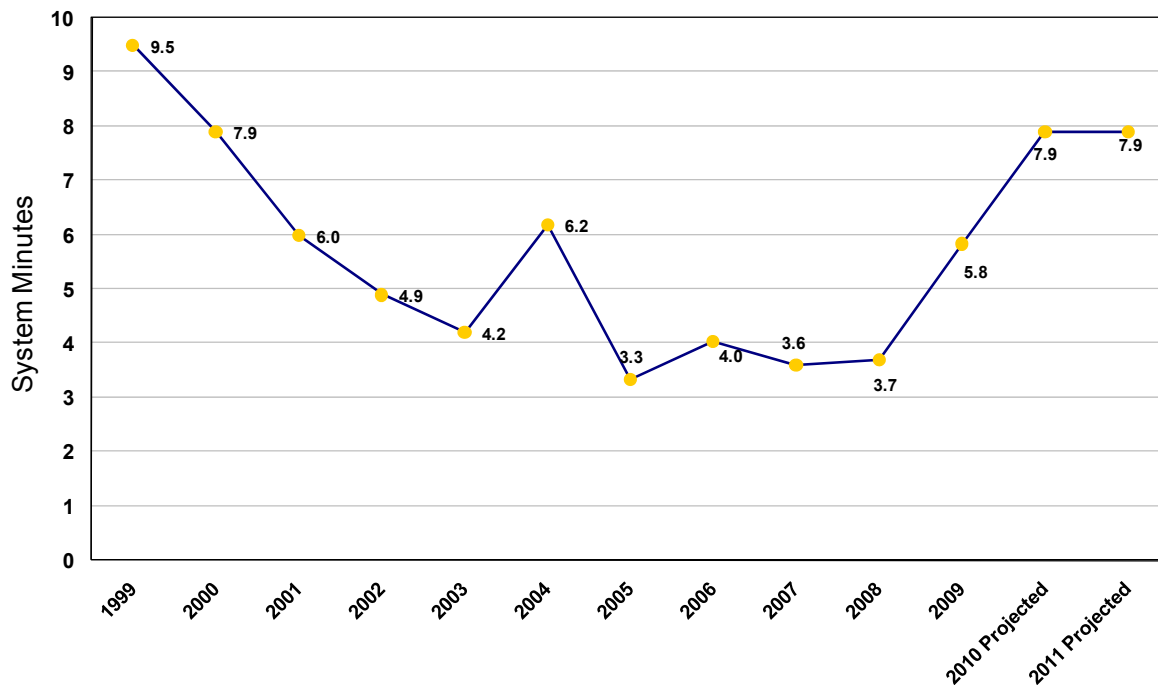
The TVA transmission organization offers transmission services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate its transmission functions from TVA's marketing functions.

Connection point interruptions are driven primarily by weather, and it can be particularly difficult to reduce the number of interruptions across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by investing in more than 165 lightning mitigation projects. These projects have helped reduce connection point interruptions caused by lightning by more than 50 percent since FY 1995. The projection for FY 2010 and FY 2011 assumes an industry top quartile metric and is not representative of TVA's efforts to maintain its current level of performance.



Another measure of reliability is Load Not Served ("LNS"), which is a measure of the magnitude and duration of interruptions that affect TVA customers. LNS applies to interruptions that exceed one minute and is calculated by multiplying the percentage of total load not served (in megawatt-hours) by the number of minutes in the fiscal year. TVA is taking proactive steps to maintain an improved level of LNS by (1) working on its transmission preventative maintenance program, (2) identifying equipment that is nearing the end of its service life and replacing it before failure and (3) rapid recovery from interruptions. The projection for FY 2010 and FY 2011 assumes an industry top quartile metric and is not representative of TVA's efforts to maintain its current level of performance.

Load Not Served (LNS)



Goal 2: Environmental Stewardship and Supporting a Thriving River System

TVA manages the Tennessee River system to provide public benefits including navigation, flood damage reduction, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA completed a new high-level environmental policy to align with and execute the direction in the TVA Strategic Plan. The Environmental Policy was approved by the TVA Board in 2008, and is intended to identify environmental objectives that will allow TVA to produce cleaner and still-affordable electricity.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy, TVA's Environmental Policy calls for TVA to derive at least 50 percent of its generation from low-carbon and zero-carbon sources by 2020. TVA's Environmental Policy also aims to stop the growth in volume of greenhouse gas emissions and reduce the rate of emissions by 2020. The TVA Board also has approved guiding principles for an Energy Efficiency and Demand Response Plan and a Renewable and Clean Energy Plan. The Energy Efficiency and Demand Response Plan seeks to slow the current rate of growth in the region's power demand by providing opportunities for residential, business, and industrial consumer groups to use energy more efficiently. In the short term, the plan proposes reducing the growth in peak demand by up to 1,400 megawatts by the end of FY 2012. The Renewable and Clean Energy Plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions and maintain a reliable power supply. The Plan advises TVA to reduce the carbon intensity of the power generation in a cost-effective manner through the implementation of conservation measures, preferentially reviewing regional renewable and clean energy supply options, and considering technology innovations to address intermittency issues associated with renewable options.

As a result of the 2008 Environmental Policy, TVA is currently conducting two significant reviews of the options and methods for meeting the objectives outlined within the Policy. The Integrated Resource Plan, TVA's Environmental and Energy Future, is a comprehensive study of alternatives to achieve a sustainable future and meet the electricity needs of the Tennessee Valley over the next 20 years. This will be done by analyzing various combinations of supply side and demand side management options. The goals of the Environmental Policy not closely tied to energy production and use are being considered through a separate, focused Natural Resource Plan ("NRP"). The NRP is studying various ways in which TVA can address future natural resource stewardship needs of the Tennessee Valley. It will evaluate the implementation of TVA's reservoir lands planning, natural resource management, water resources management, and recreation processes and strategies.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries —America's fifth-largest river system— to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth. TVA has direct stewardship responsibility for 293,000 acres of public land, 11,000 miles of shoreline, and 650,000 acres of reservoir water surface available for recreation and other purposes. TVA reservoirs and public lands provide outdoor recreation opportunities for millions of visitors each year.

Navigation on the Tennessee River—made possible by the system of dams and locks operated by TVA—provides significant contributions to the regional economy. Construction of a new lock at the Chickamauga Dam above Chattanooga is essential to maintaining navigation on the upper Tennessee River. TVA will eventually need to close the existing lock due to safety issues stemming from concrete growth. Work on the new lock is being done by the U.S. Army Corps of Engineers.

TVA also manages the river system to provide water for hydro generation and cooling water for TVA nuclear and fossil power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at its dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tail waters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use, and implements a number of activities such as the Targeted Watershed Initiative Program, Tennessee Valley Clean Marina Initiative, Tennessee Growth Readiness Program, Strategic Partnership Initiative, and Shoreline Stabilization Program. TVA performs year-round monitoring and analysis of the 41,000-square-mile watershed and reports to the people of the Valley on the health of the river system.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the Environmental Protection Agency shows air quality in the nation has steadily improved, with a 54 percent decline in collective emissions (from 1980 to 2008) of all six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Air quality data for the Tennessee Valley region also shows reductions in all of these pollutants. TVA is significantly reducing emissions from its coal-fired plants while continuing to supply affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance, and TVA is continuing to make further improvements. As of September 30, 2009, TVA spent \$5.3 billion on clean air controls at its 11 coal-fired power plants. TVA estimates that spending on emission controls for SO₂, NO_x, and mercury in the decade beginning in 2011 will cost approximately \$4.2 billion.

Goal 3: Stimulating Economic Growth

Demonstrating leadership in sustainable economic development in the Tennessee Valley means helping communities recruit and retain quality jobs and making the Valley a better place to live and work.

TVA Economic Development's goal is to be a source for economic development information and services across the seven-state Tennessee Valley region. TVA's effective partnerships with its customers and communities have helped produce quality jobs and resulted in significant capital investments in new and existing companies. Economic development efforts are performed in partnership with various private and public organizations, including regional and state agencies. TVA helps meet the needs of its stakeholders to achieve the bigger picture of regional economic development that results in a better life for Tennessee Valley residents today and into the future. TVA's innovative programs and services combine to create powerful tools for sustainable economic development. These programs and services include the following:

Global Business and Community Development

Industrial Recruiting Services

TVA works with distributor customers and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

A regional development specialist with economic development expertise is assigned to serve counties in a specific TVA region to create, sustain, and foster job growth.

Community Development

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders and by providing economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Business Resources

Existing Industry Support

An array of products and services are geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

These funds are designed to stimulate job creation and leverage capital investment in the TVA power service region. The loan funds are open to primary manufacturing companies and other institutions in the Valley, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties ("SOC") Loan Fund

This revolving loan fund is available to the Valley's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide the support that many companies need to survive the challenging early stages of business start-up. Over the years, TVA has provided financial and technical assistance to help communities establish incubators where clients can share services, equipment, and building space.

Consumer Connection

Consumer Connection is an economic development program that links Valley communities with business opportunities, expansions, and retentions.

Diversity Alliance

TVA helps the Tennessee Valley's high-growth sectors of woman-owned and minority-owned businesses to increase their job creation and capital investment opportunities by providing business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing Customers

This economic development incentive program offers financial incentives to existing Valley companies that contribute to the economic development of the Tennessee Valley region and complement TVA's power system.

Technical Services

Engineering and Design Assistance

TVA offers general engineering design services to help industrial prospects make sound location decisions.

Appalachian Regional Commission Project Administration

TVA serves as the lead agency to administer grants for the Appalachian Regional Commission in the Tennessee Valley.

Current Management Initiatives

Organizational Effectiveness

In August 2009, TVA launched an Organizational Effectiveness Initiative to strengthen the organizational capabilities to deliver on TVA's mission and strategy and to improve organizational effectiveness, cooperation, and engagement within the organization. The goal of this initiative is to be recognized by customers, employees, and the broader Valley community as a great company. The initiative will consist of a comprehensive assessment of TVA's organizational effectiveness including the following organizational elements: (1) Governance and accountability, (2) Organizational structure, (3) Operating policies and procedures, (4) Skill sets (institutional capabilities), (5) Rewards and recognition, (6) Change-management effectiveness and (7) Communications.

Integrated Resource Plan

On June 15, 2009, TVA began the preparation of a new Integrated Resource Plan ("IRP") entitled *TVA's Environmental and Energy Future*. The purpose of the IRP is to analyze alternative ways of addressing the Tennessee Valley's electricity needs for the next 20 years. The IRP builds on the energy resource portfolio that resulted from TVA's 1995 IRP. The alternative portfolios developed for this effort will be evaluated using several criteria including capital and fuel costs, reliability, possible environmental impacts including climate change, compliance with existing and anticipated future regulations, and other factors. The process will provide opportunities for the public to provide input and TVA expects to issue a final IRP in early CY 2011.

Cyber Security

Security Governance is an integral part of TVA's enterprise governance. This strategic alignment is accomplished through the implementation of a Cyber Security Governance council comprised of TVA executives. TVA strategically aligns security with business strategy and processes to support organizational objectives.

TVA centralizes security financial management to improve accountability, visibility, and tracking. TVA is developing and maintaining an integrated five-year security strategic plan covering all security functions. TVA is integrating security controls into TVA business processes. TVA has established security standards, training, and metrics that enable timely, coordinated, effective, and efficient execution across TVA. TVA's security program assigns clear accountability for all security activities throughout TVA. To sustain enterprise security, the organization is moving towards a security management process that is strategic, systematic, and repeatable, with efficient use of resources and effective, consistent achievement of goals. To address this business challenge, Enterprise IT Security was established in February 2008 to develop and govern a common and sustainable Agency Security Program.

New Nuclear Generation

TVA is developing options for completing a new nuclear unit at its Bellefonte site. One option being considered is completing Bellefonte Units 1 or 2. The NRC has reinstated the construction permits on Units 1 and 2 and has placed them in "Deferred" status. Further reviews by TVA, approval by the TVA Board of Directors, and notice to the NRC are required before construction can resume. The second option being developed is the construction of a new nuclear unit at the Bellefonte site. The unit would have a Westinghouse Advanced Passive 1000 reactor. TVA submitted, in October 2007, a Combined Construction and Operation License Application ("COLA") to the NRC. Contentions have been filed with respect to the Bellefonte Units 3 and 4 COLA.

Tennessee Valley Authority

GPRA Annual Performance Plan
for FY 2011

Submitted
September 2009



Foreword

The Tennessee Valley Authority's Strategic Plan was approved by the TVA Board of Directors in 2007. TVA's Board and executive leadership recognized the need to articulate TVA's overall strategic direction for the next decade as a result of market trends, a new national energy policy, rising fuel costs and other changes since the previously issued strategic plan. The Strategic Plan outlines actions TVA must accomplish to align with this direction. The Strategic Plan also identifies aspects of TVA's current business structure that must be fine-tuned for TVA to strengthen its ability to continue to serve the people of the Tennessee Valley region.

This document is TVA's GPRA Annual Performance Plan for FY 2011. It contains the specific information that is required by the Government Performance and Results Act. This FY 2011 GPRA Annual Performance Plan builds upon the strategic objectives and critical success factors identified in the Strategic Plan and describe the metrics that will be used to monitor TVA's performance toward achieving successful implementation of its strategy.

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1. TVA Mission Statement

The mission statement approved in 2007 states that “[t]he mission of TVA is to improve the quality of life in the Tennessee Valley through its work in three key areas: energy, the environment, and economic development. TVA provides reliable, competitive power; manages the Tennessee River system and associated lands to meet multiple needs; and partners with Valley communities and states for economic development. For nearly 75 years, TVA’s unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.”

Energy

Provide electric power to the Tennessee Valley

- TVA supplies reliable, affordable electricity to the Tennessee Valley. It strives to meet the changing needs of power distributor customers and directly served industrial customers for electricity and related products and services in a dynamic marketplace.

Environment

Act as steward of the Valley’s water resources and associated public lands

- To fulfill its environmental stewardship mission, TVA manages water resources and associated public lands in the Valley for the benefit of the region and the nation. It manages the Tennessee River system and associated public lands to reduce flood damage, maintain navigation, support power production and recreational uses, improve water quality and supply, and protect shoreline resources.

Economic Development

Serve as a catalyst for sustainable economic development

- TVA works with its power distributor customers; state, regional, and local economic development organizations; and other federal agencies to build partnerships that help bring jobs to the Tennessee Valley and make the economy stronger to benefit the people of the region.

2. Strategic Objectives and Critical Success Factors

In its 2007 Strategic Plan, TVA identified five broad strategic objectives on which it will focus as it moves forward, and twenty-four corresponding critical success factors that support those objectives. These strategic objectives, along with their corresponding critical success factors, are as follows:

CUSTOMER: Maintain power reliability, provide competitive rates, and build trust with TVA's customers

Critical Success Factors:

- Strengthen relationships and trust by being responsive to stakeholder needs
- Develop a portfolio of product and pricing structures that more accurately reflect the costs of serving load at different times and levels of use
- Partner with distributors and directly served customers to encourage conservation, promote energy efficiency, and reduce peak demand
- Partner with customers to limit volatility in rates and participate in power supply through shared generation ownership
- Assist states, communities, and distributors in sustaining economic development programs

PEOPLE: Build pride in TVA's performance and reputation

Critical Success Factors:

- Safeguard the health and safety of employees and the public
- Strengthen workforce knowledge and skills and management processes to motivate performance and successfully implement the strategic objectives
- Treat employees, customers, and other stakeholders with integrity and respect
- Communicate clearly and consistently

FINANCIAL: Adhere to a set of sound guiding financial principles to improve TVA's fiscal performance

Critical Success Factors:

- Apply sound economic and financing practices to new investments
- Pay financing obligations before assets are fully depreciated
- Strengthen TVA's balance sheet by improving the ratio of financing obligations to total assets
- Improve TVA's cash return on total assets in order to service debt, preserve existing assets, reinvest in new assets, and improve environmental performance
- Achieve top-quartile performance in non-fuel operation and maintenance ("O&M") expenses and then hold increases to be less than unit sales growth ("kWhs")

ASSETS: Use TVA's assets to meet market demand and deliver public value

Critical Success Factors:

- Balance TVA's production capabilities and load by adding assets (buy, build or through long-term contracts) and encouraging the use of energy in ways that reduce the need for new generation
- Preserve, maintain, repower or retire existing assets where appropriate
- Manage land and water resources to provide multiple benefits to the Valley
- Reduce fuel supply risk with a diverse portfolio of generation assets

OPERATIONS: Improve performance to be recognized as an industry leader

Critical Success Factors:

- Deliver reliable electric power generation and transmissions products and services
- Benchmark the industry's best performers to develop metrics for top-quartile performance
- Make nuclear safety the overriding priority for each nuclear facility and for each individual associated with it
- Continue to reduce the impacts of TVA's operations on the environment
- Serve as a responsible steward of the Tennessee River system
- Apply science and technological innovation to improve operational performance

3. Program Evaluations - Tracking Progress Against the Goals

3.1 Corporate Level Metrics

The 2007 Strategic Plan outlined the Board of Directors' policy-level direction for TVA over the next decade and highlighted several actions that are needed for successful implementation of the strategy. In support of the strategic objectives and critical success factors outlined in the Strategic Plan, sixteen corporate-level metrics were in place to monitor TVA's FY 2009 performance toward achieving successful implementation of its strategy (Exhibit 1). These metrics are reviewed and systematically updated annually to maintain alignment with the strategic focus. TVA's scorecard, with its performance metrics, clearly demonstrates that no one single organizational unit has complete responsibility for implementing strategy.

The TVA-wide performance metrics are as follows:

- (1) **Retail Price (¢ / kWh Sales)** = distributor reported retail power revenue and directly served power revenue divided by distributor reported retail power sales and directly served power sales

Calculation:

$$\frac{\text{Distributor reported power revenue} + \text{Directly Served power revenue}}{\text{Distributor reported sales} + \text{Directly Served power sales}}$$

- (2) **Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)** = TVA's total costs in dollars per MWh of power sold to customers

Calculation:

$$\frac{\text{Total Income Statement Expenses (Excluding FCA Costs) +/- Other Income, net}}{\text{Total Sales Volume (MWh)}}$$

- (3) **FCA Costs (\$ / MWh Sales)** = TVA's FCA expenses per MWh of power sold

Calculation:

$$\frac{\text{FCA Costs}}{\text{Total Sales Volume (MWh)}}$$

- (4) **Economic Health Index (Percent)** = percentage growth of the weighted average wage of jobs created and/or retained in the Valley as compared to the percentage growth of the weighted average wage of all states in the Southeast

Calculation:

$$\frac{\text{TVA Project Average Wage}}{\text{Southeastern Average Wage}}$$

- (5) **Participation in Energy Efficiency & Peak Shaving Initiatives (Percent)** = quarterly measure of distributors' participation in Demand Side Management programs and pilots

Calculation:

$$\frac{\text{\# of Distributor Customers Participating in DSM initiatives}}{\text{Total \# of Distributors}}$$

- (6) **Customer Satisfaction Survey (% Satisfied)** = quarterly measure of distributors' and directly served customers' satisfaction with TVA in 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

Calculation:

$$\left[\left(\sum \text{PD survey questions (\% satisfied)} \right) * \left(1/14 \right) * \left(0.85 \right) \right] + \left[\left(\sum \text{DSI survey questions (\% satisfied)} \right) * \left(1/13 \right) * \left(0.15 \right) \right]$$

- (7) **Connection Point Interruptions (Interruptions / Connection Points)** = tracks interruptions of power, including momentary, at connection points caused by the transmission system

Calculation:

$$\frac{\text{Number of interruptions}}{\text{Number of connection points}}$$

- (8) **Cultural Health Index ("CHI")** = measures alignment, capability and engagement of the employee work force

Calculation:

Measured by the percent favorable responses (agree or strongly agree) on the CHI. Item favorabilities are averaged within each respective dimension (alignment, capability, engagement). The CHI score is the average of the dimension favorability averages.

- (9) **Safe Workplace (Injuries / Hours Worked)** = a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty / job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and Staff Augmentation contractors

Calculation:

$$\frac{\text{ORIR} \times 200,000}{\text{Number of Hours worked during time period}}$$

NOTE: Hearing loss events are reported as recordable injuries on the OSHA 300 Log, but are excluded from the TVA Winning Performance Safe Workplace indicator.

- (10) **Debt-like Obligations / Asset Value (Percent)** = TVA's flexibility in a competitive market place

Calculation:

$$\frac{\text{Statutory debt} + \text{lease obligations} + \text{prepaid energy obligations}}{\text{Total Assets}}$$

- (11) **Funds From Operations / Interest (Ratio)** = credit quality

Calculation:

$$\frac{(\text{Net Income} + \text{Depreciation} + [\text{Other Non-Cash Items} - \text{AFUDC}] - \text{Changes in Working Capital} + [\text{Interest Expense} + \text{AFUDC}] + \text{Industry Defined Pension Adjustment})}{([\text{Interest Expense} + \text{AFUDC}] + \text{Industry Defined Pension Adjustment})}$$

- (12) **Net Cash Flow from Operations less Investing (\$ Millions)** = management's ability to control net cash flow (in millions) during the year by focusing attention on both cash inflows and outflows being balanced throughout the year

Calculation:

$$(\text{Cash Flow from Operations}) + (\text{Investing Cash Flow}) - (\text{Net Cash Flow from Change in FCA Deferral Account})$$

- (13) **Key Environmental Metrics (Index)** = a composite of the following environmental performance factors: Air (three elements); Water (two elements); Clean Water Act ("CWA") Nonconformances, Notices of Violation, and Office Recyclables (one element each)

Calculation:

The sum of six element scores. The six elements are: CO2, NOx, SO2, CWA nonconformances, Notices of Violation, and office recyclables. The six element scores are the result of percent of target performance met. This percentage is determined by dividing the actual performance by the target or vice versa based on whether the

preferred performance is declining or increasing. If threshold performance is achieved, the appropriate number of points are obtained. The maximum number of points which can be achieved are the points assigned to meeting the stretch performance.

- (14) **Megawatt Demand (“MW”) Reduction (MW Reduced)** = total incremental MW demand reduction potential from TVA-initiated energy efficiency and demand reduction activities, programs, projects, and pilots

Calculation:

$$[(\text{Individual product kW impacts}) * (\text{FY 11 individual product installations}) / 1000] + [(\text{Individual FY 11 project kW impacts}) / 1000] + (\text{Individual FY 11 pilot kW impacts}) / 1000] + \text{FY 11 Demand Response MW reduction}$$

- (15) **Demand Reduction (\$ / kW Reduced)** = quarterly measure of cumulative annual expenditures for energy efficiency and demand response activities divided by cumulative annual demand reduction potential identified

Calculation:

$$\frac{\text{YTD EE\&DR Expenditures}_{\text{qtr}}}{\text{Monthly potential demand reduction reported YTD}_{\text{qtr}}}$$

- (16) **Equivalent Availability Factor - Coal, CC, & Nuclear (Percent)** = a ratio of actual available generation from all TVA Coal, Combined Cycle & Nuclear generating assets in a given period compared to maximum availability

Calculation:

$$\frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((\text{AVH} * \text{NMC}) - \text{MWhL} - \text{SchMWhL})) * 100}{\sum \text{of all Coal, Combined Cycle \& Nuclear units } (\text{PH} * \text{NMC})}$$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand Hours)

PH = Period Hours

NMC = Net Maximum Capacity = Winter NDC for Thermal Units

MWhL = MWh Losses due to forced outage or derating

SchMWhL = MWh Losses due to scheduled outages (planned or maintenance) or derating

3.2 The Winning Performance Process

The Winning Performance process 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. Employees' involvement in Winning Performance enables them to understand how their day-to-day performance contributes to TVA's performance and success.

TVA's Winning Performance Team Incentive Plan (“WPTIP”) is a pay-for-performance program similar in structure to incentivized performance-based profit-sharing programs used by private companies. The program is based on the principle that operational and process improvements, reduced costs, and improved revenues can be obtained by applying appropriate management focus and offering appropriate monetary incentives.

Employees can see how their work contributes to the direction set by their SBU's performance plan and how that contributes to TVA's overall successful implementation of the agency's strategy (Exhibit 2). Additionally, employees have line-of-sight from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's strategic objectives and critical success factors.

All full time employees are eligible to participate in WPTIP, except those approved by the Board of Directors or delegate(s) to participate in the Executive Annual Incentive Program. WPTIP is a compensation plan (lump sum payment) tied to performance results based on scorecard metrics at the TVA, SBU, and BU levels. The SBUs are Fossil Power Group, Nuclear Generation, Development and Construction, Nuclear Power Group, Power Supply & Fuels, Power System Operations, and River Operations.

The TVA scorecard represents at least 30 percent of each employee's potential payout. The remaining potential employee payout is tied to the performance of an employee's SBU or BU scorecards, whichever is applicable. Corporate organizations are incented based off of a weighted average of TVA's SBU and BU scorecards as they support multiple groups. Executives also have performance incentives linked to the same scorecards.

3.3 TVA's Balanced Scorecard

The TVA, SBU, and BU scorecards contain targets at three levels, corresponding to different incentive payouts: Threshold, Target, and Stretch.

The scorecard basis sheets contain the year-to-date actual values of the metrics, as well as historical and future forecasts, where applicable. Adverse trends and improvement plans are discussed during normal reviews with executive management.

Performance is monitored on each of the metrics, and the scorecards are updated to reflect actual results and updated forecasts. These updates are available to employees through their organizations and TVA's intranet.

4. Strategy Implementation

4.1 TVA's Mission and Strategic Plan

The five strategic objectives identified in the TVA Strategic Plan focus on the general steps TVA must take to preserve its core mission. The outcomes are areas that TVA must focus on to continue fulfilling its mission within the evolving business environment.

4.2 Principles of a Strategy Focused Organization

TVA follows the five Principles of a Strategy Focused Organization¹ 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 Robert S. Kaplan and David P. Norton, The Strategy-Focused Organization, Harvard Business School Press, Cambridge, Massachusetts, 2000.

1. Mobilize the organization through visible, executive leadership. The TVA Board approves the strategic plan, 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 Business Planning Process. These objectives translate 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 balanced scorecard which ties incentive compensation to the achievement of goals.
5. Govern to make strategy a continual process. TVA, SBU, and BU scorecards are updated monthly as described in section 3.3.

4.3 Translating the Strategic Plan into Operational Terms

TVA's mission and strategic objectives must be translated into operational terms to align the actions of management and employees. Defining the critical success factors ("CSFs") is the first step. CSFs define the key factors and capabilities needed to generate sustainable performance consistent with the business themes of the mission and the priorities identified by the Strategic Plan.

Performance goals identify specific, tangible objectives for measuring achievement. TVA develops a strategy in the context of the mission, maps the strategy into operational initiatives, and ultimately develops performance plans for each part of the organization and scorecards for measuring success.

4.4 Annual Goals, Long Term Goals and the Strategic Plan

Developing corporate short-term and long-term plans are key to achieving the goals outlined in the Strategic Plan. TVA's Long-Term Plans cover a minimum of 5 years and maximum of 20 years. These plans include:

- Shorter Term (1-3 Year) Plans
 - Bi-Annual Power Supply Plan
 - TVA Business Plans (3-year outlook with Quarterly reviews)
- Longer Term (5-20 Years) Plans
 - Bi-Annual Long-Term Power Supply Plan (20-year forecast)
 - Long-Range Financial Plans (10 years or more), and associated risk analyses
 - Capital Project Plans (5-year outlook)
 - Enterprise Risk Assessments (5-year outlook)

At a minimum, quarterly briefings are held with the Board of Directors, which include a review of corporate performance. The strategic issues, the scorecard and financial outlook are tracked and reviewed. Annually these reviews include 3-year trending and 3-year forecast.

5. 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 subject to forecast error, and planning under uncertainty is inherent. Normal planning uncertainties include those associated with projections about:

- 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
- change in operating and maintenance cost

In addition to these uncertainties in electric power planning, the electric utility industry continues 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. Given the potential for change in the industry and the high potential for significant forecast error, TVA planning evolves as more information becomes available.

6. 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 directed TVA to use power revenues to pay for essential stewardship activities previously funded by federal appropriations.

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 while also developing a number of new processes and skills. 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.

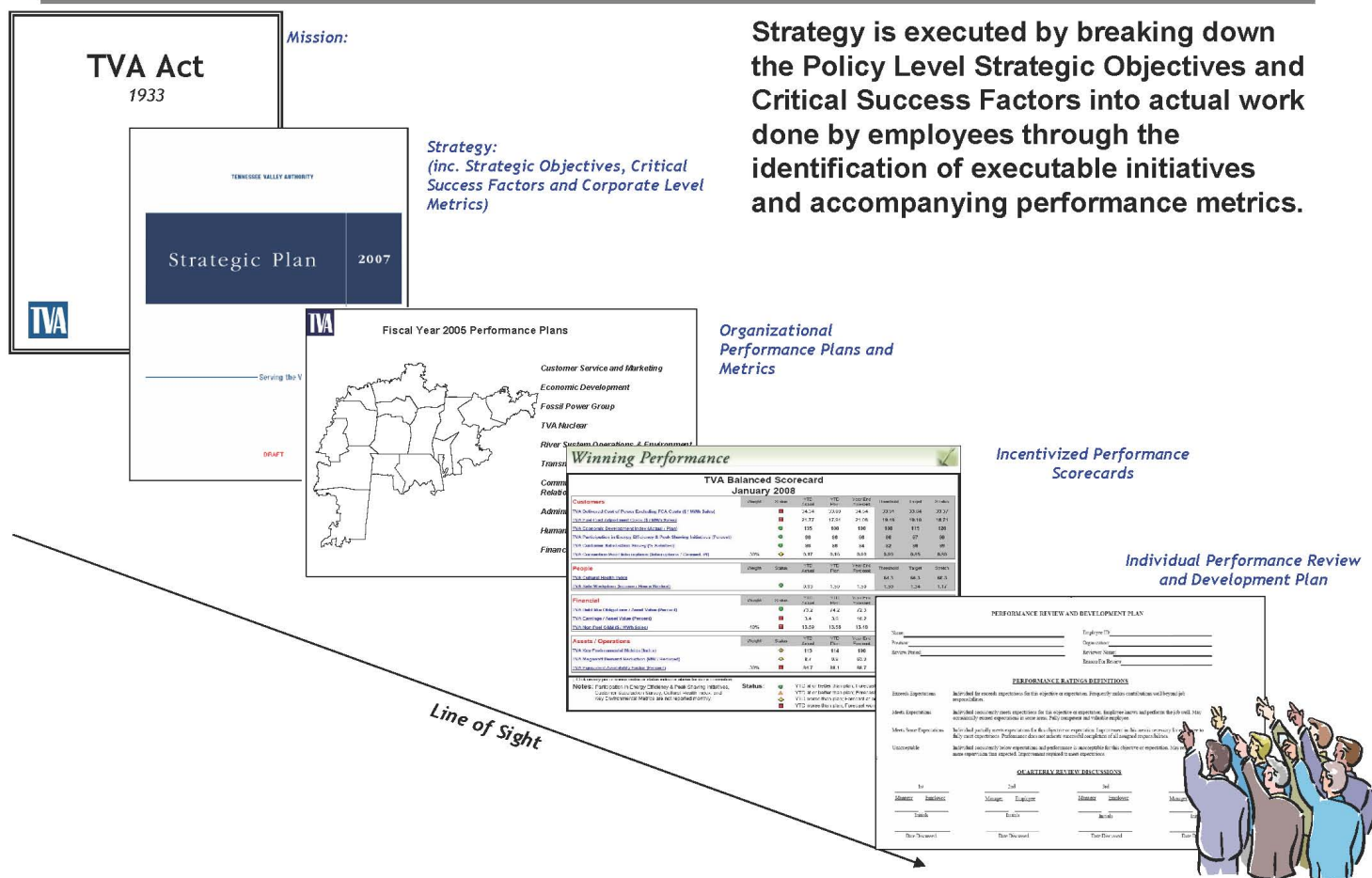
- Continued training to develop a multi-skilled workforce to improve labor productivity.
- Developing new tools to support the development of products and services, including new methods for determining TVA's cost to provide different types of service and evaluating and quantifying risk.
- Developing new methods for evaluating future investments in generation that reflect the uncertainty in future revenue available to recover those investments.

Exhibit 1. TVA Strategic Plan Corporate Level Metrics

Winning Performance								
FY 2009 TVA Balanced Scorecard								
Customers	Weight	Status	Actual YTD	Plan YTD	YE Actual	Threshold	Target	Stretch
TVA Retail Price (\$ / kWh Sales)		■	8.49	8.40	8.49	8.40		
TVA Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)		■	37.10	35.89	37.10	35.89		
TVA Fuel Cost Adjustment Costs (\$ / MWh Sales)		●	21.99	33.85	21.99	33.85		
TVA Economic Health Index (Percent)**		●	111	100	111	100		
TVA Participation in Energy Efficiency & Peak Shaving Initiatives (Percent)**		●	99	98	99	98		
TVA Customer Satisfaction Survey (% Satisfied)**		●	83	82	83	82		
TVA Connection Point Interruptions (Interruptions / Connection Point)	0.0%	●	0.75	1.12	0.75		1.12	0.78
People	Weight	Status	Actual YTD	Plan YTD	YE Actual	Threshold	Target	Stretch
TVA Cultural Health Index**		■	64.6	66.3	64.6	66.3		
TVA Safe Workplace (Injuries / Hours Worked)		●	0.82	1.62	0.82	1.62		
Financial	Weight	Status	Actual YTD	Plan YTD	YE Actual	Threshold	Target	Stretch
TVA Debt-like Obligations / Asset Value (Percent)		●	62.8	67.3	62.8	67.3		
TVA Funds From Operations / Interest (Ratio)		■	2.4	2.6	2.4	2.6		
TVA Net Cash Flow from Operations less Investing (\$ Millions)**	0.0%	■	-975	-163	-975	-292	-163	-113
Assets / Operations	Weight	Status	Actual YTD	Plan YTD	YE Actual	Threshold	Target	Stretch
TVA Key Environmental Metrics (Index)**		●	101	100	101	100		
TVA Megawatt Demand Reduction (MW Reduced)		●	172	154	172	154	162	170
TVA Demand Reduction (\$ / kW Reduced)**	0.0%	●	217	643	217	643	611	582
TVA Equivalent Availability Factor - Coal, CC & Nuclear (Percent)	0.0%	■	85.6	85.8	85.6	85.8	87.1	88.0
† Click on any metric or status indicator above for more information.			Status:					
Note: ** Not reported monthly			● Actual YTD at or better than Plan YTD; Year End Actual at or better than Threshold					
			▲ Actual YTD at or better than Plan YTD; Year End Actual worse than Threshold					
			◆ Actual YTD worse than Plan YTD; Year End Actual at or better than Threshold					
			■ Actual YTD worse than Plan YTD; Year End Actual worse than Threshold					

Exhibit 2. Translating Strategy into Operational Terms

Line Of Sight



Appendix

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles ("GAAP"). EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Reconciliation of Net Income to EBITDA
(in millions)

	2004	2005	2006	2007	2008	2009	2010 Projected	2011 Projected
Net Income	\$ 386	\$ 85	\$ 113	\$ 423	\$ 817	\$ 726	\$ 770	\$ 694
Add back:								
Interest Expense	1,363	1,312	1,264	1,232	1,376	1,272	1,253	1,334
Tax Equivalents	338	365	376	451	491	544	502	588
Depreciation & Amortization	1,115	1,154	1,500	1,473	1,224	1,598	1,635	1,723
Total EBITDA	<u>\$ 3,202</u>	<u>\$ 2,916</u>	<u>\$ 3,253</u>	<u>\$ 3,579</u>	<u>\$ 3,908</u>	<u>\$ 4,140</u>	<u>\$ 4,160</u>	<u>\$ 4,339</u>



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Tennessee Valley Authority

Budget Proposal and Management Agenda



For the Fiscal Year Ending
September 30, 2012

Submitted to Congress
February 2011



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Introduction

TVA's Vision and Mission

The Tennessee Valley Authority (TVA) serves the nation and over nine million people of the Tennessee Valley region which covers parts of seven states; Tennessee, Alabama, Virginia, North Carolina, Georgia, Mississippi, and Kentucky in the five major areas of TVA's mission — low-cost power, environmental stewardship, river management, technological innovation, and economic development. For TVA to continue to achieve its mission in today's changing economic and regulatory climate, it must lead with a continued focus on key critical issues while acting on new initiatives. As such, at its August 2010 meeting the TVA Board of Directors adopted a renewed strategic vision (which is currently under review by the Administration):

To be one of the Nation's leading providers of low-cost and cleaner energy by 2020.

TVA plans to accomplish this vision by being:

- **The Nation's leader in improving air quality;**
- **The Nation's leader in increased nuclear production; and**
- **The Southeast's leader in increased energy efficiency.**

While maintaining a focus on our core business through:

- **Keeping electricity rates low for the Tennessee Valley region**
- **Maintaining high reliability; and**
- **Being responsible stewards of the Tennessee Valley land and waterways.**

To be the Nation's leader in improving air quality, TVA will plan to

- Significantly increase production from low emission electricity generators; and
- Reduce SO₂, NO_x, mercury, particulate, and CO₂ emissions from TVA plants.

To be the Nation's leader in increased nuclear production, TVA will plan to

- Lead the nation in delivery of new nuclear capacity; and
- Demonstrate the first small modular reactor in the U.S.

To be the Southeast's leader in increased energy efficiency, TVA will plan to

- Help consumers and business use energy more efficiently and save money; and
- Reduce peak power usage with demand management tools including time-of-use pricing; and
- Minimize transmission losses and optimize plant efficiency.

Power Program

A corporation of the federal government, TVA operates like a business. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Additionally, through fiscal year (FY) 2012, TVA expects to have returned to the U.S. Treasury approximately \$3.6 billion, including interest, on the government's original \$1.4 billion appropriation investment in TVA's power program.

TVA provides power through local power distributors and sells power directly to large industries and government entities. As the nation's largest public power system, TVA is committed to meeting the region's growing needs for reliable, affordable, and environmentally-sound energy. The TVA system includes 3 nuclear sites, 11 coal-fired sites, 29 conventional hydroelectric sites, 11 combustion turbine sites, 2 diesel generator sites, and 1 pumped storage hydroelectric site. TVA's renewable energy program, Green Power Switch®, includes 14 solar sites, 1 wind-energy site, 1 digester gas site, and 1 biomass cofiring site. In FY 2012, TVA expects sales to approach 170 billion kilowatt-hours of electricity.

As of September 30, 2010, the coal-fired generating facilities of TVA's Fossil Power Group have 14,573 megawatts (MW) of net summer capability. They have been the backbone of the power system since the 1950s when TVA first began using coal to make electricity. The eleven coal-fired plants generated about 51 percent of the electricity TVA produced for its customers in FY 2010. TVA's fossil system also includes 94 generators powered by combustion turbines with a total net summer capability of 7,358 MW. These generators can be quickly started and are vital for meeting peak electricity demands.

TVA operates six nuclear units at three sites with a combined net summer capability of 6,632 MW. These units generated over 53 billion kilowatt-hours in FY 2010, or 36 percent of TVA's power.

In FY 2010, about 9 percent of TVA's generation was from hydroelectric power and overall about 45 percent of TVA's generation was from clean energy sources that TVA defines as low or zero carbon emitting resources including hydro, renewables, nuclear and demand reduction. TVA is striving to have low and zero carbon emission sources comprise at least 50 percent of its generation portfolio by FY 2020.

Transmission System

The 2,465 miles of 500kV lines in TVA's approximately 15,940-mile transmission system are a critical link for the movement of electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability as well as leverage new technology to provide a clearer picture of grid conditions over a wider area at any given time.

Natural Resource Stewardship

TVA has direct stewardship responsibility for approximately 11,000 miles of shoreline, 293,000 acres of public land, and almost 650,000 reservoir surface acres available for recreation, water supply, and industrial access. TVA primarily funds resource stewardship services from power receipts. User fees are also used but to a much smaller extent (e.g., TVA campgrounds). In accordance with its 2008 Environmental Policy, TVA is preparing a Natural Resource Plan (NRP) to set direction for management of these resources for the next 10 to 20 years. The 652-mile-long Tennessee River, the 42,000 miles of streams and tributaries, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's management of the river system includes recreation water supply needs, protecting aquatic habitat, reducing flood risk, producing hydro power, and providing cooling water for TVA's fossil and nuclear plants. Encompassing over 41,000 square miles, the Tennessee River and its 12 tributary watersheds touch 125 counties in portions of seven states.

Economic Development

TVA promotes sustainable economic development by assisting states, communities, and distributor customers in recruiting and retaining targeted businesses and industries that provide high economic impact, while balancing TVA's anticipated future system needs. By providing technical and community development related services to TVA's various stakeholders, TVA's economic development activities strive to help create and retain quality, high-paying jobs and increase the capital investment in the business community to the benefit of the community and the region.

Technology Innovation

TVA is committed to the advancement of knowledge and innovation in the electric utility industry and works in partnership with the Electric Power Research Institute, Oak Ridge National Laboratory, universities, and others to promote the goals of low cost power and clean energy. This year, three signature technologies have been identified for special emphasis of research focus and direction. These are: small modular nuclear reactors, electric vehicle transportation infrastructure, and smart grid technologies. The goal is to identify ways TVA can take a leadership role in demonstrating how these technologies can effectively be used to reduce costs and lower emissions in the service territory.

Budget Overview

Power Program

TVA's power program is entirely self-financing and does not receive any federal appropriations. The power program budget is, however, included in the Unified Budget of the United States Government. TVA is experiencing significant levels of uncertainty relative to the weather, the economy and other factors. TVA's financial information includes estimates which are affected by these changing conditions.

TVA projects revenue to exceed \$12 billion in FY 2012, which includes the estimated impacts of the fuel cost adjustment (FCA). The FCA is a formula under which rates are periodically adjusted to reflect the changing costs of fuel, purchased power, and emission allowances. In FY 2012, TVA projects to invest \$2.6 billion in capital projects for the power system, including \$219 million for clean air projects and \$289 million for transmission system projects. TVA's debt and debt-like obligations increased by \$636 million in FY 2010, and are projected to increase by \$891 million in FY 2011, and \$962 million in FY 2012.

TVA power sales have increased an average of one percent annually during the past decade. To keep pace with this growth, TVA added approximately 8,500 MWs of generating capacity during this period. This growth included both owned generation and purchased power agreements. At the beginning of FY11, TVA added another 955 MWs from Lagoon Creek combined-cycle plant and wind-generated purchased power contracts. TVA has concurrently upgraded its transmission system to maintain reliability and added new customer delivery points to serve this load.

TVA will continue to explore the full range of options available to meet the growing demand. Between FY 2006 and FY 2008, the TVA Board authorized the purchase of three combustion-turbine generating plants and one combined-cycle plant, executed a 15 year operating lease on a second combined-cycle plant and approved construction of two more combined-cycle plants. The first constructed combined-cycle plant in west Tennessee, Lagoon Creek, began commercial operation with a generating capacity of 550 MW in September 2010. The second combined-cycle plant, John Sevier, is anticipated for operation in FY 2012. It is expected to be an 880 MW facility located in northeastern Tennessee. This facility should provide TVA with the flexibility to meet future power needs in the Tennessee Valley while maintaining transmission reliability in the eastern part of its service area. Including the FY 2010 and FY 2012 plants, the actions add 1,813 MW of winter peaking capacity and 3,354 MW of intermediate winter capacity to the TVA system. Additionally, Browns Ferry Nuclear Plant Unit 1 returned to service in May of 2007 and currently supplies additional generating capacity of approximately 1,150 MW with an eventual expected supply of 1,280 MW. On August 1, 2007, the TVA Board approved completing the construction of Watts Bar Unit 2, a nuclear facility. When completed, Watts Bar Unit 2 is expected to provide 1,150 MW of capacity. In August 2010, the TVA Board approved \$248 million to further develop an option to complete the 1,260 MW Bellefonte Unit 1 nuclear reactor. TVA expects to make a decision on construction of Bellefonte Unit 1 in 2011.

TVA's FY 2012 annual gross interest expense is expected to be \$555 million lower than in FY 1997. Annual gross interest expense that once consumed 35 percent of TVA's revenue has been reduced to only 13 percent in FY 2010 and is expected to be between 12 and 13 percent in FY 2011 and FY 2012.

Water and Land Stewardship

TVA continues to meet its obligation to operate and maintain its system of dams, reservoirs, and adjacent lands. Based on the provisions in the Energy and Water Development Appropriations Act of 1998, TVA funds its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA for Water and Land Stewardship since FY 1999, and none are requested for FY 2012. Long-term TVA funding levels for these activities are expected to stay about the same. FY 2012 funding of this program is estimated at \$90 million. TVA is preparing a strategic Natural Resource Plan (NRP) and corresponding Environmental Impact Statement, to determine TVA's long-term strategy for complying with its Environmental Policy of 2008. This plan will help identify appropriate levels of future resources.

Budget Details

TVA Operating Budget (millions of dollars)

	FY 2010 Actual	FY 2011 Estimate	FY 2012 Estimate
Revenue	\$ 10,874	\$11,846	\$12,115
Operating Expenses			
Fuel & Purchased Power	(3,219)	(4,344)	(4,384)
Operating, Maintenance, & Other	(3,232)	(3,437)	(3,478)
Depreciation & Amortization	(1,724)	(1,762)	(1,827)
Tax Equivalents*	(457)	(567)	(662)
Total Operating Expenses	(8,632)	(10,110)	(10,351)
Operating Income	2,242	1,736	1,764
Other Income	24	17	18
Interest Expense	(1,294)	(1,301)	(1,312)
Net Income	\$ 972	\$ 452	\$ 470

*Tax equivalents are based on the prior year's base revenue and current year FCA revenue.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2011 budget August 20, 2010.

Note 2: The above budget information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

(continued)

Capital Budget & Cash Flow*(millions of dollars)*

	FY 2010	FY 2011	FY 2012
	Actual	Estimate	Estimate
Operating Activities			
Net Income	\$ 972	\$ 452	\$ 470
Items not requiring cash	<u>929</u>	<u>1,608</u>	<u>1,849</u>
Total Cash Provided from Operating Activities	1,901	2,060	2,319
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(242)	(234)	(279)
Fossil	(223)	(344)	(304)
Hydro	(55)	(73)	(33)
Transmission	(56)	(81)	(84)
Other Capital	<u>(54)</u>	<u>(117)</u>	<u>(149)</u>
Subtotal	(630)	(849)	(849)
Clean Air	(58)	(100)	(219)
Ash Remediation	(103)	(141)	(107)
Watts Bar Unit 2	(690)	(635)	(440)
Capacity Expansion	<u>(531)</u>	<u>(781)</u>	<u>(1,025)</u>
Total Capital Projects	(2,012)	(2,506)	(2,640)
Other Sources (Requirements)	<u>(653)</u>	<u>(581)</u>	<u>(782)</u>
Total Cash Used in Capital Budget	(2,665)	(3,087)	(3,422)
Cash Payments to U.S. Treasury	<u>(29)</u>	<u>(41)</u>	<u>(42)</u>
Net Cash Available for Statutory Debt Reduction/ (Increase)	<u>\$ (793)</u>	<u>\$(1,068)</u>	<u>\$(1,145)</u>
Reduction/ (Increase) in Debt and Debt-Like Obligations	<u>\$ (636)</u>	<u>\$ (891)</u>	<u>\$ (962)</u>

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2011 budget August 20, 2010.

Note 2: The above budget information include estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions

Budget Highlights and Hard Spots

TVA is governed by the TVA Board of Directors (TVA Board) which is responsible for approving an annual budget. The information included in this document is based on the FY 2011 annual budget which was approved by the TVA Board in August 2010. The following challenges were considered in preparing the FY 2011 annual budget:

Kingston Ash Spill

TVA continues cleanup and recovery efforts related to the ash spill at the Kingston Fossil Plant (Kingston) in conjunction with federal and state agencies. TVA completed the removal of time-critical ash from the Emory River during the third quarter of 2010. Removal of the remaining ash is considered to be non-time-critical. Once the removal actions are completed, TVA will be required to assess the site and determine whether any additional actions may be needed at Kingston or the surrounding impacted area. This assessment and any additional activities found to be necessary are considered remedial actions.

TVA has recorded an estimate in the amount of \$1.1 billion for the cost of cleanup related to this event. Costs incurred since the event through September 20, 2010, totaled \$600 million. Due to actions of the TVA Board in August 2009, the cleanup cost estimate is classified as a regulatory asset and will be charged to expense as it is collected in rates over 15 years, beginning October 1, 2009. As work progresses and more information is available, TVA will review its estimates and revise them as appropriate. Any estimate changes also will be deferred and charged to expense prospectively as they are collected in future rates.

During 2010, TVA increased the estimate for the cost of cleanup related to this event by \$192 million. The change in estimate was due to increased scope of work to be performed at the site as defined in the Engineering Evaluation Cost Analysis (EE/CA) work order plan which was prepared in accordance with the Environmental Protection Agency's (EPA) Guidance on Conducting Non-Time-Critical Removal Actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). In May 2010, the EPA approved TVA's ash disposal plan, which clarified the amount of ash to be removed from the site and the final design and closure of the dredge cell and ash ponds on site.

As work continues to progress and more information is available, TVA will review its estimates and revise them as appropriate. TVA currently estimates the recovery process will be substantially completed in 2014 although monitoring may continue to a future date. Costs incurred since the event through September 30, 2010, totaled \$600 million with a remaining estimated liability of \$525 million.

Because of the uncertainty at this time of the final costs to complete the work prescribed by the ash disposal plan, a range of reasonable estimates has been developed by cost category and either the known amounts, most likely scenarios, or low end of the range for each category has been accumulated and evaluated to determine the total estimate. The range of estimated costs varies from approximately \$1.1 billion to approximately \$1.2 billion.

Weather Extremes

The TVA service area experienced a colder than normal winter and a hotter than normal summer in 2010. This weather was a primary reason for TVA selling 6 percent more electricity in 2010 than in 2009. TVA met the increased demand by using some of its higher-cost facilities and by buying more power in the market.

The hot summer, however, also resulted in TVA having to curtail the use of some of its generating facilities. The summer heat increased the temperatures of the water in the Cumberland and Tennessee Rivers. There were 68 days during the summer when TVA had to curtail generation at some of its coal-fired units because of water temperature. TVA estimates the amount of generation lost was about 540 GWh. Similarly, there were 56 days during the summer when TVA had to curtail generation at some of its nuclear units, primarily Browns Ferry, because of water temperature. TVA estimates the amount of lost nuclear generation at nearly 1,000 GWh.

The increased purchased power and fuel-related costs associated with the cold winter, the hot summer, and the curtailment of generation because of water temperature issues were reflected in TVA's rates through the FCA.

To better address the water temperature issues at Browns Ferry, TVA has initiated a project to construct a new cooling tower, to upgrade four of the existing cooling towers, and to improve the support systems for the plant's cooling towers. The project is expected to be completed in three phases. TVA anticipates having a new cooling tower constructed before the summer of 2011 and having the improved support systems and upgrades in place by the summer of 2013.

Coal Combustion Product Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's wet Coal Combustion Product (CCP) facilities. The first phase of the evaluation, which is finished, involved a detailed inspection of all wet CCP facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program, which is also complete, included geotechnical explorations, material testing, stability analyses, and studies. The study showed that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston at the time of the spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCP facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection facilities and remediating or eliminating the CCP facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCP work is between \$1.5 billion and \$2.0 billion, and the work is expected to take between eight and 10 years to complete.

Coal Fleet Evaluation

TVA is evaluating all coal-fired units in terms of original designs, economics and efficiency, overall performance, cost to operate and the cost to bring them into compliance with current and anticipated environmental regulations. These coal-fired units produce approximately 15,000 MW of generation. About 6,800 MW would require advanced environmental controls in the future, and these associated units are being evaluated to determine whether to idle them, install controls or replace them with alternative generation. In September 2010, TVA idled Unit 5 at Widows Creek. In October 2010, TVA idled Widows Creek Unit 2 and Unit 10 at Shawnee Fossil Plant. These units account for approximately 350 MW of capacity. TVA may make decisions about other units in the near future.

Capital Investment

TVA also faces large capital requirements to maintain its power system infrastructure and invest in new power assets, including cleaner energy sources. TVA believes it is likely that laws or regulations will come into effect in the near future that will require electric utilities to reduce greenhouse gas (GHG) emissions or obtain emission allowance permits under a cap and trade program, and obtain a specified portion of their power supply from renewable resources. Due to the age, lower capacity, and lower efficiency of TVA's older coal-fired units, it may not be economical to continue to operate some plants in the future, particularly if new environmental laws or regulations are passed. TVA is also planning to end the wet storage of fly ash and gypsum at its coal-fired plants, an effort that will involve significant investment.

Renewable and Clean Energy

In accordance with TVA's 2008 Environmental Policy, TVA is working toward obtaining additional power supply from clean or renewable sources by 2020. TVA defines its clean energy portfolio as energy that has a zero or near-zero carbon dioxide emission rate, including nuclear and renewable energy production that is sustainable and often naturally replenished.

TVA has entered into seven contracts for the purchase of up to 1,581 MW of renewable wind energy. The wind resources are located in North Dakota, South Dakota, Illinois, Kansas, and Iowa. TVA began receiving 300 MW of the wind energy in May 2010 and an additional 115 MW in October 2010. The remaining wind resources are under construction with expected deliveries beginning in FY 2012. These deliveries are subject to applicable environmental requirements and firm transmission paths being secured.

Wholesale Rate Structure Changes

Over the last several months, TVA has been discussing with its distributor customers and directly served customers a move from TVA's current rate structure to a new wholesale rate structure, which includes seasonal and time-of-use rates. TVA anticipates that the initial implementation of the rate change will begin in April 2011. The purpose of a transition to seasonal and time-of-use rate structures is to more closely align TVA's revenue recovery with its costs that vary by season and time of day. The new wholesale rates are designed to be revenue neutral to TVA, so this change in structure will not materially impact TVA's annual revenue recovery. There will, however, be some seasonal structural changes that may impact the timing of the revenue recovery between seasons.

Pension Fund

On September 24, 2009, TVA contributed \$1.0 billion to TVA's pension plan, the Tennessee Valley Authority Retirement System (TVARS), for FY 2010 through FY 2013. As of September 30, 2010, TVA's pension plan had assets of \$6.8 billion compared with liabilities of \$10.4 billion for a net underfunded status of \$3.6 billion. The plan currently has approximately 23,000 retirees receiving benefits in excess of approximately \$600 million per year. TVA's proposed budget assumes that annual contributions continue in 2011 and 2012 consistent with recognized pension expense.

Debt Ceiling

The TVA Act specifies that TVA's Bonds may not exceed \$30.0 billion outstanding at one time. As of September 30, 2010, TVA had \$23.7 billion of Bonds outstanding. Increased future capital expenditures along with a restrictive debt ceiling may pose a challenge to TVA's ability to maintain low and competitive power rates.

Congressional Approval of Federal Salary Freeze

Although TVA salaries are not funded in the Budget or by taxpayer dollars and TVA has been entirely self-financed for 11 years and no longer receives direct federal payments, TVA reviewed the language and intent of the legislative freeze on federal employees' base rates of pay that was proposed by President Obama and approved by Congress in December 2010 and applied the principles to its executives, managers, specialists, and excluded employees. This freeze is in effect for calendar years 2011 and 2012 and will include TVA senior executives at the level of vice president and above. TVA also carefully considered how it could best support the spirit in which the President and Congress approved the freeze. Accordingly, in a manner consistent with the guidance issued for implementing the freeze, TVA is also extending these restrictions to the base pay of its managers, specialists, and excluded employees for the duration of the freeze. The freeze does not affect TVA employees in represented positions, meaning employees in positions covered by collective bargaining units. While TVA's role in the salary freeze does not reduce federal spending because it is funded through its own revenues, it is an important action that demonstrates TVA's commitment to the nation's fiscal strength.

Current Management Initiatives

Organizational Effectiveness

In August 2009, TVA launched the Organizational Effectiveness Initiative (OEI) to strengthen the organizational capabilities to deliver on TVA's mission and strategy and to improve organizational performance by focusing on five workstreams: organizational structure, governance and accountability, operating policies and procedures, skill sets, and rewards and recognition. The five OEI workstreams are in various stages of completion. The organizational structure workstream was completed in November 2010 with the following accomplishments: better organizational alignment to TVA's mission, improved management spans of control, clearly defined and documented structure, and formal guidelines to manage changes going forward. The governance and accountability workstream is in the final phase of implementation with the following accomplishments: new management council structure, Office of the CEO role and organization created, and demonstrated improvements in presentation materials needed to support decision making. The operating policies and procedures workstream was completed in December 2010 with the following accomplishments: establishment of ownership and governance for policies and procedures, created/reviewed almost 1,000 policies and procedures, and implemented a standardized procedure website. The skill sets workstream was completed with the following accomplishments: development of a workforce planning model and development of a Talent Management organization. The rewards and recognition workstream was completed with the following accomplishments: revised performance review process that is now linked to TVA's succession planning tool and a revised talent review process leading to transparency of information and open discussion of candidates. Organizational health activities are expected to continue in FY 2011.

Integrated Resource Plan

On June 15, 2009, TVA began the preparation of a new Integrated Resource Plan (IRP) titled *TVA's Environmental and Energy Future*. The purpose of the IRP is to analyze alternative ways of addressing the Tennessee Valley's electricity needs for the next 20 years. The IRP builds on the energy resource portfolio that resulted from TVA's 1995 IRP. The alternative portfolios developed for this effort are being evaluated using several criteria including capital and fuel costs, reliability, possible environmental impacts including climate change, compliance with existing and anticipated future regulations, and other factors. The process has included significant public input in multiple venues including ongoing work with a stakeholder review group. Draft results were issued for public comment in September 2010 and comments were accepted on the draft until early November. A final IRP report that incorporates revisions to the draft results is expected to be completed in the spring of 2011.

Natural Resource Plan

On June 15, 2009, TVA announced the preparation of the NRP. The NRP is a 10 to 20-year strategic plan for the management of the natural resources entrusted to the stewardship of TVA. The plan will establish a strong vision that includes key behaviors to be modeled and operating philosophies to tie administrative processes and procedures together for consistent and effective implementation. It will leverage the value of the public lands entrusted to TVA as part of TVA's overall environmental footprint. Some of the nation's most sensitive resources are located within the Tennessee Valley, including threatened and endangered species and archeological resources.

Cyber Security

TVA has an established Enterprise Information Security Program to assure compliance with industry requirements and best practices. This program has established security standards, training and metrics that assign clear accountability for all security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective and efficient execution of the program across TVA. To assure sustainability of the agency-wide program, a security management process is being implemented with the goal of being strategic, systematic, repeatable and effective in achieving cyber security goals.

The budgeting of the Enterprise Information Security Program is centralized to improve accountability, visibility and trending. The Information Technology organization incorporates the budgeting and planning of program components into the business planning process and maintains an integrated five-year security strategic plan covering all security functions.

Governance for the program is provided by an Enterprise Security Oversight Committee comprised of TVA executives. This helps to assure that the cyber security program is aligned with business strategy and supports the objectives of the enterprise. TVA uses a full spectrum defense security model in an effort to prevent, detect, respond to and recover from threats against its systems. TVA plans to modify and upgrade its protections as technology advances and threat environments and business requirements change. TVA currently plans to spend approximately \$40 million in cyber security updates through 2013, based on continuous risk assessment performed by the agency.

New Nuclear Generation

TVA is developing options for completing a new nuclear unit at its Bellefonte site. One option being considered is completing Bellefonte Unit 1. This option has been selected as the preferred technology choice for the next nuclear capacity addition and a next phase of development has been authorized. This next phase is comprised of one year of project funding to work primarily on preliminary engineering, licensing framework development, and procurement of long lead components. The NRC has reinstated the construction permits on Units 1 and 2 and has placed them in "Deferred" status. Further reviews by TVA, approval by the TVA Board, and notice to the NRC are required before construction can resume. The NRC's authority to reissue the permits has been challenged in an administrative proceeding, and in a lawsuit filed in the U.S District of Columbia Circuit Court of Appeals.

A second option being developed is the construction of a new nuclear unit at the Bellefonte site. The unit would have a Westinghouse Advanced Passive 1000 reactor. TVA submitted in October 2007 a Combined Construction and Operation License Application (COLA) to the NRC. Contentions have been filed with respect to the Bellefonte Units 3 and 4 COLA.

Oversight, Governance and Financial Performance

Oversight and Governance

In December 2004, the President signed the Consolidated Appropriations Act, 2005, which, among other things, amended the Securities Exchange Act of 1934 by adding a new section 37. Section 37 of this act requires TVA, a non-accelerated filer under Securities and Exchange Commission (SEC) rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404 of the Sarbanes Oxley Act became effective for TVA for FY 2008, and
- As a non-accelerated filer, the auditor reporting requirements of Section 404b of the Sarbanes Oxley Act are not applicable. However, TVA implemented the auditor reporting requirements of Section 404b in FY 2009.

TVA Oversight – A Different Mission with Different Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA is governed by the TVA Board. The TVA Board, when at full strength, has nine part-time members, two of whom may reside outside the TVA service area. TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board's responsibilities include formulating broad goals, objectives, and policies for TVA and approving plans for their implementation; reviewing and approving annual budgets; setting and overseeing rates; and establishing a compensation plan for employees.

Chief Executive Officer – The Chief Executive Officer (CEO) is responsible for managing and providing governance for all aspects of TVA's mission and values. The CEO is appointed by and reports directly to the TVA Board.

Audit Committee – The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, reviewing reports of the auditor and Inspector General, and other activities.

Independent Auditor – An independent auditor audits TVA's financial statements in accordance with standards of the Public Company Accounting Oversight Board (United States) and with *Government Auditing Standards* issued by the Comptroller General of the United States. The auditor also provides an opinion on whether those statements are presented in conformity with U.S. Generally Accepted Accounting Principles (GAAP).

Independent Inspector General – An independent Office of Inspector General (OIG) conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants (AICPA) Generally Accepted Auditing Standards. OIG has about 105 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States. The OIG provides semiannual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$21.7 million for FY 2012, which includes \$107,000 for OIG training and \$55,000 in support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2012 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted government auditing standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the Government Accountability Office (GAO), also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to the Office of Management and Budget (OMB), and TVA's budget is included in the consolidated budget of the U.S. Government. Additionally, TVA's financial results are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by the GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act (GPRA), which requires that a strategic plan and annual performance reports be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the Environmental Protection Agency, state environmental agencies, the SEC, and the NRC. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission (FERC), FERC has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Council and the industry based Institute of Nuclear Power Operations.

Accounting and Financial Reporting

TVA's financial transactions are subject to audit by the Comptroller General under various statutes. Further, TVA's financial statements are annually audited by independent auditors. TVA also submits financial information to OMB, the U.S. Treasury, Energy Information Agency, NRC, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise and on a weekly basis within some business units. The monthly financial performance reports contain analysis for the income statement, cash flow statement and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

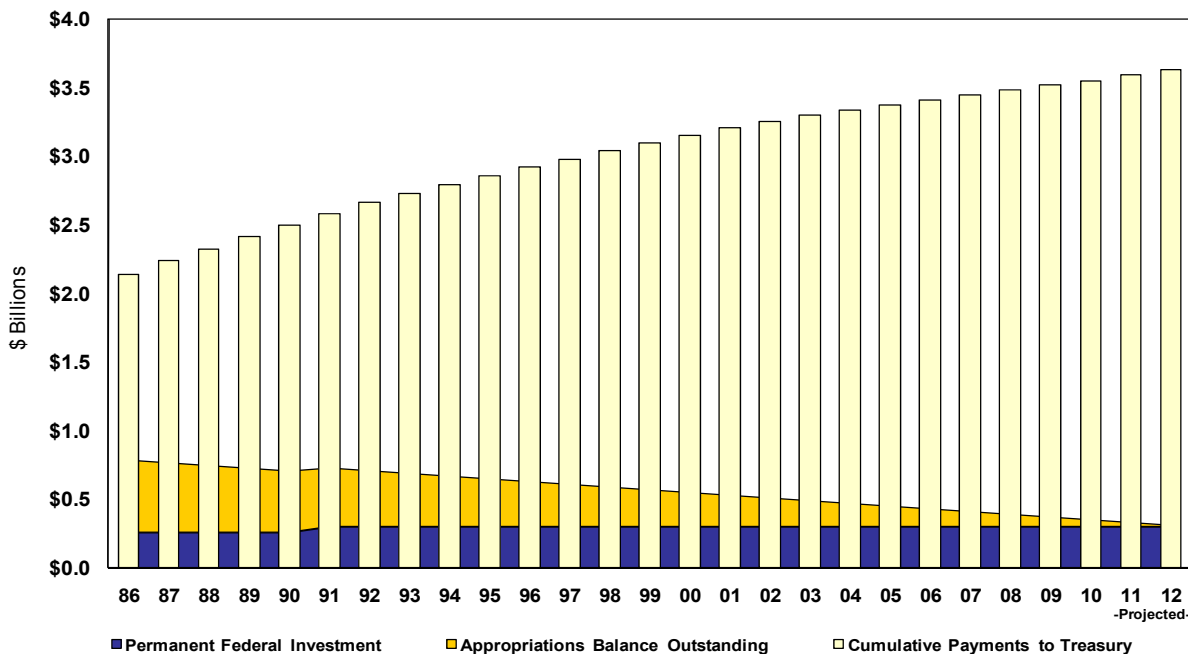
Enterprise Risk Management

TVA has a designated Enterprise Risk Management organization within its Financial Services organization, responsible for coordinating risk assessment efforts at TVA organizations, facilitating enterprise risk discussions at all levels of the organization, and developing and improving risk governance structure and risk assessment processes and methodologies.

Enterprise Risk Management at TVA is an ongoing and evolving process to protect the value of the enterprise and realize opportunities for stakeholders by promoting the efficient and effective management of risk across TVA. TVA is committed to the management of risk using an enterprise-wide approach. The TVA Enterprise Risk Management Policy provides overarching guidance on all risk management activities within TVA, including but not limited to personnel safety, operational contingency, risk control and financial hedging.

TVA has cataloged major short-term and long-term enterprise level risks across the organization. TVA will further integrate risk management practices into all aspects of the business as Enterprise Risk Management continues to evolve in a manner best suited to support TVA's mission.

Power Program Appropriation Repayment



Financing the Business

For more than 40 years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on the outstanding appropriation investment. Through FY 2012, these payments are expected to total an estimated \$3.6 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA.

TVA uses a debt service coverage (DSC) methodology for calculating its revenue requirement. The DSC methodology provides for recovery of normal operating costs, debt service (i.e., both annual principal and interest payments), and other required costs (e.g., decommissioning and pension contributions) necessary to maintain TVA's credit quality. TVA also uses a cost of service methodology. Many of these costs, such as fuel and purchased power expense, and nuclear security measures, experience fluctuations that are largely beyond the control of TVA.

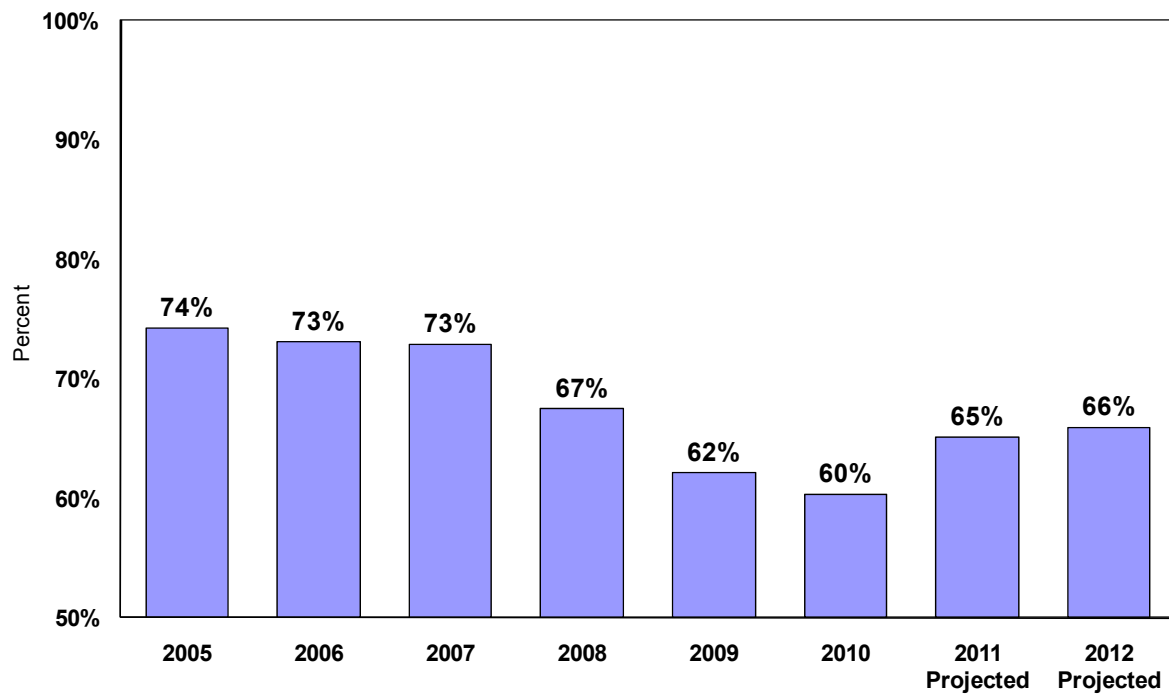
Financial Health

TVA's financial information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. Maintaining TVA's high credit rating is a key component of TVA's financial strategy. This strategy is centered on applying sound decision criteria to new investments and improving cash return on total assets for the purpose of debt payment, asset investment and investments to improve environmental performance. TVA plans to continue to make decisions necessary to further its sound financial performance. TVA's liquidity is enhanced by several factors. The TVA Board has the ability to adjust rates on a quarterly basis, if needed. Additionally, the fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's discount-note program provides TVA the short-term capital it needs to fund daily operations. TVA's financial guiding principles are to:

- Retire debt over the useful life of assets;
- Only issue new debt for new assets;
- Use regulatory accounting treatment for specific unusual events;
- Rate increases as necessary to fund operational spending;
- Evaluate rate actions to avoid significant rate volatility; and
- Implement rate actions to maintain financial flexibility.

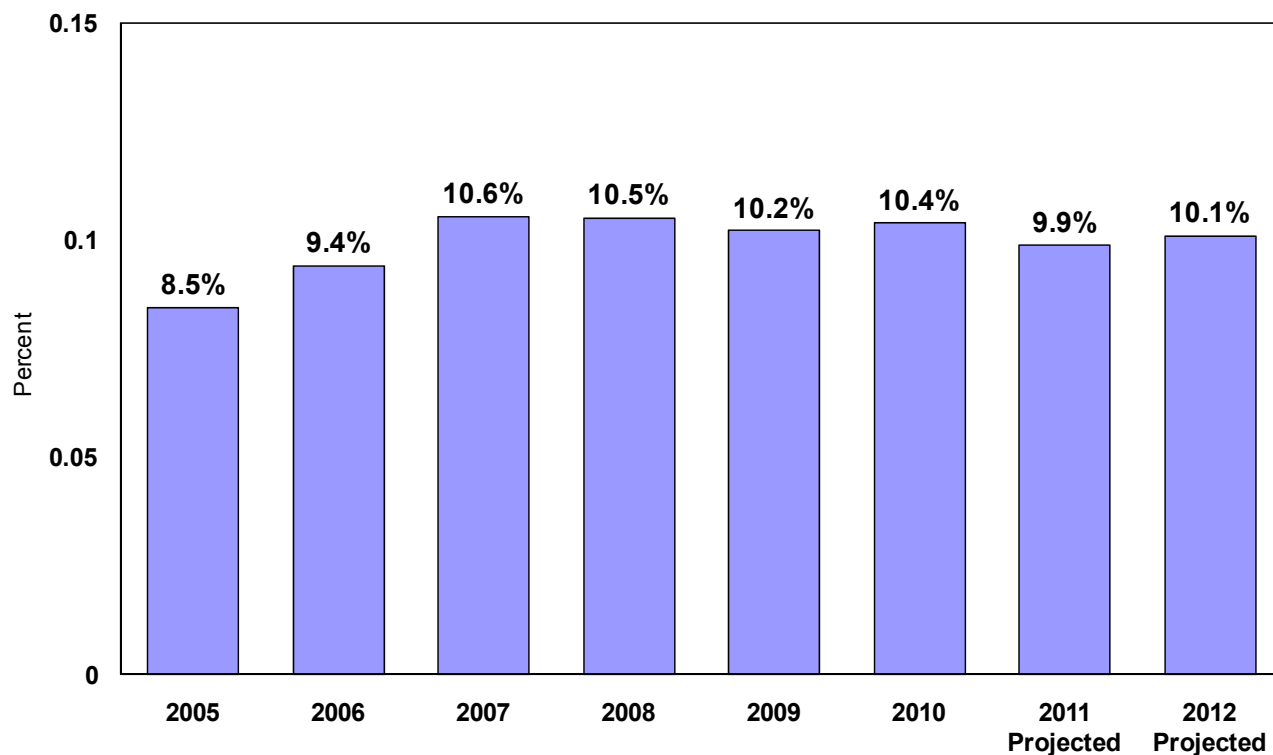
These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets. TVA will track its financial health by measuring Total Debt and Debt-Like Obligations as a percent of Total Assets.

Total Debt and Debt-Like Obligations / Total Assets %



In addition to sound criteria for new investments, improving non-fuel Operating and Maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of Earnings before Taxes, Interest, and Depreciation and Amortization (EBITDA) to Total Assets. See Appendix for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.

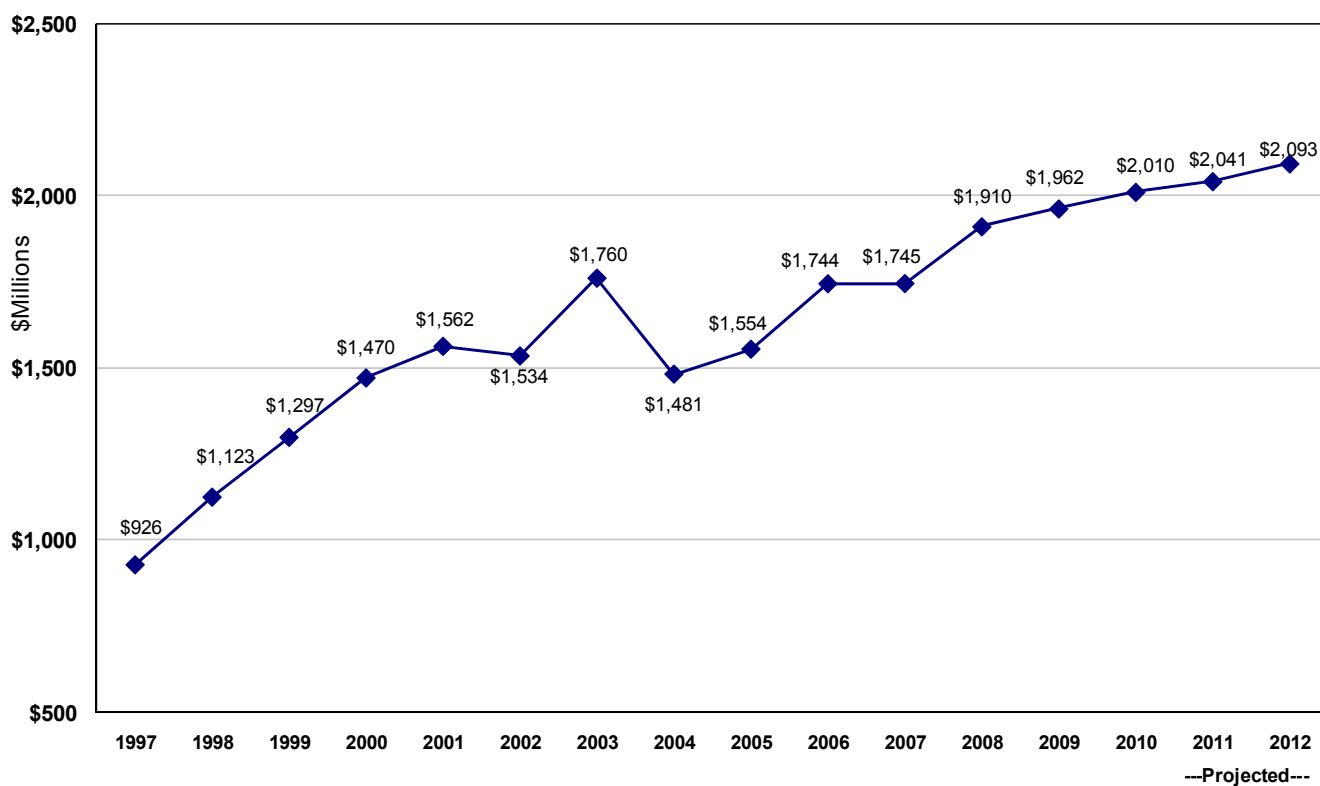
***Earnings Before Interest, Taxes, Depreciation,
Amortization (EBITDA)* / Total Assets %***



*See Appendix for a reconciliation of EBITDA to the most directly comparable GAAP measure.

Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a three-year average cash flow to provide a measure of its financial health.

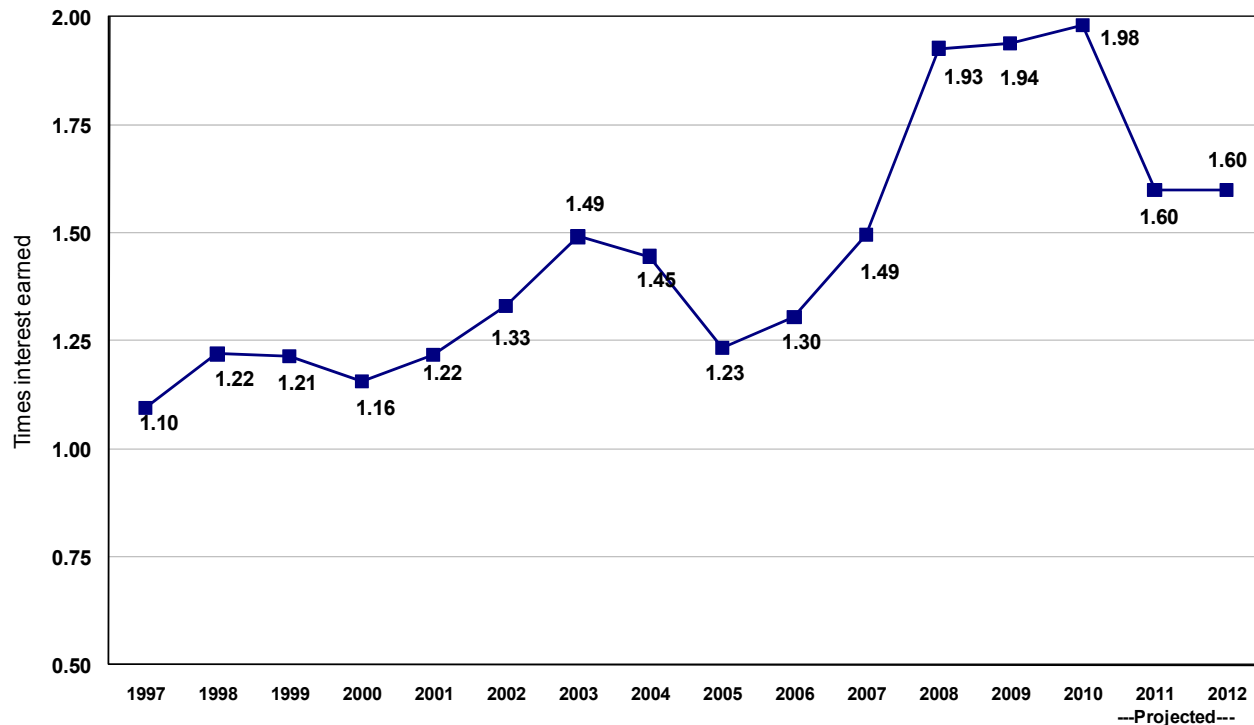
Cash Flow From Operations
3-Year Trailing Average

Interest Coverage

TVA's ability to service its statutory debt, measured by the degree to which Earnings Before Interest and Taxes (EBIT) covers interest obligations, has also improved over the past several years.

The significant decrease in interest coverage from FY 2003 to FY 2005 was due to an increase in fuel and purchased power expense due to higher market prices and increased generation. Interest coverage experienced a sharp improvement in FY 2008 due to additional revenue from the FCA. Normal interest coverage trends are expected to return in FY 2011 and FY 2012.

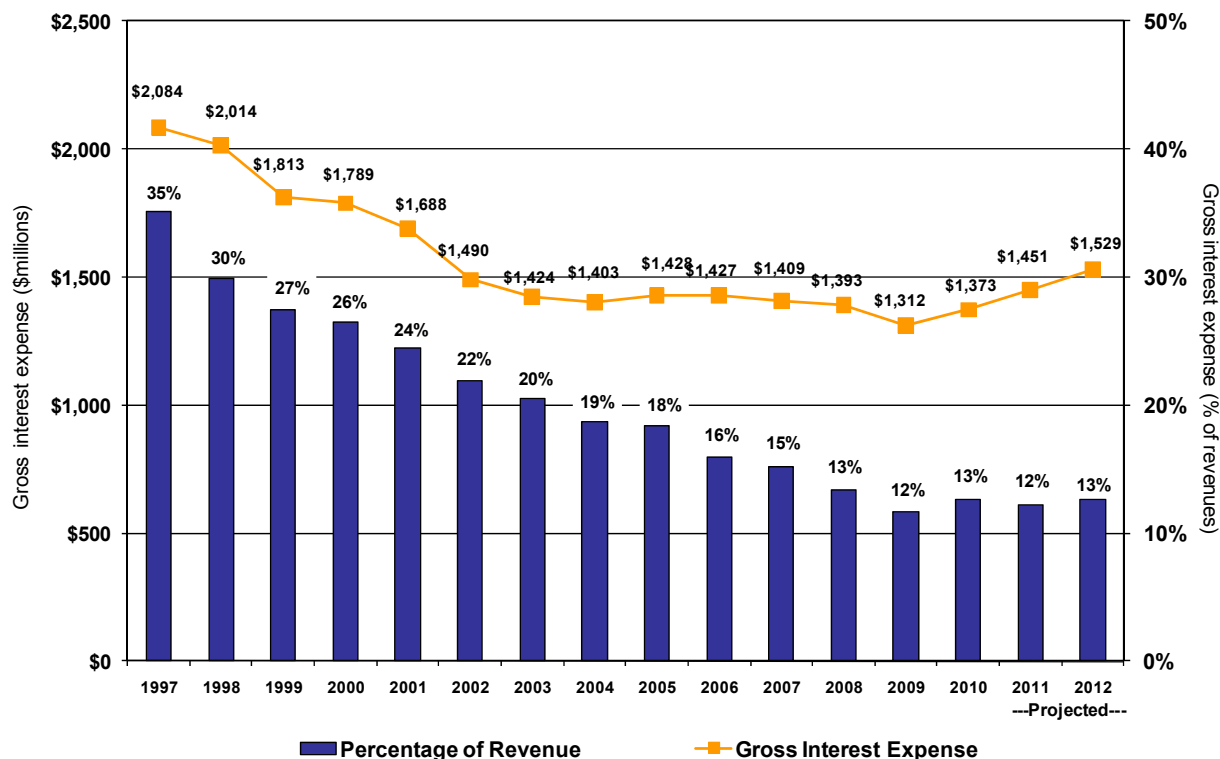
Interest Coverage Ratio



Interest Expense

TVA intends to continue to manage fixed costs including interest expense. Annual interest expense was more than \$2 billion at its peak. This amount has declined 34 percent, to \$1.4 billion in FY 2010. In FY 1997, annual interest expense as a percentage of total revenues was 35 percent. That figure has been reduced to only 13 percent of revenues for FY 2010 and expected to decrease to 12 percent in FY 2011 and return to 13 percent in FY 2012.

Interest Expense

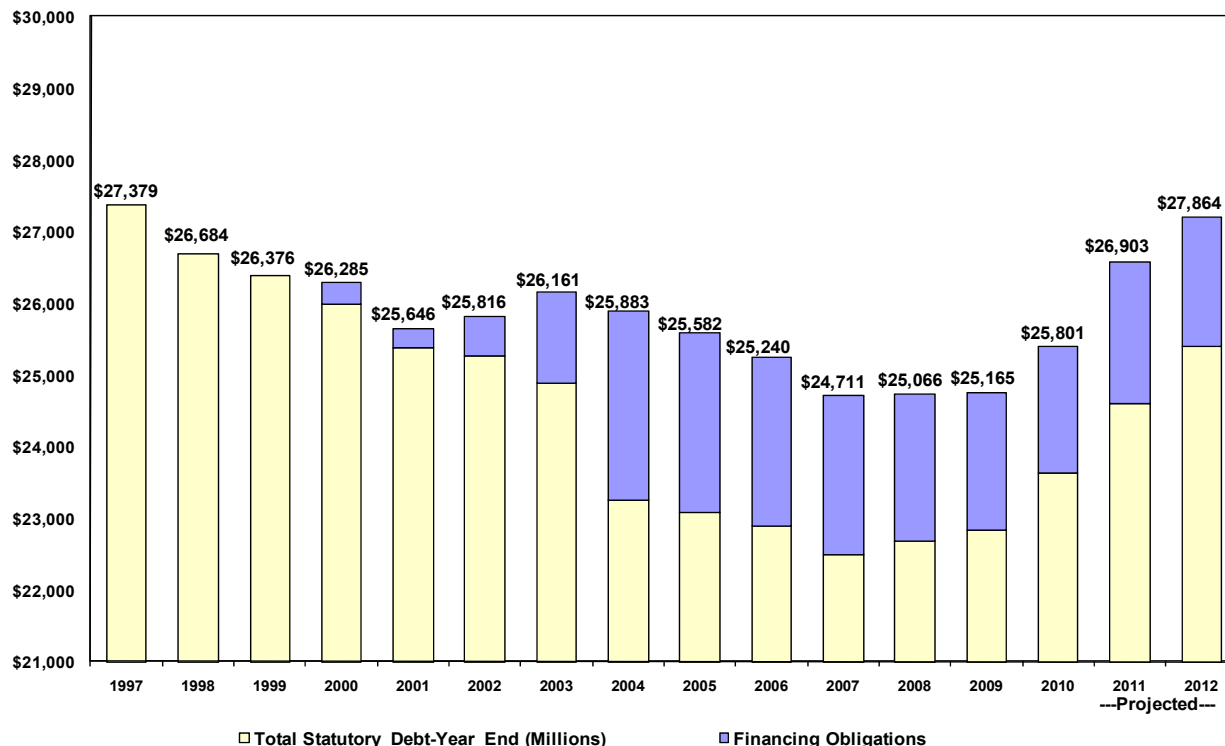


Financing Obligations

From FY 1997 through FY 2010, TVA has reduced its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by \$1.6 billion. This includes a net reduction of statutory debt of approximately \$3.8 billion during that same period. Total Debt and Debt-Like Obligations are expected to increase in FY 2011 and FY 2012 to fund capacity expansion, clean air capital, ash remediation, and the Kingston ash spill recovery.

Total Debt and Debt-Like Obligations at Year End

(in millions)



Credit Facilities

The TVA Board has approved TVA entering into a credit facility or facilities not to collectively exceed \$5 billion. Thus far, TVA has entered into three such facilities, which allow TVA to borrow up to \$2.5 billion. They are not intended to be used as a tool to manage daily cash operations or as a primary source of funding. Any outstanding borrowings on the facilities count towards TVA's statutory debt limitation. TVA has not borrowed any money under the credit facilities, although TVA has arranged for a letter of credit to be issued under one of the credit facilities.

In December 2008, TVA and the U.S. Treasury replaced a \$150 million note with a memorandum of understanding under which the U.S. Treasury provided TVA with a \$150 million credit facility. This credit facility matures in September 30, 2011, and is expected to be renewed. There were no outstanding borrowings under the facility at September 30, 2010.

TVA's Mission and Results

Low-Cost Power and Reliability

Power Sales and Revenue

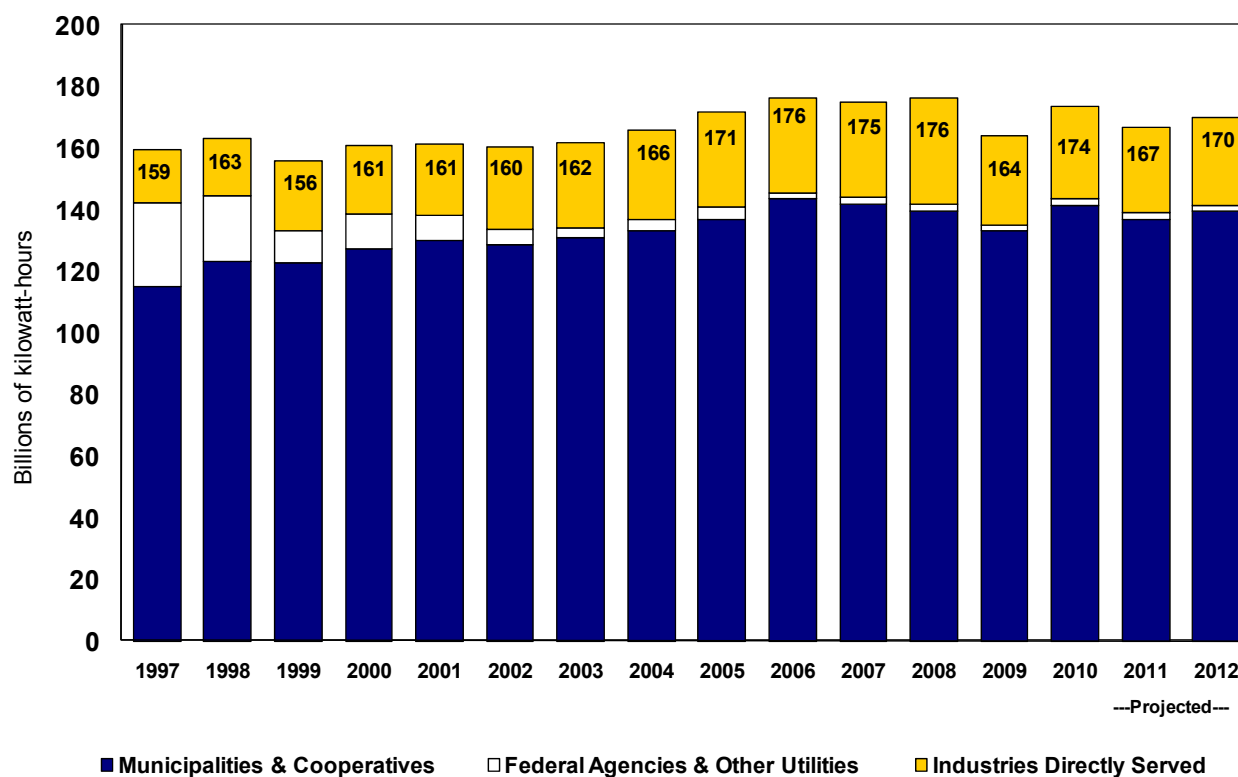
TVA sells electricity to three main customer groups:

Municipalities & Cooperatives: TVA delivers power to wholesale customers, which include municipal utility companies and cooperatives, who resell that power to consumers. The municipal utilities make up the largest block of TVA customers. Cooperatives are customer-owned companies, many of which were formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative distributors represent the majority of TVA's business.

Industrial Directly Served Customers: TVA also sells power directly to industrial customers with large or unusual loads.

Federal Agencies and Others: TVA sells power directly to federal agencies. Off-system sales are included in the "Other Utilities" category. TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring utility systems. Sales to these companies typically represent less than 1 percent of TVA's total power sales.

TVA Total Sales



Demand in the TVA Service Territory

In FY 2010, TVA sold 174 billion kilowatt-hours of electricity and is estimated to sell 167 billion kilowatt-hours in FY 2011 and 170 billion kilowatt-hours in FY 2012. Most of TVA's sales growth in the past several years has come from customers who are municipal and cooperative distributors of TVA power, which has offset reduced demand from industrial customers. Demand for electricity in the TVA region grew at approximately two percent annually from FY 1995 through FY 2010. While economic conditions have reduced power demand in recent years, TVA believes power demand will grow under most likely scenarios, and TVA intends to make capital investments in the current year as well as future years. The population of the TVA service region has surpassed 9 million, growing at a rate slightly higher than the national average.

TVA System Capability		
<i>Summer net capability (MW) at September 30, 2010</i>		
Fossil	14,573	39%
Nuclear	6,632	18%
Hydro	5,490	15%
Combustion Turbine (owned or leased)	7,358	20%
Power Purchase Agreements	3,101	8%
Other*	34	<1%
Capacity**	37,188	100%

* Other includes 19 MW of Contract Renewable Resources, 13 MW of Diesel Generator capacity and 2 MW of Renewable Resources Owned by TVA.

**Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP. Hydro capacity represented includes pumped-storage.

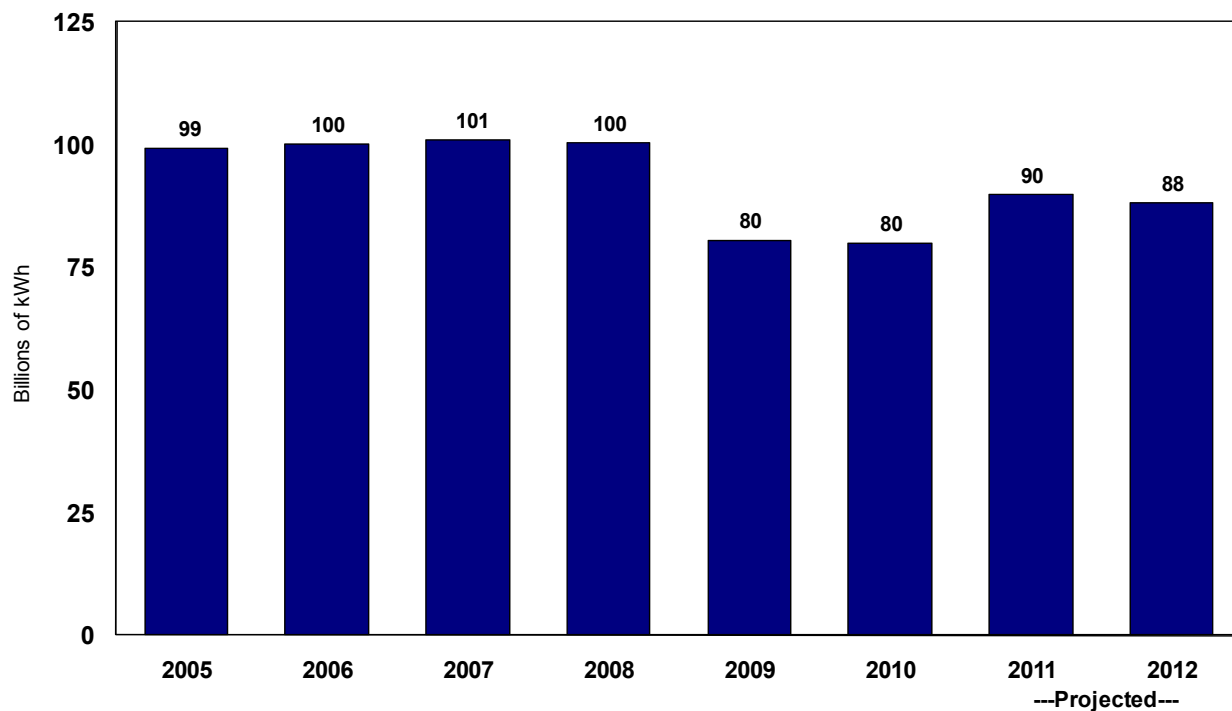
Operational Performance

Fossil Power Highlights

The mainstay of TVA's power production portfolio is its fleet of 11 coal-fired plants, which represent a combined 14,573 MW of net summer capability. TVA's fossil system also includes 88 simple-cycle natural gas-fired combustion turbine units at eight plant sites and six natural gas combined-cycle units. The simple-cycle combustion turbine sites are peaking sites that are designed to start quickly and help meet demand for electricity during peak operating periods.

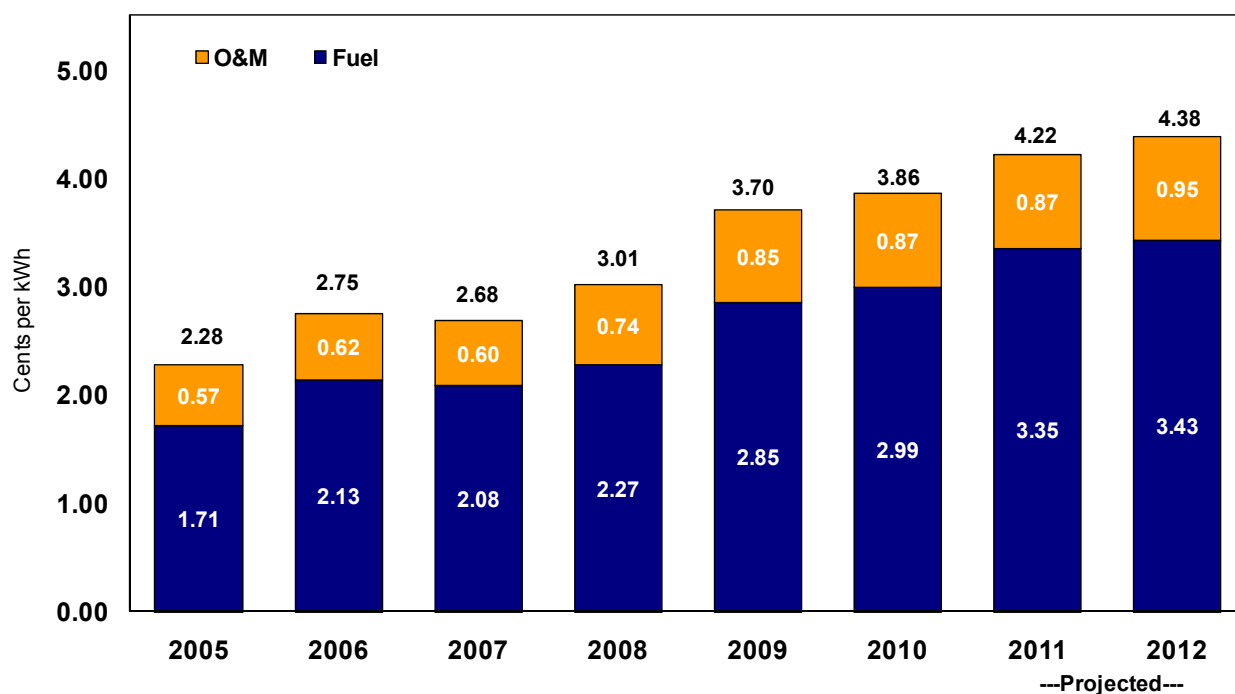
Coal generation for FY 2010 was lower than expected due to increased generation from hydro and other lower-cost resources. Coal generation is projected to return to higher levels in FY 2011 and FY 2012 as energy needs increase, Kingston returns to full service and additional generation is needed to replace nuclear during refueling outages. As new nuclear and gas generation come on line, and coal generation begins to decline significantly, TVA will continue to progress toward its vision of being the Nation's leader in improving air quality.

TVA Fossil Power Generation



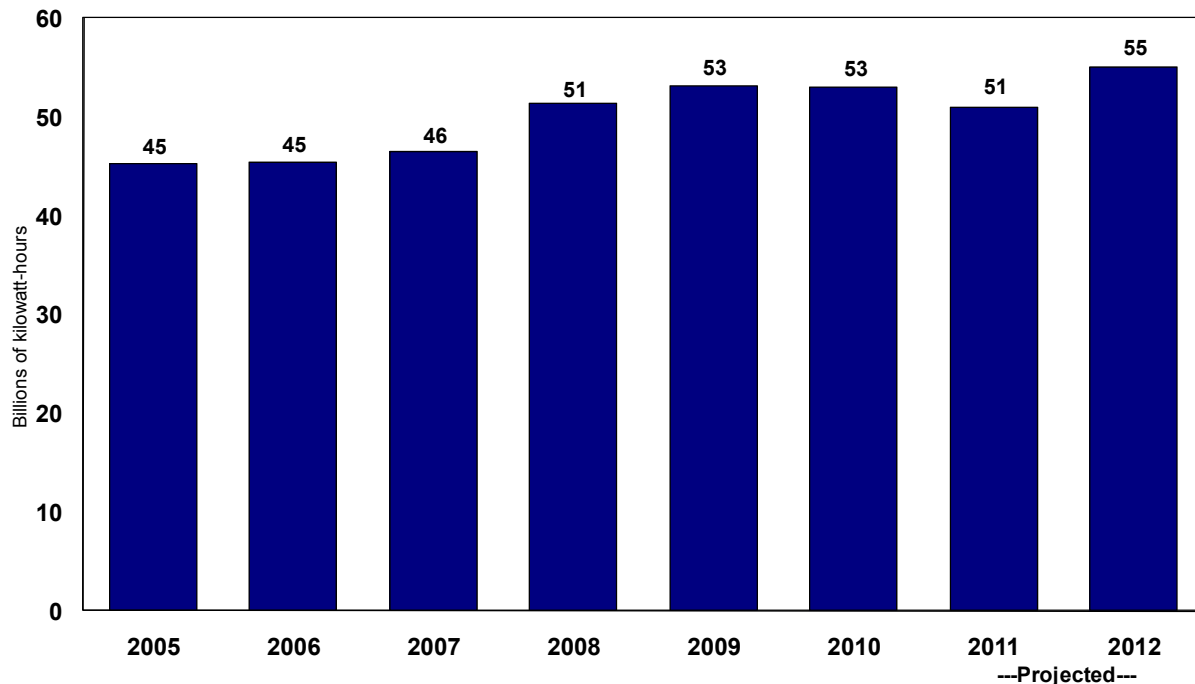
Production expense per kilowatt-hour is expected to increase from FY 2010 to FY 2011 due to increased fuel costs and operation and maintenance costs associated with mitigation of known risks and to continue sustainability of performance improvements. In FY 2012, production expense per kilowatt-hour is expected to increase from FY 2011 due to increased fuel costs, expected particulate control costs and the additional costs associated with the start-up of the John Sevier Combined-Cycle Plant.

Fossil Power Production Expense

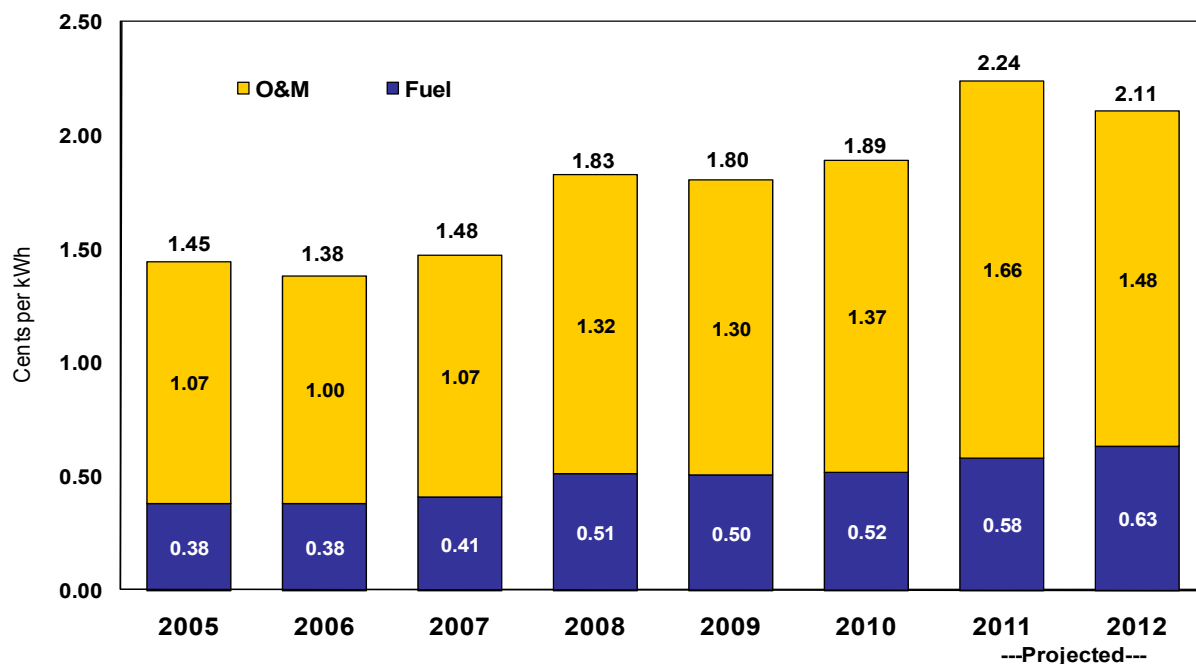


Nuclear Power Group Highlights

TVA's nuclear operations are critical to meet the region's power needs. In FY 2012, TVA's nuclear units are expected to generate 55 billion kilowatt-hours of electricity, which should represent approximately 32 percent of TVA's total net generation.

TVA Nuclear Generation

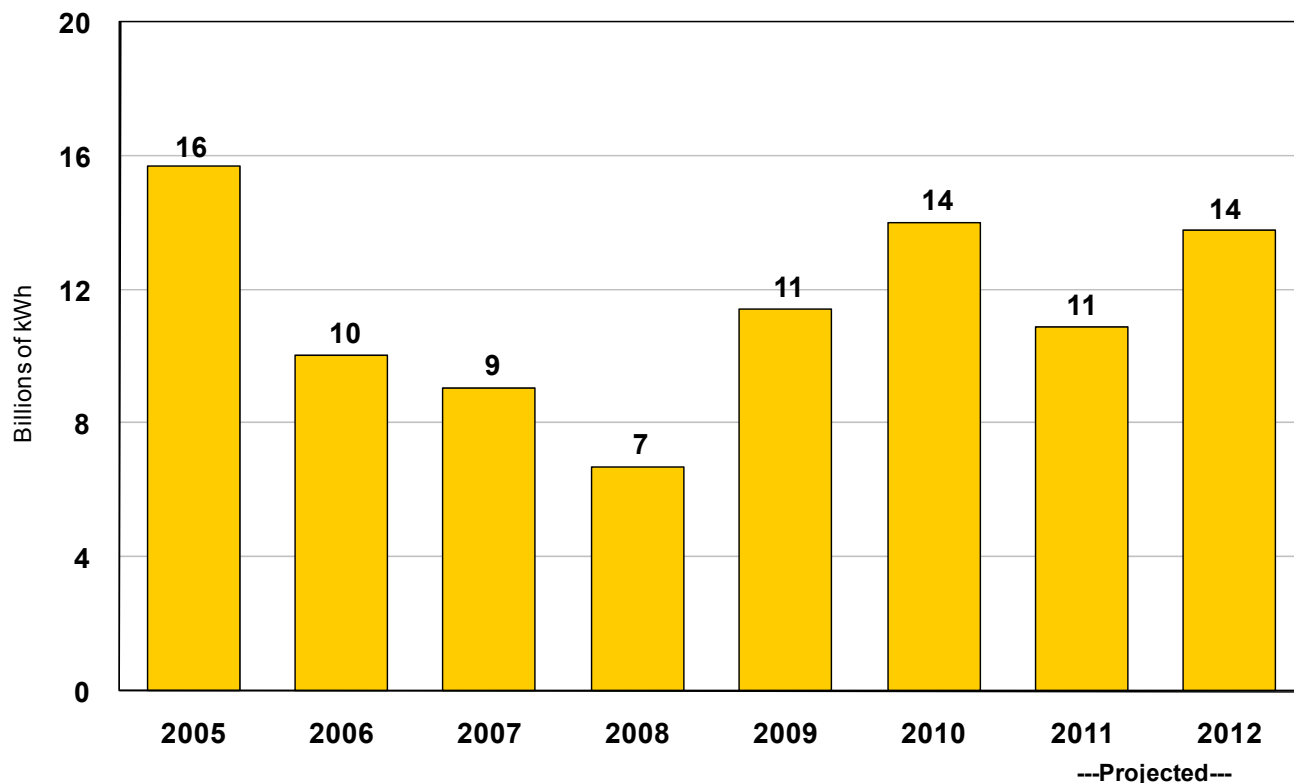
TVA's total nuclear production expense on a per-kilowatt-hour basis is expected to increase in FY 2012 due to increasing costs and higher operation and maintenance costs for equipment reliability projects.

Nuclear Power Production Expense

Hydroelectric Power Highlights

In FY 2010, TVA's integrated hydroelectric power system of dams and pumped-storage units generated approximately 14 billion kilowatt-hours of electricity – approximately 9 percent of TVA's total net generation - and in FY 2012 it is estimated to produce approximately 14 billion kilowatt-hours – approximately 8 percent of TVA's total net generation. Generation in FY 2010 increased approximately 23 percent from FY 2009 due to higher rainfall and run-off levels. FY 2011 generation is lower than FY 2010 because of the uncertainty around weather conditions. In FY 2012 generation is expected to return to a normal with normal weather predicted. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power represents a very important element in TVA's total portfolio.

TVA's hydroelectric facilities have very low operating costs and can be used as base-load, intermediate, or peaking units, depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountain-top reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

TVA Hydro-System Net Power Generation

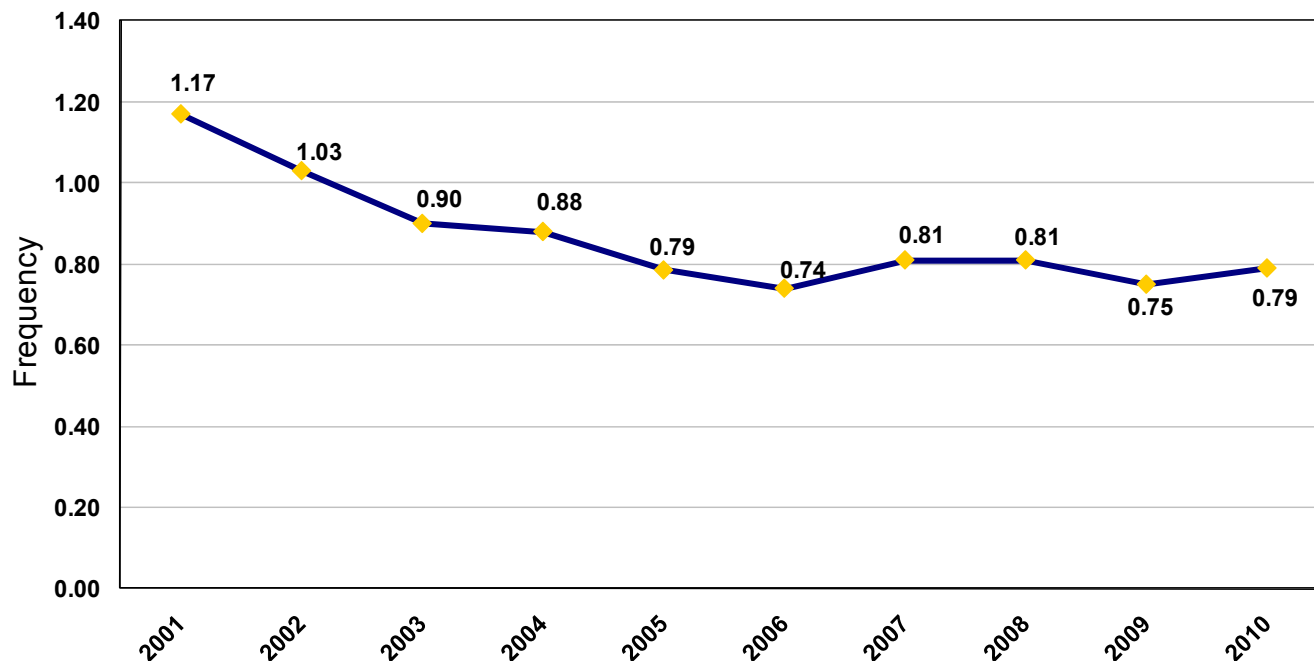
TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, delivered more than 171 billion kilowatt-hours of electricity sales in FY 2010 and over the past 11 years maintained 99.999 percent reliability for delivering electricity to its local power distributors and direct served large industrial and government customers. In FY 2012, the transmission system is expected to deliver nearly 170 billion kilowatt-hours of electricity. This system is comprised of approximately 15,940 circuit miles of transmission lines, including 2,465 miles of extra-high-voltage (500,000 volt) transmission lines, 498 substations, power switchyards and switching stations, 1,240 connection points, and 237,500 right-of-way acres.

The TVA transmission organization offers transmission services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate its transmission functions from TVA's marketing functions.

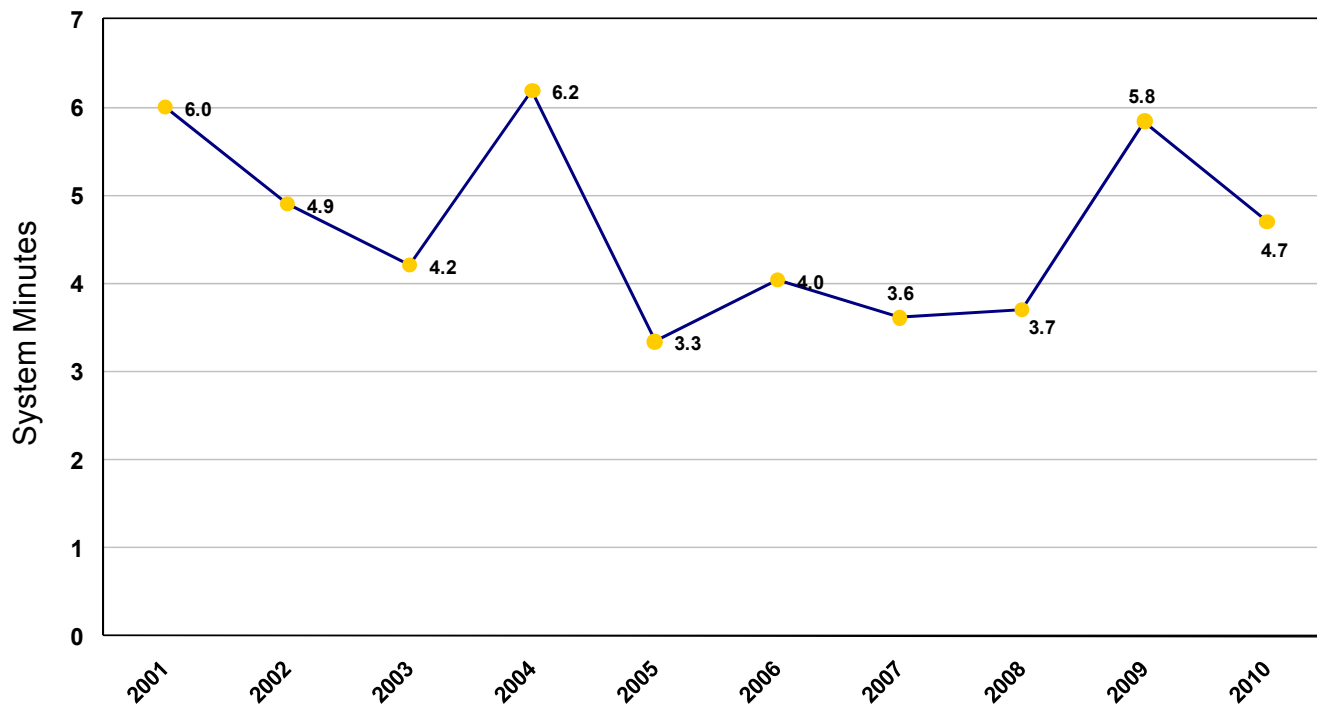
Connection point interruptions are driven primarily by weather, and can be particularly difficult to reduce across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by approximately 60 percent since FY 1995 by investing annually in lightning mitigation projects.

Connection Point Interruptions



Another measure of reliability is Load Not Served (LNS), which is a measure of the magnitude and duration of interruptions that affect TVA customers. LNS applies to interruptions that exceed one minute and is calculated by multiplying the percentage of total load not served (in megawatt-hours) by the number of minutes in the fiscal year. TVA is taking proactive steps to maintain an improved level of LNS by working on its transmission preventative maintenance program, identifying equipment that is nearing the end of its service life and replacing it before failure, and recovering rapidly from interruptions.

Load Not Served (LNS)



Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood control, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA completed a new high-level environmental policy to align with and execute the direction in the TVA Strategic Plan. The Environmental Policy was approved by the TVA Board in 2008 and is intended to identify environmental objectives that will allow TVA to produce cleaner and still-affordable electricity.

In August 2010, TVA reviewed its 2008 Environmental Policy and found that progress has been made on the Environmental Objectives for all six areas of the Policy and that no changes (internal or external) necessitate policy revisions. The Policy remains consistent with stated TVA Board strategy and policy. Environmental impact studies to assess implementation of the policy are underway (e.g., IRP and NRP).

On June 2, 2010, TVA submitted its Strategic Sustainability Performance Plan (SSPP). Implementing TVA's SSPP will demonstrate TVA's environmental leadership in selected target areas including green and efficient buildings and greenhouse gas reduction. Implementation is expected to reduce TVA's costs and risks over the long term and position TVA to become a sustainability leader among utilities.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's 2008 Environmental Policy, TVA is working toward obtaining additional power supply from clean and renewable sources by 2020. TVA's Environmental Policy also aims to stop the growth in volume of greenhouse gas emissions and reduce the rate of emissions by FY 2020.

The TVA Board also has approved guiding principles for an Energy Efficiency and Demand Response Plan and a Renewable and Clean Energy Plan. The Energy Efficiency and Demand Response Plan seeks to slow the current rate of growth in the region's power demand by providing opportunities for residential, business, and industrial consumer groups to use energy more efficiently. The Renewable and Clean Energy Plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions. The Plan advises TVA to reduce the carbon intensity of the power generation in a cost-effective manner through the implementation of conservation measures, preferentially reviewing regional renewable and clean energy supply options, and considering technology innovations to address intermittency issues associated with renewable options.

TVA is currently conducting two significant reviews of the options and methods for meeting the objectives outlined within the Policy. The IRP, titled *TVA's Environmental and Energy Future*, is a comprehensive study of alternatives to achieve a sustainable future and meet the electricity needs of the Tennessee Valley over the next 20 years. This will be done by analyzing various combinations of supply-side and demand-side management options. The goals of the Environmental Policy for sustainable land use and natural resources are being considered through a focused NRP. The NRP is studying various ways in which TVA can address future natural resource stewardship needs of the Tennessee Valley. It will evaluate the implementation of TVA's reservoir lands planning, natural resource management, water resources management, and recreation processes and strategies. This will help determine how TVA will manage its recreation and natural resources for the next 10 to 20 years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth. TVA has direct stewardship responsibility for about 293,000 acres of public land, approximately 11,000 miles of shoreline, and over 650,000 acres of reservoir water surface available for recreation and other purposes. TVA reservoirs and public lands provide outdoor recreation opportunities for millions of visitors each year.

Navigation on the Tennessee River is made possible by the system of dams and locks and provides significant contributions to the regional economy. Construction of a new lock at Chickamauga Dam above Chattanooga is essential to maintaining navigation on the upper Tennessee River. TVA eventually will need to close the existing lock due to safety issues stemming from concrete growth. Concurrently, a new lock project is underway at Kentucky Dam, near Paducah, Kentucky. The U.S. Army Corps of Engineers is responsible for both construction projects.

TVA also manages the river system to provide water for hydro generation and cooling water for TVA nuclear and fossil power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at its dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tail waters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use, and implements a number of activities such as the Targeted Watershed Initiative Program, Tennessee Valley Clean Marina Initiative, and a Strategic Partnership Initiative. TVA performs year-round monitoring and analysis of the 41,000-square-mile watershed and reports to the people of the region on the health of the river system.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the Environmental Protection Agency shows air quality in the nation has steadily improved, with a 54 percent decline in collective emissions (from 1980 to 2008) of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has also shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance and is continuing to make further improvements in air quality. While economic conditions contributed to less fossil generation and somewhat lower emissions in 2009, TVA's record in removing these pollutants remains one of the strongest and most effective in the industry. Since 1995, TVA has reduced its annual NOx emissions by 89 percent by installing various controls, including low-NOx burners and/or combustion controls on 58 of its 59 coal-fired units and installing selective catalytic reduction units, or SCRs, on 21 of the largest units. Through CY 2009, TVA reduced its SO2 emissions by 91 percent from the peak 1977 level by switching to lower-sulfur coals and operating scrubbers on seven larger units. As of September 30, 2010, TVA spent \$5.3 billion on clean air controls at its 11 coal-fired power plants. TVA estimates that spending on emission controls for SO2, NOx, and mercury in the decade beginning in FY 2011 will cost approximately \$4.95 billion.

Economic Development and Technological Innovation

Demonstrating leadership in sustainable economic development in the Tennessee Valley region means helping communities recruit and retain quality jobs and making the region a better place to live and work.

TVA Economic Development's goal is to be a source for economic development information and services across the seven-state Tennessee Valley region. TVA's effective partnerships with its customers and communities have helped produce quality jobs and resulted in significant capital investments in new and existing companies. Economic development efforts are performed in partnership with private and public organizations, including regional and state agencies. TVA helps meet the needs of its stakeholders for regional economic development that results in a better life for Tennessee Valley residents today and into the future. TVA's innovative programs and services combine to create powerful tools for sustainable economic development. These programs and services include the following:

Global Business

Industrial Recruiting Services

TVA works with distributor customers and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

TVA assigns a regional development specialist with economic development expertise to serve counties in a specific TVA region to help create, sustain, and foster job growth.

Community Development

Community Preparedness

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders.

Training

TVA helps communities by providing need-specific training to increase the competitiveness of our communities in economic development.

Rural Initiative Strategy

TVA helps rural communities better market their sites and area to prospective companies and site selection consultants.

Consumer Connection

Consumer Connection is an economic development program that links communities with retail business opportunities, expansions, and retentions.

Business Resources

Existing Industry Support

An array of products and services are geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

These funds are designed to stimulate job creation and leverage capital investment in the TVA power service region. The loan funds are open to primary manufacturing companies and other institutions, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties (SOC) Loan Fund

This revolving loan fund is available to the region's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide the support that many companies need to survive the challenging early stages of business start-up. Over the years, TVA has provided financial and technical assistance to help communities establish incubators where clients can share services, equipment, and building space.

Diversity Alliance

TVA helps the Tennessee Valley's high-growth sectors of woman-owned and minority-owned businesses to increase their job creation and capital investment opportunities by providing business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing & New Customers

This economic development incentive program offers financial incentives to existing companies and new companies that contribute to the economic development of the Tennessee Valley region and complement TVA's power system.

Appalachian Regional Commission Project Administration

TVA serves as the lead agency to administer grants for the Appalachian Regional Commission in the Tennessee Valley region.

Research

TVA provides communities with economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Technical Services

TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities better market and prepare for prospects and growth.

TVA Economic Development's innovative programs and offerings have led to:

- The Megasite Program – a catalog of certified, large industrial properties ready for heavy industrial development. This program has certified nine sites (one site has since dropped from the program) and seen five sold to Severcor (now Severstal), PACCAR, Toyota, Volkswagen, and Dow Corning/Hemlock Semiconductor. These companies represent almost 6,000 direct jobs and more than \$5.5 billion in capital investment.
- Over 41,000 jobs were recruited and/or retained and companies made \$4.3 billion in capital investment in FY 2010.
- The Data Center Site Assessment program aims to better prepare communities in the TVA service territory to support the attraction of data center projects via a catalogue of sites well-suited to host data centers, collection of key site and community data to support active marketing of these sites to prospects, and maintaining a dialogue between TVA, community economic development organizations, and other stakeholders whose involvement is critical to making these efforts successful.
- The Rural Strategy Initiative works to help rural areas better market sites and their communities to prospective companies and site selection consultants.
- Four of the largest (\$1 billion-plus) industrial economic development announcements in the nation since 2007 have occurred in the TVA service area (Toyota, Volkswagen, Wacker Chemie, and Dow Corning/Hemlock Semiconductor).
- The Valley Investment Initiative (VII) program is offered in conjunction with our local power providers. VII makes financial incentive awards to qualifying existing companies and new companies that are contributing to the economic development of the TVA service area and complement TVA's power system resources.
- *Site Selection* magazine ranking TVA among "Top 10 U.S. Utilities in Economic Development" for five consecutive years. TVA is one of only three utilities to earn this recognition for the past five years.

Tennessee Valley Authority
GPRA Annual Performance Plan
for FY 2012

Submitted
September 2010



Foreword

This document is TVA's GPRA Annual Performance Plan for FY 2012. It contains the specific information that is required by the Government Performance and Results Act. This FY 2012 GPRA Annual Performance Plan builds upon the strategic objectives and critical success factors identified in the TVA Board approved Strategic Plan of May 2007. It describes the metrics that will be used to monitor TVA's performance toward achieving successful implementation of its strategy.

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1. TVA Mission and Renewed Vision Statement

The mission statement approved in 2007 states that “[t]he mission of TVA is to improve the quality of life in the Tennessee Valley through its work in three key areas: energy, the environment, and economic development. TVA provides reliable, competitively priced power; manages the Tennessee River system and associated lands to meet multiple needs; and partners with communities and states for economic development. For nearly 75 years, TVA’s unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.”

Energy

Provide low-cost electric power to the Tennessee Valley region reliably

- TVA supplies reliable, affordable electricity to the Tennessee Valley region. It strives to meet the changing needs of power distributor customers and directly served industrial customers for electricity and related products and services in a dynamic marketplace.

Environment

Act as an environmental steward of the Tennessee Valley region and rivers

- To fulfill its environmental stewardship mission, TVA manages water resources and associated public lands for the benefit of the region and the nation; to reduce flood damage, maintain navigation, support power production and recreational uses, improve water quality and supply, and protect shoreline resources.

Economic Development

Serve as a catalyst for sustainable economic development and technological innovation

- TVA works with its power distributor customers; state, regional, and local economic development organizations; and other federal agencies to build partnerships that help bring jobs and make the economy stronger to benefit the people of the region.
- TVA’s programs and services combine to create powerful tools for sustainable economic development.

TVA’s Renewed Vision

For TVA to continue to achieve its mission in today’s changing economic and regulatory climate, it must lead with a continued focus on key critical issues while acting on new initiatives. As such, the TVA Board of Directors adopted a renewed vision at its August 2010 meeting to be:

One of the Nation’s leading providers of low-cost and cleaner energy by 2020.

TVA plans to accomplish this vision by being:

- The Nation’s leader in improving air quality;
- The Nation’s leader in increased nuclear production; and
- The Southeast’s leader in increased energy efficiency.

2. Strategic Objectives and Critical Success Factors

In its 2007 Strategic Plan, TVA identified five broad strategic objectives on which it will focus as it moves forward, and twenty-four corresponding critical success factors that support those objectives. These strategic objectives, along with their corresponding critical success factors, are as follows:

CUSTOMER: Maintain power reliability, provide competitive rates, and build trust with TVA's customers

Critical Success Factors:

- Strengthen relationships and trust by being responsive to stakeholder needs
- Develop a portfolio of product and pricing structures that more accurately reflect the costs of serving load at different times and levels of use
- Partner with distributors and directly served customers to encourage conservation, promote energy efficiency, and reduce peak demand
- Partner with customers to limit volatility in rates and participate in power supply through shared generation ownership
- Assist states, communities, and distributors in sustaining economic development programs

PEOPLE: Build pride in TVA's performance and reputation

Critical Success Factors:

- Safeguard the health and safety of employees and the public
- Strengthen workforce knowledge and skills and management processes to motivate performance and successfully implement the strategic objectives
- Treat employees, customers, and other stakeholders with integrity and respect
- Communicate clearly and consistently

FINANCIAL: Adhere to a set of sound guiding financial principles to improve TVA's fiscal performance

Critical Success Factors:

- Apply sound economic and financing practices to new investments
- Pay financing obligations before assets are fully depreciated
- Strengthen TVA's balance sheet by improving the ratio of financing obligations to total assets
- Improve TVA's cash return on total assets in order to service debt, preserve existing assets, reinvest in new assets, and improve environmental performance
- Achieve top-quartile performance in non-fuel operation and maintenance (O&M) expenses and then hold increases to be less than unit sales growth

ASSETS: Use TVA's assets to meet market demand and deliver public value

Critical Success Factors:

- Balance TVA's production capabilities and load by adding assets (buy, build or through long-term contracts) and encouraging the use of energy in ways that reduce the need for new generation
- Preserve, maintain, repower or retire existing assets where appropriate
- Manage land and water resources to provide multiple benefits to the region
- Reduce fuel supply risk with a diverse portfolio of generation assets

OPERATIONS: Improve performance to be recognized as an industry leader

Critical Success Factors:

- Deliver reliable electric power generation and transmission products and services
- Benchmark the industry's best performers to develop metrics for top-quartile performance
- Make nuclear safety the overriding priority for each nuclear facility and for each individual associated with it
- Continue to reduce the impacts of TVA's operations on the environment
- Serve as a responsible steward of the Tennessee River system
- Apply science and technological innovation to improve operational performance

3. Program Evaluations - Tracking Progress Against the Goals

3.1 Corporate Level Metrics

The 2007 Strategic Plan outlined the Board of Directors' policy-level direction for TVA over the next decade and highlighted several actions that are needed for successful implementation of the strategy. In support of the strategic objectives and critical success factors outlined in the Strategic Plan, 15 enterprise-wide metrics were in place to monitor TVA's FY 2010 performance toward achieving successful implementation of its strategy (Exhibit 1). These metrics are reviewed and systematically updated annually to maintain alignment with the strategic focus. TVA's enterprise-wide metrics, clearly demonstrate that no one single organizational unit has complete responsibility for implementing strategy.

The TVA-wide performance metrics are as follows:

- (1) **Retail Price (¢ / kWh Sales)** = distributor reported retail power revenue and directly served power revenue divided by distributor reported retail power sales and directly served power sales

Calculation:

$$\frac{\text{Distributor reported power revenue} + \text{Directly Served power revenue}}{\text{Distributor reported sales} + \text{Directly Served power sales}}$$

- (2) **Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)** = TVA's total costs in dollars per MWh of power sold to customers

Calculation:

$$\frac{\text{Total Income Statement Expenses (Excluding FCA Costs)} \pm \text{Other Income, net}}{\text{Total Sales Volume (MWh)}}$$

- (3) **FCA Costs (\$ / MWh Sales)** = TVA's FCA expenses per MWh of power sold

Calculation:

$$\frac{\text{FCA Costs}}{\text{Total Sales Volume (MWh)}}$$

- (4) **Economic Health Index (Percent)** = percentage growth of the weighted average wage of jobs created and/or retained as compared to the percentage growth of the weighted average wage of all states in the Southeast

Calculation:

$$\frac{\text{TVA Project Average Wage}}{\text{Southeastern Average Wage}}$$

- (5) **Customer Satisfaction Survey (% Satisfied)** = quarterly measure of distributors' and directly served customers' satisfaction with TVA in 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

Calculation:

$$[(\sum \text{PD survey questions (\% satisfied) }) * (1/14) * (0.85)] + [(\sum \text{DSI survey questions (\% satisfied) }) * (1/13) * (0.15)]$$

- (6) **Connection Point Interruptions (Interruptions / Connection Points)** = tracks interruptions of power, including momentary, at connection points caused by the transmission system

Calculation:

$$\frac{\text{Number of interruptions}}{\text{Number of connection points}}$$

- (7) **Load Not Served (LNS)** = measures the magnitude and duration of transmission system outages that affect TVA customers expressed in system minutes.

Calculation:

Percent of total load not served x Number of minutes in period

- (8) **Organizational Health Survey** = measures the organizational health of the employee work force

Calculation:

Measured by the percent favorable responses (agree or strongly agree) on the Survey. Item favorabilities are captured within each respective dimension.

- (9) **Safe Workplace (Injuries / Hours Worked)** = a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty / job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and Staff Augmentation contractors

Calculation:

$$\frac{\text{ORIR x 200,000}}{\text{Number of Hours worked during time period}}$$

NOTE: Hearing loss events are reported as recordable injuries on the OSHA 300 Log, but are excluded from the TVA Winning Performance (see section 3.2) Safe Workplace indicator.

- (10) **Debt-like Obligations / Asset Value (Percent)** = TVA's flexibility in a competitive market place

Calculation:

$$\frac{\text{Statutory debt + lease obligations + prepaid energy obligations}}{\text{Total Assets}}$$

- (11) **Interest Coverage (Ratio)** = credit quality

Calculation:

$$\frac{\text{Net Income} + \text{Interest Expense} + \text{Taxes}}{\text{Gross Interest Expense}}$$

- (12) **Net Cash Flow from Operations less Investing (\$ Millions)** = management's ability to control net cash flow (in millions) during the year by focusing attention on both cash inflows and outflows being balanced throughout the year

Calculation:

$$(\text{Cash Flow from Operations}) + (\text{Investing Cash Flow}) - (\text{Net Cash Flow from Change in FCA Deferral Account})$$

- (13) **Reportable Environmental Events (REE's)** = An environmental event at a TVA facility (or elsewhere caused by TVA or TVA contractors) that violates regulatory and /or permit requirements and triggers oral or written notification to, or enforcement action by, a regulatory agency.

Calculation:

Actual number of reportable events.

- (14) **Clean Energy Generation** = percent of capacity from energy resources with zero or low emissions of greenhouse gases (GHG), including nuclear, wind, biomass, solar, hydro (including HMOD), and other non-fossil sources such as waste heat.

Calculation:

Clean energy capacity / Total capacity

- (15) **Megawatt Demand (MW) Reduction (MW Reduced)** = total incremental MW demand reduction potential from TVA-initiated energy efficiency and demand reduction activities, programs, projects, and pilots

Calculation:

$$[(\text{Individual product kW impacts}) * (\text{FY 11 individual product installations}) / 1000] + [(\text{Individual FY 11 project kW impacts}) / 1000] + (\text{Individual FY 11 pilot kW impacts}) / 1000] + \text{FY 11 Demand Response MW reduction}$$

- (16) **Equivalent Availability Factor - Coal, CC, & Nuclear (Percent)** = a ratio of actual available generation from all TVA Coal, Combined-Cycle & Nuclear generating assets in a given period compared to maximum availability

Calculation:

$$\frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((\text{AVH} * \text{NMC}) - \text{MWhL} - \text{SchMWhL})}{\sum \text{of all Coal, Combined-Cycle \& Nuclear units } (\text{PH} * \text{NMC})} * 100$$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand Hours)

PH = Period Hours

NMC = Net Maximum Capacity = Winter NDC for Thermal Units

MWhL = MWh Losses due to forced outage or derating

SchMWhL = MWh Losses due to scheduled outages (planned or maintenance) or derating

3.2 The Winning Performance Process

The Winning Performance process 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. Employees' involvement in Winning Performance enables them to understand how their day-to-day performance contributes to TVA's performance and success.

TVA's Winning Performance Team Incentive Plan (WPTIP) is a pay-for-performance program similar in structure to incentivized performance-based profit-sharing programs used by private companies. The program is based on the principle that operational and process improvements, reduced costs, and improved revenues can be obtained by applying appropriate management focus and offering appropriate monetary incentives.

Employees can see how their work contributes to the direction set by their Strategic Business Units (SBUs) performance plan and how that contributes to TVA's overall successful implementation of the agency's strategy (Exhibit 1). WPTIP utilizes a balanced scorecard as the primary tool to identify and communicate the focus of the incentives to the workforce. Employees have line-of-sight from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's strategic objectives and critical success factors.

All full time employees are eligible to participate in WPTIP, except those approved by the Board of Directors or delegate(s) to participate in the Executive Annual Incentive Program. WPTIP is a compensation plan (lump sum payment) tied to performance results based on scorecard metrics at the TVA, SBU, and BU levels. The SBUs are Fossil Generation, Nuclear Generation, Development and Construction, Fossil Generation, Development and Construction, Nuclear Generation, Power System Operations, and River Operations.

The TVA corporate metrics represent at least 50 percent of each employee's potential payout. The remaining potential employee payout is tied to the performance of an employee's SBU or BU scorecards, whichever is applicable. Corporate organizations are incented based off the performance of the two TVA corporate metrics, Net Cash Flow and Equivalent Availability Factor. Executives also have performance incentives linked to the same scorecards.

3.3 TVA's Balanced Scorecard

The TVA, SBU, and BU scorecards contain targets at three levels, corresponding to different incentive payouts: Threshold, Target, and Stretch.

The scorecard basis sheets contain the year-to-date actual values of the metrics, as well as historical and future forecasts, where applicable. Adverse trends and improvement plans are discussed during normal reviews with executive management.

Performance is monitored on each of the metrics, and the scorecards are updated to reflect actual results and updated forecasts. These updates are available to employees through their organizations and TVA's intranet.

4. Strategy Implementation

4.1 TVA's Mission and Strategic Plan

The five strategic objectives identified in the TVA Strategic Plan focus on the general steps TVA must take to fulfill its core mission. The outcomes are areas that TVA must focus on to continue fulfilling its mission within the evolving business environment.

4.2 Principles of a Strategy Focused Organization

TVA follows the five Principles of a Strategy Focused Organization¹ to implement its strategy throughout the operations of the organization. The five principles have been successfully used by the public and private sectors and are defined as:

1. Mobilize the organization through visible executive leadership. The TVA Board approves the strategic plan, budgets, and performance targets. Executive leadership endorses the Strategic Plan and takes responsibility for its operational implementation.
2. Translate the strategy into operational terms. A key vehicle for translating TVA's strategy into operational terms is TVA's Business Planning Process. These objectives translate 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 balanced scorecard which ties incentive compensation to the achievement of goals.
5. Govern to make strategy a continual process. TVA, SBU, and BU scorecards are updated monthly as described in section 3.3.

4.3 Translating the Strategic Plan into Operational Terms

TVA's mission and strategic objectives must be translated into operational terms to align the actions of management and employees. Defining the critical success factors is the first step. Critical success factors define the key factors and capabilities needed to generate sustainable performance consistent with the business themes of the mission and the priorities identified by the Strategic Plan.

Performance goals identify specific, tangible objectives for measuring achievement. TVA develops a strategy in the context of the mission, maps the strategy into operational initiatives, and ultimately develops performance plans for each part of the organization and scorecards for measuring success.

4.4 Annual Goals, Long Term Goals and the Strategic Plan

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

Developing corporate short-term and long-term plans are key to achieving the goals outlined in the Strategic Plan. TVA's Long-Term Plans cover a minimum of five years and maximum of 20 years. These plans include:

- Shorter Term (1-3 Year) Plans
 - Bi-Annual Power Supply Plan
 - TVA Business Plans (3-year outlook with Quarterly reviews)
- Longer Term (5-20 Years) Plans
 - Bi-Annual Long-Term Power Supply Plan (20-year forecast)
 - Long-Range Financial Plans (10 years or more), and associated risk analyses
 - Capital Project Plans (5-year outlook)
 - Enterprise Risk Assessments (5-year outlook)

At a minimum, quarterly briefings are held with the Board of Directors, which include a review of corporate performance. The strategic issues, the scorecard and financial outlook are tracked and reviewed. Annually these reviews include three-year trending and three-year forecast.

5. 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 subject to forecast error, and planning under uncertainty is inherent. Normal planning uncertainties include those associated with projections about:

- 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
- change in operating and maintenance cost

In addition to these uncertainties in electric power planning, the electric utility industry continues 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. Given the potential for change in the industry and the high potential for significant forecast error, TVA planning evolves as more information becomes available.

6. 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 directed TVA to use power revenues to pay for essential stewardship activities previously funded by federal appropriations.

6.2 Physical Resources

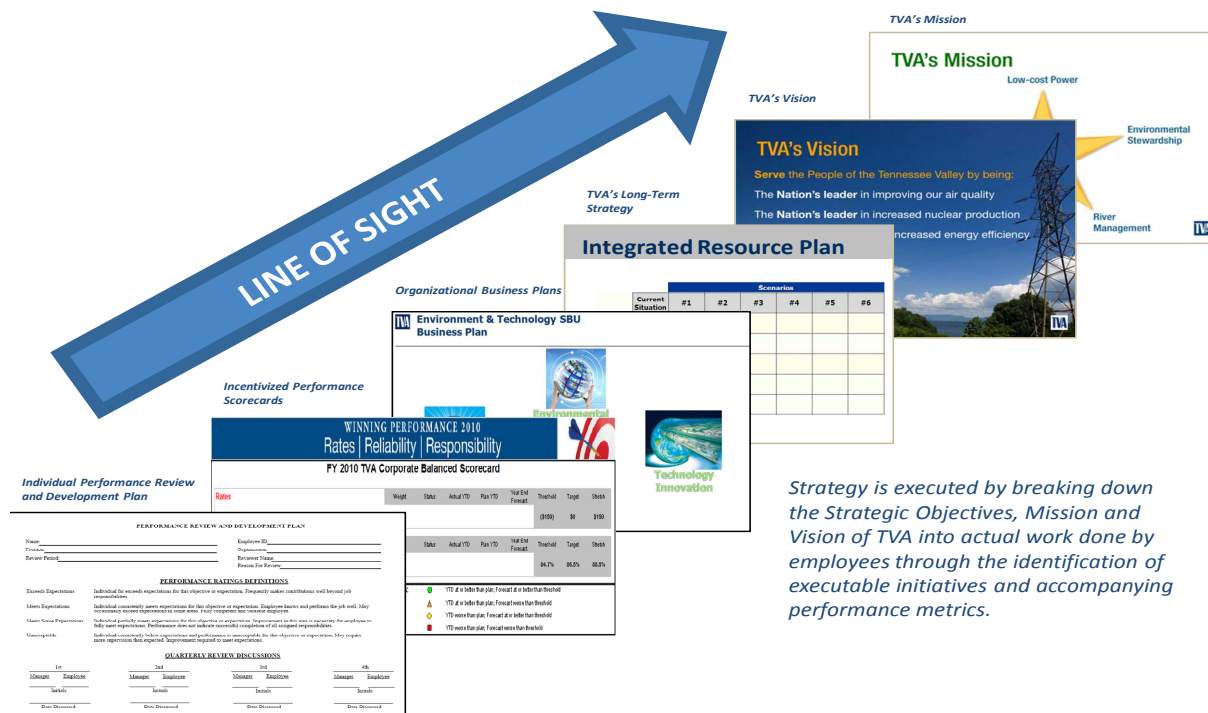
TVA's success in carrying out its mission requires that TVA retain management and operational responsibility for the Tennessee River system and other federal assets crucial to its statutory responsibility.

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 while also developing a number of new processes and skills. 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, including new methods for determining TVA's cost to provide different types of service and evaluating and quantifying risk.
- Developing new methods for evaluating future investments in generation that reflect the uncertainty in future revenue available to recover those investments.

Exhibit 1. Translating Strategy into Operational Terms



Appendix

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles (GAAP). EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Reconciliation of Net Income to EBITDA
(in millions)

	2005	2006	2007	2008	2009	2010	2011 Projected	2012 Projected
Net Income	\$ 85	\$ 113	\$ 423	\$ 817	\$ 726	\$ 972	\$ 452	\$ 470
Add back:								
Interest Expense	1,312	1,264	1,232	1,376	1,272	1,294	1,301	1,312
Tax Equivalents	365	376	451	491	544	457	567	662
Depreciation & Amortization	1,154	1,500	1,473	1,224	1,598	1,724	1,762	1,828
Total EBITDA	\$ 2,916	\$ 3,253	\$ 3,579	\$ 3,908	\$ 4,140	\$ 4,447	\$ 4,082	\$ 4,272

Tennessee Valley Authority

Budget Proposal and Management Agenda



For the Fiscal Year Ending
September 30, 2013

Submitted to Congress
February 2012



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Introduction

TVA's Vision and Mission

The Tennessee Valley Authority has a history of improving the quality of life and promoting economic prosperity for people, business, and industry in the TVA service territory. As times have changed, TVA has changed with them, updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation.

TVA's Renewed Vision

While TVA's mission remains essentially unchanged, the business environment in which TVA operates has evolved. Facing challenging economic conditions, tougher environmental standards, the need to modernize its generating system and changing customer needs, TVA recognized it must refine its strategic vision.

In August 2010, the TVA Board of Directors adopted a vision that will shape a cleaner and more secure energy future for the Tennessee Valley, relying more on nuclear power, energy efficiency, and renewable energy, and less on coal-fired generation.

TVA's vision is to be one of the nation's leading providers of low-cost and cleaner energy by 2020. Specifically, TVA intends to:

- Lead the nation in improving air quality
- Lead the nation in increased nuclear production
- Lead the Southeast in increased energy efficiency
- Improve its core business to continue providing low rates, high reliability, and responsible stewardship

Over the next decade, TVA will place greater emphasis on low rates, high reliability, responsibility, cleaner air, more nuclear generation, and greater energy efficiency. By accomplishing initiatives linked to these six strategic focus areas, TVA will realize its vision and meet the needs of its customers.

Improving Air Quality

Since the 1970s, TVA has invested \$5.4 billion to reduce emissions of sulfur dioxide by 90 percent and nitrogen oxide by 86 percent at its coal-fired plants from their peak levels. In support of its renewed vision, TVA announced plans in 2011 to retire 2,700 megawatts of coal-fired capacity by the end of 2017. TVA will decide on whether to convert, add emission controls, or retire other coal-fired units by 2019. TVA plans to meet future capacity needs with low-emission or zero-emission sources, such as renewable energy, natural gas, nuclear power, and energy efficiency.

Increasing Nuclear Production

TVA is constructing a second reactor unit at Watts Bar Nuclear Plant in eastern Tennessee as part of the transition to cleaner energy sources. The unit is expected to add 1,180 MW (summer net capability) to TVA's generating portfolio when it begins commercial operation. At this time, TVA is working on an updated project estimate that will establish a scheduled completion date. In August 2011, the TVA Board of Directors approved the licensing, construction, and operation of one reactor at Bellefonte Nuclear Plant in North Alabama. When complete, the unit will add 1,260 MW of summer net capability.

Increasing Energy Efficiency

TVA is involved in a range of activities aimed at improving energy efficiency in its service region. Energy efficiency and demand response programs can decrease the environmental impact of power production, reduce the overall need for new generating capacity, and help consumers and businesses save money on their power bills. In cooperation with local power distributors, TVA offers homeowners, businesses, and industries a variety of energy-saving tools, expert advice, and financial incentives through the EnergyRight® Solutions program. Small scale renewable options are available through the Green Power Switch® and Generation PartnersSM programs. As part of achieving its vision to be a national leader in providing low-cost, cleaner energy by 2020, TVA has the goal of leading the Southeast in increased energy efficiency. In 2010 and 2011, respectively, TVA realized 210 gigawatt hours and 559 gigawatt hours of energy efficiency savings. Those savings are expected to continue to grow.

A New Path Forward

TVA's vision sets the stage for its strategic planning process that includes strategic objectives, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the Integrated Resource Plan.

The Integrated Resource Plan (IRP), *TVA's Energy and Environmental Future*, supports TVA's comprehensive mission, which includes providing the region with an affordable, reliable, environmentally sustainable supply of electricity. The power supply plans evaluated in this study identify the resources that will be needed to satisfy expected energy demand in the region during the next twenty years under various scenarios of the future. The resource plan is consistent with TVA's Environmental Policy and it fully supports TVA's vision.

The Integrated Resource Plan will guide TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The recommended planning direction provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the plan balance costs, energy efficiency, system reliability, and environmental responsibility for TVA's stakeholders.

On April 14, 2011, the TVA Board of Directors accepted the plan and authorized the Chief Executive Officer to use its recommended direction as a guide in energy resource planning.

Power Program

TVA is a corporation of the federal government. TVA is self-funded almost entirely from the sale of electricity and financings that provide capital for the power program. Additionally, TVA makes annual returns to the U.S. Treasury on the government's original \$1.4 billion appropriated investments in the power program. Through fiscal year (FY) 2013, TVA expects to have returned approximately \$3.7 billion, including interest, to the U.S. Treasury.

TVA sells electricity wholesale to 155 local power distributors and sells power directly to large industries and government entities. As the nation's largest public power system, TVA is committed to meeting the region's growing needs for reliable, affordable, and environmentally-sound energy. The power system includes three licensed nuclear sites, eleven coal-fired sites, twenty-nine conventional hydroelectric sites, twelve natural gas and/or oil fired sites, two diesel generator sites, and one pumped storage hydroelectric site. TVA's renewable energy program, Green Power Switch®, includes fourteen solar sites, one wind-energy site, one digester gas site and biomass co-firing capability at one of its coal-fired sites. In FY 2013, TVA expects sales of about 161 billion kilowatt-hours of electricity.

As of September 30, 2011, the coal-fired generating units of TVA's Fossil Power Group had 13,807 megawatts (MW) of net summer capability. They have been the backbone of the power system since the 1950s when TVA began using coal to make electricity. The eleven coal-fired plants generated about 52 percent of the electricity TVA produced for its customers. TVA's fossil system also includes ninety-eight generators powered by natural gas and/or oil-fired units with a total net summer capability of 8,224 MW. These generators can be quickly started and are vital for meeting peak electricity demands.

TVA operates six nuclear units at three sites with a combined net summer capability of 6,691 MW. The nuclear units generated over forty-nine billion kilowatt-hours in FY 2011, or 34 percent of the power TVA produced by TVA.

In FY 2011, about 9 percent of TVA's generation came from hydroelectric power as part of about 43 percent of TVA's generation that comes from clean energy sources defined by TVA as low or zero carbon emitting sources. These include hydro, nuclear, renewable energy, and programs designed to reduce customer demand during peak periods of usage. TVA is striving to have low and zero carbon emission sources comprise at least 50 percent of its generation portfolio by FY 2020.

Transmission System

The 2,465 miles of 500 kilovolt lines in TVA's approximately 15,940-mile transmission system are a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology that provides a clearer picture of grid conditions over a wider area at any given time.

Natural Resource Stewardship

TVA has direct stewardship responsibility for about 11,000 miles of shoreline, approximately 293,000 acres of reservoir land, and almost 650,000 surface acres of water used for recreation, water supply, and industrial access. The resource stewardship services are funded primarily from power receipts. User fees also fund services, but to a much smaller extent. In accordance with its 2008 Environmental Policy, the TVA Board of Directors accepted the newly released Natural Resource Plan to guide TVA's natural resource stewardship efforts for the next twenty years. The 652-mile-long Tennessee River, the approximately 42,000 miles of streams and tributaries, and the forty-nine dams and fourteen navigation locks are a vital part of the nation's inland waterway system, transporting more than fifty million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydro power production, and cooling water for TVA's fossil and nuclear plants. The watersheds of the Tennessee River and its sixteen tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

TVA promotes sustainable economic development by assisting states, communities, and the 155 local power distributors that purchase TVA power in recruiting and retaining businesses and industries that are targeted to provide high economic impact in balance with TVA's power system. By providing technical and community development related services to various stakeholders, TVA's economic development initiatives strive to help create and retain quality, high-paying jobs and increase capital investment in the community and the region.

Technology Innovation

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low cost power and clean energy. Three signature technologies have been identified for special emphasis. These are small modular nuclear reactors (SMRs), electric vehicle transportation infrastructure, and smart grid for the bulk power system. The goal is to identify leadership roles for TVA to demonstrate how these technologies can be used to reduce costs and lower emissions to the environment.

Budget Overview

Power Program

TVA's power program is entirely self-financed and does not receive any federal appropriations. TVA, like the rest of the electric utility industry, is challenged to meet growing customer demands with cleaner, low-cost energy resources. This will require substantial capital investments during the next decade. TVA raises capital for asset investments through power revenues, public bonds up to a limit set by Congress, and alternative financings, including lease financings.

TVA faces significant levels of uncertainty relative to the weather, the economy, and other factors. TVA's financial information includes estimates, which are affected by these changing conditions. TVA projects revenue to exceed \$11.6 billion in FY 2013, which includes revenues related to fuel cost recovery. The fuel cost recovery mechanism adjusts power prices monthly to reflect the changing costs of fuel, purchased power, and emission allowances. In FY 2013, TVA projects to invest \$3.1 billion in capital projects for the power system, including \$860 million for clean air projects and \$316 million for transmission system projects. Included in the \$3.1 billion of future investments is approximately \$630 million of pending capacity expansion projects. These investments are subject to approval in the FY 2013 budgeting process scheduled for August 2012. TVA's debt and alternative financing obligations increased approximately \$831 million in FY 2011 and are expected to increase by approximately \$1.1 billion and \$960 million respectively in FY 2012 and FY 2013.

TVA power sales increased an average of about 1 percent annually during the past decade. To keep pace with this growth, TVA has added approximately 7,000 MWs of generating capacity during this period. The added capacity includes both owned generation and purchased power agreements. Concurrently, TVA has upgraded its transmission system to maintain reliability and added new customer delivery points to serve this load.

TVA will continue to explore the full range of options available to meet the growing demand. Between FY 2006 and FY 2008, the TVA Board authorized the purchase of three combustion-turbine generating plants and one combined cycle plant; executed a 15-year operating lease on a second combined-cycle plant; and approved construction of two more combined-cycle plants. The first constructed combined cycle plant, Lagoon Creek in West Tennessee, began commercial operation with a generating capacity of 540 MW summer net capability in September 2010. The second combined cycle plant, John Sevier in northeastern Tennessee, is expected to begin operation with 880 MW of summer net capability in FY 2012. The John Sevier facility should provide flexibility to meet future power needs in the Tennessee Valley while maintaining transmission reliability in the eastern part of the service area. In August 2011, the TVA Board authorized the purchase of the Magnolia Combined Cycle Plant. The three-unit, natural gas-fired plant is located in Benton County, Mississippi, and has a summer net capability of 909 MW. The plant additions and wind power contracts put in place from FY 2010 to FY 2013 will add 3,894 MW of summer net capability to the TVA system.

In May 2007, Browns Ferry Nuclear Plant Unit 1 returned to service to provide 1,150 MWs of generating capacity. On August 1, 2007, the TVA Board authorized the completion of the partially-built Unit 2 reactor at Watts Bar Nuclear Plant. When completed, Watts Bar Unit 2 is expected to provide 1,180 MW of summer net capability. In August 2011, the TVA Board of Directors approved the licensing, construction, and operation of Unit 1 at the Bellefonte Nuclear Plant. When complete, the unit is expected to add 1,260 megawatts of summer net capability.

TVA's FY 2013 annual gross interest expense is expected to be about \$400 million lower than in FY 1997. Annual gross interest expense that once consumed 35 percent of TVA's revenue is expected to be only 14 percent in FY 2013.

Water and Land Stewardship

TVA continues to meet its obligation to operate and maintain its system of dams, reservoirs, and adjacent lands. Based on the provisions in the Energy and Water Development Appropriations Act of 1998, TVA funds its traditional essential water and land stewardship activities with power revenues, user fees, and sources other than appropriations. No appropriations have been received by TVA for water and land stewardship since FY 1999, and none are requested for FY 2013. Long-term TVA funding levels for these activities are expected to stay about the same. FY 2013 funding of this program is estimated to be \$70 million to \$80 million. In accordance with its 2008 Environmental Policy, the Board of Directors accepted the newly released Natural Resource Plan at its August 2011 meeting to guide TVA's natural resource stewardship efforts for the next twenty years.

Budget Details

TVA Operating Budget

(millions of dollars)

	FY 2011 Actual	FY 2012 Estimate	FY 2013 Estimate
Revenue	\$ 11,841	\$12,049	\$11,661
Operating Expenses			
Fuel and Purchased Power	(4,353)	(4,129)	(3,796)
Operating, Maintenance, and Other	(3,617)	(3,754)	(3,969)
Depreciation and Amortization	(1,772)	(1,850)	(1,959)
Tax Equivalents*	<u>(662)</u>	<u>(640)</u>	<u>(576)</u>
Total Operating Expenses	<u>(10,404)</u>	<u>(10,373)</u>	<u>(10,300)</u>
Operating Income	1,437	1,676	1,361
Other Income	30	16	13
Net Interest Expense	<u>(1,305)</u>	<u>(1,378)</u>	<u>(1,557)</u>
Net Income (loss)	<u>\$ 162</u>	<u>\$ 314</u>	<u>\$ (183)</u>

*Tax equivalents are based on the prior year's base revenue and current year fuel cost revenue.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2012 budget August 18, 2011.

Note 2: The above budget information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

(continued)

Capital Budget and Cash Flow*(millions of dollars)*

	FY 2011	FY 2012	FY 2013
	Actual	Estimate	Estimate
Operating Activities			
Net Income (loss)	\$ 162	\$ 314	\$ (183)
Items not requiring cash	<u>2,275</u>	<u>2,101</u>	<u>2,179</u>
 Total Cash Provided from Operating Activities	 2,437	 2,415	 1,996
 Cash Used in Capital Budget			
Capital Projects			
Nuclear	(305)	(315)	(268)
Fossil	(334)	(347)	(280)
Hydro	(70)	(51)	(64)
Transmission	(102)	(112)	(116)
Other Capital	<u>(9)</u>	<u>(100)</u>	<u>(148)</u>
Subtotal	(820)	(925)	(876)
Clean Air	(52)	(181)	(860)
CCR Projects	(142)	(255)	(164)
Watts Bar Unit 2	(669)	(369)	-
Bellefonte	(184)	(394)	(420)
Capacity Expansion**	<u>(986)</u>	<u>(1,162)</u>	<u>(825)</u>
Total Capital Projects	(2,853)	(3,286)	(3,145)
Other Sources (Requirements)	<u>(416)</u>	<u>(153)</u>	<u>221</u>
Total Cash Used in Capital Budget	(3,269)	(3,439)	(2,924)
Cash Payments to U.S. Treasury	<u>(27)</u>	<u>(35)</u>	<u>(35)</u>
 Net Cash Available for Statutory Debt Reduction/ (Increase)	 <u>\$ (1,033)*</u>	 <u>\$2,257</u>	 <u>\$(1,144)</u>
 Reduction/ (Increase) in Debt and Alternative Financing Obligations	 <u>\$ (859)*</u>	 <u>\$ (1,059)</u>	 <u>\$ (963)</u>

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2012 budget August 18, 2011.

Note 2: The above budget information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions

*These amounts do not include unamortized discounts/premiums or net exchange losses from currency transactions

**FY 2013 capacity expansion estimates include approximately \$630 million of pending projects that are subject to approval in the FY 2013 budgeting process scheduled for August 2012. Estimates excluding these projects agree to the FY 2013 President's Budget.

Budget Highlights and Hard Spots

TVA is governed by the TVA Board of Directors (TVA Board), which is responsible for approving an annual budget. The information in this document is based on the FY 2012 annual budget, which was approved by the TVA Board in August 2011. The following challenges were considered in preparing the FY 2012 annual budget.

Borrowing Limit

TVA must manage its finances efficiently to achieve its mission-related performance goals of: supplying low-cost, reliable power; supporting environmental stewardship and a thriving river system; stimulating economic growth; and supporting technological innovation. Balancing these integrated missions requires that TVA use its lowest cost financing options to fund new capital investments. In order to support TVA's mission, Congress regularly raised TVA's borrowing authority between 1959 and 1979. TVA's borrowing authority has not been increased since the current limit of \$30 billion was passed by Congress in 1979.

Since 1979, TVA has increased the value of its assets from \$13 billion to \$46 billion to meet growing customer demand while incurring considerable capital investments. While TVA continues to pay down debt for older assets, TVA's financing needs are projected to increase substantially to meet growing energy demand within its service territory, in particular for investments in a balanced energy portfolio that includes energy efficiency and reduced-emission energy resources.

The TVA Act specifies that TVA-issued bonds may not exceed \$30 billion outstanding at one time. As of September 30, 2011, TVA had \$24.4 billion of net bonds outstanding. Capital is needed for plant improvements, environmental compliance, and new generating capacity to replace coal units that will be retired and to meet growing customer needs. To achieve TVA's vision while keeping rates as low as possible, TVA needs the financial flexibility to make long-term investments. Increased future capital expenditures along with a restrictive debt ceiling may pose a challenge to TVA's ability to maintain low and competitive power rates. Financial flexibility enables TVA to provide more affordable, cleaner energy that supports regional economic development and job creation.

On September 30, 2011, TVA's Inspector General issued a report stating that TVA should continue to pursue multiple options and strategies to maintain financial flexibility; including the use of alternative financing and ensuring that debt remains a viable option in future financing decisions. The report acknowledged that TVA could support additional debt if it maintains its ratemaking authority, service territory, and customer base, and as long as TVA uses the debt proceeds to successfully build generating capacity.

On January 17, 2012, TVA entered into a \$1 billion lease purchase transaction for the John Sevier Combined Cycle facility located in Hawkins County, Tennessee. TVA will lease the facility beginning July 15, 2012 through January 15, 2042.

Although TVA's ability to issue bonds is limited by its \$30 billion debt ceiling, TVA's bonds are not backed by the full faith and credit of the federal government, and do not count against the nation's federal debt limit.

Environmental Protection Agency (EPA) Agreements

On April 14, 2011, TVA entered into two agreements that generally absolve TVA from any liability under the new source requirements of the Clean Air Act (NSR) for maintenance, repair, and component replacement projects at TVA's coal-fired plants. The first is a Federal Facilities Compliance Agreement with the U.S. Environmental Protection Agency. The second agreement is a consent decree with the States of Alabama, North Carolina, and Tennessee, the Commonwealth of Kentucky, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation (the "Consent Decree"). The two agreements are substantially the same and are part of a collective undertaking. The agreements are described below.

Under the agreements:

- Most existing and possible claims against TVA based on alleged NSR and associated violations are waived and cannot be brought against TVA. Some possible claims for sulfuric acid mist and greenhouse gases ("GHG") can still be brought against TVA. Additionally, the agreements do not address compliance with new laws and regulations or the cost associated with such compliance.
- The EPA generally will not enforce NSR requirements for new plant maintenance, repair, and component replacement projects against TVA until 2019. Possible claims for NSR violations involving increases in GHG and sulfuric acid mist from projects can be pursued in the future. Claims for increases in particulates also can be pursued except at TVA's Allen, Bull Run, Kingston, and Gallatin Fossil Plants and for Unit 5 at TVA's Colbert Fossil Plant.
- TVA commits to retiring on a phased schedule two units at the John Sevier Fossil Plant, the six small units at the Widows Creek Fossil Plant, and ten units at the Johnsonville Fossil Plant. This totals about 2,700 MW (nameplate capacity) or

about 2,200 MW (summer net dependable capability). The majority of these retirement costs have been previously included in the asset retirement obligation (ARO) liability. Further, the depreciation expense related to these facilities was changed beginning in April 2011 in order to depreciate the assets over their remaining useful lives.

- Of the remaining 5,600 MW (nameplate capacity) or 4,500 MW (summer net dependable capability) coal-fired fleet capacity that is not already fully equipped with advanced sulfur dioxide (SO₂) controls, TVA must decide whether to control, convert, or retire 4,300 MW (nameplate capacity) or 3,500 MW (summer net dependable capability) on a unit by unit schedule, which can extend until 2019.
- Annual, declining emission caps are set for SO₂ and nitrogen oxides (NO_x).
- TVA, with the EPA's approval, will invest \$290 million in energy efficiency projects, demand response projects, renewable energy projects, and other TVA projects.
- TVA will provide Alabama, Kentucky, North Carolina, and Tennessee a total of \$60 million in annual installments from 2011 through 2016 to fund environmental projects, giving a preference for projects in the TVA watershed or service area.
- TVA paid a \$10 million civil penalty that was divided among the EPA, Alabama, Kentucky, and Tennessee in July 2011.

Weather Events in the TVA Service Area

TVA's service area experienced unprecedented weather during a series of storms that came through the area on April 27, 2011, and April 28, 2011, causing significant damage to the TVA power system. The hardest hit areas were central and northern Mississippi, northern Alabama, and the eastern portion of Tennessee. Local power distributors also sustained significant damage. At the end of the storms on April 28, 2011, there were approximately 850,000 distributor-served customers without power, 128 customer delivery points out of service, and more than ninety large transmission lines taken out of service, including twenty-five of TVA's 500-kilovolt lines. All transmission lines were repaired by mid-July 2011.

TVA's Browns Ferry Nuclear Plant ("Browns Ferry"), located in northern Alabama, and the switchyard at Browns Ferry sustained only minimal damage from the storms, but damage to the TVA transmission system at offsite locations resulted in the plant being without sufficient external electricity supply. Emergency backup power systems, including on-site diesel generators, provided power to safely cool down the reactors during the ensuing shutdown. TVA declared a Notification of Unusual Event ("NOUE"), the lowest of the four levels of nuclear plant emergency classifications, and notified the Nuclear Regulatory Commission ("NRC"). The NOUE was terminated on May 2, 2011. All Browns Ferry units returned to full availability status by early June 2011.

Additionally, transmission lines at Widows Creek Fossil Plant ("Widows Creek"), also located in north Alabama, were damaged as a result of this storm system. The interruption in transmission service resulted in one generating unit at Widows Creek being taken off-line. The unit returned to availability status on May 9, 2011.

TVA estimates the cost of the events (described above) to be \$39 million for structural repairs, including capitalized expenditures of \$29 million and operating and maintenance expenditures of \$10 million. The cost of power purchased to meet demand while Browns Ferry and other generating units were not connected to the electric grid was \$95 million.

Coal Fleet Evaluation

TVA is evaluating all coal-fired units in terms of original designs, economics and efficiency, overall performance, operational cost, and the cost to bring them into compliance with current and anticipated environmental regulations and the Clean Air agreements made by TVA with the EPA, four states, and three environmental groups. TVA's coal-fired units comprise 13,807 MW of generation. About 6,800 MW would require advanced environmental controls. These units are being evaluated to determine whether to idle them, install controls, or replace them with alternative generation. As of September 30, 2011, TVA had three mothballed units (units unavailable for service but which can be brought back into service after some repairs with appropriate amount of notification, typically weeks or months): Shawnee Unit 10, Widows Creek Unit 2, and Widows Creek Unit 5. Also, as of September 30, 2011, TVA had three units in inactive reserve (unit is unavailable for service but can be brought back into service after some minor repairs in a relatively short duration of time, typically measured in days): Widows Creek Unit 1, Widows Creek Unit 3, and Widows Creek Unit 4. Effective October 1, 2011, Widows Creek Unit 6 was placed in inactive reserve. The Clean Air agreements require specific unit retirements as determined by the schedule set forth in the agreements. In addition, it requires that clean air control equipment be installed on the remaining units that do not already have sufficient controls. Also, under the Environmental Agreements, TVA agreed to retire eighteen of its fifty-nine coal-fired units by the end of 2017. This amount supports the 2011 Integrated Resource Plan, *TVA's Energy and Environmental Future*, and TVA's renewed vision to become a leading national producer of clean energy. These measures align with the Environmental Agreements.

In response to the vacatur of the Clean Air Mercury Rule and consistent with a consent decree, the EPA signed the Final Utility MACT Rule on December 16, 2011. The rule sets unit or plant level limits for emissions of mercury, acid gasses, and metals for coal and oil-fired steam electric generating units. In conjunction with and consistent with the final Utility MACT rule, the EPA is also revising the New Source Performance Standards for new and reconstructed units for emissions of particulate matter, sulfur dioxide, and nitrogen oxide. These standards are very stringent, and any new coal units will be challenged to

meet all of the required emission limits simultaneously. TVA is currently evaluating this new rule in order to comply with all regulations set forth within its scope.

Kingston Ash Spill

TVA continues cleanup and recovery efforts related to the December 2008 ash spill at the Kingston Fossil Plant (Kingston) in conjunction with federal and state agencies. TVA completed the removal of time-critical ash from the Emory River during the third quarter of 2010. Removal of the remaining ash is considered to be non-time-critical. Once the removal actions are completed, TVA is required to assess the site and determine whether any additional actions may be needed at Kingston or the surrounding impacted area. This assessment and any additional activities found to be necessary are considered remedial actions.

TVA estimates that these costs will range from \$1.1 billion to \$1.2 billion. Costs incurred since the event through September 30, 2011, totaled \$749 million, with a remaining estimated liability of \$376 million. In August 2009, the TVA Board directed that the cleanup cost estimate be classified as a regulatory asset and charged to expense as it is collected in rates over 15 years, beginning October 1, 2009. As the work progresses, TVA will review its estimates and revise them as appropriate. Any estimate changes will be deferred and charged to expense prospectively as they are collected in future rates.

In May 2010, EPA approved TVA's ash disposal plan, which clarified the amount of ash to be removed from the site and the final design and closure of the dredge cell and ash ponds at the site. TVA currently estimates the recovery process will be substantially completed in 2014 although monitoring may continue to a future date.

Coal Combustion Residuals Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's wet Coal Combustion Residual (CCR) facilities. The first phase of the evaluation, which is finished, involved a detailed inspection of all wet CCR facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program, which is also complete, included geotechnical explorations, material testing, stability analyses, and studies. The study determined that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston Fossil plant at the time of the ash spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection facilities and remediating or eliminating the CCR facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCR work is between \$1.5 billion and \$2 billion, and the work is expected to take about ten years to complete.

Seven States Power Corporation Obligation

Seven States Power Corporation (Seven States), through its subsidiary, Seven States Southaven, LLC (SSSL), exercised Seven States' option to purchase an undivided 90 percent interest in a combined cycle combustion turbine facility in Southaven, Mississippi. As part of interim joint-ownership arrangements, Seven States has the right at any time during the interim period, and for any reason, to require TVA to buy back the Seven States interest in the facility.

The interim period under the original agreements was to expire on April 30, 2010. On April 22, 2010, TVA and Seven States through SSSL, amended the joint ownership agreement, lease agreement, and buy-back arrangements to extend the term of the interim arrangements by approximately three years, until April 23, 2013.

Wholesale Rate Structure Changes

In April 2011, TVA moved to a new wholesale rate structure, which includes seasonal and time-of-use rates, with its distributor and directly served customers. The purpose of a transition to seasonal and time-of-use rate structures is to more closely align TVA's revenue recovery with its costs that vary by season and time of day. The new wholesale rates are designed to be revenue neutral to TVA, so this change in structure will not materially impact TVA's annual revenue recovery; however, some seasonal structural changes may impact the timing of the revenue recovery between seasons.

Pension Fund

As of September 30, 2011, TVA's pension plan had assets of \$6.5 billion compared with liabilities of \$11.3 billion. TVA's plan remained underfunded at September 30, 2011 in the amount of \$4.7 billion. The ability of the plan's funded status to quickly improve is limited because of the significant amount of benefits paid each year to plan beneficiaries. The plan currently pays approximately \$600 million of benefits each year to nearly 24,000 retirees.

Renewable Energy

In accordance with TVA's Vision and Integrated Resource Plan, TVA is working toward obtaining additional power supply from renewable sources by 2020. TVA defines its renewable energy as energy that is sustainable and often naturally replenished, such as wind, solar, biomass, and hydro electric generation. In FY 2011, TVA-owned renewable generation accounted for about 9 percent of TVA's generation mix.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including: hydro, wind, solar, and biomass. As of September 30, 2011, TVA maintains twenty-nine conventional hydroelectric dams, accounting for 3,827 MW of net summer dependable capacity. TVA also owns three wind turbines, capability for digester gas co-firing and biomass co-firing (located at coal-fired sites), and fourteen solar energy sites. The wind sites did not provide any summer net capability because they were not operational. The digester and solar sites provided less than one MW of summer net dependable capacity.

Additional renewable energy is obtained through power purchase agreements, TVA's Generation PartnersSM program (supports customer-owned generation), and the Renewable Standard offer. As of September 30, 2011, TVA has entered into nine contracts with eight wind farms for the purchase of renewable wind energy. Energy is currently provided under two of the nine contracts. The first began providing three hundred MW (nameplate capacity) under a twenty year contract from a wind farm in Illinois in May 2010. TVA currently does not purchase the renewable attributes for this energy but has the opportunity to attain them in the future. The second is a 115 MW (nameplate capacity) wind farm in Iowa that began providing energy to TVA in September 2010. The remaining seven 20 year wind contracts will provide up to an additional 1,150 MW of renewable energy from wind farms located in South Dakota, Iowa, Illinois, and Kansas. These wind farms are under construction with expected deliveries beginning in 2012. The delivery of energy from these facilities is subject to satisfying applicable environmental requirements and securing firm transmission paths. In addition, TVA has contracted for twenty-seven MW (nameplate capacity) of renewable energy generation from fifteen wind turbine generators located in Buffalo Mountain near Oak Ridge, Tennessee.

In 2003, TVA developed a Generation Partners Program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. Since 2009, TVA has seen the program grow from seventy-nine installations to nearly seven hundred installations providing more than thirty MW of solar, wind, and biomass generation. In addition, as of September 30, 2011, TVA approved more than three hundred projects that are in various stages of construction, representing an additional forty-five MW of renewable power.

The Renewable Standard Offer program is a pilot program that began in October 2010. Under the program, TVA will accept up to one hundred MW of renewable energy. At September 30, 2011, TVA had eight MW of renewable energy signed up under the program, including two landfill gas generation projects and two solar projects.

Additionally, TVA's Green Power Switch® program is a voluntary program that supports the production of renewable energy by allowing consumers to purchase renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. Consumers buy 150 kilowatt-hour Green Power Switch renewable energy blocks for \$4 a month. Supply for the program includes Green-e certified renewable energy generated from TVA owned and purchased solar, wind, digester gas, and landfill gas generation.

Federal Salary Freeze

Although TVA salaries are not funded in the federal budget or by taxpayer dollars (TVA has been entirely self-financed since 1999 and no longer receives federal appropriation payments), TVA reviewed the freeze on federal employees' base rates of pay that was proposed by President Obama and approved by Congress in December 2010. After considering the language and intent of the freeze, TVA applied the principles to its executives, managers, specialists, and excluded employees. This freeze is in effect for calendar years 2011 and 2012 and will include TVA senior executives at the level of vice president and above. The freeze does not affect positions represented by collective bargaining units. While TVA's salary freeze does not reduce federal spending because its compensation is funded by its own revenues, the action demonstrates TVA's commitment to the nation's fiscal strength.

Current Management Initiatives

Integrated Resource Plan

After more than two years of development, TVA issued the final Integrated Resource Plan (IRP) on March 2, 2011, along with the associated Environmental Impact Statement. On April 14, 2011, the TVA Board accepted the plan and authorized the Chief Executive Officer to use its recommended planning direction as a guide in energy resource planning and selection. This plan, developed through extensive analysis and collaboration with partners and stakeholders, identifies the resources that will be needed to satisfy expected energy demand in the Tennessee Valley region during the next twenty years. The plan is consistent with the TVA Environmental Policy and it supports the vision to be one of the nation's leading providers of low-cost and cleaner energy by 2020. The IRP will help TVA to meet its customers' needs effectively while addressing the substantial challenges that face the electric utility industry. The recommended planning direction gives TVA the flexibility to make sound choices amid economic and regulatory uncertainty while balancing costs, reliability, environmental responsibility, and competitive pricing for customers.

Despite the impacts of the recession of 2008-2009, which reduced TVA sales by about seven percent at its peak, and the relatively sluggish economic recovery under way, TVA believes new generation sources will be needed to meet anticipated load growth under the most likely scenarios. Additionally, increasingly stringent environmental regulations facing coal-fired power plants, coupled with TVA's announced intention to transition toward more generation sources with low or zero emissions, and to retire eighteen coal-fired units are highly likely to result in a need for new generating capacity. Accordingly, TVA intends to make capital investments in the current year as well as future years.

Natural Resource Plan

On August 18, 2011, the TVA Board accepted the Natural Resource Plan ("NRP"). The NRP is designed to enhance stewardship of public recreation facilities, water resources, wildlife and plants, and historic and cultural sites on TVA-managed reservoir lands by helping to guide TVA management to better meet public stewardship objectives while responding to the needs of the TVA region's communities and residents. See 'Environmental Stewardship and River Management,' which begins on page 28 for additional information.

Cyber Security

TVA has an established Risk Based Cyber Security Program to ensure alignment with applicable regulations, industry requirements, and best practices. The program has established security standards, training, and metrics that assign clear accountability for all cyber security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective, and efficient execution of the program across TVA. Cyber security management processes have been implemented agency-wide with the goal of being systematic, repeatable, and effective in achieving the strategic security goals of the program.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components has been integrated into the business planning process and is maintained in a five-year cyber security strategic plan covering all information security functions.

Governance for the program is provided by an Enterprise Security Council sponsored by TVA's Chief Information Officer and comprised of key TVA executives. This Council helps assure that the Cyber Security Program is aligned with business strategy and supports the objectives of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to and recover from threats against its systems. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change. TVA currently plans to spend approximately \$30 million to \$40 million for cyber security updates between 2012 and 2015.

New Nuclear Generation

On August 20, 2010, the TVA Board reaffirmed its vision for TVA to be one of the Nation's leading providers of low-cost and cleaner energy by 2020. A key aspect of this vision includes committing TVA to leading the nation in increased nuclear power generation.

The Integrated Resource Plan (IRP), accepted by the Board in April 2011, recommends an optimized mix of diversified energy resources, including more energy efficiency and demand reduction programs, renewable energy resources, energy storage resources, and natural gas and nuclear capacity. In particular, the nuclear energy component of the IRP planning direction calls for increasing the amount of nuclear generation capacity on the TVA system in the range of 1,150 to 5,900 megawatts from 2013 to 2029.

With the support of the IRP, environmental review, and extensive studies and analysis by independent construction, equipment, licensing, and risk experts, the TVA Board approved the licensing, construction, and operation of Unit 1 at the

Bellefonte nuclear site at its meeting in August 2011. The project is estimated to cost \$4.9 billion with an expected in-service date of 2020.

Tennessee Valley Customer Planning Council

TVA recently formed the Tennessee Valley Customer Planning Council to promote greater customer involvement in TVA's generation and financial planning processes. Members of the Council include leadership from the Tennessee Valley Public Power Association representing TVA's distributor customers and the Tennessee Valley Industrial Committee representing TVA's directly served industrial customers. The council will promote transparency and collaboration among customers and TVA, and educate customers about TVA's planning policies, processes, and assumptions.

Oversight and Governance

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from three full-time members to nine part-time members to decide strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer (CEO) position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission (SEC) rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404 of the Sarbanes Oxley Act became effective for TVA for FY 2008.
- As a non-accelerated filer, the auditor reporting requirements of Section 404b of the Sarbanes Oxley Act are not applicable. However, TVA implemented the auditor reporting requirements of Section 404b in FY 2009.
- Dodd-Frank deferred indefinitely the requirement for non-accelerated filers to have an external auditor attestation; however, management has chosen to continue to have the external auditor attestation.

TVA Oversight – A Different Mission with Different Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA is governed by the TVA Board of Directors (TVA Board). The TVA Board has nine part-time members, two of whom may reside outside the TVA service area. The board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The board's responsibilities include formulating broad goals, objectives, and policies for TVA and approving plans for their implementation; reviewing and approving annual budgets; setting and overseeing rates; and establishing a compensation plan for employees. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office (GAO), the Office of Management & Budget (OMB), the U.S. Treasury, and an independent inspector general.

Audit Committee – The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and the TVA Inspector General.

Independent Auditor – An independent auditor audits TVA's financial statements in accordance with standards of the Public Company Accounting Oversight Board (United States) and with *Government Auditing Standards* issued by the Comptroller General of the United States. The auditor also provides an opinion on whether those statements are presented in conformity with U.S. Generally Accepted Accounting Principles (GAAP).

Independent Inspector General – An independent Office of Inspector General (OIG) conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants Generally Accepted Auditing Standards. The OIG has about 105 employees, including more than fifty auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semiannual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$22.4 million for FY 2013, which includes \$118,000 for OIG training and \$63,762 in support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2013 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the Government Accountability Office, also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to the Office of Management and Budget (OMB), and TVA's budget is included in the consolidated budget of the U.S. Government. TVA's financial results also are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act (GPRA), which requires that a strategic plan and annual performance reports be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the Environmental Protection Agency, state environmental agencies, the SEC, and the Nuclear Regulatory Commission (NRC). TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission (FERC), FERC has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Corporation and the industry based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted government auditing standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office. On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represents TVA's comparative, consolidated, department-level financial statements, to the U.S. Department of Treasury to comply with the requirements of the U.S. Department of Treasury Financial Manual, for the purpose of providing financial information to the U.S. Department of Treasury and the U.S. Government Accountability Office to use in preparing the Financial Report of the U.S. Government. The auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by Federal Accounting Standards Advisory Board.

Accounting and Financial Reporting

TVA's financial transactions are subject to audit by the Comptroller General under various statutes. Further, TVA's financial statements are annually audited by independent auditors. TVA also submits financial information to OMB, the U.S. Treasury, the Energy Information Agency, the Nuclear Regulatory Commission, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise and on a weekly basis within some business units. The monthly financial performance reports contain analysis for the income statement, cash flow statement, and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

Enterprise Risk Management

TVA has a designated Enterprise Risk Management organization within its Financial Services organization, responsible for coordinating risk assessment efforts at TVA organizations, facilitating enterprise risk discussions at all levels of the organization, and developing and improving risk governance structure and risk assessment processes and methodologies.

Enterprise Risk Management at TVA is an ongoing and evolving process to protect the value of the enterprise and realize opportunities for stakeholders by promoting the efficient and effective management of risk across TVA. TVA is committed to the management of risk using an enterprise-wide approach. The TVA Enterprise Risk Management Policy provides overarching guidance on all risk management activities within TVA, including but not limited to personnel safety, operational contingency, risk control, and financial hedging.

TVA has cataloged major short-term and long-term enterprise level risks across the organization. TVA will further integrate risk management practices into all aspects of the business as Enterprise Risk Management continues to evolve in a manner best suited to support TVA's mission.

Financial Performance

Financing the Business

TVA uses debt service coverage (DSC) as a measure of financial health when calculating its revenue requirement. DSC provides for recovery of normal operating costs, debt service (i.e., both annual principal and interest payments), and other required costs (e.g., decommissioning and pension contributions) necessary to maintain TVA's credit quality. TVA also uses a cost of service methodology. Some of these costs, such as fuel and purchased power expense, experience fluctuations due to commodity prices beyond the control of TVA.

Financial Health

TVA's financial information includes estimates with significant uncertainty relative to the weather, the economy, and fuel prices, which are subject to changing conditions. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. Maintaining TVA's high credit rating is a key component of TVA's financial strategy. This strategy is centered on applying sound decision criteria to new investments and improving cash return on total assets for the purpose of debt payment, asset investment and investments to improve environmental performance. TVA plans to continue to make decisions necessary to further its sound financial performance. TVA's liquidity is enhanced by several factors. The fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's discount-note program provides TVA the short-term capital it needs to fund daily operations. Additionally, the TVA Board has the ability to adjust rates on a quarterly basis, if needed.

The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide funds for operation, maintenance and administration of its power system and additional margin as the TVA Board may consider desirable for investment in power system assets, retirement of outstanding Bonds in advance of maturity, additional reduction of the Power Program Appropriation Investment, and other purposes connected with TVA's power business. In setting TVA's rates, the Board has primary responsibility of achieving objectives of the TVA Act including the objective that power shall be sold at rates as low as are feasible. TVA's financial guiding principles are to:

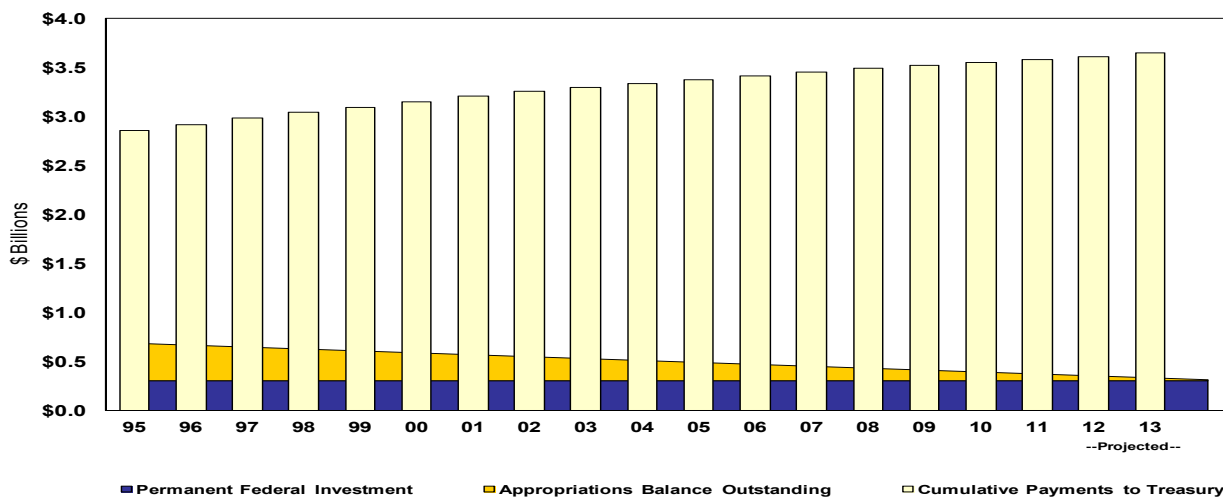
- Only issue new debt for new assets
- Use regulatory accounting treatment for specific unusual events
- Increase rates as necessary to fund operational spending
- Evaluate rate actions to avoid significant rate volatility
- Implement rate actions to maintain financial flexibility

These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets.

Power Program Appropriation Repayment and Statutory Debt as a Percent of Total Assets

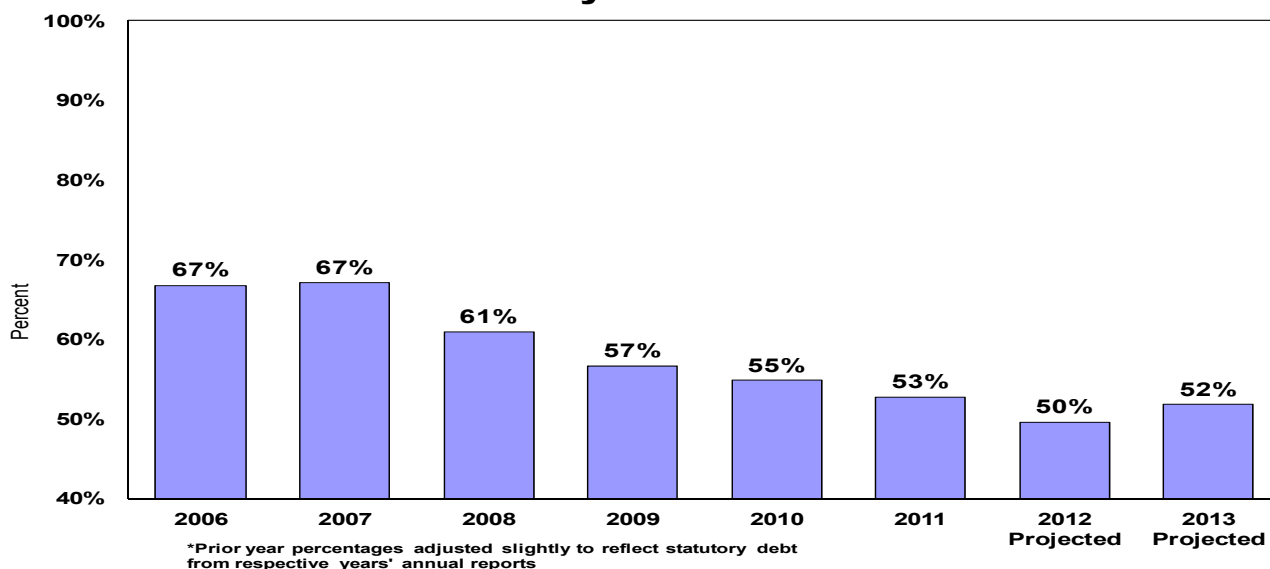
For more than forty years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on the outstanding appropriation investment. Through FY 2013, these payments are expected to total an estimated \$3.7 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA. While the government has the benefit of equity position in TVA, and is the ultimate owner of its assets, neither the government nor taxpayers are liable for TVA's debt, as stated in the TVA Act.

Power Program Appropriation Repayment



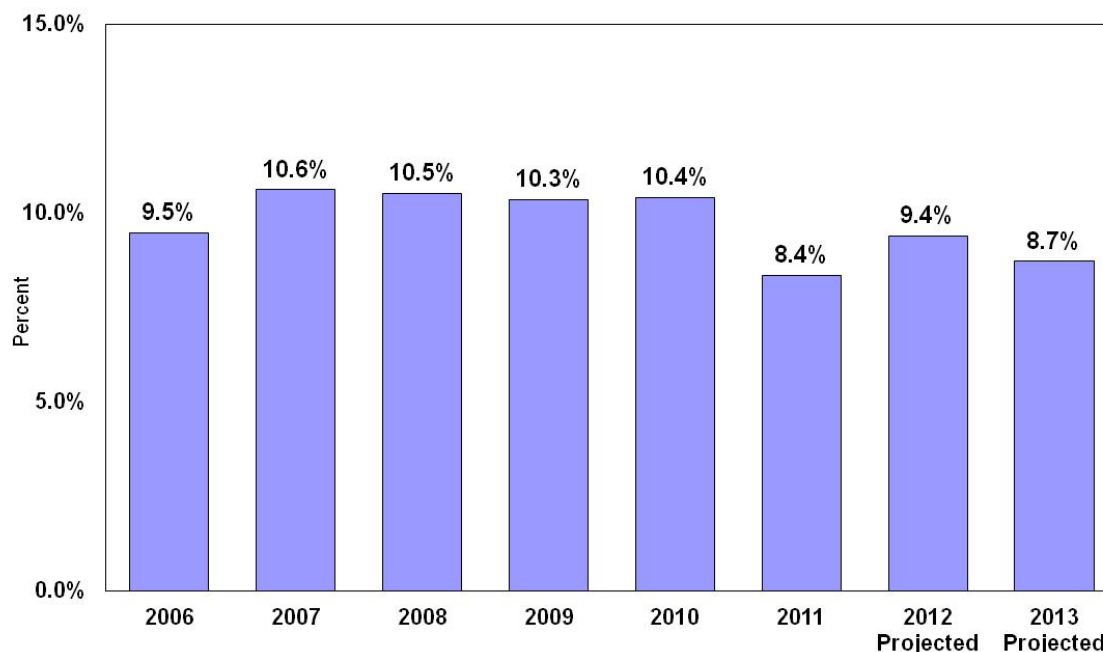
These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets. Along with the debt service coverage ratio, TVA will track its financial health by measuring total statutory debt as a percent of total assets.

*Total Statutory Debt / Total Assets %



Earnings before Interest, Taxes, Depreciation, Amortization (EBITDA)/Total Assets

In addition to sound criteria for new investments, improving non-fuel Operating and Maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of Earnings before Taxes, Interest, and Depreciation and Amortization (EBITDA) to Total Assets. See Appendix for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.

**Earnings Before Interest, Taxes, Depreciation,
Amortization (EBITDA)* / Total Assets %**

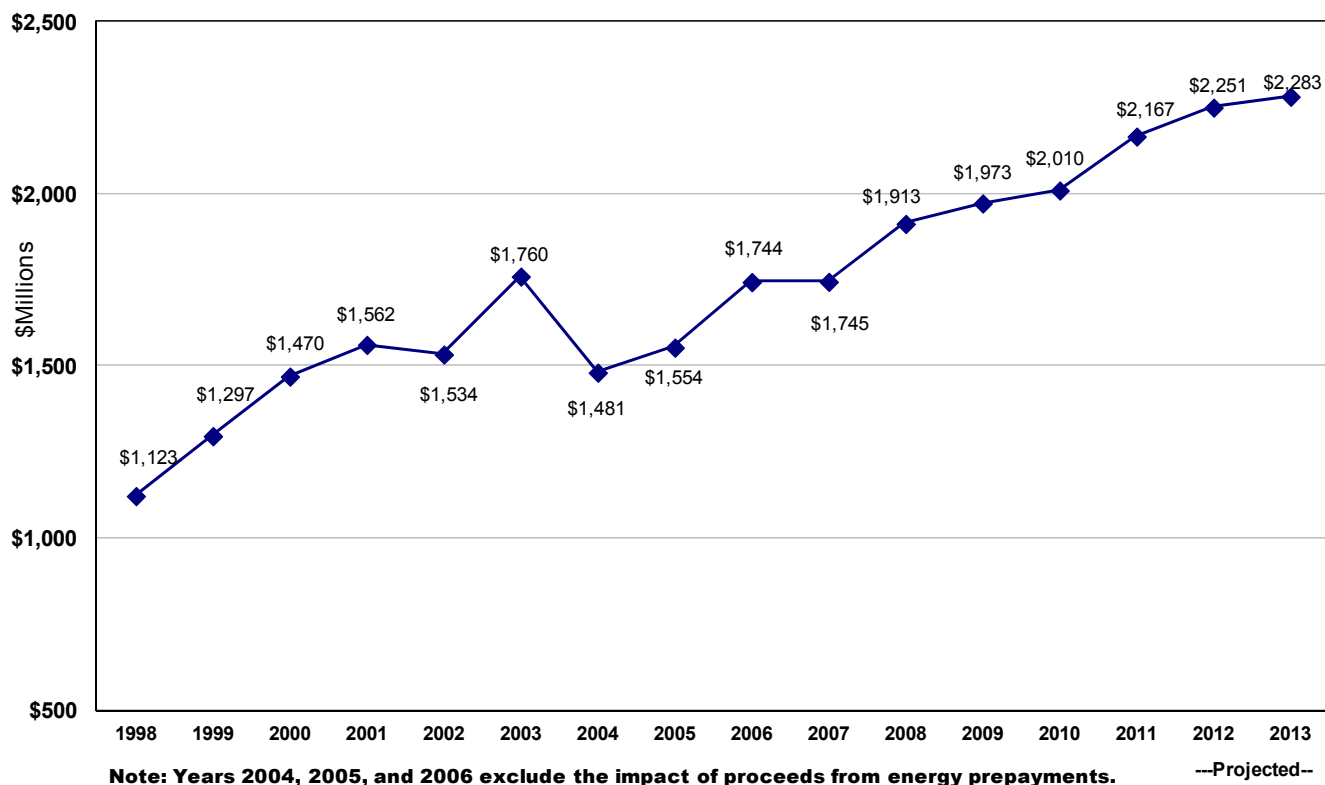
*See Appendix for a reconciliation of EBITDA to the most directly comparable GAAP measure.

Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a three-year average cash flow to provide a measure of its financial health.

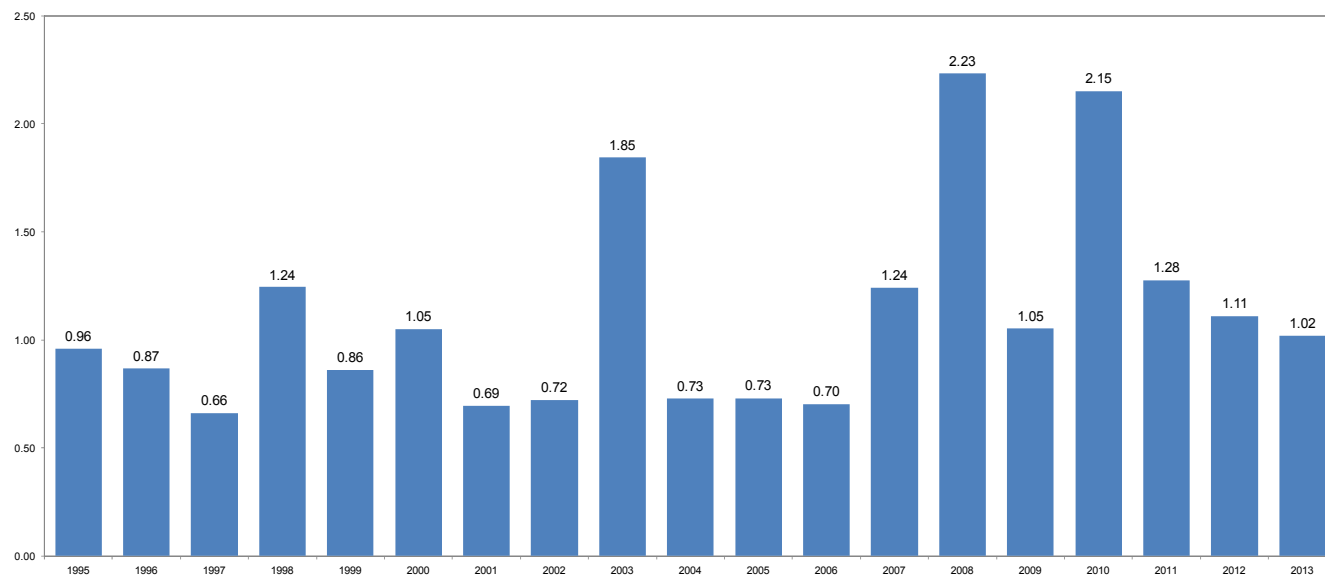
Cash Flow From Operations

3-Year Trailing Average



Debt Service Coverage Ratio

Measured by dividing Net Operating Income by Total Debt Service, the Debt Service Coverage Ratio (DSCR) describes TVA's ability to cover interest payments and current maturities of long-term debt and leaseback obligations. TVA's annual DSCR varies significantly due to TVA's use of mostly bullet maturity bonds. While TVA's three year average DSCR has improved in recent years as TVA has been following the financial guiding principles, since 1995 it has ranged from 0.66 to 2.23, with half of those years below 1.0.

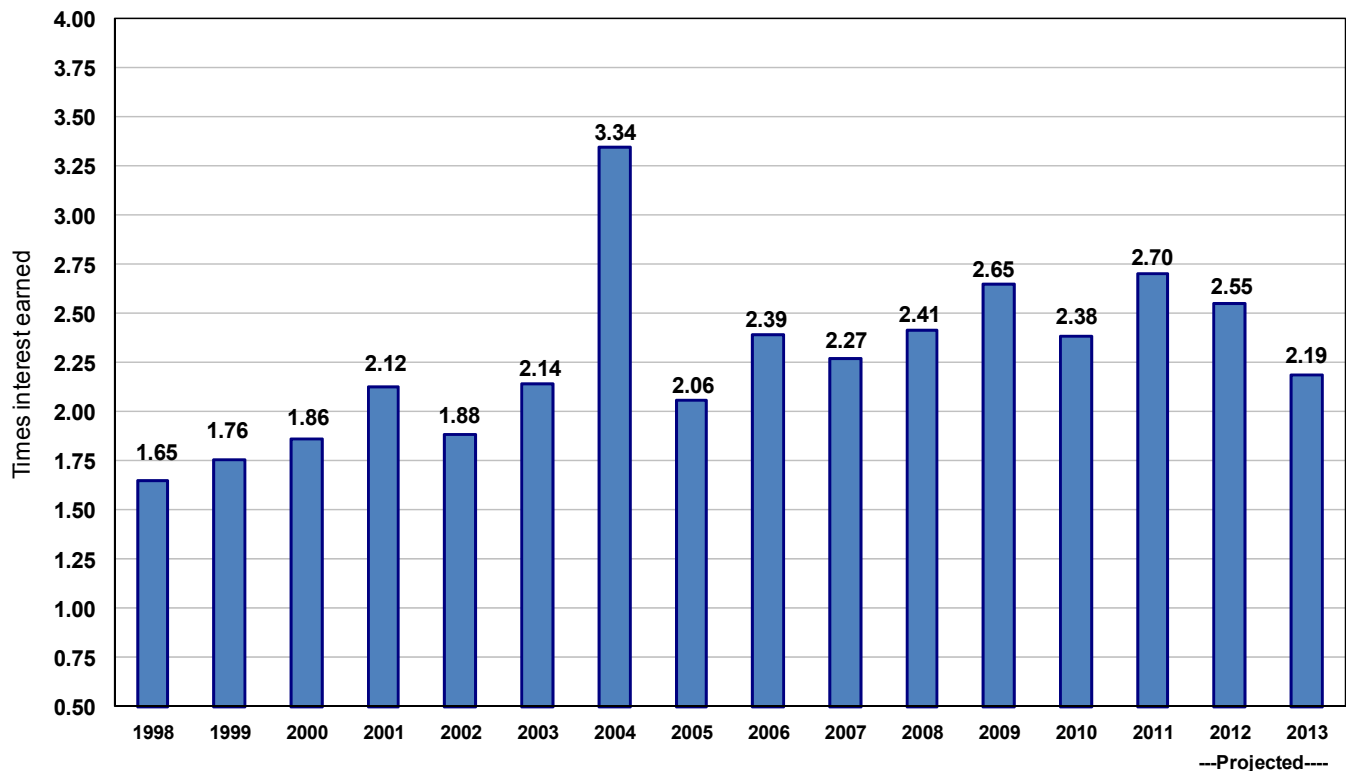
Debt Service Coverage Ratio

Interest Coverage Ratio

TVA's ability to pay the interest on its bonds and notes, measured by the degree to which cash flows from operations covers interest obligations, has also improved over the past several years.

The significant decrease in interest coverage from FY 2003 to FY 2005 was due to an increase in fuel and purchased power expense due to higher market prices and increased generation. Interest coverage experienced a sharp improvement in FY 2008 due to additional revenue from the fuel cost recovery mechanism. The interest coverage trends for FY 2012 and FY2013 are slightly lower than expected, however they are still stronger than historical average.

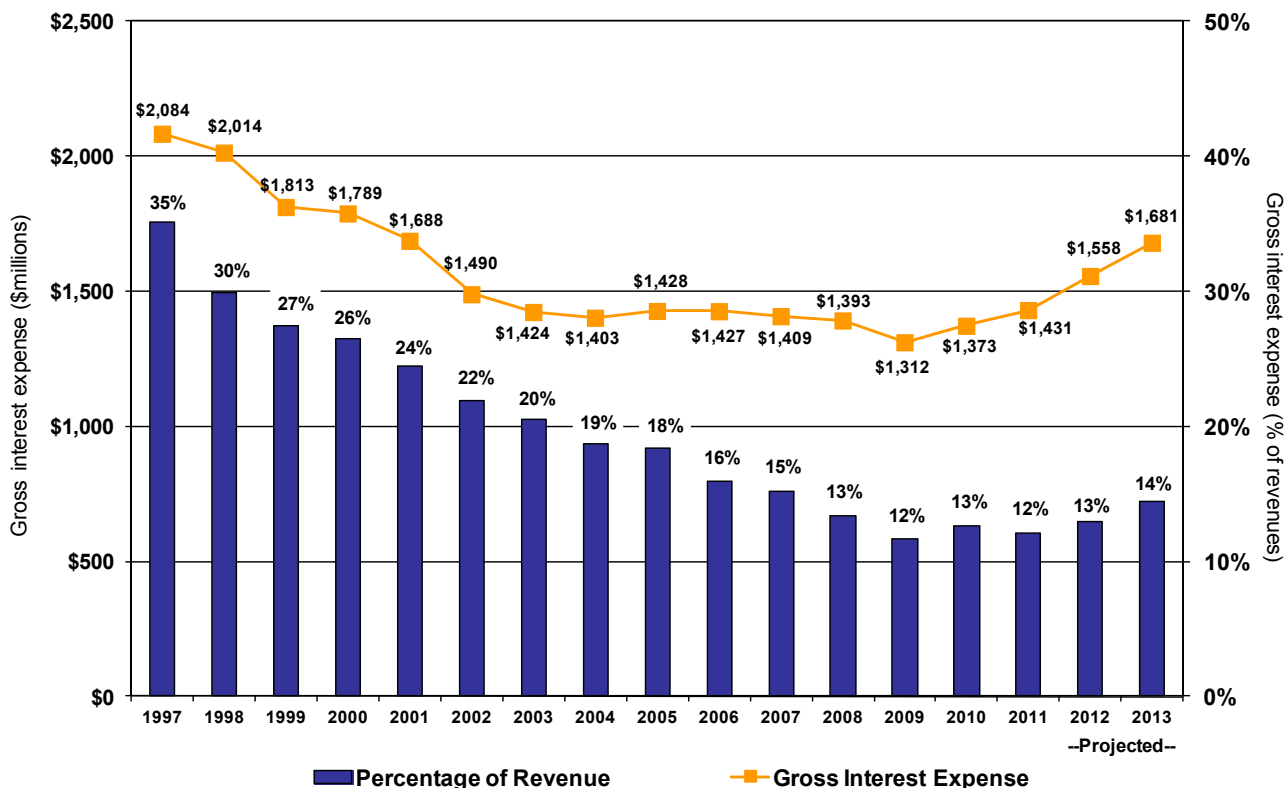
Interest Coverage Ratio



Interest Expense

TVA intends to continue to manage fixed costs including interest expense. Annual interest expense was more than \$2 billion at its peak. This amount has declined 31 percent, to \$1.4 billion in FY 2011. In FY 1997, annual interest expense as a percentage of total revenues was 35 percent. That figure has been reduced to only 12 percent of revenues for FY 2011 and expected to be 13 percent in FY 2012 and 14 percent in FY 2013.

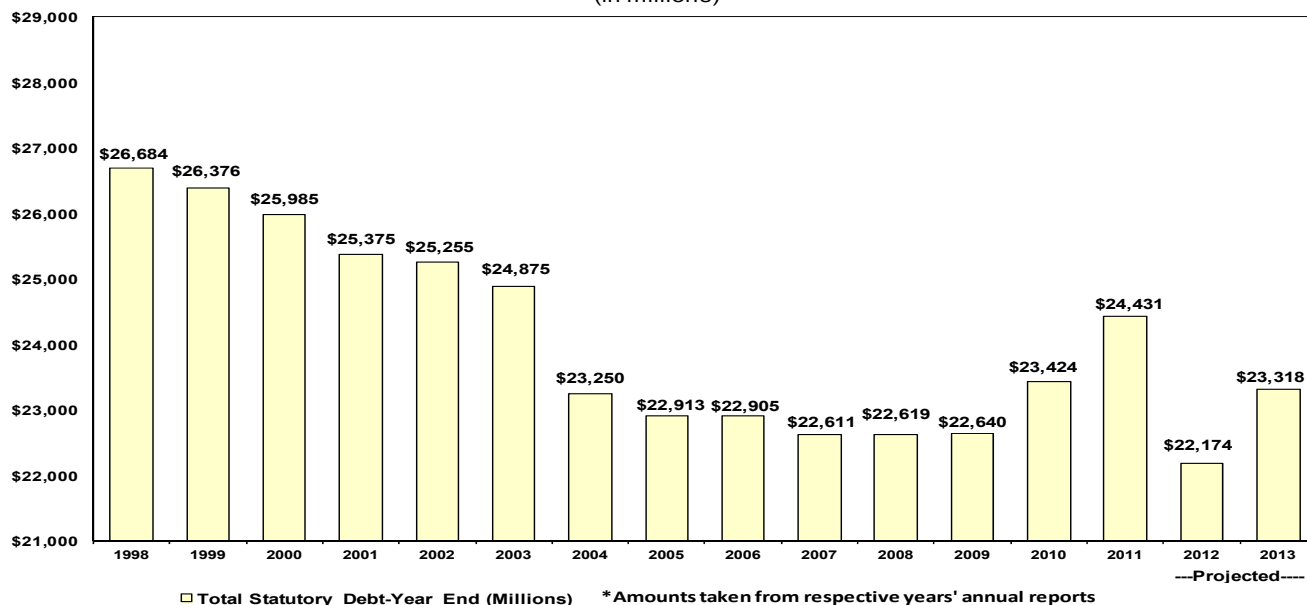
Interest Expense



Total Financing Balance

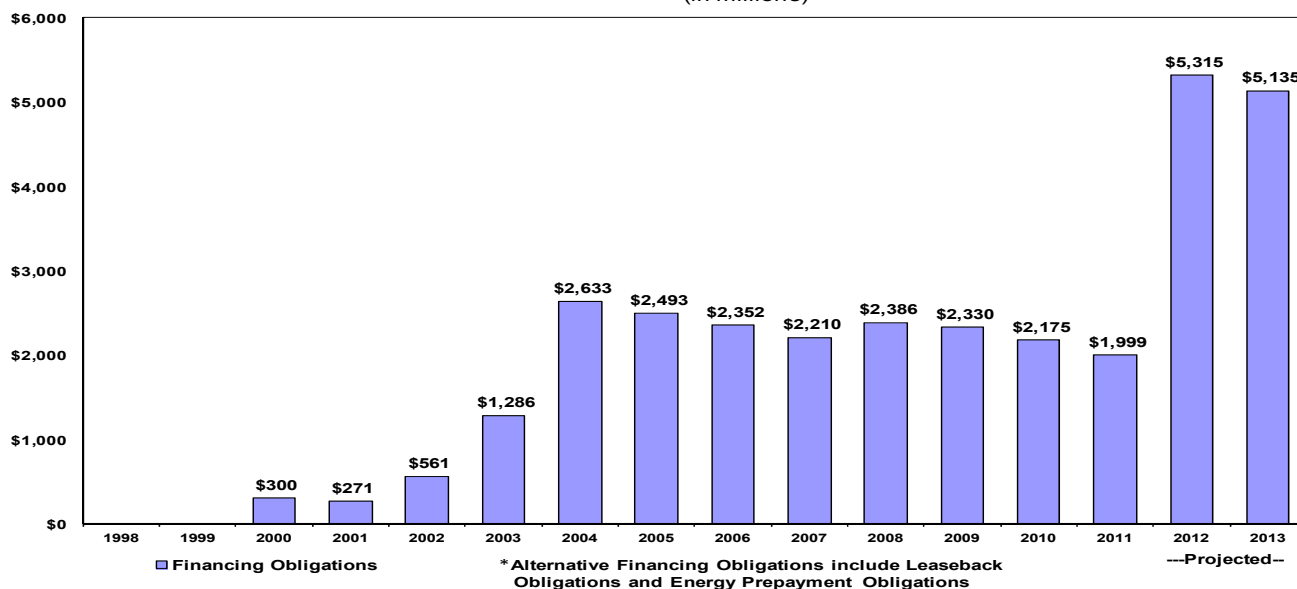
Through FY 2011, TVA has reduced its Total Debt and Debt-Like Obligations from the 1998 levels, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by \$254 million. Statutory debt obligations declined approximately \$2.3 billion during that same period. Total Debt and Debt-Like Obligations are expected to increase in FY 2012 and FY 2013 to fund capacity expansion, clean air capital, coal combustion residual projects, and the Kingston ash spill recovery. Statutory debt obligations for FY 2012 and FY 2013 include amounts for pending capacity expansion projects of \$394 million and \$630 million, respectively. These projects are subject to approval during the FY 2013 budgeting process scheduled for August 2012.

***Total Statutory Debt at Year End**
(in millions)



The increase in FY 2012 alternative financing obligations is driven by anticipated alternative financing on assets such as combined cycle facilities, clean air projects or additional generation units. On January 17, 2012, TVA entered into a \$1 billion lease purchase transaction for the John Sevier Combined Cycle facility located in Hawkins County, Tennessee. TVA will lease the facility beginning July 15, 2012 through January 15, 2042.

*** Alternative Financing Obligations at Year End**
(in millions)



Credit Facilities

The TVA Board has approved TVA entering into a credit facility or facilities not to collectively exceed \$5 billion. Thus far, TVA has entered into three such facilities, which allow TVA to borrow up to \$2.5 billion. They are not intended to be used as a tool to manage daily cash operations or as a primary source of funding. Any outstanding borrowings on the facilities count towards TVA's statutory debt limitation. As of September 30, 2011, there was \$575 million of letters of credit outstanding and there were no borrowings outstanding.

In December 2008, TVA and the U.S. Treasury replaced a \$150 million note with a memorandum of understanding under which the U.S. Treasury provided TVA with a \$150 million credit facility. This credit facility matures on September 30, 2012.

TVA's Mission and Results

Low-Cost Power and Reliability

Power Sales and Revenue

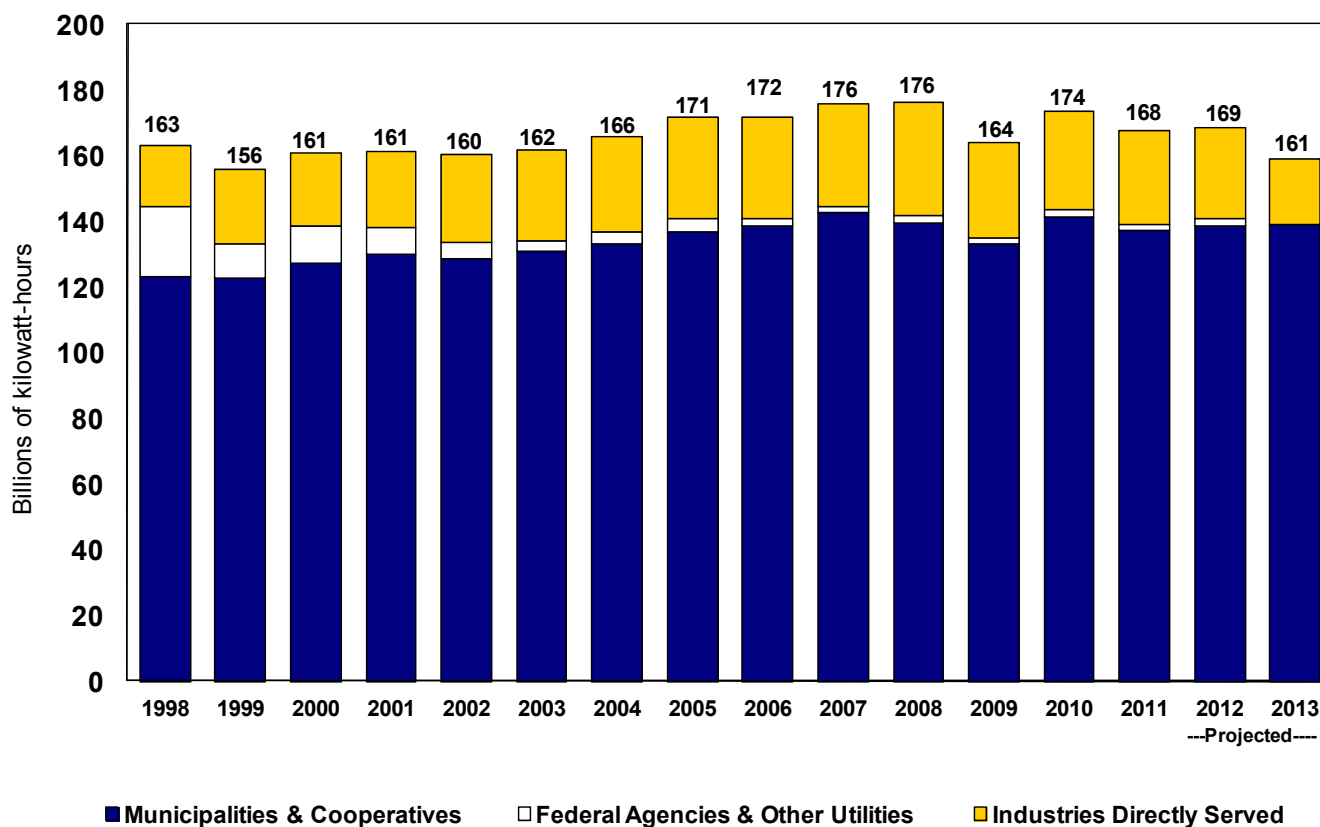
TVA sells electricity to three main customer groups:

Municipalities & Cooperatives: TVA delivers power to wholesale customers, which include municipal utility companies and cooperatives, who resell that power to consumers. The municipal utilities make up the largest block of TVA customers. Cooperatives are customer-owned companies, many of which were formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative distributors represent the majority of TVA's business.

Industrial Directly Served Customers: TVA also sells power directly to industrial customers with large or unusual loads. FY 2013 projections include reduced demand in this segment from large customers.

Federal Agencies and Others: TVA sells power directly to federal agencies. Off-system sales are included in the "Other Utilities" category. TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring utility systems. Sales to these companies typically represent less than one percent of TVA's total power sales.

TVA Total Sales



Demand in the TVA Service Territory

In FY 2011, TVA sold 168 billion kilowatt-hours of electricity and is estimated to sell 169 billion kilowatt-hours in FY 2012 and 161 billion kilowatt-hours in FY 2013. Most of TVA's sales growth in the past several years has come from customers who are municipal and cooperative distributors of TVA power, which has offset reduced demand from industrial customers. Demand for electricity in the TVA region grew at approximately one and a half percent annually from FY 1995 through FY 2011. TVA expects significant load reductions in FY 2013 as a result of losing its largest customer due to competing technologies in a more stringent economic environment. While economic conditions have reduced power demand in recent years, TVA believes power demand will grow under most likely scenarios, and TVA intends to make capital investments in the current year as well as future years. The population of the TVA service region has surpassed nine million, growing at a rate slightly higher than the national average.

TVA System Capability		
<i>Summer net capability (MW) at September 30, 2011</i>		
Coal-Fired	13,807	37%
Nuclear	6,691	18%
Hydro	5,443	15%
Combustion Turbine (owned or leased)	8,224	22%
Power Purchase Agreements	3,087	8%
Other*	<u>48</u>	<u><1%</u>
Capacity**	37,300	100%

* Other includes 35 MW of TVA and Contract Renewable Resources (non-hydro) and 13 MW of Diesel Generator capacity.

**Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP. Hydro capacity represented includes pumped-storage.

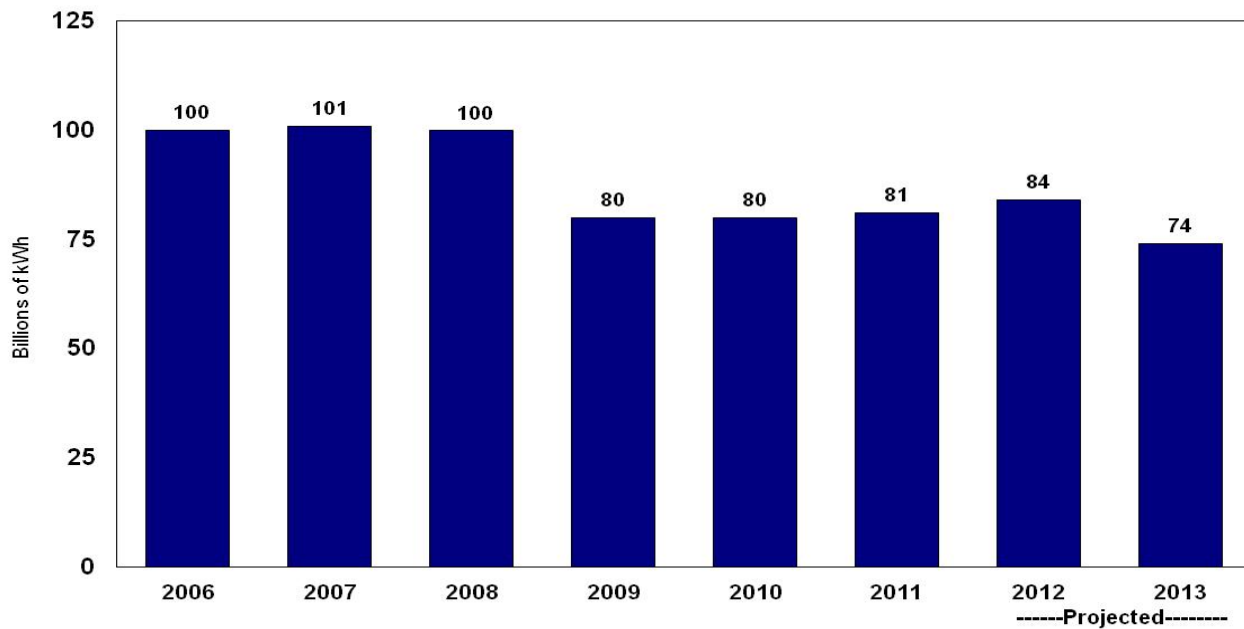
Operational Performance

Fossil Power Highlights

TVA's power production portfolio includes in its fleet eleven coal-fired plants, which represent a combined 13,807 MW of net summer capability. TVA's fossil system also includes eighty-seven simple-cycle natural gas-fired combustion turbine units at nine plant sites and eleven natural gas combined cycle units. The simple-cycle combustion turbine sites are peaking sites that are designed to start quickly and help meet demand for electricity during peak operating periods.

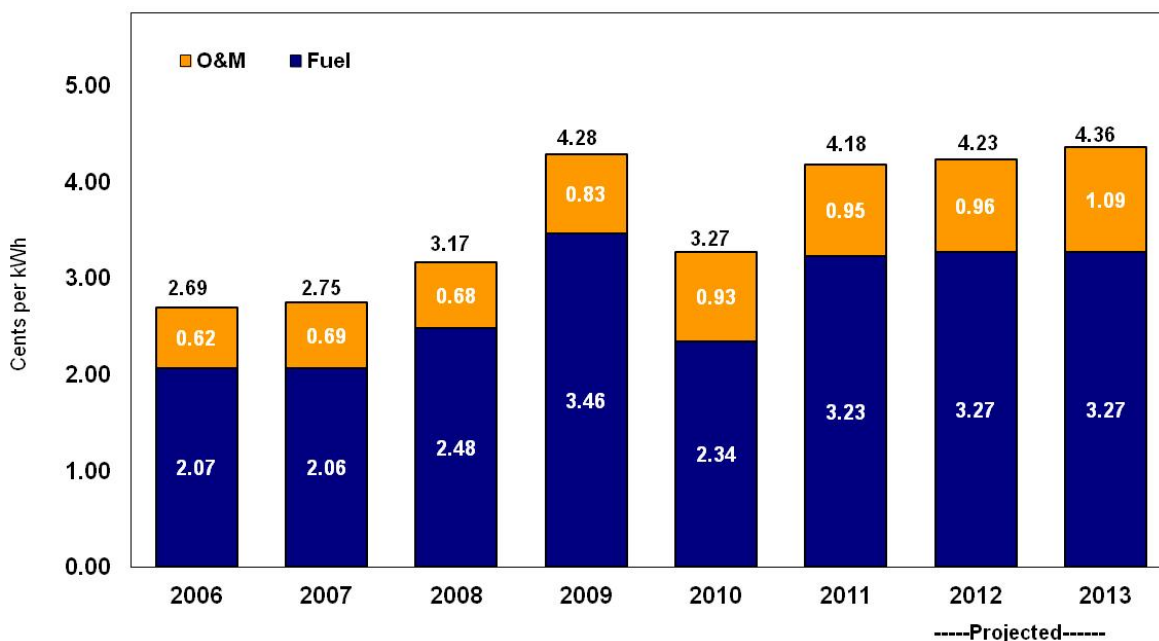
Coal-fired generation for FY 2011 was lower than expected due to increased generation from hydro and other lower-cost resources and this trend is expected to continue. As new nuclear and gas generation come on line, and coal generation begins to decline significantly, TVA will continue to progress toward its Vision of being the Nation's leader in improving air quality.

TVA Fossil Power Generation



Production expense per kilowatt-hour is expected to increase from FY 2011 to FY 2012 due to increased fuel costs related to higher fossil generation. In FY 2013, production expense per kilowatt-hour is expected to increase slightly from FY 2012. The costs increase is due to higher operation and maintenance costs associated with mitigation of known risks and to continue sustainability of performance improvements, expected particulate control costs, and the additional costs associated with the start-up of the John Sevier Combined Cycle Plant.

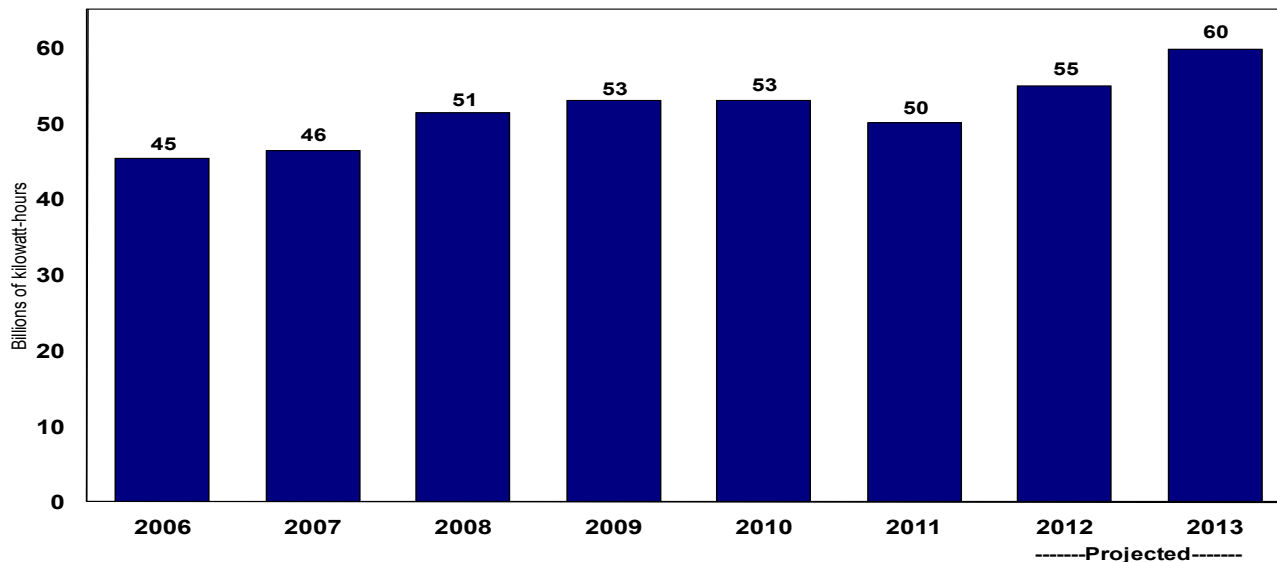
Fossil Power Production Expense



Nuclear Power Group Highlights

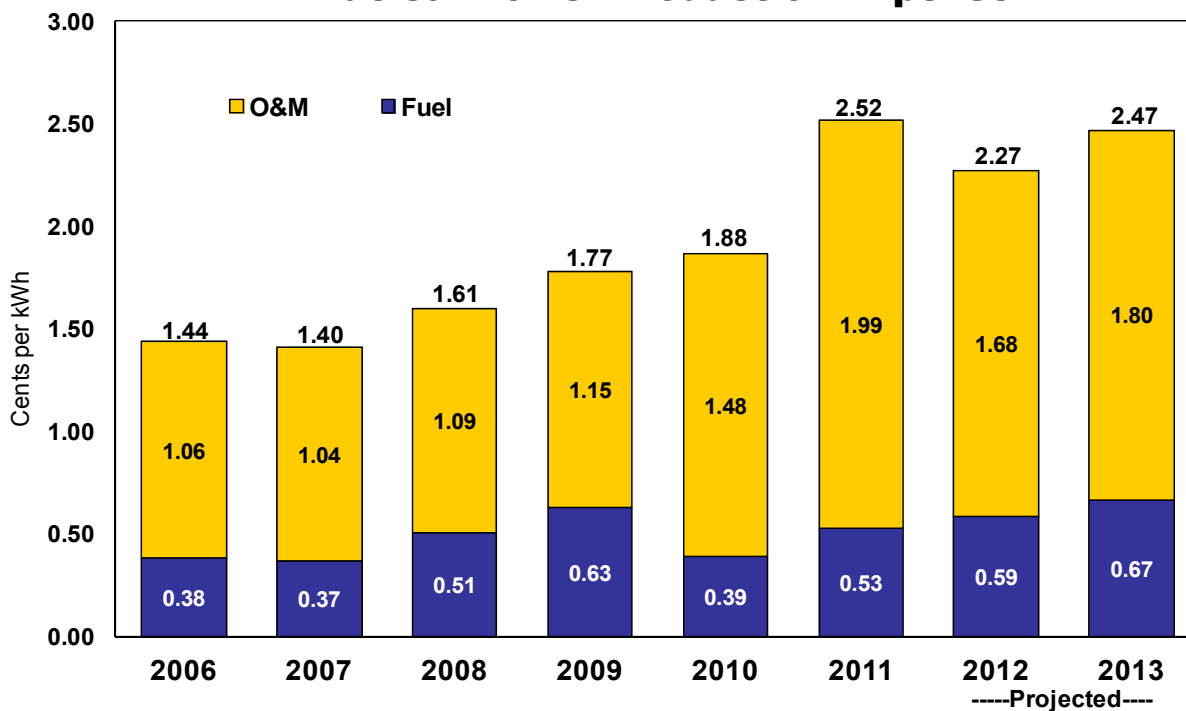
TVA's nuclear operations are critical to meet the region's power needs. In FY 2013, TVA's nuclear units are expected to generate sixty billion kilowatt-hours of electricity, which should represent approximately 41 percent of TVA's total net generation.

TVA Nuclear Generation



TVA's total nuclear production expense on a per-kilowatt-hour basis is expected to increase slightly in FY 2013 due to higher operation and maintenance costs for equipment reliability projects.

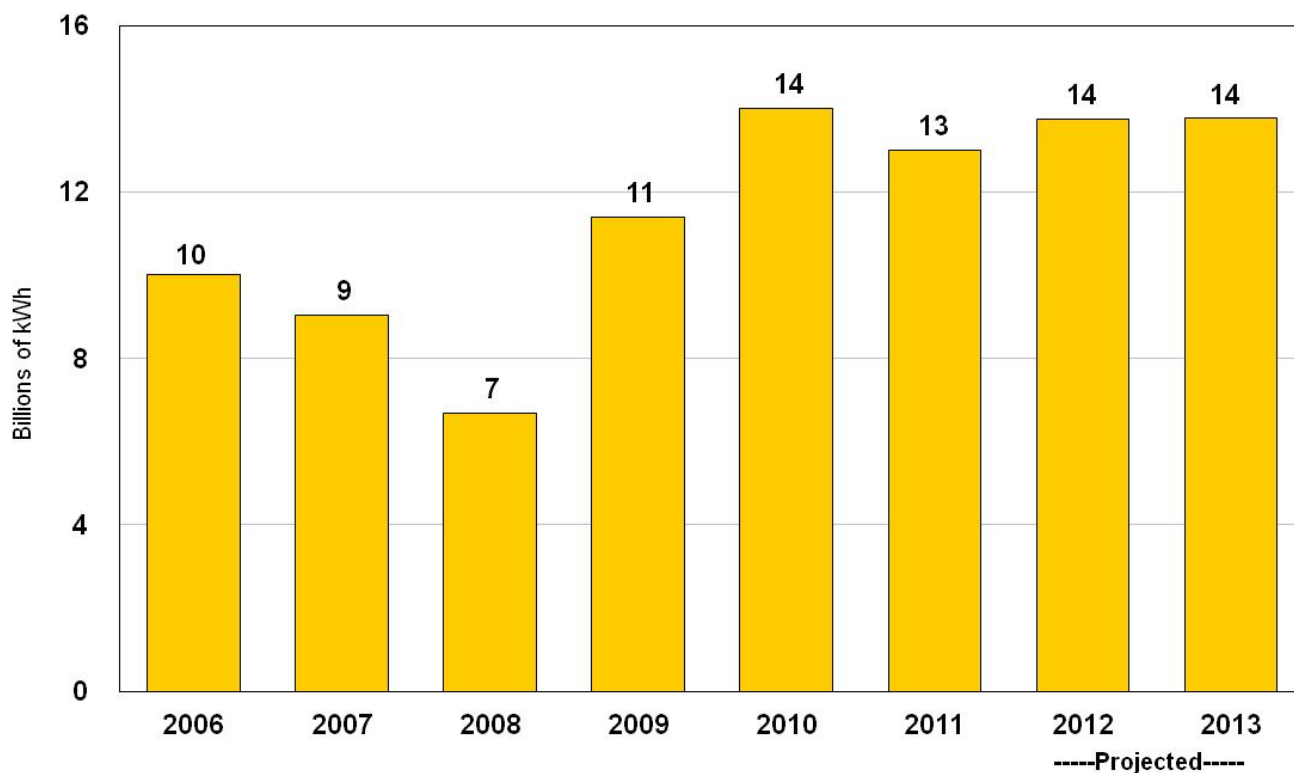
Nuclear Power Production Expense



Hydroelectric Power Highlights

In FY 2011, hydro generation was slightly lower than normal due to lower than normal rainfall and runoff. For FY 2012 and 2013, hydroelectric generation is forecast to return to a normal level. Also in FY 2012 and 2013, TVA's integrated hydroelectric power system of dams and pumped-storage units are expected to generate approximately fourteen billion kilowatt-hours of electricity – approximately 8 percent of TVA's total net generation. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power represents a very important element in TVA's total portfolios.

TVA's hydroelectric facilities have very low operating costs and can be used as base-load, intermediate, or peaking units, depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountain-top reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

TVA Hydro-System Net Power Generation

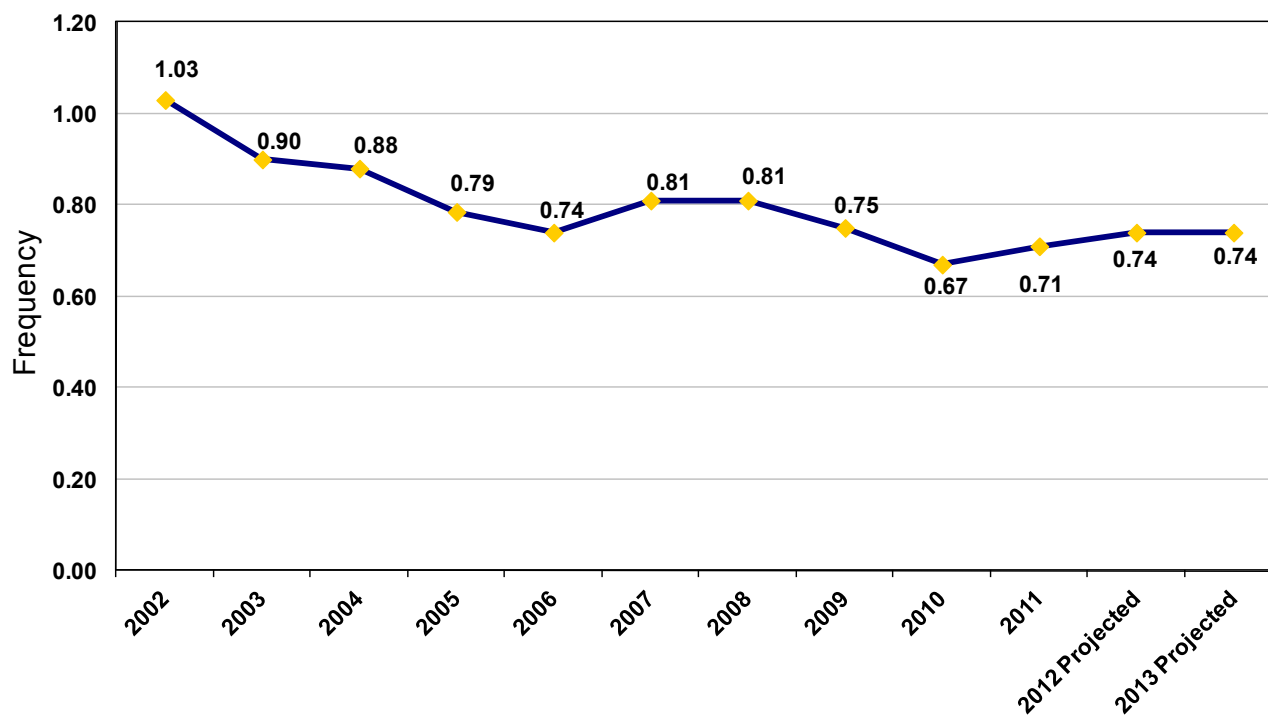
TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, delivered approximately 168 billion kilowatt-hours of electricity sales in FY 2011 and over the past twelve years maintained 99.999 percent reliability for delivering electricity to its local power distributors and directly served large industrial and government customers. In FY 2013, the transmission system is expected to deliver 161 billion kilowatt-hours of electricity. Currently, this system is comprised of approximately 15,940 circuit miles of transmission lines, including 2,465 miles of extra-high-voltage (500 kilovolt) transmission lines, 498 substations, power switchyards and switching stations, 1,240 connection points, and 237,500 right-of-way acres.

The TVA transmission organization offers transmission services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate its transmission functions from TVA's marketing functions.

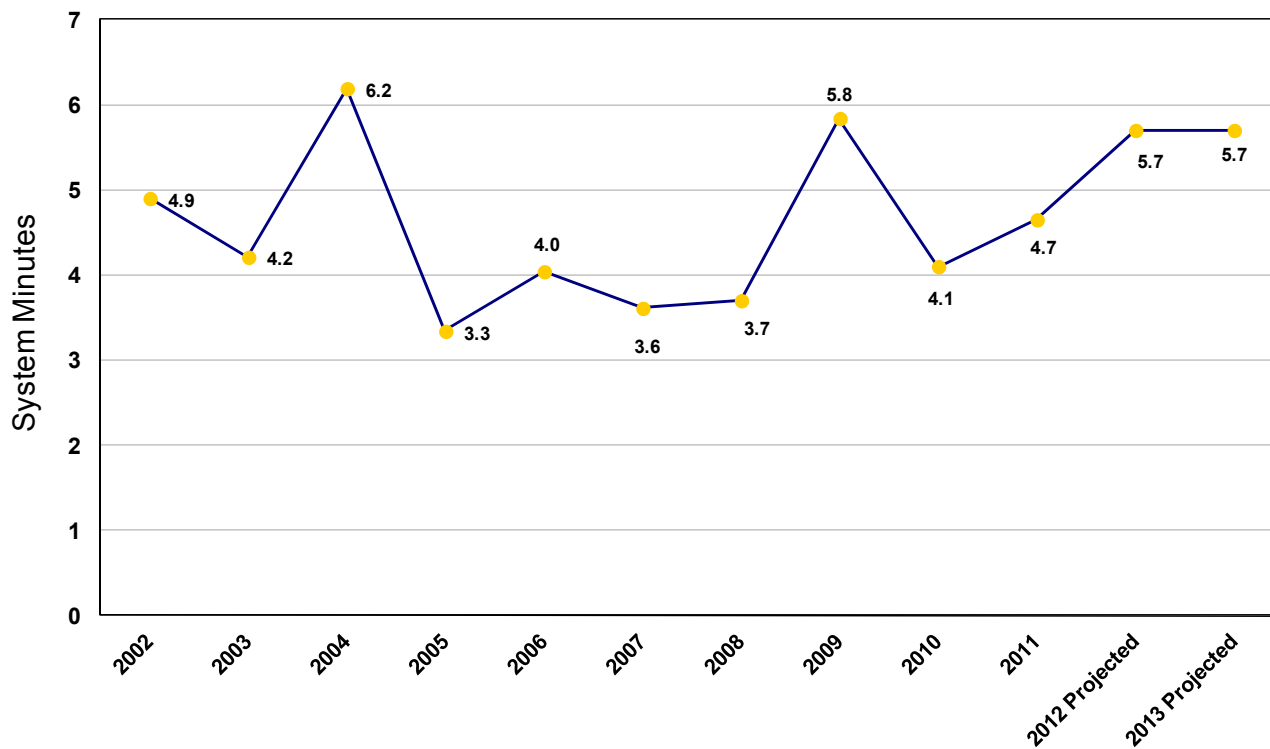
Connection point interruptions are driven primarily by weather, and can be particularly difficult to reduce across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by approximately 44 percent since FY 1995 by investing annually in lightning mitigation projects.

Connection Point Interruptions



Another measure of reliability is Load Not Served (LNS), which is a measure of the magnitude and duration of interruptions that affect TVA customers. LNS applies to interruptions that exceed one minute and is calculated by multiplying the percentage of total load not served (in megawatt-hours) by the number of minutes in the fiscal year. TVA is taking proactive steps to maintain an improved level of LNS by working on its transmission preventative maintenance program, identifying equipment that is nearing the end of its service life and replacing it before failure, and recovering rapidly from interruptions.

Load Not Served (LNS)



Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood control, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA completed a new high-level environmental policy to align with and execute the direction in the TVA Strategic Plan. The Environmental Policy was approved by the TVA Board in 2008 and is intended to identify environmental objectives that will allow TVA to produce cleaner and still-affordable electricity.

In August 2010, TVA reviewed its 2008 Environmental Policy and found that progress has been made on the Environmental Objectives for all six areas of the Environmental Policy and that no changes (internal or external) necessitate policy revisions. The Environmental Policy remains consistent with stated TVA Board strategy and policy. Environmental impact studies to assess implementation of the policy are under way or completed (e.g. Natural Resource Plan).

On June 3, 2011, TVA submitted its second Strategic Sustainability Performance Plan (SSPP). Implementing TVA's SSPP will demonstrate TVA's environmental leadership in selected target areas including green and efficient buildings and greenhouse gas reduction. Implementation is expected to reduce TVA's costs and risks over the long term and position TVA to become a sustainability leader among utilities.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's 2008 Environmental Policy, TVA is working toward obtaining additional power supply from clean and renewable sources by 2020. TVA's Environmental Policy also aims to limit the growth in volume of greenhouse gas emissions and reduce the rate of emissions by FY 2020.

The TVA Board also has approved guiding principles for an Energy Efficiency and Demand Response Plan and a Renewable and Clean Energy Plan. The Energy Efficiency and Demand Response Plan seeks to slow the current rate of growth in the region's power demand by providing opportunities for residential, business, and industrial consumer groups to use energy more efficiently. The Renewable and Clean Energy Plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions. The Plan advises TVA to reduce the carbon intensity of the power generation in a cost-effective manner through the implementation of conservation measures, preferentially reviewing regional renewable and clean energy supply options, and considering technology innovations to address intermittency issues associated with renewable options.

On August 18, 2011, the TVA Board accepted the Natural Resource Plan (NRP). The NRP is designed to enhance stewardship of public recreation facilities, water resources, wildlife and plants, and historic and cultural sites on TVA-managed reservoir lands by helping to guide TVA management to better meet public stewardship objectives while responding to the needs of the TVA region's communities and residents. The NRP was developed with public input including input from TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. Implementation of the NRP is expected to be staged over a twenty year period. It is expected to be reviewed and updated at least every five years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth. TVA has direct stewardship responsibility for about 293,000 acres of public land, approximately 11,000 miles of shoreline, and approximately 650,000 acres of reservoir water surface available for recreation and other purposes. TVA reservoirs and public lands provide outdoor recreation opportunities for millions of visitors each year.

Navigation on the Tennessee River is made possible by the system of dams and locks and provides significant contributions to the regional economy. Construction of a new lock at Chickamauga Dam above Chattanooga is essential to maintaining navigation on the upper Tennessee River. The existing lock may eventually need to be closed due to safety issues stemming from concrete growth. Concurrently, a new lock project is underway at Kentucky Dam, near Paducah, Kentucky. The U.S. Army Corps of Engineers is responsible for both construction projects.

TVA also manages the river system to provide water for hydro-generation and cooling water for TVA nuclear and fossil power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at its dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tail waters (the areas immediately downstream from dams). In managing the watershed, TVA balances

water quality protection with other demands for water use. TVA implemented a number of initiatives that include the Tennessee Valley Clean Marina Initiative, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring and Aquatic Ecological Management programs, and a Strategic Partnership Initiative. TVA performs year-round monitoring and analysis of the 41,000-square-mile watershed and reports to the people of the region on the health of the river system.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the Environmental Protection Agency shows air quality in the nation has steadily improved, with significant declines in collective emissions of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has also shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance and is continuing to make further improvements in air quality. While economic conditions contributed to less fossil generation and somewhat lower emissions in 2009, TVA's record in removing these pollutants remains one of the strongest and most effective in the industry. Through September 2011, TVA has reduced its annual NO_x emissions by 86 percent below peak 1995 levels by installing various controls, including low- NO_x burners and/or combustion controls on fifty-eight of its fifty-nine coal-fired units and installing selective catalytic reduction units, or SCRs, on twenty-one of the largest units. TVA also reduced its SO₂ emissions by 90 percent from the peak 1977 level by switching to lower-sulfur coals and operating scrubbers on seven larger units. As of September 30, 2011, TVA has invested approximately \$5.4 billion to reduce coal-fired power plant emissions at its eleven coal-fired power plants. TVA estimates that spending on emission controls for SO₂, NO_x, and mercury will cost an additional \$3.0 billion to \$5.0 billion in the next decade.

To provide a more certain business environment, TVA negotiated two agreements with the EPA, four states, and three environmental groups that brings closure to ongoing cases, eliminates some future legal challenges and improves TVA's opportunity to achieve its vision to become a leader in cleaner energy. The agreements, announced April 14, 2011, with the Federal Facilities Compliance Agreement effective on June 13, 2011, align with TVA's progressive initiatives to deliver cleaner energy and lead the nation in increased nuclear capacity as it retires older, less efficient coal-fired units. The agreements require that all emission control equipment is continuously operated to ensure optimum removal of air pollutants. The agreements also set a schedule for installing emission control devices as well as a set schedule for required coal unit retirements, totaling eighteen unit retirements by late 2017. Fleet wide emission caps for SO₂ and NO_x are set per year, with caps lowering year to year as more units are required to be retired. .

CCR Initiative

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's wet Coal Combustion Residual (CCR) facilities. The first and second phases, which included a detailed inspection of all wet CCR facilities, geotechnical explorations, material testing, stability analyses, and studies are complete. The third phase of the program, which is implementation of the recommended actions, is ongoing and includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

Economic Development and Technological Innovation

Demonstrating leadership in sustainable economic development in the Tennessee Valley region means helping communities recruit and retain quality jobs and making the region a better place to live and work.

TVA Economic Development's goal is to be a source for economic development information and services across the seven-state Tennessee Valley region. TVA's investments in newer, cleaner power supply resources create new jobs, retain local industries, and support the national economy with purchases for fuel, materials, and services. TVA's Watts Bar Nuclear Unit 2 and John Sevier Combined Cycle Plant, currently under construction employ more than four thousand construction workers on site, as well as provide indirect economic benefits to the surrounding communities.

TVA's effective partnerships with its customers and communities have helped produce quality jobs and resulted in significant capital investments in new and existing companies. Economic development efforts are performed in partnership with private and public organizations, including regional and state agencies. TVA helps meet the needs of its stakeholders for regional economic development that results in a better life for Tennessee Valley residents today and into the future. TVA's innovative programs and services combine to create powerful tools for sustainable economic development. These programs and services include, but are not limited to, the following:

Global Business

Industrial Recruiting Services

TVA works with distributor customers and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

TVA assigns a regional development specialist with economic development expertise to serve counties in a specific TVA region to help create, sustain, and foster job growth.

Community Development

Community Preparedness

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders.

Training

TVA helps communities by providing need-specific training to increase the competitiveness of its communities in economic development.

Rural Initiative Strategy

TVA helps rural communities better market their sites and area to prospective companies and site selection consultants.

Retail Development

Retail Development is an economic development program that links communities with retail business opportunities, expansions, and retentions.

Business Resources

Existing Industry Support

An array of products and services are geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

These funds are designed to stimulate job creation and leverage capital investment in the TVA power service region. The loan funds are open to primary manufacturing companies and other institutions, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties Loan Fund

This revolving loan fund is available to the region's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide support that many companies need to survive the challenging early stages of business start-up. TVA provides technical and research assistance to incubators where clients can share services, equipment, and building space.

Diversity Alliance

TVA helps the Tennessee Valley's high-growth sectors of woman-owned and minority-owned businesses to increase their job creation and capital investment opportunities by providing business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing and New Customers

This economic development incentive program offers financial incentives to existing companies and new companies that contribute to the economic development of the Tennessee Valley region and complement TVA's power system.

Appalachian Regional Commission Project Administration

TVA serves as the lead agency to administer grants for the Appalachian Regional Commission in the Tennessee Valley region.

Research

TVA provides communities with economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Technical Services

TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities better market and prepare for prospects and growth.

TVA Economic Development's innovative programs and offerings have led to:

- The Megasite Program – a catalog of certified, large industrial properties ready for heavy industrial development. This program has certified nine sites (one site has since dropped from the program) and seen five sold to Severcor (now Severstal), PACCAR, Toyota, Volkswagen, and Dow Corning/Hemlock Semiconductor. These companies represent almost six thousand direct jobs and more than \$5.5 billion in capital investment.
- Over forty-three thousand jobs were recruited and/or retained and companies made \$4.9 billion in capital investment in FY 2011.
- The Data Center Site Assessment program aims to better prepare communities in the TVA service territory to support the attraction of data center projects via a catalogue of sites well-suited to host data centers, collection of key site and community data to support active marketing of these sites to prospects, and maintaining a dialogue between TVA, community economic development organizations, and other stakeholders whose involvement is critical to making these efforts successful. Twenty primary data center sites have now been identified since the program's inception.
- The Rural Strategy Initiative works to help rural areas better market sites and their communities to prospective companies and site selection consultants.
- Four of the largest (\$1 billion-plus) industrial economic development announcements in the nation since 2007 have occurred in the TVA service area (Toyota, Volkswagen, Wacker Chemie, and Dow Corning/Hemlock Semiconductor).
- The Valley Investment Initiative (VII) program is offered in conjunction with TVA's local power providers. VII makes financial incentive awards to qualifying existing companies and new companies that are contributing to the economic development of the TVA service area and complement TVA's power system resources. In FY 2011, the program was expanded to include new companies expanding into the Valley.
- *Site Selection* magazine ranked TVA among "Top 10 U.S. Utilities in Economic Development" for six consecutive years. TVA is one of only three utilities to earn this recognition for the past five years.

TVA Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a national leader in technological innovation. A key element in TVA achieving its renewed vision is technology innovation. Innovation is an avenue where TVA strives to be at the forefront of the utility business.

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low cost power and clean energy. Three signature technologies have been identified for special emphasis. These are small modular nuclear reactors (SMRs), electric vehicle transportation infrastructure, and smart grid for the bulk power system. The goal is to identify leadership roles for TVA to demonstrate how these technologies can be used to reduce costs and lower emissions to the environment. Technology Innovation & Sustainability works collaboratively with lead line organizations to develop technology roadmaps for these signature technologies. These roadmaps will include technology goals and milestones in an integrated plan for advancing the technologies over the next three to five years.

In addition to TVA's signature technologies, TVA's research and development strategic plan includes several issue areas where TVA is pursuing technology innovation critical to the transition to a cleaner energy economy, including air and water quality, clean energy and integration, long term operations of generating assets, and energy efficiency.

TVA's research portfolio selection enables TVA to take advantage of new technologies in these issue areas. Each year TVA's annual research portfolio and research strategic plan is updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development operations.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with the Electric Power Research Institute (EPRI), the U.S. Department of Energy (DOE), national labs, federal agencies, academic institutions, and other research consortiums. Technology evaluations are most often accomplished through applied field scale research to document performance, needs and requirements. TVA delivers or transfers results to the operational units or other stakeholders through reporting, technology transfer events and educational outreach. TVA also serves as a technology advisor for TVA's distributors and directly served customers.

Signature technologies were selected by TVA's Executive Council in 2010. These technologies share three characteristics that made them TVA's top choices for focused innovation efforts: TVA has the expertise to become a world class technology leader, these technologies will benefit the nation, and these technologies have the potential to make a powerful and beneficial impact on TVA's mission.

Signature Technologies

Electric Vehicle Infrastructure

- TVA initiates and manages a portfolio of research and development projects and demonstrations and coordinates investment and activities with the EPRI and industry related to transportation electrification to support regional distributors of TVA power and provide guidance on matters of plug-in electric vehicle readiness and non-road transportation electrification for the Tennessee Valley.
- Specific projects investigate: the value proposition of electricity as a transportation fuel; technology adoption and consumer behavior; charging impacts and mitigation strategies; charging optimization through 'smart charging' and grid modernization activities; education and outreach message and channel development through TVA Fuel Solutions; non road electrification; advanced infrastructure development and economic and environmental modeling.

Smart Grid for Bulk Power System

- In cooperation with the Tennessee Valley Public Power Association, power distributors, and EPRI, TVA is developing a vision and roadmap for coordinated grid modernization in the Tennessee Valley. Guided by overarching principals of sustaining reliability, increasing energy efficiency, and integrating clean energy sources, the roadmap identifies:
 - industry and regulatory drivers that necessitate modernization;
 - barriers and interdependencies that must be addressed for successful implementation;
 - critical gaps in technology deployment; and
 - key opportunities for investment guided by overall benefits, system planning requirements, pricing and product objectives, and system operational needs.
- TVA has developed and is evaluating a number of low-cost, multi-purpose sensors that enable the capability to monitor, maintain, optimize, and extend the life of critical power system equipment assets. Specific monitoring

applications of interest include: temperatures, pressures, vibration, currents, acoustic emission, sag/displacement, geo-magnetically induced currents, voltages, and gas-in-oil. Successful sensor applications are anticipated to become part of TVA's smart grid deployments.

Small Modular Reactors

- TVA is collaborating with Generation mPower LLC, EPRI, Nuclear Energy Institute, and DOE to identify research and development needs for the development, design, licensing, deployment, construction and safe operation of SMRs. TVA recently signed a letter of intent with Generation mPower for constructing up to six Babcock & Wilcox mPower SMRs at TVA's Clinch River site.
- SMRs provide simplicity of design, enhanced safety and flexibility (financing, siting, sizing, and end-use applications).
- SMRs can provide power for applications where large plants are not needed and they can replace aging fossil plants.
- SMRs also provide safety and potential nonproliferation benefits to the United States.

The issue areas are additional technology innovation focus areas that potentially fill gaps that help meet TVA's vision.

Issue Areas

Air and Water Quality

- Completed a long-term demonstration of passive treatment technologies conducted at TVA's Paradise Fossil Plant to remove ammonia, nitrate, trace metals (arsenic, mercury, and selenium) and other pollutants from fossil plant wastewater. The treatment system components included trickling filters, zero valent iron (ZVI) trenches, settling pond, and constructed wetlands.
- Initiated a small-scale, terrestrial carbon sequestration project on TVA-owned land in early 2011. The purpose of the project is to develop internal knowledge of the steps needed to generate verified and certified carbon offsets from planting trees and grasses. Environmental stewardship is an integral part of this project.
- Conducted long-term air monitoring at Look Rock located in the Great Smoky Mountains National Park to assess the effects of TVA fossil emissions. Analysis of the data confirmed TVA fossil emissions reductions in East Tennessee coincided with reduced sulfur dioxide (SO₂) levels at Look Rock with little change in sulfate levels.
- Participating on a TVA team evaluating the wastewaters that will remain after the TVA fossil plants convert to dry handling of ash. Wastewaters are being characterized and treatment system requirements are being identified that will meet new effluent limit guidelines that will be proposed by Environmental Protection Agency (EPA).
- Participating with EPRI on the Ohio River Basin Trading Program to develop a cost effective and mutually beneficial mechanism to improve water quality in individual watersheds.
- Collaborating with EPRI, Oak Ridge National Laboratory (ORNL), and Tennessee Tech University on a thermal plume study at Cumberland Fossil Plant to monitor the behavior of fish residing in and near a heated discharge to determine impacts of thermal discharges on the fish community in situ.
- Conducting long-term acidic deposition monitoring across five southern states since 1986 in support of the National Atmospheric Deposition Program. The purpose is to determine the magnitude of acid deposition in high elevations in the Appalachian Mountains.
- Conducted fugitive emissions study to sample airborne particles resulting from material handling operations at fossil plants. Results will be used to support air permits issued under more stringent PM 2.5 regulations.
- Conducting Enhanced Mercury Oxidation studies with Shaw Environmental to evaluate potential mercury removal efficiencies from flue gas at coal-fired power plants.
- Completed an Information Collection Request for Hazardous Air Pollutants (HAPs) data evaluation in cooperation with EPRI to improve the accuracy of data provided to the EPA to inform the HAPs rulemaking process.
- Evaluating the environmental impacts of transportation electrification (electric vehicles). The results of the project will assist TVA in exploring the potential benefits associated with electric transportation in the Valley.
- Completed and published study examining mercury deposition in litterfall and throughfall in Great Smoky Mountains National Park.

Clean Energy and Integration

- Completed construction and began data analysis at the Melton Hill Sustainable Recreation Site, a clean energy recreation model for the region and nation; technologies demonstrated and evaluated include: solar PV, solar water heating, small wind, solar powered LED lighting, energy efficient lighting controls, high efficiency HVAC, electric vehicles, coal combustion product reuse, water efficiency, and riparian zones.

- Conducted comprehensive economic and technical feasibility study for the conversion of TVA's Shawnee Fossil Plant Unit 10 from coal to renewable biomass.
- Demonstrating advanced, highly distributed solar PV technology to evaluate integration benefits and assess increased efficiency, grid and voltage support benefits.
- Completed feasibility study for integrating concentrated solar power technology with an existing coal-fired unit.
- Development of a renewables roadmaps; completed biomass roadmap, initiated solar roadmap.
- Co-sponsorship of the Tennessee Valley Solar Solutions Conference for solar stakeholders in the TVA region.
- In response to TVA's Agreement with the EPA, TVA is developing several waste heat recovery and solar photovoltaic projects.

Long Term Operations of Generating Assets

- Collaborating with EPRI on new R&D projects designed to achieve high performance in power generation beyond nominal unit design life.
- TVA is partnering with EPRI in developing industry-wide guidelines for fossil plant layup, and demonstrating innovative plant layup techniques utilizing film-forming amines to preserve equipment.
- Conducting plant cycling performance research to improve operating and maintenance strategies and component designs for increased reliability and to mitigate the effects of cycling on the fossil fleet.
- Conducting fossil plant material degradation research to reduce the impacts to high-temperature materials used in boiler and heat recovery steam generator components caused by fast ramping and increased load-following.
- Collaborating with EPRI to identify opportunities for cost effective thermal efficiency improvements by increasing heat rate by major component replacements or improvements.

Energy Efficiency

- TVA has partnered with EPRI in a nation-wide collaboration of utilities to evaluate six hyper-efficient technologies for the residential and commercial markets. The residential technologies include variable capacity air conditioning, heat pump water heaters, and appliances (washer, dryer, and refrigerator). Commercial technologies include variable capacity air conditioning, LED street lighting, and efficient data centers. TVA is testing performance and reliability of four of these technologies in over 160 consumer facilities in the Tennessee Valley.
- TVA utilizes seven residential test houses in the Knoxville area to further its residential research efforts. These projects evaluate residential building techniques, energy efficiency, demand response technologies, and consumer smart grid concepts in a controlled, simulated occupancy research environment. Test results are being used to educate builders, developers, consumers, and TVA efficiency program designers to develop the best, most cost-effective residential energy efficiency and demand reduction projects. Test results can apply to both new home and retrofit markets.
- In addition, TVA has partnered with the University of Tennessee Knoxville to support research and their entry into the 2011 DOE Solar Decathlon Competition. The research will include an educational tour of the Tennessee Valley

Sustainability

Sustainability relates to what we do to protect and respect the interests of our current and future stakeholders; it is the convergence of our environmental, economic, and social performance. It includes everything from our protection of the shoreline to our preservation of reasonable rates, and from our commitment to employee well-being to our economic development efforts in the Valley. In short, it is a measure of our accountability to our internal and external stakeholder groups. In June 2010, TVA issued its first Strategic Sustainability Performance Plan under Executive Order 13514, titled "Federal Leadership in Environmental, Energy and Economic Performance." The Executive Order (EO) challenges TVA and other federal agencies to develop, implement and annually update sustainability plans to help "create a clean-energy economy." Even before the issuance of this EO and the passage of legislation on energy efficiency at federal facilities, TVA had begun to reduce its energy use. TVA issued an updated Strategic Sustainability Performance Plan on June 3, 2011, which is available at <http://www.tva.gov>.

TVA is also currently preparing its first corporate responsibility report "Generations of Responsibility: The Tennessee Valley Authority's 2011 Corporate Responsibility Report." This report will combine information about its Fiscal Year 2011 activities while paying homage to its roots as a stakeholder-focused agency, which has evolved to meet challenges through the decades. Where practical in the development of this report, TVA is using the Global Reporting Initiative framework as a guide.

Tennessee Valley Authority
GPRA Annual Performance Plan
for FY 2013

Submitted
September 2011



Foreword

The Tennessee Valley Authority's Strategic Plan was approved by the TVA Board of Directors on May 31, 2007. TVA's Board and executive leadership recognized the need to articulate TVA's overall strategic direction for the next decade as a result of market trends, a new national energy policy, rising fuel costs and other changes since the previously issued strategic plan. The Strategic Plan outlines actions TVA must accomplish to align with this direction. The Strategic Plan also identifies aspects of TVA's current business structure that must be fine-tuned for TVA to strengthen its ability to continue to serve the people of the Tennessee Valley region.

This document is TVA's GPRA Annual Performance Plan for FY 2013. It contains the specific information that is required by the Government Performance and Results Act. This FY 2013 GPRA Annual Performance Plan builds upon the strategic objectives and critical success factors identified in the Strategic Plan and describe the metrics that will be used to monitor TVA's performance toward achieving successful implementation of its strategy.

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1. TVA Mission

The mission of TVA is to improve the quality of life in the Tennessee Valley through its work in three key areas: energy, the environment, and economic development. TVA provides reliable, competitive power; manages the Tennessee River system and associated lands to meet multiple needs; and partners with Valley communities and states for economic development. For over seventy-five years, TVA's unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.

Energy

Provide low-cost electric power to the Tennessee Valley region reliably

- TVA supplies reliable, affordable electricity to the Tennessee Valley region. It strives to meet the changing needs of power distributor customers and directly served industrial customers for electricity and related products and services in a dynamic marketplace.

Environment

Act as an environmental steward of the Tennessee Valley region and rivers

- To fulfill its environmental stewardship mission, TVA manages water resources and associated public lands for the benefit of the region and the nation.
- To reduce flood damage, maintain navigation, support power production and recreational uses, improve water quality and supply, and protect shoreline resources.

Economic Development

Serve as a catalyst for sustainable economic development and technological innovation

- TVA works with its power distributor customers; state, regional, and local economic development organizations; and other federal agencies to build partnerships that help bring jobs and make the economy stronger to benefit the people of the region.
- TVA's programs and services combine to create powerful tools for sustainable economic development.

2. Strategic Focus Areas and Observations/Objectives

The Strategic Plan outlines objectives TVA must accomplish to align with this direction. The plan also identifies aspects of TVA's current business structure that must be focused on for TVA to strengthen its ability to serve the people of the Tennessee Valley. These strategic objectives, along with their corresponding critical success factors, are as follows:

CUSTOMER: Maintain power reliability, provide competitive rates, and build trust with TVA's customers

Critical Success Factors:

- Strengthen relationships and trust by being responsive to stakeholder needs
- Develop a portfolio of product and pricing structures that more accurately reflect the costs of serving load at different times and levels of use
- Partner with distributors and directly served customers to encourage conservation, promote energy efficiency, and reduce peak demand
- Partner with customers to limit volatility in rates and participate in power supply through shared generation ownership
- Assist states, communities, and distributors in sustaining economic development programs

PEOPLE: Build pride in TVA's performance and reputation

Critical Success Factors:

- Safeguard the health and safety of employees and the public

- Strengthen workforce knowledge, skills, and management processes to motivate performance and successfully implement the strategic objectives
- Treat employees, customers, and other stakeholders with integrity and respect
- Communicate clearly and consistently
- Implement organizational health initiatives

FINANCIAL: Adhere to a set of sound guiding financial principles to improve TVA's fiscal performance

Critical Success Factors:

- Apply sound economic and financing practices to new investments
- Pay financing obligations consistent with the useful life of the asset
- Strengthen TVA's balance sheet by improving the ratio of financing obligations to total assets
- Improve TVA's cash return on total assets in order to service debt, preserve existing assets, reinvest in new assets, and improve environmental performance
- Achieve top-quartile performance in non-fuel operation and maintenance (O&M) expenses and then hold increases to be less than unit sales growth

ASSETS: Use TVA's assets to meet market demand and deliver public value

Critical Success Factors:

- Balance TVA's production capabilities and load by adding assets (buy, build, or through long-term contracts) and encouraging the use of energy in ways that reduce the need for new generation
- Preserve, maintain, repower, or retire existing assets where appropriate
- Manage land and water resources to provide multiple benefits to the region
- Reduce fuel supply risk with a diverse portfolio of generation assets

OPERATIONS: Improve performance to be recognized as an industry leader

Critical Success Factors:

- Deliver reliable electric power generation and transmission products and services
- Benchmark the industry's best performers to develop metrics for top-quartile performance
- Make nuclear safety the overriding priority for each nuclear facility and its employees
- Continue to reduce the impacts of TVA's operations on the environment
- Serve as a responsible steward of the Tennessee River system
- Apply science and technological innovation to improve operational performance

3. Program Evaluations - Tracking Progress Against the Goals

3.1 Corporate Level Metrics

The 2007 Strategic Plan outlined the Board of Directors' policy-level direction for TVA over the next decade and highlighted several actions needed for successful implementation of the strategy. In support of the strategic objectives outlined in the Strategic Plan, sixteen enterprise-wide metrics are in place to monitor TVA's FY 2011 performance toward achieving successful implementation of its strategy (Exhibit 1). These metrics are reviewed and systematically updated annually to maintain alignment with the strategic focus.

The TVA-wide performance metrics are as follows:

- (1) **Retail Rates (¢ / kWh Sales)** = distributor reported retail power revenue and directly served power revenue divided by distributor reported retail power sales and directly served power sales

Calculation:

$$\frac{\text{Distributor reported power revenue} + \text{Directly Served power revenue}}{\text{Distributor reported sales} + \text{Directly Served power sales}}$$

- (2) **Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)** = TVA's total costs in dollars per MWh of power sold to customers

Calculation:

$$\frac{\text{Total Income Statement Expenses (Excluding FCA Costs)} \pm \text{Other Income, net}}{\text{Total Sales Volume (MWh)}}$$

- (3) **FCA Costs (\$ / MWh Sales)** = TVA's FCA expenses per MWh of power sold

Calculation:

$$\frac{\text{FCA Costs}}{\text{Total Sales Volume (MWh)}}$$

- (4) **Economic Development** = percentage growth of the weighted average wage of jobs created and/or retained as compared to the percentage growth of the weighted average wage of all states in the Southeast

Calculation:

$$\frac{\text{TVA Project Average Wage}}{\text{Southeastern Average Wage}}$$

- (5) **Customer Satisfaction Survey (% Satisfied)** = quarterly measure of distributors' and directly served customers' satisfaction with TVA in 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

Calculation:

$$\left[\left(\sum \text{PD survey questions (\% satisfied)} \right) * \left(\frac{1}{14} \right) * (0.85) \right] + \left[\left(\sum \text{DSI survey questions (\% satisfied)} \right) * \left(\frac{1}{13} \right) * (0.15) \right]$$

- (6) **Connection Point Interruptions (Interruptions / Connection Points)** = tracks interruptions of power, including momentary, at connection points caused by the transmission system

Calculation:

$$\frac{\text{Number of interruptions}}{\text{Number of connection points}}$$

- (7) **Load Not Served (LNS)** = measures the magnitude and duration of transmission system outages that affect TVA customers expressed in system minutes

Calculation:

$$\text{Percent of total load not served} \times \text{Number of minutes in period}$$

- (8) **Organizational Health Survey** = measures the organizational health of the employee work force

Calculation:

Measured by the percent favorable responses (agree or strongly agree) on the Survey. Item favorabilities are captured within each respective dimension.

- (9) **Safe Workplace (Injuries / Hours Worked)** = a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty / job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and Staff Augmentation contractors

Calculation:

$$\frac{\text{ORIR} \times 200,000}{\text{Number of Hours worked during time period}}$$

NOTE: Hearing loss events are reported as recordable injuries on the OSHA 300 Log, but are excluded from the TVA Winning Performance (see section 3.2) Safe Workplace indicator.

- (10) **Debt-like Obligations / Asset Value (Percent)** = TVA's flexibility in a competitive market place

Calculation:

$$\frac{\text{Statutory debt} + \text{lease obligations} + \text{prepaid energy obligations}}{\text{Total Assets}}$$

- (11) **Interest Coverage (Ratio)** = credit quality

Calculation:

$$\frac{\text{Net Income} + \text{Interest Expense} + \text{Taxes}}{\text{Gross Interest Expense}}$$

- (12) **Net Cash Flow from Operations less Investing (\$ Millions)** = management's ability to control net cash flow (in millions) during the year by focusing attention on both cash inflows and outflows being balanced throughout the year

Calculation:

$$(\text{Cash Flow from Operations}) + (\text{Investing Cash Flow}) - (\text{Net Cash Flow from Change in FCA Deferral Account})$$

- (13) **Environmental Strategy Implementation Index** = A composite of the following environmental performance factors: Air (3 elements) and Reportable Environmental Events.

Calculation:

Environmental Strategy Implementation Index is the sum of four element scores: CO₂, NO_x, SO₂, and Reportable Environmental Events. The element scores are the result of percent of target performance met. This percentage is determined by dividing the actual performance by the target or vice versa based on whether the preferred performance is declining or increasing. If threshold performance is achieved, the appropriate number of points is obtained. The maximum number of points, which can be achieved is the number assigned to meeting the stretch performance.

- (14) **Clean Energy Generation** = percent of capacity from energy resources with zero or low emissions of greenhouse gases (GHG), including nuclear, wind, biomass, solar, hydro (including HMOD), and other non-fossil sources such as waste heat.

Calculation:

$$\text{Clean energy capacity} / \text{Total capacity}$$

- (15) **Energy Efficiency Savings (GWh)** = total incremental GWh savings from TVA-initiated energy efficiency and demand reduction activities, programs, projects, and pilots

Calculation:

FY12 Incremental Energy Efficiency Savings = [(Residential product first-year kWh potential impacts) * (Residential installations) + (FY12 first-year kWh potential from Industrial and Commercial projects + FY12 first-year kWh potential from Demand Response programs + FY12 first-year kWh potential through outreach programs + FY12 first-year kWh achieved by wholesale & retail pricing products + FY12 first-year kWh potential from TVA facilities improvements + + FY12 first-year kWh potential from TVA-supported loan funds administered by others + FY12 first-year kWh potential from state programs receiving TVA support)]/1,000,000

- (16) **Equivalent Availability Factor - Coal, CC, & Nuclear (Percent)** = a ratio of actual available generation from all TVA Coal, Combined-Cycle & Nuclear generating assets in a given period compared to maximum availability

Calculation:

$$\frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((AVH * NMC) - MWhL - SchMWhL)}{\sum \text{of all Coal, Combined-Cycle \& Nuclear units } (PH * NMC)} * 100$$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand 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 outages (planned or maintenance) or derating

3.2 The Winning Performance Process

The Winning Performance process keeps TVA focused on the strategic objectives. It identifies the priority measures and tracks its performance in these areas, and provides the incentives and feedback to employees to see the direct connection. Employees' involvement in Winning Performance enables them to understand how their day-to-day performance contributes to TVA's performance and success.

TVA's Winning Performance Team Incentive Plan (WPTIP) is a pay-for-performance program similar in structure to incentivized performance-based, profit-sharing programs used by private companies. The program is based on the principle that operational and process improvements, reduced costs, and improved revenues can be obtained by applying appropriate management focus and offering appropriate monetary incentives.

Employees can see how their work contributes to the direction set by their Strategic Business Units (SBUs) performance plan and how that contributes to TVA's overall successful implementation of the agency's strategy. WPTIP utilizes a balanced scorecard as the primary tool to identify and communicate the focus of the incentives to the workforce. Employees have line-of-sight from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's strategic objectives and critical success factors.

All full time employees are eligible to participate in WPTIP, except those approved by the Board of Directors or delegate(s) to participate in the Executive Annual Incentive Program. WPTIP is a compensation plan (lump sum payment) tied to performance results based on scorecard metrics at the TVA, SBU, and BU levels. The SBUs with scorecards are Fossil Generation, Nuclear Generation, Fossil Generation, Development and Construction, Nuclear Generation, Development and Construction, Power System Operations, River Operations and Strategy & External Relations.

The TVA corporate metrics represent at least 50 percent of each employee's potential payout. The remaining potential employee payout is tied to the performance of an employee's SBU or BU scorecards, whichever is applicable. Corporate organizations are incented based off the performance of the three TVA corporate metrics, Net Cash Flow, Nuclear Equivalent Availability Factor and Critical Fossil Seasonal Equivalent Forced Outage Rate. Executives also have performance incentives linked to the same scorecards.

3.3 TVA's Balanced Scorecard

The TVA, SBU, and BU scorecards contain targets at three levels, corresponding to different incentive payouts: Threshold, Target, and Stretch.

The scorecard basis sheets contain the year-to-date actual values of the metrics, as well as historical and future forecasts, where applicable. Adverse trends and improvement plans are discussed during normal reviews with executive management.

Performance is monitored on each of the metrics, and the scorecards are updated each month to reflect actual results and updated forecasts. These updates are available to employees through their organizations, TVA's intranet, posters and pamphlets.

4. Strategy Implementation

4.1 TVA's Mission and Strategic Plan

The five strategic objectives identified in the TVA Strategic Plan focus on the general steps TVA must take to fulfill its core mission. The outcomes are areas that TVA must focus on to continue fulfilling its mission within the evolving business environment.

4.2 Principles of a Strategy Focused Organization

TVA follows the Principles of a Strategy Focused Organization¹ to implement its strategy throughout the operations of the organization. The five principles have been successfully used by the public and private sectors and are defined as:

1. Mobilize the organization through visible executive leadership. The TVA Board approves the strategic plan, budgets, and performance targets. Executive leadership endorses the Strategic Plan and takes responsibility for its operational implementation.
2. Translate the strategy into operational terms. A key vehicle for translating TVA's strategy into operational terms is TVA's Business Planning Process. These objectives translate 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 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 balanced scorecard, which ties incentive compensation to the achievement of goals.
5. Govern to make strategy a continual process. TVA, SBU, and BU scorecards are updated monthly as described in section 3.3.

4.3 Translating the Strategic Plan into Operational Terms

TVA's mission and strategic objectives must be translated into operational terms to align the actions of management and employees. Defining the critical success factors is the first step. Critical success factors define the key factors and capabilities needed to generate sustainable performance consistent with the business themes of the mission and the priorities identified by the Strategic Plan.

Performance goals identify specific, tangible objectives for measuring achievement. TVA develops a strategy in the context of the mission, maps the strategy into operational initiatives, and ultimately develops performance plans for each part of the organization and scorecards for measuring success.

4.4 Annual Goals, Long Term Goals and the Strategic Plan

Developing corporate short-term and long-term plans are key to achieving the goals outlined in the Strategic Plan. TVA's Long-Term Plans cover a minimum of five years and maximum of twenty years. These plans include:

- Shorter Term (1-3 Year) Plans
 - Bi-Annual Power Supply Plan
 - TVA Business Plans (3-year outlook with Quarterly reviews)

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
 - Bi-Annual Long-Term Power Supply Plan (20-year forecast)
 - Long-Range Financial Plans (10 years or more), and associated risk analyses
 - Capital Project Plans (5-year outlook)
 - Enterprise Risk Assessments (5-year outlook)

At a minimum, quarterly briefings are held with the Board of Directors, which include a review of corporate performance. The strategic issues, the scorecard and financial outlook are tracked and reviewed. Annually these reviews include three-year trending and three-year forecast.

5. 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 subject to forecast error, and planning under uncertainty is inherent. Normal planning uncertainties include those associated with projections about:

- 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
- competition
- changes in market interest rates
- change in operating and maintenance cost

In addition to these uncertainties in electric power planning, the electric utility industry continues 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 “Delivering the Vision”. Given the potential for change in the industry and the high potential for significant forecast error, TVA planning evolves as more information becomes available.

6. 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 directed TVA to use power revenues to pay for essential stewardship activities previously funded by federal appropriations.

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 while also developing a number of new processes and skills. Major initiatives include the following:

- Continued efforts across the organization to improve efficiency. The activities include benchmarking best-in-class performers, on a variety of industry accepted measures.
- Continued training to develop a multi-skilled workforce to improve labor productivity.
- Developing new tools to support the development of products and services, including new methods for determining TVA's cost to provide different types of service and evaluating and quantifying risk.
- Developing new methods for evaluating future investments in generation that reflect the uncertainty in future revenue available to recover those investments.

Appendix A

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles (GAAP). EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Reconciliation of Net Income to EBITDA
(in millions)

	2006	2007	2008	2009	2010	2011	2012 Projected	2013 Projected
Net Income	\$ 113	\$ 423	\$ 817	\$ 726	\$ 972	\$ 162	\$ 314	\$ (183)
Add back:								
Interest Expense	1,264	1,232	1,376	1,272	1,294	1,305	1,378	1,557
Tax Equivalents	376	451	491	544	457	662	640	576
Depreciation & Amortization	1,500	1,473	1,224	1,598	1,724	1,772	1,850	1,959
Total EBITDA	<u>\$ 3,253</u>	<u>\$ 3,579</u>	<u>\$ 3,908</u>	<u>\$ 4,140</u>	<u>\$ 4,447</u>	<u>\$ 3,901</u>	<u>\$ 4,181</u>	<u>\$ 3,909</u>

Appendix B

Debt Service Coverage is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles (GAAP). Debt Service Coverage is measured by dividing Operating Income and Depreciation and Amortization by Interest Expense and the previous year's Current Maturities of Long-Term Debt and Current Portion of Leaseback Obligations. TVA presents Debt Service Coverage because it describes TVA's ability to cover interest payments and current maturities of long-term debt and leaseback obligations. A calculation of Debt Service Coverage utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY Unaudited Calculation of Debt Service Coverage (in millions)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Operating Income		1,927	2,037	1,854	2,180	1,669	1,743	1,493	1,475	1,555	1,660	1,337	1,423	1,543	2,184	1,973	2,242	1,437	1,675	1,361
Depreciation and Amortization		703	904	1,014	1,038	1,181	1,185	1,312	1,037	1,073	1,115	1,154	1,500	1,473	1,224	1,598	1,724	1,772	1,850	1,960
Net Operating Income		2,630	2,941	2,868	3,218	2,850	2,928	2,805	2,512	2,628	2,775	2,491	2,923	3,016	3,408	3,571	3,966	3,209	3,525	3,321
Interest Expense			2,024	2,083	2,084	2,014	1,813	1,789	1,688	1,490	1,424	1,403	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,558
Current Maturities of Long-Term Debt	716	1,306	2,250	574	1,500	1,000	2,350	1,984	-	2,336	2,000	2,693	985	90	2,030	8	1,008	1,537	1,500	
Current Portion of Leaseback Obligations	-	-	-	-	-	-	-	-	-	68	35	35	37	43	54	463	74	80	79	
		3,330	4,333	2,658	3,514	2,813	4,139	3,672	1,490	3,828	3,438	4,105	2,449	1,542	3,477	1,783	2,455	3,048	3,136	1,680
Debt Service Coverage		0.96	0.87	0.66	1.24	0.86	1.05	0.69	0.72	1.85	0.73	0.73	0.70	1.24	2.23	1.05	2.15	1.28	1.11	1.02

Appendix C

Interest Coverage is a financial measure that, although commonly used, is not calculated and presented in accordance with U.S. generally accepted accounting principles (GAAP). Interest Coverage is measured by dividing Net Cash Provided by Operating Activities and Interest Expense by Interest Expense. TVA presents Interest Coverage because it describes TVA's ability to pay the interest on its bonds and notes. A calculation of Interest Coverage utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY Unaudited Calculation of Interest Coverage (in millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Net Cash Provided by Operating Activities	1,314	1,372	1,547	1,897	1,314	1,629	3,290	1,462	1,985	1,788	1,967	2,163	1,901	2,437	2,415	1,996
Interest Expense	2,014	1,813	1,789	1,688	1,490	1,424	1,403	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,558	1,680
Interest Coverage	1.65	1.76	1.86	2.12	1.88	2.14	3.34	2.06	2.39	2.27	2.41	2.65	2.38	2.70	2.55	2.19

Tennessee Valley Authority

Budget Proposal and Management Agenda



For the Fiscal Year Ending
September 30, 2014

Submitted to Congress
April 2013



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Introduction and Executive Summary

TVA's Vision and Mission

The Tennessee Valley Authority has a history of improving the quality of life and promoting economic prosperity for people, business, and industry in the TVA service territory. As times have changed, TVA has changed with them, updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation.

TVA's Vision

While TVA's mission remains essentially unchanged, the business environment in which TVA operates has evolved. Facing challenging economic conditions, tougher environmental standards, the need to modernize its generating system, and changing customer needs, TVA recognizes it must continue to refine its strategic vision.

In August 2010, the TVA Board of Directors adopted a vision that is designed to shape a cleaner and more secure energy future for the Tennessee Valley, relying more on nuclear power, energy efficiency, and renewable energy, and less on coal-fired generation.

TVA's vision is to be one of the nation's leading providers of low-cost and cleaner energy by 2020. Specifically, TVA intends to provide value to the Tennessee Valley with:

- Low cost energy
- High reliability
- Responsibility
- Cleaner air
- More nuclear generation
- Greater energy efficiency

Through on-going operations, we focus on the first three strategic areas. This focus ensures that we are most effectively meeting the needs of our customers and stakeholders.

Also, TVA continues to focus on creating a balanced and diversified portfolio by focusing on initiatives such as: cleaner air, more nuclear generation, and greater energy efficiency. We believe a diverse portfolio is the most cost-effective and responsible structure and will help ensure TVA's long-term success.

Cleaner Air

Since the 1970s, TVA has invested \$5.4 billion to reduce emissions of sulfur dioxide by 91 percent below 1977 levels and nitrogen oxide by 88 percent below peak 1995 levels at its coal-fired plants. In support of its renewed vision, TVA announced plans in 2011 to retire 18 of its 59 coal-fired units by the end of 2017. TVA will decide whether to convert, add emission controls, or retire other coal-fired units on a unit-by-unit schedule. TVA plans to meet future capacity needs with low-emission or zero-emission sources, such as renewable energy, natural gas, nuclear power, and energy efficiency.

More Nuclear Generation

TVA is constructing a second reactor unit at Watts Bar Nuclear Plant in east Tennessee as part of the transition to cleaner energy sources. After the project failed to meet schedule and budget expectations, TVA management established a team in October 2011 to develop an Estimate to Complete (ETC) detailing the work remaining and duration. In April 2012, the TVA Board of Directors approved a new ETC for Watts Bar Unit 2. The ETC concluded that additional funding of \$1.5 billion to \$2.0 billion will be needed to complete Watts Bar Unit 2, putting the total estimated cost of completion in the range of \$4.0 billion to \$4.5 billion. The estimated completion date for Watts Bar Unit 2 is most likely December 2015. The unit is expected to add 1,180 MW of summer net capability to TVA's generating portfolio when it begins commercial operation.

In August 2011, the TVA Board of Directors approved the licensing, construction, and operation of one reactor at Bellefonte Nuclear Plant in North Alabama. When complete, the unit will add 1,260 MW of summer net capability. Delays to Watts Bar Unit 2 will affect the commencement of construction of Bellefonte Unit 1. The TVA Board agreed at its August 2011 meeting that construction at Bellefonte Unit 1 would not start until fuel is loaded at Watts Bar Unit 2. Bellefonte Unit 1 was expected to be completed in 2020. As a result of lessons learned during the construction of Watts Bar Unit 2 and other factors, such as the Fukushima event, TVA is analyzing the Bellefonte Unit 1 cost and schedule. It is expected that the cost of the project will increase and the completion date will change. In the event of these changes, TVA will seek action from the TVA Board.

Greater Energy Efficiency

TVA is involved in a range of activities aimed at improving energy efficiency in its service region. Energy efficiency and demand response programs can decrease the environmental impact of power production, reduce the overall need for new generating capacity, and help consumers and businesses save money on their power bills. In cooperation with power distributors, TVA offers homeowners, businesses, and industries a variety of energy-saving tools, expert advice, and financial incentives through the Energy Right[®] program. Small scale renewable options are available through the Green Power Switch[®] and Generation PartnersSM programs. TVA's goal of achieving increased energy efficiency is part of TVA's vision to be one of the nation's leading providers of low-cost, cleaner energy by 2020. TVA realized incremental energy efficiency savings of 559 gigawatt hours in 2011 and 560 gigawatt hours in 2012. Cumulative savings are expected to continue to grow.

Power Program

TVA is a corporation of the federal government. TVA is funded from the sale of electricity and financings that provide capital for the power program. TVA has not received federal government appropriations since 1999. Additionally, TVA makes annual returns to the U.S. Treasury on the government's original \$1.4 billion appropriated investments in the power program. Through fiscal year FY 2014, TVA expects to have paid approximately \$3.7 billion, principal and interest, to the U.S. Treasury.

TVA is a wholesaler of electricity to 155 power distributors and sells power directly to large industries and government entities. As the nation's largest public power system, TVA is committed to meeting the region's growing needs for reliable, affordable, and environmentally-sound energy. The power system includes 3 licensed nuclear sites, 11 coal-fired sites, 29 conventional hydroelectric sites, 13 natural gas and/or oil fired sites, 2 diesel generator sites, and 1 pumped storage hydroelectric site. In FY 2014, TVA expects sales of about 160 billion kilowatt-hours of electricity. TVA's renewable energy program, Green Power Switch[®], includes 16 solar sites, 1 wind-energy site, and 1 digester gas site.

As of September 30, 2012, TVA's coal-fired generating units had 13,605 MW of net summer capability. The 11 coal-fired plants generated about 41 percent of the power from TVA operated facilities. TVA's system also includes 98 generators powered by natural gas and/or oil-fired units with a total net summer capability of 9,242 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided 12 percent of the power from TVA operated facilities in FY 2012.

The 6 nuclear units have a combined net summer capability of 6,710 MW and generated 38 percent of the power from TVA operated facilities in FY 2012.

TVA-owned hydroelectric power is comprised of conventional plants with 109 generating units and a pumped storage facility consisting of 4 units. TVA's hydroelectric power assets have a combined net summer capability of 5,447 MW and accounted for about 9 percent of the power from TVA-operated generation in FY 2012.

Integrated Resource Plan (IRP)

TVA's vision sets the stage for its strategic planning process that includes strategic objectives, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the Integrated Resource Plan (IRP).

The IRP, *TVA's Energy and Environmental Future*, completed in April 2011, supports TVA's comprehensive mission, which includes providing the region with an affordable, reliable, environmentally sustainable supply of electricity. The power supply plans evaluated in this study identify the potential resources that will be needed to satisfy expected energy demand in the region during the next twenty years under various scenarios of the future. The Recommended Planning Direction developed in the IRP is consistent with TVA's Environmental Policy and fully supports TVA's vision.

The IRP functions primarily as a guide for TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The Recommended Planning Direction provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the plan balance costs, energy efficiency, system reliability, and environmental responsibility for TVA's stakeholders.

TVA intends to refresh the analysis in the IRP study every 3-5 years. The next cycle will begin in the fall of 2013 and a new IRP study report is expected to be completed by the winter of 2014.

Transmission System

The 2,466 miles of 500 kilovolt lines in TVA's approximately 16,000-mile transmission system are a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of shoreline, approximately 293,000 acres of reservoir land, and 49 TVA reservoirs used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In accordance with its 2008 Environmental Policy, the TVA Board of Directors accepted the Natural Resource Plan (NRP) to guide TVA's natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation, water resources, and biological and cultural resources on TVA lands and reservoirs. The NRP is expected to be reviewed and updated at least every five years.

Tennessee River System

The 652-mile-long Tennessee River, the approximately 42,000 miles of streams and tributaries, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production, and cooling water for TVA's generation units. The watersheds of the Tennessee River and its 16 tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

TVA promotes sustainable economic development by partnering with states, communities, and the 155 local power distributors that purchase TVA power in recruiting and retaining businesses and industries that are targeted to provide high economic impact in balance with TVA's power system. By providing technical and community development-related services to stakeholders, TVA's economic development initiatives strive to create and retain quality, high-paying jobs and also increase capital investment in the region.

Technology Innovation

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low-cost power and clean energy. Three signature technologies have been identified for special emphasis. These are small modular nuclear reactors (SMRs), energy utilization (including energy efficiency and electric vehicle transportation infrastructure) and grid modernization (smart grid for the bulk power system and distribution systems). TVA's goal is to demonstrate how technologies can be used to improve cost efficiency, lower emissions to the environment, and position TVA for a sustainable future.

Budget Overview

Power Program

TVA, like the rest of the electric utility industry, is challenged to meet customer demand with cleaner, low-cost energy resources. This will require sizable capital investments in the next decade. TVA raises capital for asset investments through power revenues, power bonds (up to a limit set by Congress), and alternative financings (including lease financings).

TVA faces significant uncertainty from external factors such as weather and the economy. TVA's financial information includes estimates, which are affected by these changing conditions. TVA projects total revenue to exceed \$11.2 billion in FY 2014. The fuel cost recovery mechanism adjusts power prices monthly to reflect the changing costs of fuel, purchased power, and emission allowances. TVA power sales increased an average of approximately 1 percent annually during the past decade. To keep pace with this growth, TVA has added capacity with both owned generation and purchased-power agreements. Concurrently, TVA has upgraded its transmission system to maintain reliability and added new customer delivery points to serve this load.

TVA will continue to explore the full range of options available to meet demand. Between FY 2006 and FY 2008, the TVA Board authorized: the purchase of three combustion-turbine generating plants and one combined cycle plant; the execution of a 15-year operating lease on a second combined-cycle plant; and the construction of two combined-cycle plants. The first constructed combined cycle plant, Lagoon Creek, located in West Tennessee, began commercial operation in September 2010 with 540 MW of summer net capability. The second combined cycle plant, John Sevier, located in northeast Tennessee, began commercial operation in April 2012 with 880 MW of summer net capability. The John Sevier facility will provide flexibility to meet future power needs in the Tennessee Valley while maintaining transmission reliability in the eastern part of the service area. In August 2011, the TVA Board authorized the purchase of the Magnolia Combined Cycle Plant. The three-unit, natural gas-fired plant, located in Benton County, Mississippi, added 909 MW of summer net capability to the TVA system. As of September 30, 2012, the total MW contribution to the TVA system for the 2010-2014 plant additions described above is 2,315 MW of summer net capability.

TVA's nuclear construction is an important element in a diversified portfolio for the future. The second reactor unit at Watts Bar Nuclear Plant is projected to be operational in 2015 and add 1,180 MW of summer net capability to TVA's generating portfolio. In addition, the future construction of one reactor at Bellefonte Nuclear Plant is expected to add 1,260 MW of summer net capability when the unit goes into operation.

In FY 2014, TVA projects to invest \$3.0 billion in capital projects for the power system, including \$703 million for clean air projects and \$112 million for transmission system projects. These investments are subject to approval in the FY 2014 budgeting process scheduled for August 2013. TVA's debt and alternative financing obligations increased approximately \$253 million in FY 2012 and are expected to increase by approximately \$558 million and \$941 million respectively in FY 2013 and FY 2014.

Water and Land Stewardship

TVA strives to meet its obligation to operate and maintain its system of dams, reservoirs, and TVA managed lands. Based on the provisions in the Energy and Water Development Appropriations Act of 1998, TVA funds its essential water and land stewardship activities including the (NRP) with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999, and none are requested for FY 2014.

Budget Details

TVA Operating Budget

(Millions of dollars)

	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
Revenue	\$ 11,220	\$11,236	\$11,246
Operating Expenses			
Fuel and Purchased Power	(3,869)	(3,968)	(3,823)
Operating and Maintenance	(3,510)	(3,661)	(3,559)
Depreciation and Amortization	(1,919)	(1,656)	(1,689)
Tax Equivalents*	<u>(622)</u>	<u>(550)</u>	<u>(543)</u>
Total Operating Expenses	<u>(9,920)</u>	<u>(9,835)</u>	<u>(9,614)</u>
Operating Income	1,300	1,401	1,632
Other Income	33	16	16
Net Interest Expense	<u>(1,273)</u>	<u>(1,336)</u>	<u>(1,296)</u>
Net Income (loss)	<u>\$ 60</u>	<u>\$ 81</u>	<u>\$ 352</u>

*Tax equivalents are based on the prior year's base revenue and current year fuel cost revenue.

Note 1: Included budget estimates are subject to change by the TVA Board. The TVA Board approved the FY 2013 budget August 16, 2012.

Note 2: The above budget information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, etc. which are subject to changing conditions.

Capital Budget and Cash Flow

(Millions of dollars)

	FY 2012 Actual	FY 2013 Estimate	FY 2014 Estimate
Cash flows from operating activities			
Net income	\$ 60	\$ 81	\$ 352
Items affecting operating activities	2,514	2,038	2,026
Net cash provided by operating activities	2,574	2,119	2,378
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(368)	(276)	(344)
Fossil	(206)	(166)	(229)
Hydro	(41)	(43)	(75)
Transmission	(115)	(84)	(112)
Other Base Capital	(112)	(105)	(121)
Total Base Capital	(842)	(673)	(881)
Clean Air	(38)	(387)	(703)
Ash Remediation	(141)	(107)	(97)
Water Remediation	-	(5)	(48)
Total Environmental Costs	(179)	(499)	(848)
Watts Bar Unit 2	(397)	(660)	(692)
Bellefonte	(196)	(211)	(195)
Other Capacity Expansion	(408)	(275)	(361)
Total Capacity Expansion	(1,001)	(1,146)	(1,248)
Nuclear Fuel Capital	(361)	(364)	(412)
Other Investing Activities	(130)	(44)	14
Net cash used in investing activities	(2,513)	(2,726)	(3,375)
Capacity Expansion Financing	1,001	1,146	1,248
Other Cash (Uses)/Sources	(701)	(539)	(251)
Net cash provided by financing activities	300	607	997
Net change in cash and cash equivalents	361	0	0
Cash and cash equivalents at beginning of year	507	200	200
Cash and cash equivalents at end of year	868	200	200
Cash Payments to U.S. Treasury	(30)	(35)	(26)
Reduction/(Increase) in Total Debt and Debt-Like Obligations	(253)	(558)	(941)

Budget Highlights and Hard Spots

TVA is governed by the nine-member TVA Board of Directors (TVA Board), which is responsible for approving an annual budget. The information in this document is based on the FY 2013 annual budget, which was approved by the TVA Board in August 2012. The following challenges were considered in preparing the budget.

Borrowing Limit

Given TVA's debt constraints and the impact to the Federal deficit of its increasing capital expenditures, the Administration intends to undertake a strategic review of options for addressing TVA's financial situation, including the possible divestiture of TVA, in part or as a whole.

TVA manages its finances efficiently to achieve its mission-related performance goals of supplying low-cost, reliable power, supporting environmental stewardship and a thriving river system, stimulating economic growth, and supporting technological innovation. In balancing these goals while following financial guiding principles, TVA uses financing selectively. Generally, financing is used to fund capital investments for new generation capacity, reliability investments that support new capacity, and clean air or other regulatory requirements. Maintenance of the power system and other capital expenditures are funded with revenues.

TVA has the authority in the TVA Act to issue bonds, notes and other evidences of indebtedness subject to a \$30.0 billion limit, sometimes referred to as TVA's "statutory debt". TVA's bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2012, TVA had \$24.1 billion net bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30.0 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$47.0 billion (as of September 30, 2012). In following financial guiding principles, TVA collects some revenue each year for the paydown of outstanding financing obligations. The balance of financing obligations may increase in periods where more financing obligations are added than outstanding debt is paid down. TVA's balance of financing obligations is projected to increase in the coming years to meet expected capital investment needs.

TVA may not be able to use bonds and notes to finance all of the capital investments planned over the next decade, but TVA has the ability to use other alternative forms of financing not subject to the \$30.0 billion limit. Also, the impact of energy efficiency and demand response initiatives may reduce generation requirements and thereby reduce capital needs. Capital spending needs may be met in the coming years with a combination of bonds and notes, lease arrangements, energy prepayments, additional power revenues, cost reductions, or in other ways.

Nuclear Program

TVA is making a significant strategic investment in nuclear power. Completion of Watts Bar Unit 2 will require additional funding of \$1.5 billion to \$2.0 billion, putting the total estimated cost of completion in the range of \$4.0 billion to \$4.5 billion. The costs to complete Bellefonte Unit 1 are under review and any future cost revisions will be submitted to the TVA Board for action.

Pension Fund

As of September 30, 2012, TVA's pension plan had assets of \$7.0 billion compared with liabilities of \$11.9 billion. The ability of the plan's funded status to quickly improve is limited by the amount of benefits paid each year to plan beneficiaries. Benefits of approximately \$600 million were paid to participants in 2012.

Actions under the Environmental Protection Agency (EPA) Agreements

On April 14, 2011, TVA entered into two agreements that generally absolve TVA from any liability under the new source requirements of the Clean Air Act for maintenance, repair, and component replacement projects at TVA's coal-fired plants. The first is a Federal Facilities Compliance Agreement with the EPA. The second agreement is a consent decree with the States of Alabama, North Carolina, and Tennessee, the Commonwealth of Kentucky, and 3 environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. The two agreements are collectively known as the Environmental Agreements. TVA's actions under the Agreements are described below:

- TVA paid the National Park Service and the U.S. Forest Service \$1 million each on September 23, 2011. TVA also submitted 11 mitigation projects to the EPA on October 7, 2011, for review and approval. The EPA approved one project on March 26, 2012. The EPA submitted comments for the remaining 10 projects on June 21, 2012, and TVA revised and resubmitted the proposals on August 20, 2012. These payments/projects are designed to meet the \$290 million dollar commitment to EPA made in the agreements to fund EPA approved projects/payments.
- TVA paid the State of Alabama \$2.24 million on August 29, 2011 and \$2.4 million on October 1, 2012.
- TVA paid the State of Tennessee \$5.28 million on October 9, 2011 and \$5.28 million on October 1, 2012.
- TVA paid the Commonwealth of Kentucky \$2.24 million on May 11, 2012 and \$2.24 million on October 1, 2012.
- TVA paid the State of North Carolina \$4.48 million on October 1, 2012.
- TVA paid a \$10 million civil penalty that was divided among the EPA, Alabama, Kentucky, and Tennessee in July 2011.

Coal-Fired Fleet Evaluation

TVA is evaluating all coal-fired units in terms of design, economics and efficiency, overall performance, operational cost, and the cost to bring them into compliance with current and anticipated environmental regulations and the Environmental Agreements. At September 30, 2012, TVA's coal-fired units provided 13,605 MW of summer net capability. About 6,700 MW would require advanced environmental controls. These units are being evaluated to determine whether to idle, to install controls, or to replace with alternative generation. TVA has:

- Idled Shawnee Fossil Plant Unit 10 and Widows Creek Fossil Plant Units 1-6 as of October 2011
- Idled Johnsonville Fossil Plant Units 7 and 8 in March 2012
- Announced plans to retire Johnsonville Fossil Plant Units 1-4 by December 2017
- Announced plans to idle Johnsonville Fossil Plant Units 5 and 6 and Units 9 and 10 by September 2013
- Announced plans to idle Colbert Fossil Plant Unit 5 by October 1, 2012
- Announced plans to retire John Sevier Fossil Plant Units 1 and 2 by December 2012 (Retired 12/31/12)
- Announced plans to idle John Sevier Fossil Plant Units 3 and 4 by December 31, 2012 (Idled 12/31/12)

Due to unanticipated operating challenges of certain generating units, TVA is in the process of re-evaluating the previously announced idling dates of these units. Colbert Unit 5 has been delayed since plans for its idling were announced. Johnsonville Fossil Plant Unit 9 was brought back into service during June 2012 and Johnsonville Fossil Plant Unit 10 was brought back into service in July 2012. Depending on capacity needs, TVA may bring other previously idled units back into service.

In response to the Clean Air Mercury Rule being set aside and consistent with a consent decree, the EPA signed the final Utility Maximum Achievable Control Technology (MACT) Rule on December 16, 2011. The rule sets unit or plant level limits for emissions of mercury, acid gases, and metals for coal and oil-fired steam electric generating units. In conjunction with and consistent with the final Utility MACT Rule, the EPA is also revising the New Source Performance Standards for new and reconstructed units for emissions of particulate matter, sulfur dioxide, and nitrogen oxide. These standards are very stringent, and any new coal units will be challenged to meet all of the required emission limits simultaneously. TVA is currently evaluating this new rule in order to comply with all regulations set forth within its scope.

Kingston Ash Spill

TVA continues cleanup and recovery efforts related to the December 2008 ash spill at the Kingston Fossil Plant (Kingston) in conjunction with federal and state agencies. TVA completed the removal of time-critical ash from the Emory River during the second quarter of calendar year 2010. Removal of the remaining ash is considered to be non-time-critical. Once the removal actions are completed, TVA is required to assess the site and determine whether any additional actions may be needed at Kingston or the surrounding impacted area. This assessment and any additional activities found to be necessary are considered remedial actions.

TVA estimates that these costs will range from \$1.1 billion to \$1.2 billion. Costs incurred since the event through September 30, 2012, totaled \$856 million, with a remaining estimated liability of \$269million. In August 2009, the TVA Board directed that the cleanup cost estimate be classified as a regulatory asset and charged to expense as it is collected in rates over 15 years, beginning October 1, 2009. As the work progresses, TVA will review its estimates and revise them as appropriate. Any estimate changes will be deferred and charged to expense prospectively as they are collected in future rates.

In May 2010, EPA approved TVA's ash disposal plan, which clarified the amount of ash to be removed from the site and the final design and closure of the dredge cell and ash ponds at the site. TVA estimates that the physical cleanup work (final removal) will be completed by the last quarter of the calendar year 2014. A final assessment,

issuance of a completion report, and approval by the State of Tennessee and the EPA are expected to occur by the second quarter of calendar year 2015.

Coal Combustion Residuals (CCR) Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's CCR facilities. The first phase of the evaluation, which was completed in June 2009, involved a detailed inspection of all CCR facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program completed in April 2011, included geotechnical explorations, material testing, stability analyses, and studies. The studies determined that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston at the time of the ash spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection facilities and has remediated the CCR facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCR work is between \$1.5 billion and \$2.0 billion, and the work is expected to take about ten years to complete.

Seven States Power Corporation Obligation

Seven States Power Corporation (Seven States), through its subsidiary, Seven States Southaven, LLC (SSSL), exercised its option to purchase from TVA an undivided 90 percent interest in a combined cycle combustion turbine facility in Southaven, Mississippi. As part of interim joint-ownership arrangements, Seven States has the right at any time during the interim period, and for any reason, to require TVA to buy back the Seven States interest in the facility.

The interim period under the original agreements was to expire on April 30, 2010. On April 22, 2010, TVA and Seven States, through SSSL, amended the joint ownership agreement, lease agreement, and buy-back arrangements to extend the term of the interim arrangements until April 23, 2013.

Rate Strategy

TVA sells power primarily through a network of independent distributors, who then sell to the retail customers (see page 29). Although its rates are below the national average, TVA has established a goal to have its overall effective retail rate in the top quartile by 2020 as benchmarked against the Top 100 Utilities. TVA understands the importance of competitive rates as a key to its economic development mission and its mission of providing low-cost power to the people of the Valley. In support of this goal, TVA continues to review and modify its rate structure to meet the needs of its customers.

Renewable Energy

In accordance with TVA's vision and Integrated Resource Plan, TVA is obtaining additional power supply from renewable sources by 2020. TVA defines its renewable energy as energy that is sustainable and often naturally replenished, such as wind, solar, biomass, and hydro electric generation.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including: hydro, wind, solar, and biomass. As of September 30, 2012, TVA maintained twenty-nine conventional hydroelectric dams, accounting for 3,831 MW of summer net capability. TVA also controls sixteen solar energy sites, capability for digester gas co-firing, biomass co-firing potential (located at coal-fired sites), and three wind turbines. The wind turbines and biomass co-firing potential did not provide any summer net capability because they were not operational. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into nine contracts with eight Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all nine contracts. The first began providing 300 MW (nameplate capacity) under a 20-year contract from a wind farm in Illinois in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other eight contracts provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee.

In 2003, TVA developed a Generation Partners (GP) pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. Since 2009, TVA has seen the program grow from 79 installations to nearly 1,186 installations in operation providing more than 68 MW of solar, wind, and biomass generation. In addition, there were 659 projects that had been approved by TVA as of September 30, 2012, that are in various stages of construction. Those projects represent an additional 29 MW of renewable power. The GP pilot program ended on September 30, 2012, and was replaced with the Generation Partners Program, a long-term sustainable program that began October 1, 2012.

The Renewable Standard Offer (RSO) program is a pilot program that began in October 2010. Under this program, TVA would accept up to 100 MW of renewable capacity through calendar year 2012. As of September 30, 2012, TVA had 99.48 MW of renewable capacity signed up under the program, including one biomass project, six methane projects, six solar projects, and one wind project. These projects range in size from 0.1 MW to 20 MW gross nameplate capacity.

The Solar Solution Initiative (SSI) is a pilot program that began in February 2012 and provides incentive payments for mid-size solar projects in TVA's RSO program if the projects use local installers in the Valley region. SSI is a targeted incentive that aims to support the existing local solar industry, while also serving as a recruitment tool for new industry in the Valley region, adding investment and jobs. Under this program, TVA was willing to accept up to 10 MW in calendar year 2012. As of September 30, 2012, TVA had 2.74 MW signed up under the program.

TVA's Green Power Switch® program is a voluntary program that supports the production of renewable energy by allowing consumers to purchase renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In 2012, GPS supported roughly 101,000 MWh of renewable energy. TVA is continuing to refine the program by testing two additional customer options. In the original Green Power Switch, consumers buy 150 kilowatt-hour Green Power Switch renewable energy blocks for \$4 a month. Supply includes Green-e certified renewable energy generated from TVA owned and purchased solar, wind, digester gas, and landfill gas generation. The two pilot options are testing customer demand for a 100 percent solar option sourced from TVA's growing Generation Partners supply as well as a lower priced bulk option for larger commercial and industrial customers. Supply for the bulk option is sourced from TVA-contracted RECs in the greater Southeastern region. Specifically the pilot supply will be from the Tapoco Hydroelectric project owned by Brookfield Renewable Energy Partners (facility purchased from Alcoa Power Generating Inc. on June 29, 2012).

Federal Salary Freeze

TVA reviewed the freeze on federal employees' base rates of pay that was proposed by President Obama and approved by Congress in December 2010. After considering the language and intent of the freeze, TVA applied the principles to its executives, managers, specialists, and excluded employees. The freeze was in effect for calendar years 2011 and 2012. In September 2012, President Obama signed a Continuing Resolution that extended the federal employee salary freeze until March 27, 2013. TVA will continue the freeze for all executives, managers and specialists, and excluded employees through March 27, 2013. The freeze does not affect positions represented by collective bargaining units. TVA's salary freeze does not reduce federal spending because TVA does not receive Federal appropriations. However, the intention of TVA's participation in the salary freeze was to demonstrate TVA's commitment to the nation's fiscal strength.

Oversight and Governance

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from three full-time members to nine part-time members to decide strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer (CEO) position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission (SEC) rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404(a) of the Sarbanes-Oxley Act became effective for TVA for FY 2008.
- As a non-accelerated filer, the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act are not applicable. However, TVA implemented the auditor attestation requirements of Section 404(b) in FY 2009 and continues to do so on a voluntary basis.
- The Dodd-Frank Act deferred indefinitely the auditor attestation requirements for non-accelerated filers; however, management has chosen to continue to have external auditor attestations.

TVA Oversight – A Different Mission with Different Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office (GAO), the Office of Management & Budget (OMB), the U.S. Treasury, and an independent inspector general.

TVA is governed by the TVA Board. The TVA Board has nine part-time members, at least seven of whom shall be legal residents of the TVA service area. The TVA Board members are appointed by the President of the United States with the advice and consent of the United States (U.S.) Senate. The board's responsibilities include formulating broad goals, objectives, and policies for TVA and approving plans for their implementation; reviewing and approving annual budgets; setting and overseeing rates; and establishing a compensation plan for employees.

Audit Committee – The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and the TVA Inspector General.

Independent Auditor – An independent auditor audits TVA's financial statements in accordance with standards of the Public Company Accounting Oversight Board and with *Government Auditing Standards* issued by the Comptroller General of the United States. The auditor also provides an opinion on whether those statements are presented in conformity with Generally Accepted Accounting Principles (GAAP).

Independent Inspector General – An independent Office of Inspector General (OIG) conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants' Generally Accepted Auditing Standards. The OIG has about 105 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semiannual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$23 million for FY 2014, which includes \$118,000 for OIG training and \$63,000 in support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2014 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the GAO, also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to the OMB, and TVA's budget is included in the consolidated budget of the U.S. Government. TVA's financial results also are included in the federal government's financial statements, which are consolidated by the U.S. Treasury and are subject to audit by GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act (GPRA), which requires that a strategic plan and annual performance reports be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the EPA, state environmental agencies, the SEC, and the Nuclear Regulatory Commission (NRC). TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission (FERC), FERC has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Corporation and the industry-based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted government auditing standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal agency's OIG.

Accounting and Financial Reporting

On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represents TVA's comparative, consolidated, department-level financial statements, to the U.S. Department of Treasury. This action is taken to comply with the requirements of the U.S. Department of Treasury Financial Manual for the purpose of providing financial information to the U.S. Department of Treasury and the GAO to use in preparing the Financial Report of the U.S. Government. The auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by Federal Accounting Standards Advisory Board. TVA's financial transactions are subject to audit by the Comptroller General under various statutes.

TVA also submits financial information in accordance with applicable regulatory and statutory requirements to OMB, SEC, NRC, the U.S. Treasury, the Energy Information Agency, and others. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board. These financial statements are annually audited by an independent financial auditor.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise. The monthly financial performance reports contain analysis for the income statement, cash flow statement, and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

Enterprise Risk Management

TVA has a designated Enterprise Risk Management (ERM) organization within its Financial Services organization. ERM is responsible for coordinating risk assessment efforts at TVA organizations, facilitating enterprise risk discussions at all levels of the organization, and developing and improving risk governance structure and risk assessment processes and methodologies.

ERM at TVA is an ongoing and evolving process to protect the value of the enterprise and realize opportunities for stakeholders by promoting the efficient and effective management of risk across TVA. TVA is committed to the management of risk using an enterprise-wide approach. The TVA ERM Policy provides overarching guidance on all risk management activities within TVA, including but not limited to personnel safety, operational contingency, risk control, and financial hedging.

TVA has cataloged major short-term and long-term enterprise level risks across the organization. TVA will further integrate risk management practices into all aspects of the business as ERM continues to evolve in a manner best suited to support TVA's mission.

Management Initiatives

Low Cost Energy

As a result of diminished power demand, TVA experienced a decrease in revenues in fiscal year 2012 as compared to the prior year. Actual revenues for fiscal year 2012 were 7 percent less than originally planned. The lower revenue in 2012 was primarily due to record or near-record weather variations in the Tennessee Valley region. In response to lower sales and revenues, TVA undertook cost savings initiatives in 2012. Actions initiated include reductions in discretionary spending, deferral of program spending, and identification of productivity enhancements to improve the overall cost effectiveness of existing programs and projects. In addition, TVA has eliminated certain layers of management and reduced contractor and consultant services. TVA is seeking to reduce costs to maintain financial health in the near-term, while improving competitiveness over the longer-term. TVA recorded a net gain of \$60 million for 2012.

Responsibility

TVA has an established, risk-based Cyber Security Program to ensure alignment with applicable regulations, industry requirements, and best practices. The program has established security standards, training, and metrics that assign clear accountability for all cyber security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective, and efficient execution of the program across TVA. Cyber security management processes have been implemented agency-wide with the goal of being systematic, repeatable, and effective in achieving the strategic security goals of the program.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components is integrated into the business planning process and is maintained in a five-year cyber security strategic plan covering all information security functions.

Governance for the program is provided by an Enterprise Security Council sponsored by TVA's Chief Information Officer and comprised of key TVA executives. This Council helps assure that the Cyber Security Program is aligned with business strategy and supports the objectives of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to, and recover from threats against its systems. The program will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change. TVA plans to spend approximately \$30 million to \$40 million for cyber security updates between 2013 and 2016.

Greater Energy Efficiency

TVA is focusing on using resources more efficiently to reduce long-term generation requirements as part of its balanced portfolio approach. TVA uses a wide variety of programs that reduce the use of energy (energy efficiency) and also decreases peak demand (demand response). TVA collaborates with all of its customers, such as distributors, directly served customers, and governmental agencies, to establish and implement effective energy efficiency and demand response programs across the Valley. TVA is also working with industry experts to design and deliver these programs with cost effective results.

More Nuclear Generation

A key aspect of TVA's vision is to increase TVA nuclear power generation. The IRP recommends an optimized mix of diversified energy resources, including more energy efficiency and demand reduction programs, renewable energy resources, energy storage resources, and natural gas and nuclear capacity. In particular, the nuclear energy component of the IRP planning direction calls for an increase in TVA nuclear generation capacity in the range of 1,150 to 5,900 MW from 2013 to 2029.

Completion of Unit 2 at Watts Bar is an integral part of achieving more nuclear generation. In response to the delays, a new ETC was completed with a high-confidence cost estimate and schedule. TVA has new management in place and the project is moving forward with a newly organized and aligned project structure. TVA is also focused on improved performance by key contractors. These efforts are designed to provide optimal project management and oversight.

Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood control, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level environmental policy to align with the direction in the TVA Strategic Plan. The Environmental Policy was approved by the TVA Board in 2008. It identifies environmental objectives that will allow TVA to produce cleaner and still-affordable electricity.

In August 2012, TVA reviewed its Environmental Policy. The review found that progress has been made on the Environmental Objectives and policy revisions were not needed. The Environmental Policy remains consistent with stated TVA Board strategy and policy.

On June 29, 2012, TVA submitted its third Strategic Sustainability Performance Plan (SSPP) to OMB and the Council on Environmental Quality (CEQ). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions and waste, improve water efficiency, building and energy efficiency, and electronic stewardship, and promote the purchase of sustainable products and services. Implementation is expected to reduce TVA's costs and risks over the long term.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In accord with TVA's Environmental Policy and its 2011 Integrated Resource Plan, and in light of an increasing national focus on renewable and clean energy, TVA is obtaining additional power supply from clean and renewable sources. TVA's Environmental Policy also aims to limit growth in volume of greenhouse gas emissions and reduce the rate of emissions by FY 2020.

The TVA Board has approved guiding principles for an Energy Efficiency and Demand Response plan and a Renewable and Clean Energy plan. The Energy Efficiency and Demand Response plan seeks to slow the rate of growth in the region's power demand by providing opportunities for residential, commercial and industrial consumer groups to use energy more efficiently. The Renewable and Clean Energy plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions. The plan advises TVA to reduce the carbon intensity of the power generation in a cost-effective manner by conservation measures, preferentially reviewing regional renewable and clean energy supply options, and considering technology innovations that address intermittency issues associated with renewable options.

TVA's investment will help it sustain the natural resources and recreational opportunities for the region's stakeholders and visitors in an efficient and effective manner.

The Natural Resource Plan (NRP) is a companion document to TVA's Integrated Resource Plan, which focuses on the agency's power supply portfolio. The NRP serves as a 20-year guide for the agency's efforts to balance competing and sometimes conflicting resource uses and to provide optimum public benefit of TVA-managed lands and reservoirs. Accepted by the TVA Board in 2011, the NRP guides TVA's management of biological, cultural, and water resources; recreation; reservoir lands planning; and public engagement on TVA-managed lands and reservoirs. Through its NRP programs, TVA ensures its compliance with applicable regulatory requirements and essential stewardship responsibilities, while advancing execution of its Environmental Policy.

The NRP was developed with public input including participation from TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. The NRP, which is TVA's first long-term natural resource management plan, is a model for other agencies involved in similar stewardship activities. Implementation of NRP programs will be staged over a 20-year period with reviews and updates occurring at least every five years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth.

Navigation on the Tennessee River is made possible by a system of dams and locks and provides significant contributions to the regional economy. Construction of a new lock at Chickamauga Dam above Chattanooga is essential to maintaining navigation on the upper Tennessee River. The existing lock may eventually need to be closed due to safety issues stemming from concrete degradation. Concurrently, a new lock project is underway at Kentucky Dam, near Paducah, Kentucky. This project is necessary to handle the current and projected growth in traffic on the lower Tennessee River. The U.S. Army Corps of Engineers is responsible for both construction projects.

TVA also manages the river system to provide water for hydroelectric generation and cooling water for TVA power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at several dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use. As part of the NRP, TVA implements several programs including Tennessee Valley Clean Marinas, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring, Aquatic Ecological Management, and a Strategic Partnership Initiative. Under the Stream and Tailwater Monitoring Program in the NRP, TVA performs annual monitoring and analysis of streams and rivers within the Tennessee River watershed. TVA provides the monitoring data to other agencies, educational institutions, non-government organizations, and stakeholders upon request.

TVA and Air Quality in the Tennessee Valley

The latest annual air quality trends report issued by the EPA shows air quality in the nation has steadily improved, with significant declines in collective emissions of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance and is making further improvements in air quality.

The Environmental Agreements also require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which are reduced year-to-year as more units are required to be retired or controlled.

Economic Development and Technological Innovation

Demonstrating leadership in sustainable economic development involves helping communities recruit and retain quality jobs and making the region a better place to live and work.

TVA works to be a source for economic development leadership, information and services across the seven-state Tennessee Valley region. TVA's investments in newer, cleaner power supply resources create new jobs, retain local industries, and support the national economy with purchases for fuel, materials, and services. The Watts Bar Unit 2 project, which is currently under construction, and the recently completed John Sevier Combined Cycle Plant, created more than 4,000 construction jobs and provided economic benefits for surrounding communities.

TVA's partnerships with its customers and communities have helped create quality jobs and attract significant capital investments in new and existing companies. Economic development efforts are done in partnership with private and public organizations, including regional and state agencies. TVA helps meet the needs of its stakeholders for regional economic development which contributes to a better quality of life for Tennessee Valley residents. TVA's innovative programs and services combine to create effective tools for sustainable economic development. These programs and services include, but are not limited to, the following:

Global Business

Industrial Recruiting Services

TVA works with distributor customers and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

TVA assigns a regional development specialist with economic development expertise to serve counties in a specific area to help create, sustain, and foster job growth.

Community Preparedness

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders.

Community Development Training

TVA helps communities by providing need-specific training to increase the competitiveness of its communities in economic development.

Rural Initiative Strategy

TVA helps rural communities better market their sites and area to prospective companies and site selection consultants.

Retail Development

Retail Development is a program that links communities with retail business opportunities, expansions, and retentions.

Business and Technical Resources

Existing Industry Support

An array of products and services are geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

The fund is designed to stimulate job creation and leverage capital investment in the TVA power service region. Loans are available to primary manufacturing companies and other institutions, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties Loan Fund

This fund is available to the region's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide support that many companies need to survive the challenging early stages of business start-up. TVA provides technical and research assistance to incubators where clients can share services, equipment, and building space.

Diversity Alliance

TVA helps the region's high-growth sectors of women-owned and minority-owned businesses increase their job creation and capital investment opportunities by working with local partners that provide business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing and New Customers

The Valley Investment Initiative offers financial incentives to existing companies and new companies that contribute to the economic development of the region and complement TVA's power system.

Appalachian Regional Commission Project Administration

TVA is the lead agency for administering grants from the Appalachian Regional Commission (ARC) in the Tennessee Valley region. The ARC is a federal-state partnership that works for sustainable community and economic development in Appalachia.

Research

TVA provides communities with economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Technical Services

TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities market themselves for prospects and growth.

Here are the results of some of TVA's innovative economic development programs and offerings:

- The Megasites program, which was developed to independently certify large industrial properties, has sold five of eight certified sites to large industrial companies, and targeted marketing continues for the other sites. The direct economic impact is more than 32,400 jobs created and \$5.5 billion in company investments.
- More than 48,000 jobs were recruited and retained during FY 2012 and companies made \$5.9 billion in capital investment.
- The Data Center Site Assessment program was created to help communities attract data center projects by cataloging sites suited to host data centers, collecting key site and community data to support active marketing of the sites to prospects, and maintaining a dialogue between TVA, community economic development organizations, and other stakeholders, whose involvement is critical to making these efforts successful. Since inception, twenty-two primary data center sites have been identified, and Amazon has selected a site in Rutherford County, Tennessee, for a major fulfillment center.
- Four of the largest (over \$1 billion) industrial economic development announcements in the nation since 2007 have occurred in the TVA service area. These include Toyota, Volkswagen, Wacker Chemie, and Dow Corning/Hemlock Semiconductor.
- The Valley Investment Initiative (VII) program is offered in conjunction with TVA's power providers. VII makes financial incentive awards to qualifying existing companies and new companies that are contributing to the economic development of the TVA service area and complement TVA's power system resources.
- In 2012, Site Selection magazine ranked TVA among "Top 10 U.S. Utilities in Economic Development" for the seventh consecutive year. TVA is one of only three utilities to earn this recognition for each of the past seven years.
- TVA received a Gold Award for its Megasites Program from the International Economic Development Council for excellence in economic development.

TVA Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a national leader in technological innovation. A key element in TVA achieving its renewed vision is technology innovation. Innovation is an avenue where TVA strives to be at the forefront of the utility business.

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low cost power and clean energy. Three signature technologies have been identified for special emphasis. These are small modular nuclear reactors (SMRs), energy utilization (including energy efficiency and electric vehicle transportation infrastructure) and grid modernization (smart grid for the bulk power system and distribution systems). The goal is to identify leadership roles for TVA to demonstrate how these technologies can be used to provide more nuclear generation, greater energy efficiency, and sustained reliability. Technology Innovation works collaboratively with line organizations to develop technology roadmaps for these signature technologies. These roadmaps will include technology gaps and an integrated plan for advancing the

technologies over the next three to five years.

In addition to signature technologies, TVA's research activities include several issue areas where TVA is pursuing technology innovation critical to the transition to a cleaner energy economy, including air and water quality, clean energy and integration, and long-term operations of generating assets. TVA's research portfolio selection enables TVA to focus resources on new technologies in these issue areas. Each year TVA's annual research portfolio and research strategic plan is updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development operations.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with the Electric Power Research Institute (EPRI), the U.S. Department of Energy (DOE), national labs, federal agencies, academic institutions, and other research consortiums. Technology evaluations are most often accomplished through applied field scale research to document performance, needs and requirements. TVA delivers or transfers results to the operational units or other stakeholders through reporting, technology transfer events and educational outreach. TVA also serves as a technology advisor for TVA's distributors and directly served customers.

Signature Technologies

Small Modular Reactors (SMR)

SMR technology was chosen by TVA as one of three signature technologies that support TVA's technology innovation mission and is consistent with TVA's vision to be one of the nation's leaders in clean, lower cost energy. SMRs could provide an important option for clean base-load energy for TVA's generation portfolio. SMRs offer potential improvements in safety and security, reduced construction time, less capital expenditure and lower financing costs than large reactors.

TVA is a member of the mPower America team led by Babcock and Wilcox (B&W) who is partnered with Bechtel. The DOE selected the mPower America team in November 2012 for cost share on the design and licensing of their SMR. TVA is preparing a license application for up to four mPower SMRs at its Clinch River Site in Oak Ridge, TN. Under the cost share arrangement, DOE will reimburse TVA for 50 percent of its eligible costs toward licensing the SMRs at the Clinch River Site.

TVA began working with B&W in 2009 based upon its conceptual design and robust U.S. manufacturing capability. B&W's SMR is being designed to produce 180 MWe. The reactor systems are fully underground resulting in improved safety and security. The smaller size enables all components to be shipped to the site by rail, allowing more of the construction to take place in factories which increases standardization, improves quality and shortens construction durations.

TVA is evaluating its 1200 acre Clinch River Site for potential SMR deployment. Site characterization is underway including meteorological data gathering, wetlands identification, and subsurface geotechnical investigations. During the next five years, TVA plans to prepare and submit a license application to the NRC, support NRC's review of the license application, and participate in the mPower SMR design review process. TVA may partner with other utilities in the project to share in the costs and risks and to leverage nuclear project expertise. A construction decision is still a number of years away.

Energy Utilization

Energy Utilization encompasses technologies that impact how and how much energy we consume in the residential, commercial, industrial and transportation sector. TVA's near-term concentration is on the development and maintenance of a pipeline of emerging energy efficiency and demand response technologies for market and program readiness. TVA's efforts are directed towards demonstrating and validating the performance and reliability of new energy efficient technology as well as the value of such technology for both the consumer and the utility. Additionally, TVA is conducting demonstrations to support the development of a business case and roadmap for electric vehicle infrastructure.

Current initiatives include:

- TVA coordinates investment and activities with the EPRI and industry stakeholders related to transportation electrification to support the needs and provide guidance to TVA and local power companies on matters of plug-in electric vehicle grid integration and readiness for on-road and non-road applications. Specific developmental projects are plug-in vehicle technology adoption and consumer behavior, vehicle charging impacts on the distribution system and potential mitigation strategies. Other development projects are controlled charging optimization through smart charging, non-road electrification, and advanced infrastructure development.

- EPRI and TVA are engaged in the development of an advanced Intelligent Universal Transformer (IUT) that applies solid-state technology for voltage conversion while providing additional functionality to regulate voltage, compensate for reactive power, and facilitate distribution automation. In 2012, TVA demonstrated an Electric Vehicle DC Fast-Charger, integrated with an IUT. Combining the two technologies improves overall charger efficiency, with the potential of significantly reducing the charger installed cost. The benefit to TVA of utilizing IUT in this application is the enabling of a much larger market for electric vehicles and fast charging within the Tennessee Valley.
- TVA has partnered with EPRI in a nation-wide collaboration of utilities to evaluate six hyper-efficient technologies for the residential and commercial markets. The residential technologies include variable capacity air conditioning, heat pump water heaters, and appliances (washer, dryer, and refrigerator). Commercial technologies include variable capacity air conditioning, Light Emitting Diode (LED) street lighting, and efficient data centers. TVA is testing performance and reliability of four of these technologies in over 160 consumer facilities in the Tennessee Valley.
- TVA utilizes seven residential test houses in the Knoxville-area to further its residential research efforts. These projects evaluate residential building techniques, energy efficiency, demand response technologies, and consumer smart grid concepts in a controlled, simulated occupancy research environment. Test results are being used to educate builders, developers, consumers, and TVA efficiency program designers to develop the best, most cost-effective residential energy efficiency and demand reduction projects. Test results can apply to both new home and retrofit markets. Revisions to the original test house configurations include installation of a CO₂ based heat pump water heater, variable capacity air-source heat pumps, and integrated (space conditioning and water heating) geothermal heat pumps.
- TVA has partnered with the University of Tennessee Knoxville to support research and their entry into the 2011 DOE Solar Decathlon Competition. The research concluded in 2012 with an educational tour of the Tennessee Valley.
- TVA is participating in EPRI's Industrial Center of Excellence which supports knowledge transfer and applications and seeks to identify opportunities for demonstrations and commercialization of advanced efficient electric technologies and utilization methods for the industrial market segment.
- In 2012, TVA began conducting a comparative field test to evaluate the energy and demand savings potential of grid-enabled residential appliances. The project will also evaluate and test consumer behavior using a suite of grid smart demand responsive energy star appliances, a home energy management system, and other GE home energy management devices in the 20 residential test sites. Baseline data collection has been completed for the existing appliances and the new energy star appliances. Testing of the demand response signals and the associated consumer behavior has started.

Grid Modernization

TVA's smart grid research, also known as grid modernization, focuses on technology development and demonstration activities and options that help sustain reliability, lower costs, and mitigate risks for TVA and local power companies. TVA's initiatives not only include technologies that encompass the bulk power system but also technologies that potentially impact the distributor network as well.

In cooperation with the Tennessee Valley Public Power Association, local power companies, and EPRI, TVA is developing a vision and roadmap for coordinated grid modernization in the Tennessee Valley. Guided by overarching principles of sustaining reliability, increasing energy efficiency, and integrating clean energy sources, the roadmap identifies: industry and regulatory drivers that necessitate modernization; barriers and interdependencies that must be addressed for successful implementation; critical gaps in technology deployment; and key opportunities for investment guided by overall benefits, system planning requirements, pricing and product objectives, and system operational needs.

Among the more significant efforts in this area are demonstrations of new power system sensing and control technologies that will increase operator situational awareness, provide better control of power flows, and optimize asset management.

- TVA has developed and is evaluating a number of low-cost, multi-purpose sensors that enable the capability to monitor, maintain, optimize, and extend the life of critical power system equipment assets. Specific monitoring applications of interest include: temperatures, pressures, vibration, currents, acoustic emission, sag/displacement, geo-magnetically induced currents, voltages, and gas-in-oil. Successful sensor applications are anticipated to become part of TVA's smart grid deployments.
- TVA is working with EPRI to develop a standardized approach to field data integration for both asset management and for grid operations. This collaboration will take advantage of TVA's joint sensor work, Phasor Measurement Unit (PMU) involvement, standardization involvement, and asset management focus to push towards a standardized method for data integration and application.

- TVA has partnered with DOE, Smart Wire Grid, and National Electric Energy Testing Research & Applications Center (NEETRAC) to develop and demonstrate a hardware solution that will enable TVA to better manage unused and overall transmission line capacity. The Smartwire device clamps onto existing transmission lines and provides more consistent control over how energy is routed within the grid on a real-time basis. The Smartwire device functions to improve transmission line congestion.
- TVA has partnered with DOE and EPRI to demonstrate a Synchrophasor-based Situational Awareness System that provides system operators with real-time information about disturbances that could affect operations. The Wide Area Situational Awareness Tool (WASAT) uses real-time PMU data to support both power system visualization and early warning detection.
- TVA is working with Bigwood Systems to complete the development and integration of a Reactive Power Management tool with TVA operations. The tool will support forecasting and planning TVA's reactive margins within the service territory.
- TVA is partnering with EPRI and other utilities, through participation in the SunBurst Network, to deploy sensors for monitoring Geomagnetically Induced Current (GIC) on select transformers within the TVA service territory. The sensors will support the evaluation of potential effects of GIC and solar storm related activity to electrical grids.

Issue Areas

Air and Water Quality

TVA is pursuing technology innovation on the following issues in collaboration with EPRI:

- Quantifying risk of exposure to air pollutants and levels of acceptable risk to advise development of air standards and communicate risks based on sound science to stakeholders.
- Addressing knowledge gaps in the linkage between acid/nutrient deposition, water quality, and aquatic ecosystem health. Data will inform regulation development regarding potential secondary Sulfur Oxides (SOx)/ Nitrogen Oxides (NOx) standards proposed by the EPA.
- Assessing the air quality impacts of introducing electric vehicles into the U.S. transportation fleet.
- Conducting fugitive emissions studies to sample airborne particles resulting from material handling operations at fossil plants. Results will be used to support air permits issued under more stringent Particulate Matter 2.5 regulations.
- Developing and using the Toxic Release Inventory for Power Plants (TRIPP). This is an EPRI software program used by TVA to compile and submit toxic release information (TRI) to EPA.
- Supporting EPRI toxic emissions data base (PISCES).
- Participating in the Ohio River Basin Water Quality Trading Program to develop a cost effective and mutually beneficial mechanism to improve nutrient levels and water quality in regional watersheds. The project has initiated the first interstate water quality trading program for nutrients in the U.S.
- Continuing research related to scientifically-sound water quality criteria development.
- Collaborating with EPRI, Oak Ridge National Laboratory (ORNL), and Tennessee Tech University on a thermal plume study at Cumberland Fossil Plant to monitor the behavior of fish residing in and near a heated discharge to determine impacts of thermal discharges on the fish community.
- Comparing alternative cooling water intake screens to the conventional Ristroph traveling screen to provide cost effective technology options to reduce fish impingement mortality while managing high levels of debris.
- Continuing support for providing accurate analytical results to EPA to meet Electric Generating Utility (EGU) Maximum Achievable Control Technology (MACT) requirements.
- Addressing challenges regarding closure of ponds containing coal combustion products in a cost-effective, timely, and safe manner in accordance with anticipated EPA regulations; and to develop monitoring strategies and long-term land use options.
- Analyzing Effluent Guidelines Information Collection Request data to inform the proposed Steam Electric Effluent Guidelines expected in the spring of 2013.
- Continuing to characterize power plant wastewaters; and develop, evaluate and optimize wastewater treatment technologies to identify cost-effective and reliable treatment alternatives to comply with EPA's Effluent Guidelines.
- Developing methods to assess Greenhouse Gas (GHG) policy/regulatory impacts on business strategy and compliance through EPRI.
- Assessing of the experience of state, regional, and international GHG programs.

- Conducting long-term acidic deposition monitoring across five southern states since 1986 in support of the National Atmospheric Deposition Program. The purpose is to determine the magnitude of acid deposition across North America.

Clean Energy and Integration

- Completed construction and began data analysis at the Melton Hill Sustainable Recreation Area, a clean energy recreation model for the region and nation; technologies demonstrated and evaluated include: solar PV, solar water heating, small wind, solar powered LED lighting, energy efficient lighting and controls, energy efficient Heating, Ventilation, and Air Conditioning (HVAC), electric vehicle charging, coal combustion product reuse, water conservation, and riparian zones.
- Conducted comprehensive economic and technical feasibility study for the conversion of TVA's Shawnee Fossil Plant Unit 10 from coal to renewable biomass. Although the conversion was determined to be feasible, it was not cost effective. Therefore, the conversion was not pursued.
- In response to the Environmental Agreements, TVA is developing several waste heat recovery and solar photovoltaic projects.
- Co-sponsorship of the second Tennessee Valley Solar Solutions Conference for solar stakeholders in the TVA region.

Long-Term Operations of Generating Assets

- Conducting plant cycling performance research to improve operating and maintenance strategies and component designs for increased reliability and to mitigate the effects of cycling on the fossil fleet.
- Conducting fossil plant material degradation research to reduce the impacts to high-temperature materials used in boiler and heat recovery steam generator components caused by fast ramping and increased load-following.
- Collaborating with EPRI to identify opportunities for cost effective thermal efficiency improvements by decreasing heat rate by major component replacements or improvements.
- TVA is partnering with EPRI in developing industry-wide guidelines for fossil plant layup, and demonstrating innovative plant layup techniques utilizing film-forming amines to preserve equipment.

Energy Efficiency

For fiscal year 2012, Energy Efficiency and Demand Response programs reduced electric power usage by 560 gigawatt-hours for the second straight year and since 2008 total energy efficiency program contributions have provided energy savings of more than 1,600 gigawatt-hours. In addition, TVA energy efficiency and demand response initiatives added the ability to trim an additional 227 megawatts of peak demand in fiscal year 2012. In total these programs have the ability to reduce more than 900 megawatts of peak demand which is the capacity equivalent of a mid-sized power plant with a construction value of over \$540,000,000.

Highlights include:

An in home energy efficiency program completed 17,861 evaluations this year, bringing the total number to more than 46,000 evaluations since the program began in 2009. About 70 percent of those homeowners have made recommended home energy efficiency improvements.

- In conjunction with Clayton Homes, the region's leader in manufactured home production, TVA launched a new initiative to produce more Energy Star-certified manufactured homes in the region. To date, more than 600 Energy Star homes have been built and participate in this program saving each future homeowner nearly \$1,000 per year in reduced energy bills.
- TVA hosted its inaugural Energy Efficiency Forum in Nashville, drawing more than 400 national and regional industrial leaders to discuss energy efficiency in the Southeast. The Tennessee Valley Public Power Association co-sponsored this event with TVA.
- As part of TVA's Smart Grid \$100M investment, five local power companies became participants in TVA's Dispatchable Voltage Regulation Smart Grid pilot program, activating "virtual power plants" to help TVA meet peak power demand: Clinton Utilities Board; Chattanooga Electric Power Board; Fort Loudoun Electric Cooperative; Morristown Utilities Commission; Nashville Electric Service, and North East Mississippi Electric Power Association.
- TVA, Glasgow EPB and General Electric are conducting a comparative field tests to evaluate the energy and demand savings potential of grid-enabled residential appliances. The project will also evaluate and test consumer behavior using a suite of grid smart demand responsive energy star appliances made by General

Electric (GE), a home energy management system, and other GE home energy management devices in 20 residential test sites.

Sustainability Program

From its inception in 1933, TVA has focused on improving the overall economic, environmental and social sustainability of the TVA region through its mission driven work in flood control, navigation, reforestation, economic development, and leadership in providing low-cost power, technological innovation and environmental stewardship. Today, TVA's renewed vision further refines our focus to lead the Tennessee Valley and the nation toward a cleaner and more secure energy future with emphasis on rates, reliability, responsibility, cleaner air, more nuclear generation and greater energy efficiency. TVA remains committed to its enduring mission and renewed vision for a sustainable future.

In June 2010, TVA issued its first Strategic Sustainability Performance Plan under Executive Order 13514, titled "Federal Leadership in Environmental, Energy and Economic Performance." The Executive Order (EO) challenges TVA and other federal agencies to develop, implement and annually update sustainability plans to help "create a clean-energy economy." Even before the issuance of this EO and the passage of legislation on energy efficiency at federal facilities, TVA had begun to reduce its energy use. TVA issued its third Strategic Sustainability Performance Plan on June 29, 2012.

A framework for corporate responsibility reporting is being developed that will include aspects of social, environmental and economic performance.

Performance Metrics

Financial Metrics

TVA's financial information includes estimates with significant uncertainty relative to the weather, the economy, fuel prices, and other matters, are subject to changing conditions. TVA is self-funded from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. However, TVA's liquidity is enhanced by several factors. The fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's discount note program provides TVA the short-term capital it needs to fund daily operations.

Maintaining TVA's high credit rating is a key component of TVA's financial strategy. This strategy is centered on applying sound decision criteria to new investments and improving cash return on total assets for the purpose of debt payment, asset investment and investments to improve environmental performance. TVA plans to continue to make decisions necessary to further its sound financial performance.

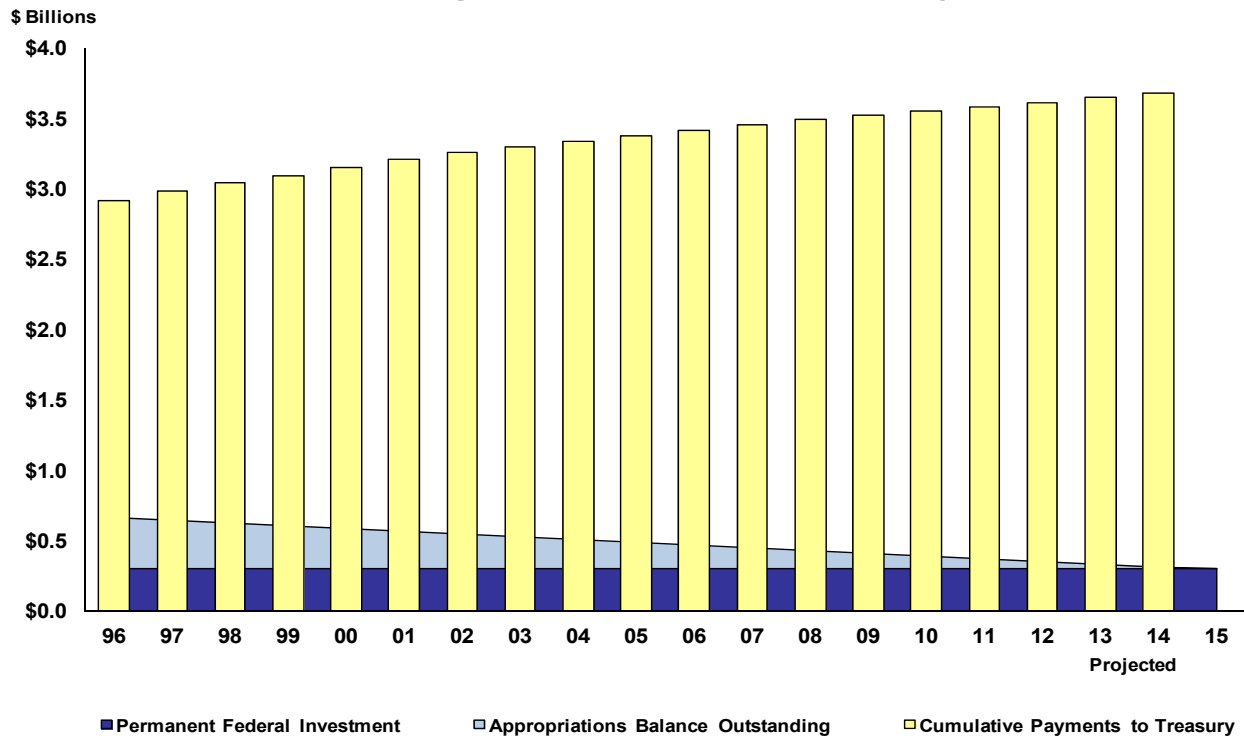
The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide, among other things, funds for operation, maintenance and administration of its power system and additional margin as the TVA Board may consider desirable for investment in power system assets, retirement of outstanding bonds in advance of maturity, additional reduction of the Power Program Appropriation Investment, and other purposes connected with TVA's power business. In setting rates, the TVA Board has the primary responsibility of achieving the objectives of the TVA Act including the objective that power shall be sold at rates as low as are feasible. TVA's financial guiding principles are to:

- Retire debt over the useful life of assets
- Only increase debt level to fund new assets
- Use regulatory accounting treatment for specific unusual events
- Implement rate increases as necessary to fund operational spending
- Evaluate rate actions to avoid significant rate volatility

Power Program Appropriation Repayment and Statutory Debt as a Percent of Total Assets

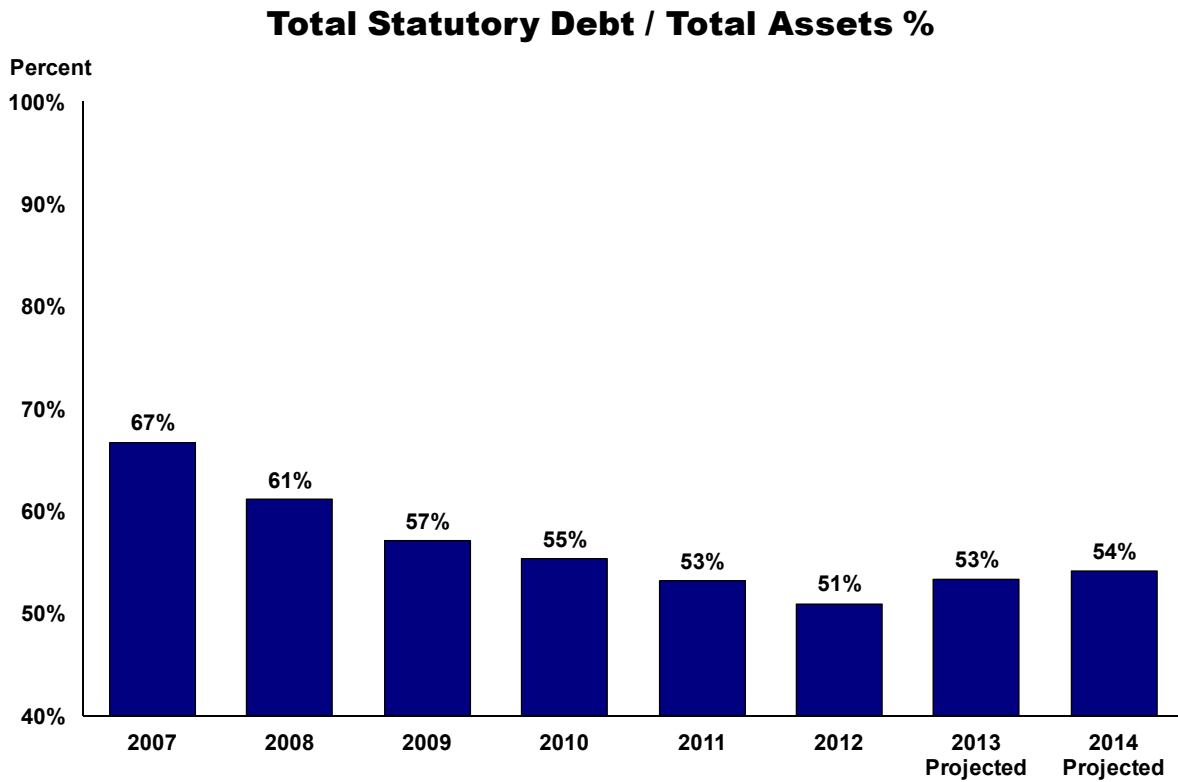
For more than forty years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on the outstanding appropriation investment. Through FY 2014, these payments are expected to total an estimated \$3.7 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA. The government has the benefit of an equity position in TVA, but neither the government nor taxpayers are liable for TVA's debt, as stated in the TVA Act.

Power Program Appropriation Repayment



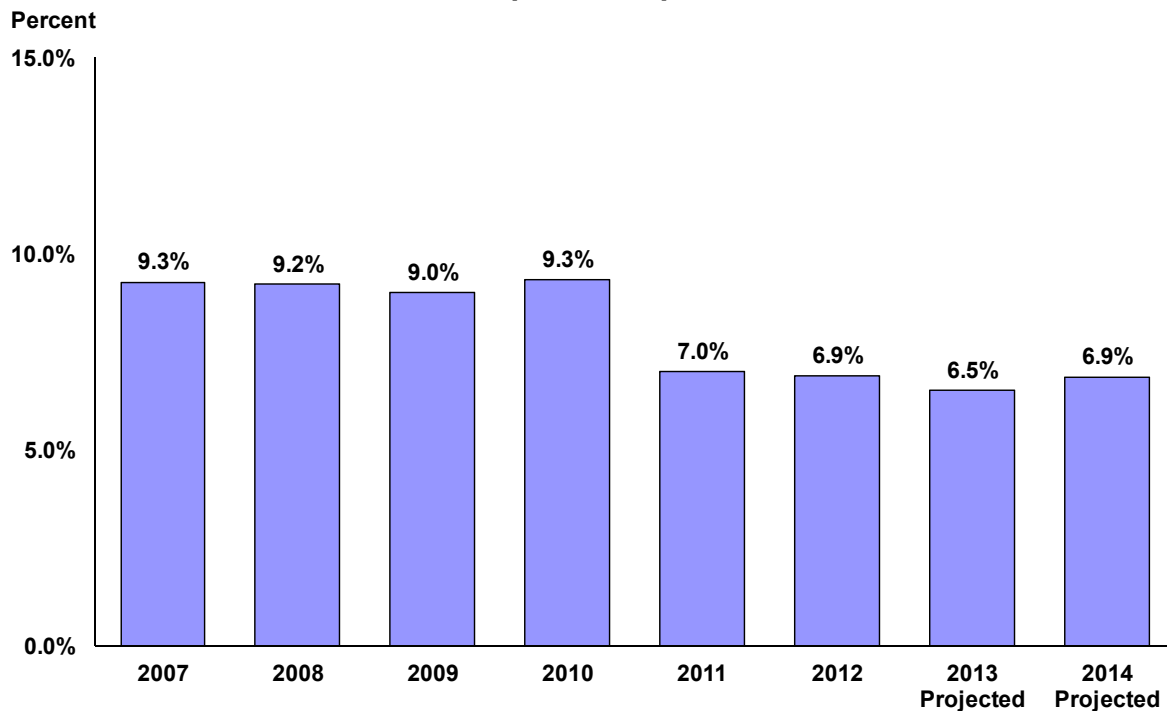
Total Statutory Debt as a Percent of Total Assets

TVA maintains a balance of financing obligations that is manageable and commensurate with its level of assets. Along with the debt service coverage ratio, TVA will track its financial health by measuring total statutory debt (defined for purposes of this document as bonds and notes) as a percent of total assets.



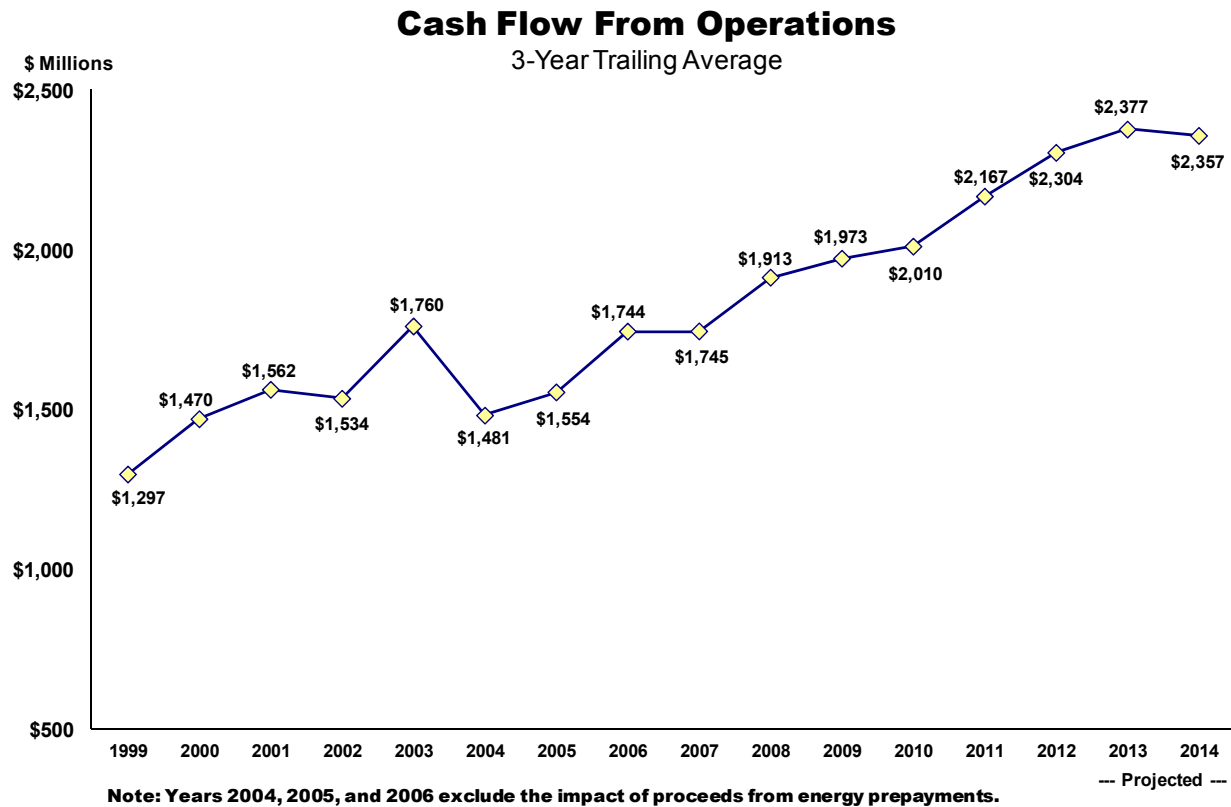
Earnings before Interest, Taxes, Depreciation, Amortization (EBITDA)/Total Assets

In addition to sound criteria for new investments, improving non-fuel operating and maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of EBITDA to Total Assets. See Appendix A for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.

**Earnings Before Interest, Taxes, Depreciation,
Amortization (EBITDA)/ Total Assets %**

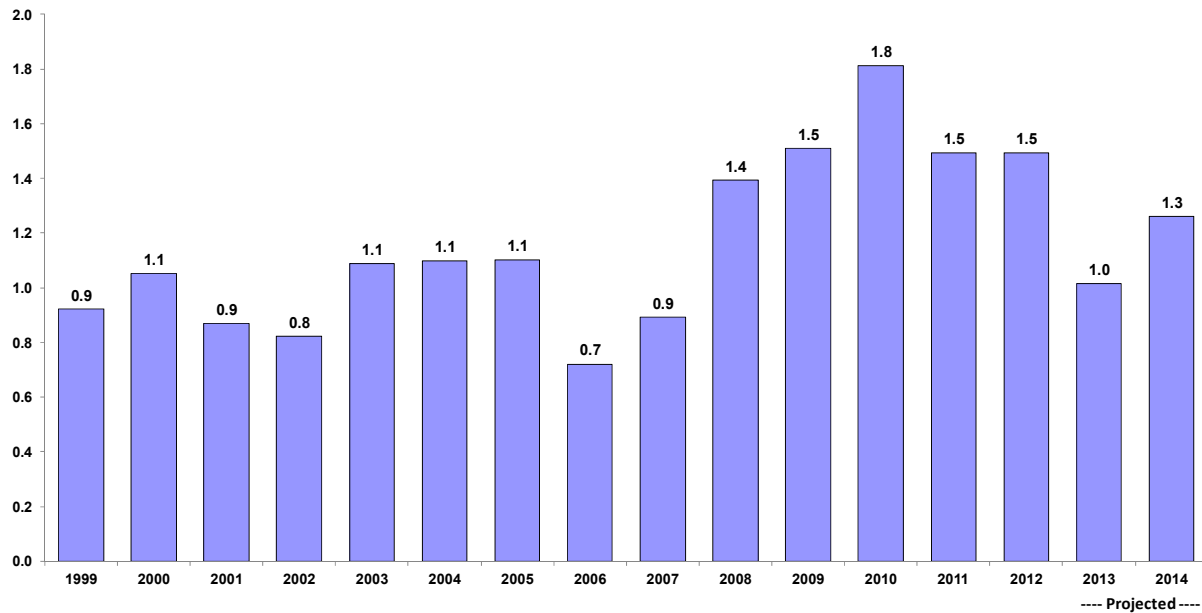
Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a three-year average cash flow to provide a measure of its financial health.



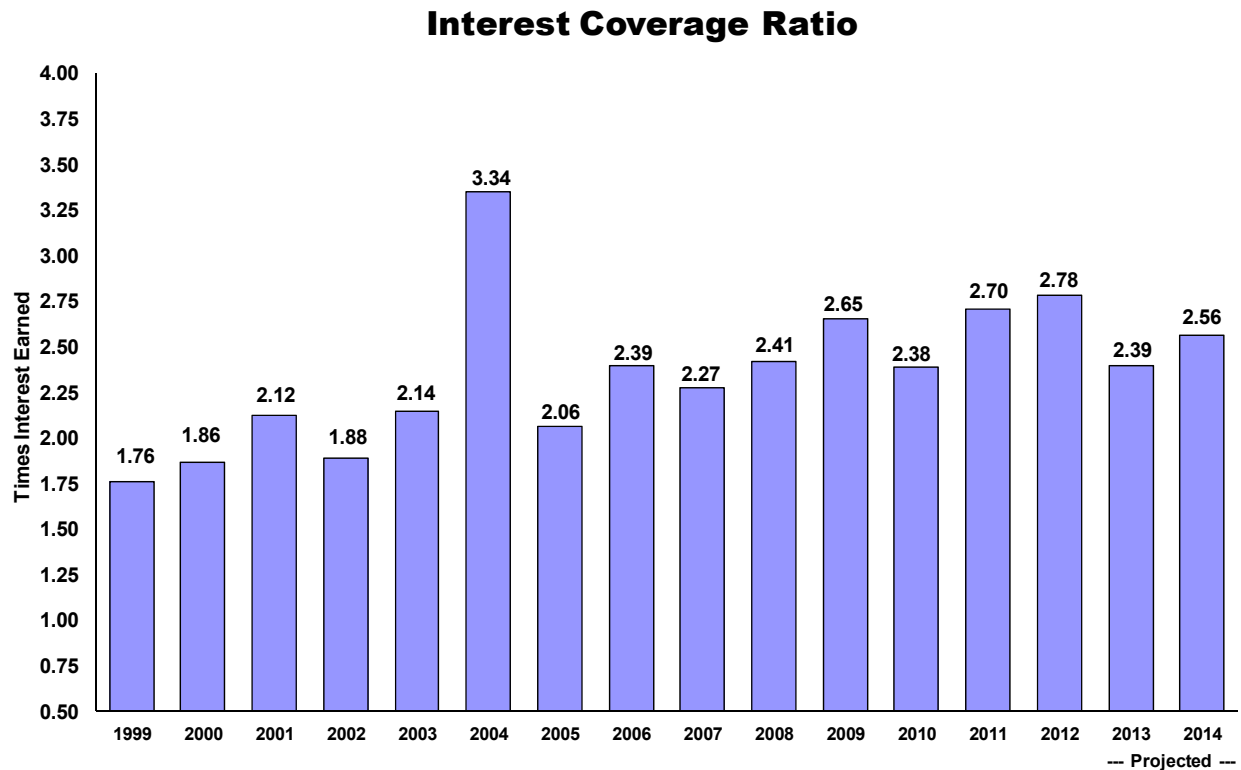
Debt Service Coverage Ratio - 3 Year Average

The Debt Service Coverage Ratio (DSCR), calculated on a three year average, demonstrates TVA's ability to cover interest payments and current maturities of long-term debt and leaseback obligations. TVA has elected this as the measure due to the fact that TVA's annual DSCR varies significantly due to the use of mostly bullet maturity bonds. Since 2008, TVA's DSCR calculated on a three year average has improved. The improvement is a result of TVA following the financial guiding principles established in 2007. See Appendix B for a calculation of DSCR - 3 Year Average, which is a non-GAAP measure, utilizing financial statement line items reported in accordance with GAAP.

Debt Service Coverage Ratio - 3 Year Average

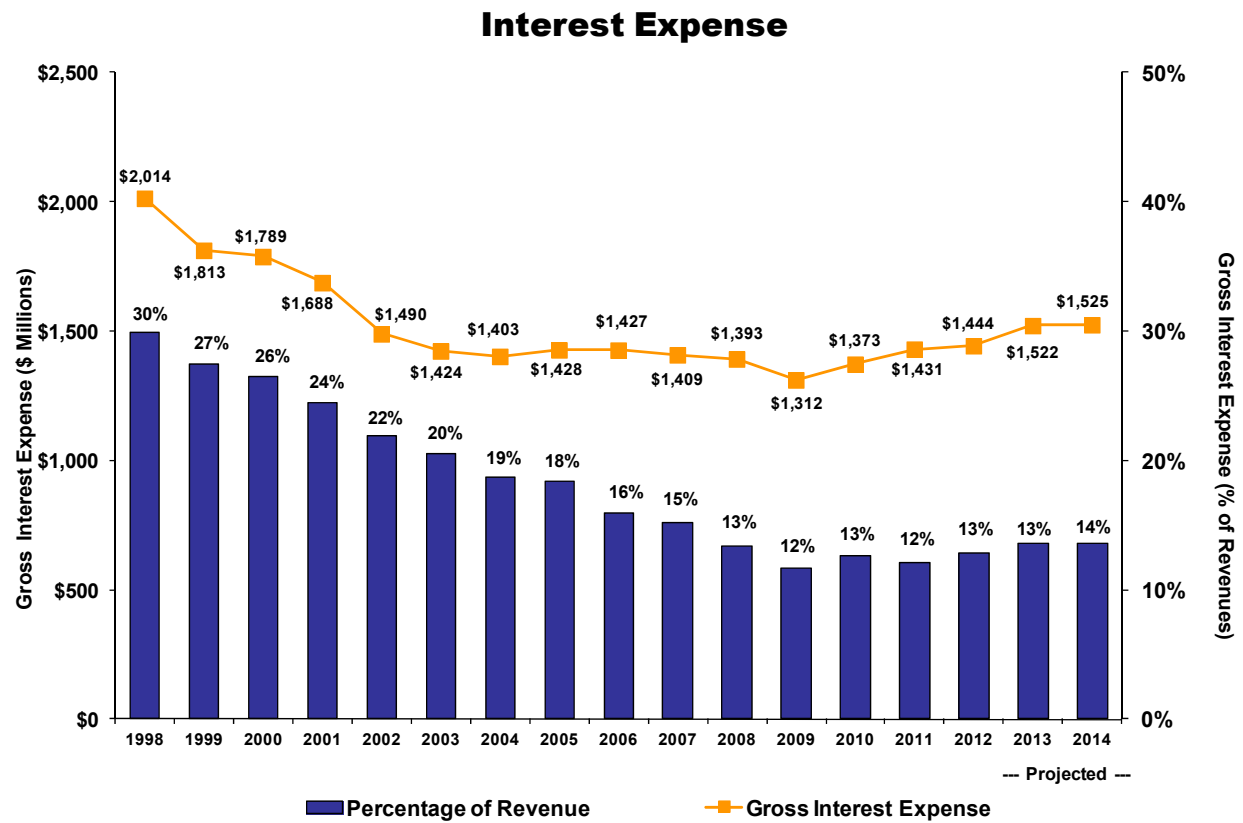
Interest Coverage Ratio

TVA's ability to pay the interest on its bonds and notes, measured by the degree to which cash flows from operations cover interest obligations, has also improved over the past several years. See Appendix C for a calculation of Interest Coverage, which is a non-GAAP measure, utilizing financial statement line items reported in accordance with GAAP.



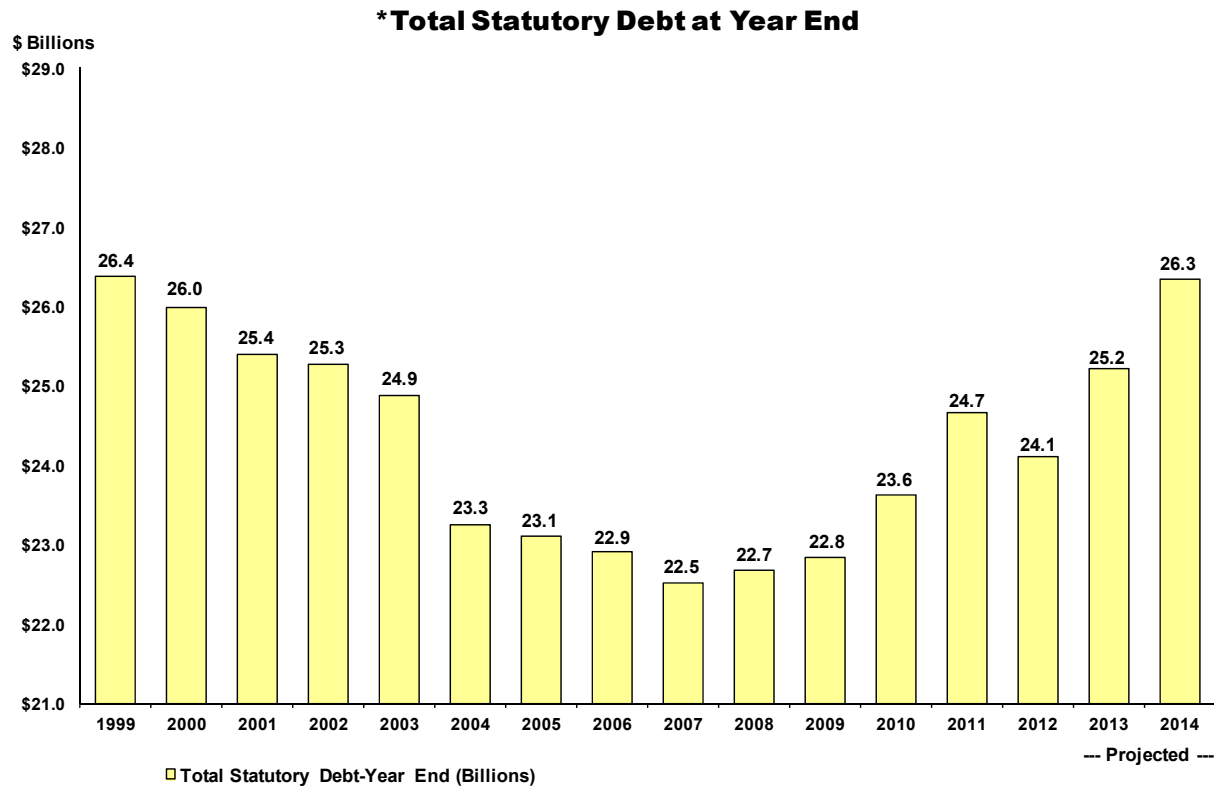
Interest Expense

TVA manages its fixed costs including interest expense. Annual interest expense was more than \$2.0 billion at its peak. This amount declined 28 percent to \$1.4 billion in FY 2012. In FY 1998, annual interest expense as a percentage of total revenues was 30 percent. That figure is expected to be 14 percent in FY 2014.



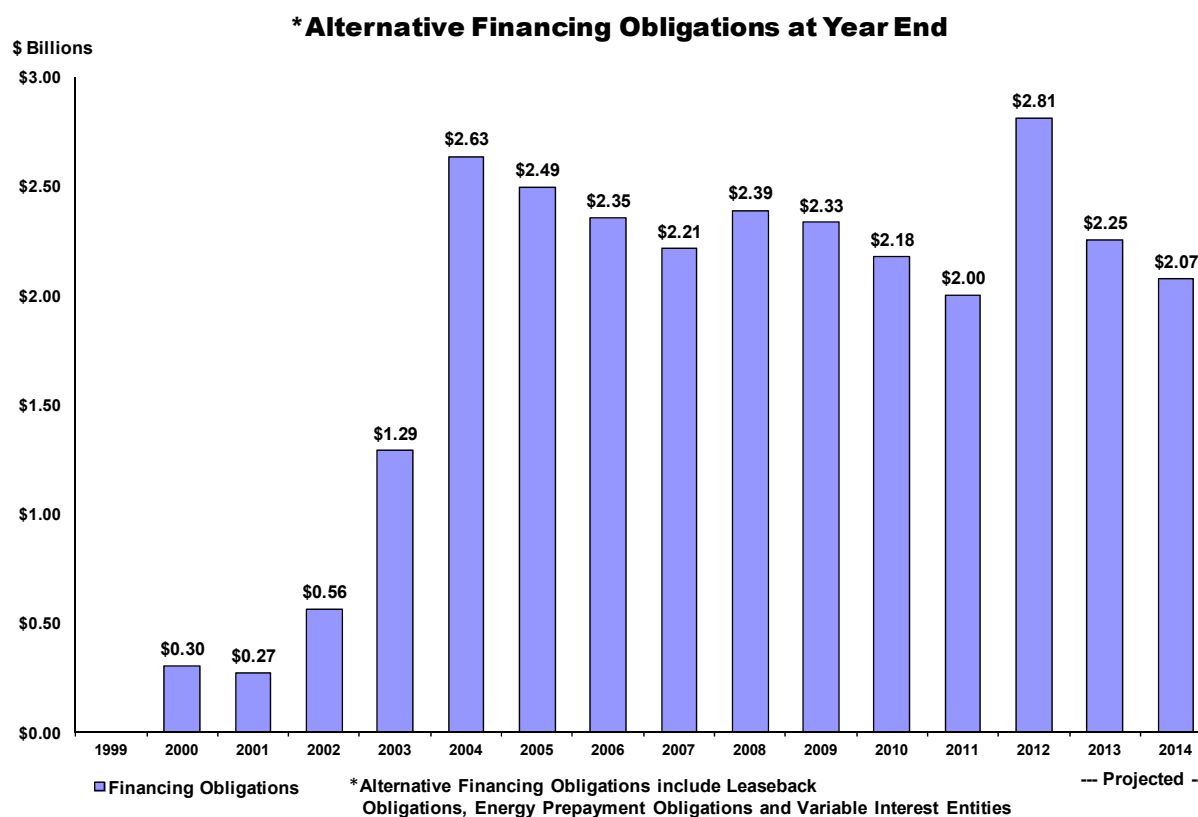
Total Financing Balance

From FY 1999 to FY 2012, TVA increased its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by \$534 million. Total Debt and Debt-Like Obligations are expected to increase in the FY 2013 through FY 2014 periods to fund capacity expansion, clean air projects, coal combustion residual projects, and the Kingston ash spill recovery.



Alternative Financing Obligations

On January 17, 2012, TVA entered into a \$1.0 billion lease transaction for the John Sevier Combined Cycle facility located in Hawkins County, Tennessee. TVA will lease the facility through January 17, 2042.



Credit Facilities

Under a memorandum of understanding, pursuant to the TVA Act, the U.S. Treasury provides TVA a credit facility for up to \$150 million. TVA also has three credit facilities with commercial banks which allow TVA to borrow up to \$2.5 billion. The facilities are generally treated as a backup source of liquidity rather than a tool to manage daily cash operations or a primary funding source. Any outstanding borrowings under any of the facilities would count as debt subject to TVA's \$30.0 billion statutory limit on bonds, notes and other evidences of indebtedness. As of September 30, 2012, the commercial credit facilities accommodated the issuance of letters of credit up to \$1.8 billion and there were \$1.1 billion of letters of credit outstanding, with no borrowings under any of the lines. From time to time, TVA provides letters of credit in lieu of cash or other assets to meet collateral requirements under certain agreements.

Operational Metrics

Power Sales and Revenue

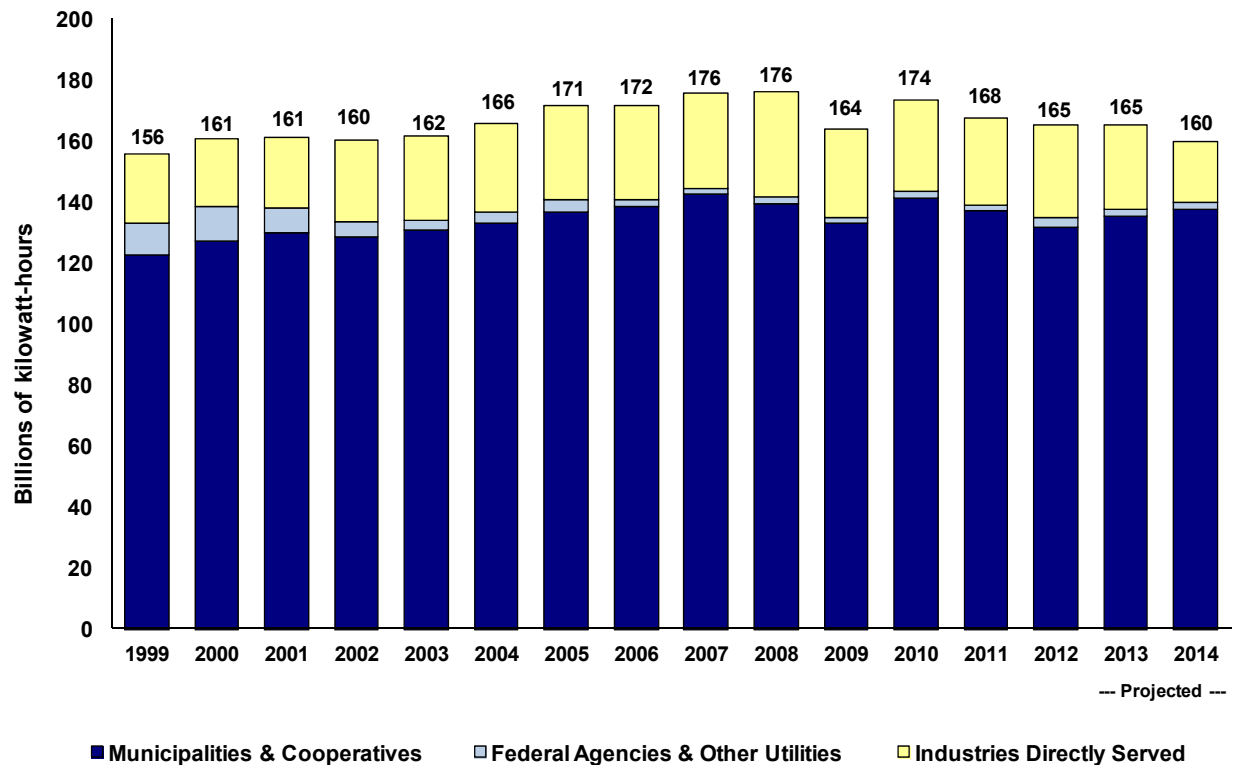
TVA sells electricity to three main customer groups:

Municipalities & Cooperatives: TVA delivers power to wholesale customers, which include municipal utility companies and cooperatives, who resell that power to consumers. Cooperatives are customer-owned companies, many of which were formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative distributors represent the majority of TVA's business.

Industrial Directly Served Customers: TVA also sells power directly to industrial customers with large or unusual loads. FY 2014 projections include reduced demand in this segment from large customers.

Federal Agencies and Others: TVA sells power directly to federal agencies. TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring utility systems. Off-system sales are included in the "Other" category. Sales to these companies typically represent less than one percent of TVA's total power sales.

TVA Total Sales



Demand in the TVA Service Territory

In FY 2012, TVA sold 165 billion kilowatt-hours of electricity, and TVA estimates that it will sell 160 billion kilowatt-hours in FY 2014. Demand for electricity in the TVA region grew approximately one percent annually from FY 1995 through FY 2012. While economic conditions have reduced power demand in recent years, TVA plans to meet demand by making capital investments in the current year, as well as future years.

TVA System Capability

Summer net capability (MW) at September 30, 2012

Coal-Fired	13,605	36%
Nuclear	6,710	18%
Hydroelectric *	5,447	15%
Combustion Turbine (owned or leased)	9,242	25%
Power Purchase Agreements	2,272	6%
Other**	<u>49</u>	<u><1%</u>
Capacity***	37,325	100%

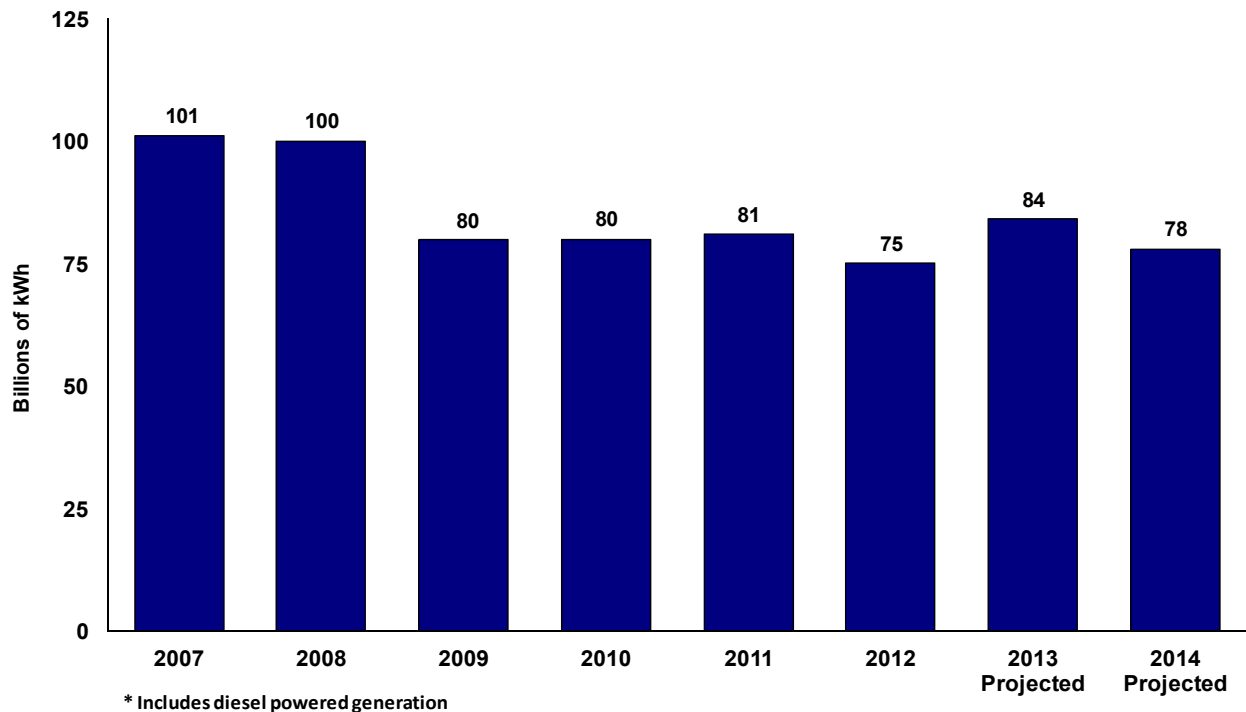
** Hydroelectric capacity includes pumped-storage.*

***Other includes 36 MW of TVA and Contract Renewable Resources (non-hydro) and 13 MW of Diesel Generator capacity.*

****Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP.*

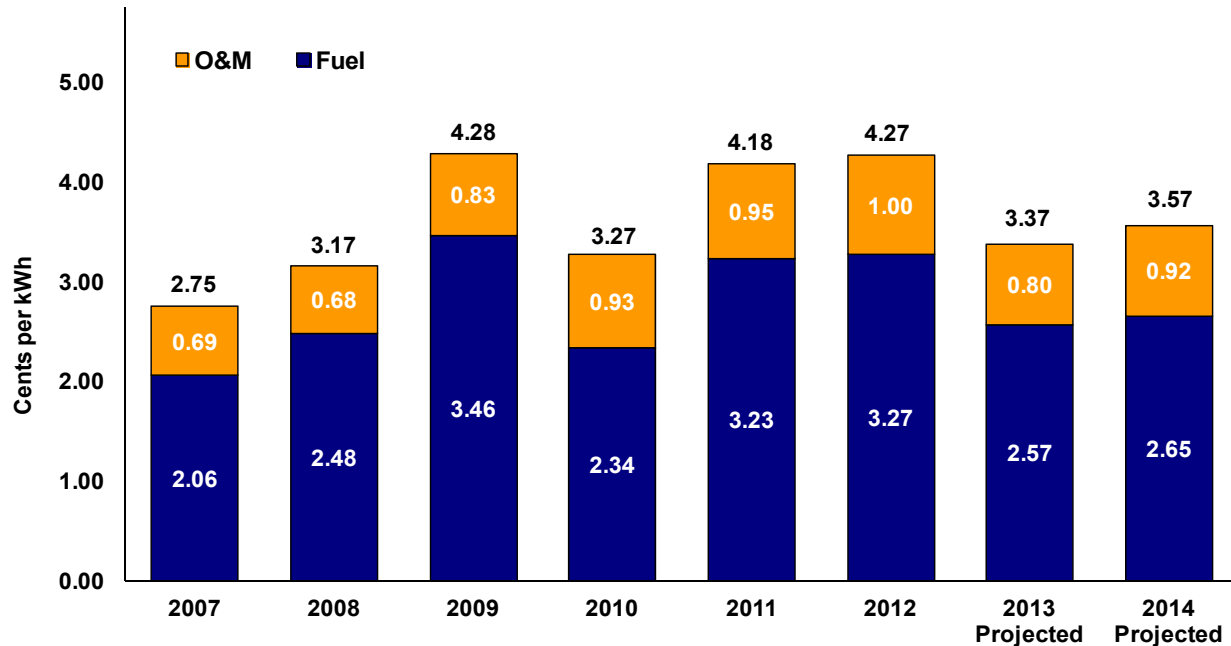
Coal and Gas Power Highlights

Coal-fired generation for FY 2012 was lower than expected due primarily to the milder winter compared to the previous year. The coal-fired generation was partially replaced with gas-fired generation and other lower-cost resources, and this trend is expected to continue. As new nuclear and gas generation come on line, and coal generation begins to decline significantly, TVA will continue to progress toward its vision of being the one of the nation's leading providers of low-cost and cleaner energy by 2020.

TVA Coal & Gas Power Generation*

Production expense per kilowatt-hour is expected to decrease from FY 2012 to FY 2013 due primarily to more favorable fuel costs and planned outages performed in FY 2012 that will not occur in FY 2013. Favorable fuel costs are partially offset by an increase in operating and maintenance (O&M) expenses for the gas fleet related to a full year of production from John Sevier Combined Cycle plant. In FY 2014, production cost per kilowatt-hour is expected to increase due to less favorable fuel costs, planned outages and air pollutant mitigation costs.

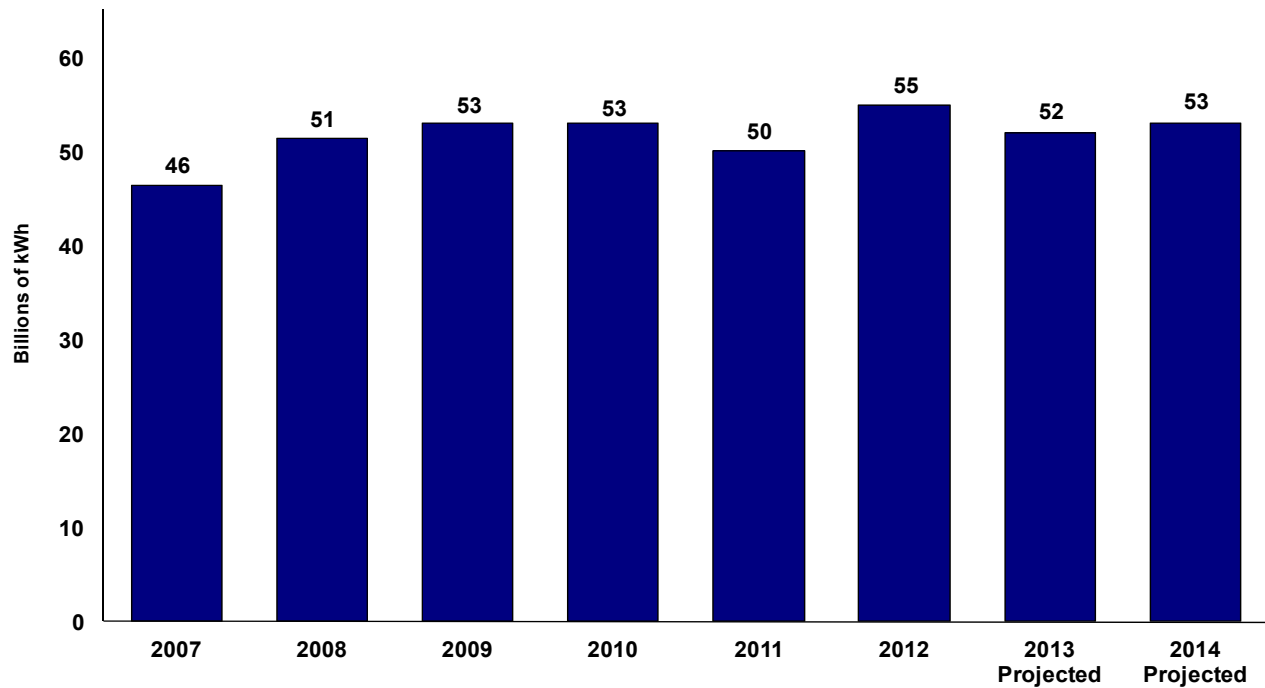
Coal and Gas Power Production Expense*



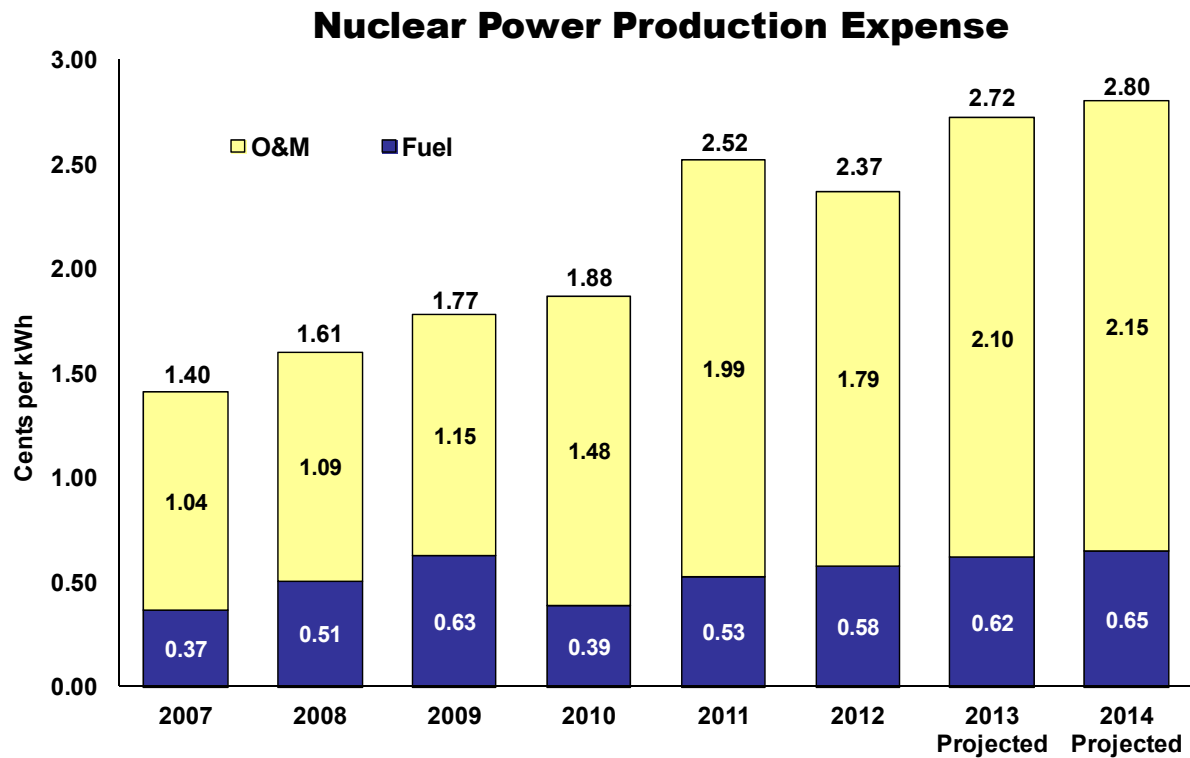
* Production includes diesel power

Nuclear Power Highlights

TVA's nuclear operations are critical to meet the region's power needs. In FY 2014, TVA's nuclear units are expected to generate 53 billion kilowatt-hours of electricity, which should represent approximately 44 percent of TVA's total net generation.

TVA Nuclear Generation

TVA's total nuclear production expense on a per-kilowatt-hour basis is expected to increase in FY 2013 and FY 2014 due to increased spending on regulatory projects (Fukushima, mitigation of inspection findings and fire protection at Browns Ferry) and fleet initiatives.



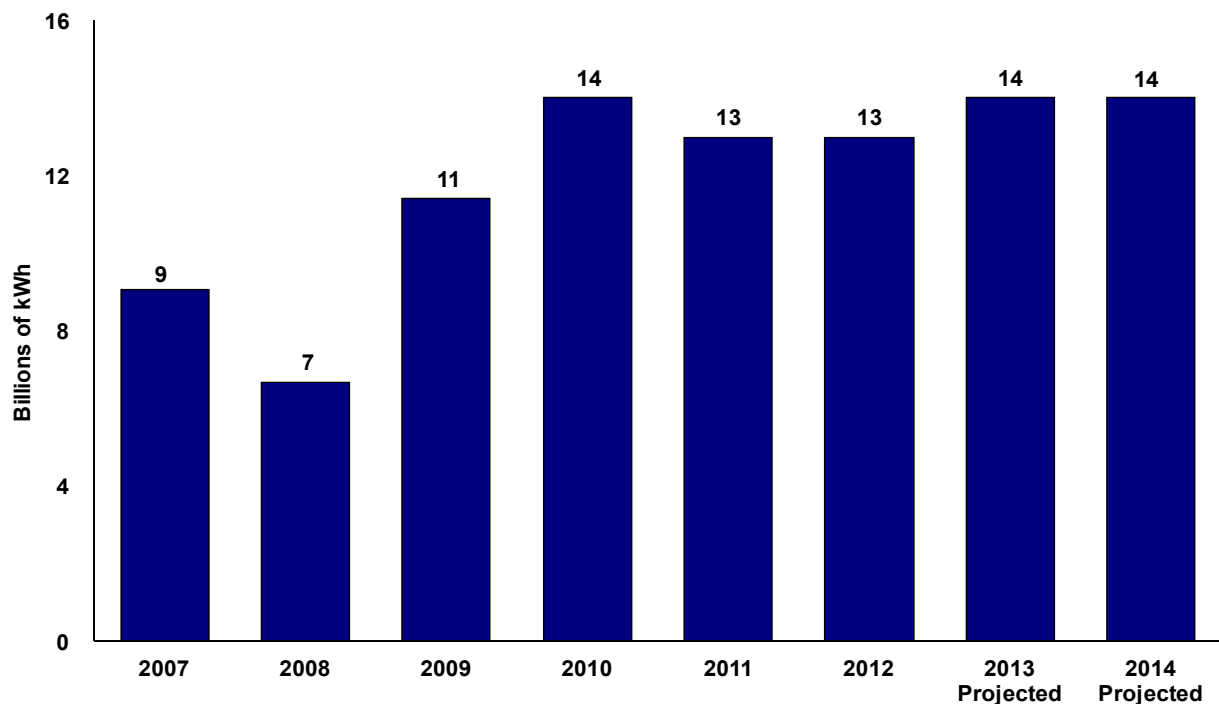
Hydroelectric Power Highlights

In FY2011 and FY2012, hydro generation was slightly lower than normal due to lower than normal rainfall and runoff for each fiscal year. For FY2013 and FY2014, TVA's integrated hydroelectric power system of dams and pumped-storage units are expected to generate at a normal level which represents 14 billion kilowatt-hours of electricity. This would represent approximately 8 percent of TVA's owned generation. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power is an important element in TVA's total portfolios.

TVA's hydroelectric facilities have very low operating costs and can be used as base-load, intermediate, or peaking units, depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountaintop reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

In the second quarter of 2012, all four of TVA's Raccoon Mountain pumped-storage units, which total 1,616 MW, were withdrawn from service after cracks were found in their rotors. In a limited capacity, one unit was returned to service in October 2012. Repairs are proceeding on the other three units and they are expected to be returned to service in the 2013 to 2014 timeframe. Alternative arrangements for power supply are being made and the reliability of supply is expected to remain unaffected.

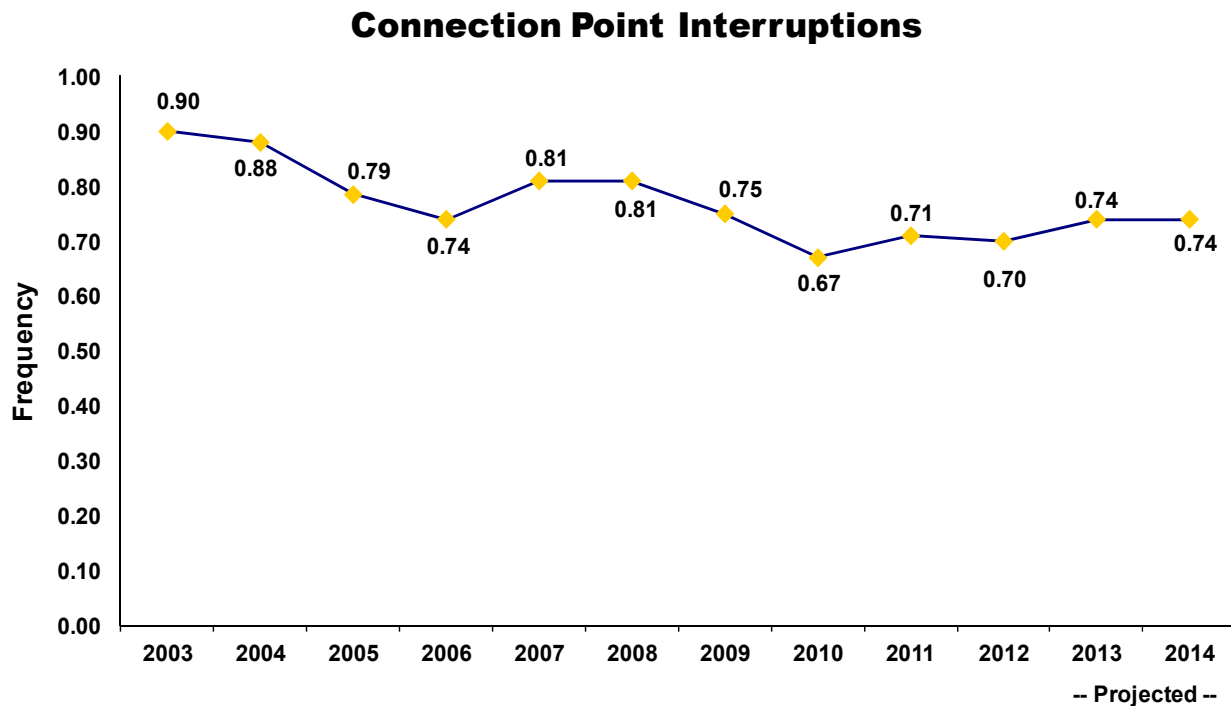
TVA Hydro-System Net Power Generation



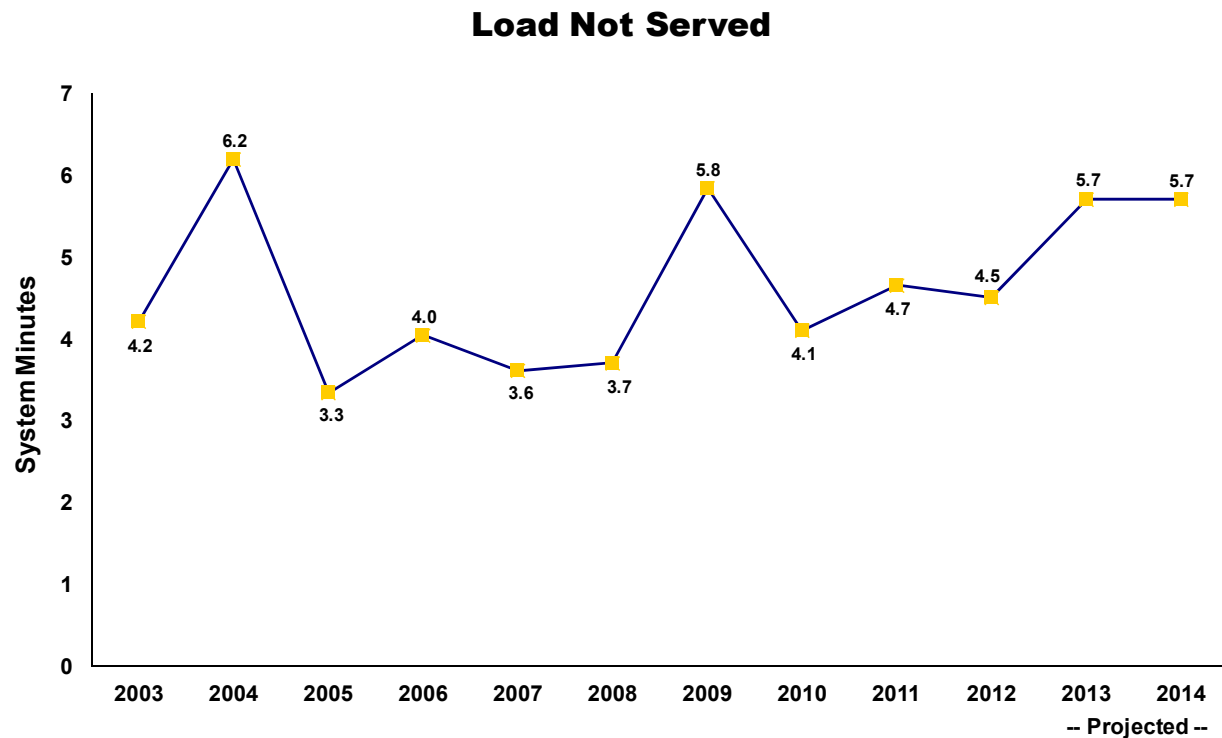
TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, maintained 99.999 percent reliability for delivering electricity to its local power distributors and directly served large industrial and government customers. The TVA transmission organization offers services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate transmission functions from TVA's marketing functions.

Connection point interruptions (CPI) measure reliability from our customers' perspective. It is calculated as the number of interruptions per connection point including momentary interruptions caused by the transmission system but excluding interruptions caused by declared major storms. CPI is lightning normalized. CPI is driven primarily by weather, and can be particularly difficult to reduce across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by 44 percent since FY 1995 by investing annually in lightning mitigation projects. In the graph below projected values shown for future years are based on industry benchmarks. TVA's targets may be lower.



Another measure of reliability is Load Not Served (LNS), which is a measure of the magnitude and duration of interruptions that affect TVA customers. LNS applies to interruptions that exceed one minute and is calculated by multiplying the percentage of total load not served (in megawatt-hours) by the number of minutes in the fiscal year. TVA takes proactive steps to remain in the industry first quartile level of LNS by working on its transmission preventative maintenance program, identifying and replacing equipment that is nearing the end of its service life before failure, and recovering rapidly from interruptions. As for CPI, projected LNS values shown for future years are based on industry benchmarks.



Tennessee Valley Authority
GPRA Annual Performance Plan
FY 2014

Originally Submitted
September 2012



Foreword

The mission of TVA is to improve the quality of life in the Tennessee Valley through its work in three key areas: energy, the environment, and economic development. TVA provides reliable, competitively priced power, manages the Tennessee River system and associated lands to meet multiple needs, and partners with communities and states for economic development. For more than 75 years, TVA's unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.

For TVA to continue to achieve its mission in today's changing economic and regulatory climate, it must lead with a continued focus on key critical issues while acting on new initiatives. As such, the TVA Board of Directors adopted the vision in 2010 to be one of the Nation's leading providers of low-cost and cleaner energy by 2020.

This document is TVA's GPRA Annual Performance Plan for FY 2014. It contains the specific information that is required by the Government Performance and Results Act. This FY 2014 GPRA Annual Performance Plan builds upon the strategic objectives and critical success factors identified in the Strategic Plan, and it describes the metrics that will be used to monitor TVA's performance toward achieving successful implementation of its strategy.

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1. TVA Mission

The mission of TVA is to improve the quality of life in the Tennessee Valley through its work in the key areas of energy, the environment and river management, economic development and technological innovation. TVA provides reliable, competitive power; manages the Tennessee River system and associated lands to meet multiple needs; and partners with Tennessee Valley communities and states for economic development. For over seventy-five years, TVA's unique mission has served as the foundation of its business endeavors and provided the context for its business objectives and internal processes.



Low-Cost, Reliable Power

TVA will provide competitively priced, reliable electricity; improve its operational performance; achieve greater energy efficiency and demand-side capabilities; and maintain the financial flexibility to deliver long-term value for customers and stakeholders.



Environmental Stewardship

TVA will continue to strengthen its industry-leading reputation in environmental stewardship of air quality, water resources, waste minimization, sustainable land use, and natural resource management.



Economic Development

TVA will continue to attract and retain jobs, including clean energy jobs and capital investments that foster sustainable economic growth. As the corporation continues to deliver the affordable, reliable electric power that businesses depend on, it will also seek new opportunities to promote regional development.



Technological Innovation

TVA will advance energy and environmental technologies, concentrating on technologies where TVA's work can make a difference in the nation's transition to cleaner energy.



River Management

TVA will provide essential public services through integrated water and land management, flood control, navigation requirements, and recreation.

2. TVA's Vision

For TVA to continue to achieve its mission in today's changing economic and regulatory climate, it must lead with a continued focus on key critical issues while acting on new initiatives. As such, the TVA Board of Directors adopted the vision:

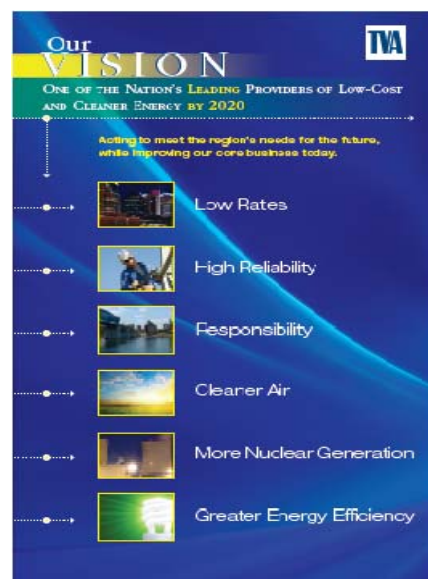
One of the Nation's leading providers of low-cost and cleaner energy by 2020

TVA plans to accomplish this vision by being:

- The Nation's leader in improving air quality;
- The Nation's leader in increased nuclear production; and
- The Southeast's leader in increased energy efficiency.

While maintaining a focus on core business through:

- Keeping electricity rates low for the Tennessee Valley region;
- Maintaining high reliability; and
- Being responsible stewards of the Tennessee Valley land and waterways.



To be the Nation's leader in improving air quality, TVA will plan to

- Significantly increase production from low emission electricity generators; and
- Reduce SO₂, NO_x, mercury, particulate, and CO₂ emissions from TVA plants.

To be the Nation's leader in increased nuclear production, TVA will plan to

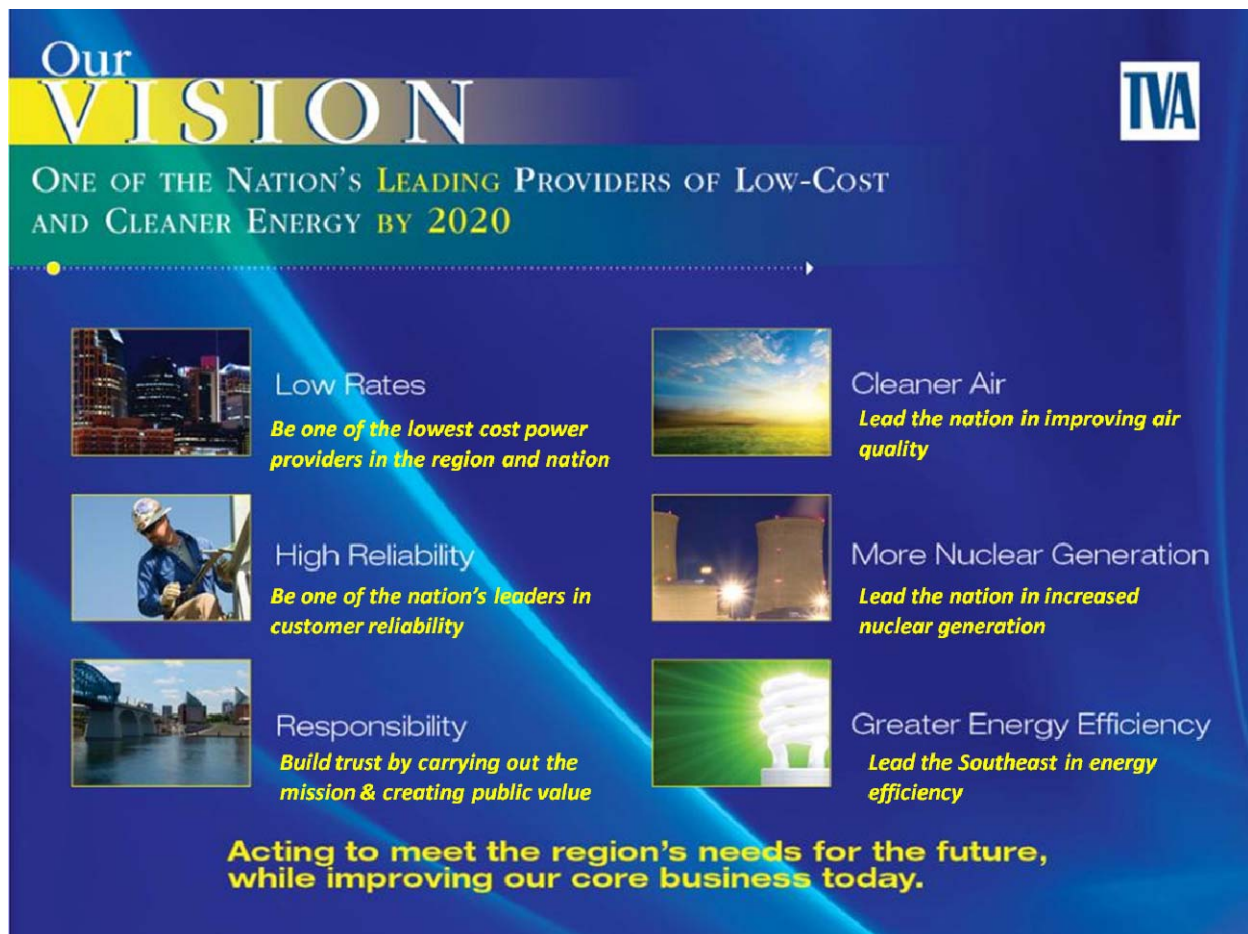
- Lead the nation in delivery of new nuclear capacity; and
- Demonstrate the first small modular reactor in the U.S.

To be the Southeast's leader in increased energy efficiency, TVA will plan to

- Help consumers and businesses use energy more efficiently and save money;
- Reduce peak power usage with demand management tools including time-of-use pricing; and
- Minimize transmission losses and optimize plant efficiency.

3. Strategic Focus Areas






Six Strategic Focus Areas have been identified to achieve TVA's vision. These focus areas and their strategic objectives are as follows:



The graphic features a dark blue background with a bright blue diagonal light beam. At the top left, the word "Our" is in white and "VISION" is in large, bold, white letters. To the right is the TVA logo. Below the title, the text "ONE OF THE NATION'S LEADING PROVIDERS OF LOW-COST AND CLEANER ENERGY BY 2020" is displayed in white and yellow. Six focus areas are arranged in two columns, each with a small image, a title, and a strategic objective in yellow italicized text. At the bottom, a yellow text box contains the statement: "Acting to meet the region's needs for the future, while improving our core business today."

Our VISION

ONE OF THE NATION'S LEADING PROVIDERS OF LOW-COST AND CLEANER ENERGY BY 2020

 <p>Low Rates <i>Be one of the lowest cost power providers in the region and nation</i></p>	 <p>Cleaner Air <i>Lead the nation in improving air quality</i></p>
 <p>High Reliability <i>Be one of the nation's leaders in customer reliability</i></p>	 <p>More Nuclear Generation <i>Lead the nation in increased nuclear generation</i></p>
 <p>Responsibility <i>Build trust by carrying out the mission & creating public value</i></p>	 <p>Greater Energy Efficiency <i>Lead the Southeast in energy efficiency</i></p>

Acting to meet the region's needs for the future, while improving our core business today.

4. Program Evaluations - Tracking Progress Toward the Goals

4.1 Primary Strategic Objective Measures

In support of the mission and vision, fifteen measures that relate to the Primary Strategic Objectives (see Section 3 above) have been identified to monitor TVA's performance toward achieving successful implementation of its vision. These metrics are reviewed and systematically updated annually to maintain alignment with the strategic focus.

The Strategy Scorecard Primary Strategic Objective metrics are as follows:

LOW RATES

- (1) **Retail Rates (¢ / kWh Sales) - 12-month rolling average** = average of the previous twelve months' distributor reported retail power revenue and directly served power revenue divided by distributor reported retail power sales and directly served power sales

Calculation:

$$\frac{\text{Distributor reported power revenue} + \text{Direct Served power revenue}}{\text{Distributor reported sales} + \text{Direct Served power sales}}$$

- (2) **Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales)** = TVA's total costs in dollars per MWh of power sold to customers

Calculation:

$$\frac{\text{Total Income Statement Expenses (Excluding FCA Costs)} \pm \text{Other Income, net}}{\text{Total Sales Volume (MWh)}}$$

HIGH RELIABILITY

- (3) **Load Not Served (LNS)** = measures the magnitude and duration of transmission system outages that affect TVA customers expressed in system minutes

Calculation: Percent of total load not served x Number of minutes in period

- (4) **Equivalent Availability Factor - Coal, Combined Cycle, & Nuclear (Percent)** = a ratio of actual available generation from all TVA Coal, Combined-Cycle & Nuclear generating assets in a given period compared to maximum availability

Calculation:

$$\frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units ((AVH * NMC) - MWhL - SchMWhL)) * 100}}{\sum \text{of all Coal, Combined-Cycle \& Nuclear units (PH * NMC)}}$$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand 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 outages (planned or maintenance) or derating

- (5) **Purchased Power Reliability** = ensures that purchased MWh are delivered reliably to the TVA system; this measure tracks and responds to purchased MWh not delivered as scheduled, most often due to Transmission Load Reliefs (TLRs) but also due to lost generation from unit contingent purchases and unit trips in the Commercial Fleet

Calculation: (MWh delivered / MWHS scheduled) x 100%

Note: excludes purchases from renewable resources, and Dispersed Power agreements; may exclude impacts of major events due to storms or natural disasters; purchases where non-delivery is compensated for financially are not included.

RESPONSIBILITY

- (6) **Integrated Stakeholder Assessment** = a quantitative survey conducted among residents, public officials, economic development leaders and business/community leaders in the Tennessee Valley; public opinion tracking research is conducted to help TVA understand, measure and address positive and negative perceptions about the organization

Calculation: Average scores of the following stakeholder survey components: General Public, Public Officials, Business/Community Leaders, and Economic Developers

- (7) **Organizational Health Index** = measures the organizational health of the employee work force

Calculation: Measured by the percent favorable responses (agree or strongly agree) on the Survey.

Item favorability is captured within each respective dimension.

- (8) **Safe Workplace (Injuries / Hours Worked)** = a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty/job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and Staff Augmentation contractors

Calculation: Safe Workplace (RIR) Rate = (number of recordable injuries x 200,000) / (number of employee-hours worked)

NOTE: Hearing loss events are reported as recordable injuries on the OSHA 300 Log, but are excluded from the TVA Winning Performance (see section 4.2) Safe Workplace indicator.

CLEANER AIR

- (9) **Reduce CO₂ Emissions (Emissions Tons/GWh)** = direct emissions of CO₂ from the combustion of carbon-based fuels for energy generation and excluding purchased power

Calculation: Annual reduction of CO₂ Emissions = ktons

- (10) **Reduce SO₂ Emissions (Emissions Tons/GWh)** = direct emissions of SO₂ from the combustion of carbon-based fuels for energy generation and excluding purchased power

Calculation: Annual reduction of SO₂ Emissions = ktons

- (11) **Reduce NO_x Emissions (Emissions Tons/GWh)** = direct emissions of NO_x from the combustion of carbon-based fuels for energy generation and excluding purchased power.

Calculation: Annual reduction of NO_x Emissions = ktons

MORE NUCLEAR GENERATION

- (12) **Nuclear Capacity Additions (MW)** = the addition of Nuclear capacity in the generation mix

Calculation: Sum additional MW from nuclear capacity additions

- (13) **Nuclear Total Delivered Cost (\$/MWh)** = Nuclear delivered cost of power reflects costs incurred by a utility to generate and deliver Nuclear power to end users; measures ability to provide low cost, reliable power; includes TVA end-use costs of power and distributor costs; expressed as utility costs incurred per MWh sold (includes FCA)

Calculation:
$$\frac{\text{(Nuclear Total Income Statement Expenses +/- Other Income, net)}}{\text{Total Sales Volume (MWh)}}$$

Income statement expenses include fuel and purchased power costs, O&M, depreciation and amortization, tax equivalents and interest expenses

GREATER ENERGY EFFICIENCY

- (14) **Energy Efficiency Savings (GWh)** = Energy efficiency (EE) savings measured in GWh from internally and externally focused programs, demonstrations, pricing products and structures supported or funded by TVA which promote the efficient use of electricity

Calculation: FY12 Incremental Energy Efficiency Savings = [(Individual EnergyRight Solutions product kWh impacts) * (FY12 individual EnergyRight Solutions installations)/1,000,000] + [FY12 kWh energy efficiency achieved by Industrial and Commercial projects + FY12 kWh energy efficiency impacts from Demand Response programs + FY12 kWh energy efficiency impacts achieved through information/outreach programs + FY12 kWh energy efficiency impacts achieved by wholesale & retail pricing products + FY12 kWh energy efficiency impacts from TVA facilities improvements +....+ FY12 kWh energy efficiency impacts from TVA-supported loan funds administered by others + FY12 kWh energy efficiency impacts from state programs receiving TVA support]/1,000,000

- (15) **Peak Demand Reduction (MW)** = measure of cumulative annual expenditures for energy efficiency and demand response activities divided by cumulative annual demand reduction potential identified

Calculation: (YTD EE&DR Expenditures)Qtr / (Σ Monthly potential demand reduction reported YTD)Qtr

OTHER FINANCIAL MEASURES

- (16) **Net Cash Flow** = movement of cash, or balancing cash inflows and outflows throughout the year

Calculation: (Cash Flow from Operations) + (Investing Cash Flow) - (Net Cash Flow from Change in FCA Deferral Account)

- (17) **Interest Coverage** = ratio used to determine how easily a company can pay interest on outstanding debt

Calculation:
$$\frac{\text{Cash from Operations}}{\text{Interest Expenses}}$$

- (18) **Debt Service Coverage** = the amount of cash flow available to meet annual interest and principal payments of debt to indicate how well positioned a company is to service its current outstanding debt

Calculation:
$$\frac{(\text{Operating Income} + \text{Depreciation, Amortization, and Accretion})}{(\text{Current Maturities of Long Term Debt and Leases} + \text{Net Interest Expense})}$$

- (19) **Debt Service Coverage Rolling 3 Year Average** = average of the previous two years and current year amount of Debt Service Coverage (see calculation above), which is cash flow available to meet annual interest and principal payments of debt to indicate how well positioned a company is to service its current outstanding debt

4.2 The Winning Performance Process

The Winning Performance process keeps TVA focused on the strategic objectives. It identifies the priority measures and tracks its performance in these areas, and provides the incentives and feedback to employees to see the direct connection. Employees' involvement in Winning Performance enables them to understand how their day-to-day performance contributes to TVA's performance and success.

TVA's Winning Performance Team Incentive Plan (WPTIP) is a pay-for-performance program similar in structure to incentivized performance-based, profit-sharing programs used by private companies. The program is based on the principle that operational and process improvements, reduced costs, and improved revenues can be obtained by applying appropriate management focus and offering appropriate monetary incentives.

Employees can see how their work contributes to the Strategic Business Unit (SBU) performance plan and how that contributes to TVA's successful implementation of the agency's strategy. WPTIP utilizes a balanced scorecard as the primary tool to identify and communicate the focus of the incentives to the workforce. Employees have line-of-sight from their individual performance objectives, developed as a part of the Integrated Performance Management process, to TVA's strategic objectives.

All full-time employees are eligible to participate in WPTIP, except those approved by the TVA Board or delegate(s) to participate in the Executive Annual Incentive Program. WPTIP is a compensation plan (lump sum payment) tied to performance results based on scorecard metrics at the TVA, SBU, and Business Unit (BU) levels. The SBUs with scorecards are Generation (includes Generation Construction, River Operations & Renewables, and Coal & Gas Fleets), Nuclear Generation, Nuclear Construction, and Energy Delivery.

The TVA corporate metrics represent at least 50 percent of each employee's potential payout. The remaining potential employee payout is tied to the performance of an employee's SBU or BU scorecards, whichever is applicable. Corporate organizations are incentivized based on the performance of the three TVA corporate metrics, Net Cash Flow, Nuclear Equivalent Availability Factor and Critical Fossil Seasonal Equivalent Forced Outage Rate. Executives also have performance incentives linked to the same scorecards.

4.3 TVA's Balanced Scorecard

The TVA, SBU, and BU scorecards contain targets at three levels, corresponding to different incentive payouts: Threshold, Target, and Stretch.

The scorecard basis sheets contain the year-to-date actual values of the metrics, as well as historical and future forecasts, where applicable. Adverse trends and improvement plans are discussed during normal reviews with executive management.

Performance is monitored on each of the metrics, and the scorecards are updated each month to reflect actual results and updated forecasts. These updates are available to employees through their organizations, TVA's intranet, posters and pamphlets.

5. Strategy Implementation

5.1 TVA's Mission and Strategic Plan

The five strategic objectives identified in the TVA Strategic Plan focus on the general steps TVA must take to fulfill its core mission. The outcomes are areas that TVA must focus on to continue fulfilling its mission within the evolving business environment.

5.2 Principles of a Strategy-Focused Organization

TVA follows the Principles of a Strategy-Focused Organization¹ to implement its strategy throughout the operations of the organization. The five principles used by the public and private sectors are defined as:

1. Mobilize the organization through visible executive leadership. The TVA Board approves the Strategic Plan, budgets, and performance targets. Executive leadership endorses the Strategic Plan and takes responsibility for its operational implementation.
2. Translate the strategy into operational terms. A key vehicle for translating TVA's strategy into operational terms is TVA's Business Planning Process. These objectives translate 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 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 balanced scorecard, which ties incentive compensation to the achievement of goals.
5. Govern to make strategy a continual process. TVA, SBU, and BU scorecards are updated monthly as described in section 4.3.

5.3 Translating the Strategic Plan into Operational Terms

Translation of the TVA Strategy includes the selection of strategic objectives and clear measures, targets, and time boundaries for each. This translation "operationalizes" the strategic vision and direction by providing lower levels of detail that become TVA's integrated plan of action. The process takes a top-down approach in three respects:

1. The top level represents a longer timeframe, where each subsequent level is of a shorter duration. The vision and strategy describe approximately ten years, while the business plan and budget are each of shorter duration.
2. The top level represents the largest organizational grouping (all of TVA) while each subsequent level is a subset of the previous level until each individual has objectives that align with and support the overall TVA strategy.
3. The top level describes a broad vision and each subsequent level describes ever more detailed plans.

Critical to the process is the development of objectives, metrics, and milestones to answer the question, "What does success look like?" At the corporate level, TVA has developed a Strategy Scorecard which is updated twice a year. At subsequent levels, metrics are reviewed monthly and weekly. The level of detail and the frequency of review of metrics allows for timely and relevant feedback -- timely enough for corrective actions.

5.4 Annual Goals, Long-Term Goals and the Strategic Plan

Developing corporate short-term and long-term plans is critical in achieving the goals outlined in the Strategic Plan. TVA's Long-Term Plans cover a minimum of five years and maximum of twenty years. These plans include:

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

- Short-Term (1-3 Year) Plans
 - Bi-Annual Power Supply Plan
 - TVA Business Plans (3-year outlook with quarterly reviews)
 - Capital Project Plans (3-year outlook)
- Long-Term (5-20 Years) Plans
 - Bi-Annual Long-Term Power Supply Plan (20-year forecast)
 - Long-Range Financial Plans (10 years or more), and associated risk analyses
 - Enterprise Risk Assessments (5-year outlook)

At a minimum, quarterly briefings are held with the TVA Board, which include a review of corporate performance. The strategic issues, the scorecard and financial outlook are tracked and reviewed. Annually these reviews include three-year trending and three-year forecast.

6. 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 subject to forecast error, and planning under uncertainty is inherent. Normal planning uncertainties include those associated with projections about:

- 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
- competition
- changes in market interest rates
- change in operating and maintenance cost

In addition to these uncertainties in electric power planning, the electric utility industry continues 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 “Delivering the Vision”. Given the potential for change in the industry and the high potential for significant forecast error, TVA planning evolves as more information becomes available.

7. Resources and Skills Needed to Achieve Goals

7.1 Financial Resources

The TVA Act authorizes and requires the TVA Board to set electric rates at a level to cover all power system costs while being responsible to the Act’s objective that power is sold at rates as low as feasible. The Energy and Water Development Appropriations Bill of 1998 directed TVA to use power revenues to pay for essential stewardship activities previously funded by federal appropriations.

7.2 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.

7.3 Management and Human Resources

TVA will need to maintain its existing skills and processes related to power supply, resource stewardship, and economic development while also developing a number of new processes and skills. Major initiatives include the following:

- Continued efforts across the organization to improve efficiency. The activities include benchmarking best-in-class performers on a variety of industry accepted measures.
- Continued training to develop a multi-skilled workforce to improve labor productivity.

- Developing new tools to support the development of products and services, including new methods for determining TVA's cost to provide different types of service and evaluating and quantifying risk.
- Developing new methods for evaluating future investments in generation that reflect the uncertainty in future revenue available to recover those investments.

Appendix A

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Reconciliation of Net Income to EBITDA
(in millions)

	2007	2008	2009	2010	2011	2012	2013 Projected	2014 Projected
Net Income	\$ 423	\$ 817	\$ 726	\$ 972	\$ 162	\$ 60	\$ 81	\$ 352
Add back:								
Interest Expense	1,232	1,376	1,272	1,294	1,305	\$ 1,273	\$ 1,336	\$ 1,296
Depreciation & Amortization	1,473	1,224	1,598	1,724	1,772	1,919	1,656	1,689
Total EBITDA	\$ 3,128	\$ 3,417	\$ 3,596	\$ 3,990	\$ 3,239	\$ 3,252	\$ 3,073	\$ 3,337

Appendix B

Debt Service Coverage Ratio (DSCR) calculated on a three year average is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Annual DSCR coverage is measured by dividing Operating Income and Depreciation and Amortization by Interest Expense and the previous year's Current Maturities of Long-Term Debt and Current Portion of Leaseback Obligations. Then to compute the three year average you average the current year annual ratio and previous two years annual ratios. A calculation of DSCR calculated on a three year average utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Debt Service Coverage
(in millions)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Operating Income	1,660	1,337	1,423	1,543	2,184	1,973	2,242	1,437	1,300	1,401	1,632
Depreciation and Amortization	1,115	1,154	1,500	1,473	1,224	1,598	1,724	1,772	1,919	1,656	1,689
Net Operating Income	2,775	2,491	2,923	3,016	3,408	3,571	3,966	3,209	3,219	3,057	3,321
Gross Interest Expense	1,403	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,522	1,525
Current Maturities of Long-Term Debt	2,000	2,693	985	90	2,030	8	1,008	1,537	2,308	40	1,040
Current Portion of Leaseback Obligations	35	35	37	43	54	463	74	80	443	83	89
	3,438	4,105	2,449	1,542	3,477	1,783	2,455	3,048	4,195	1,645	2,654
3-Year Average DSCR	1.1	1.1	0.7	0.9	1.4	1.5	1.8	1.5	1.5	1.0	1.3

Appendix C

Interest Coverage is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Interest Coverage is measured by dividing Net Cash Provided by Operating Activities and Interest Expense by Interest Expense. TVA presents Interest Coverage because it describes TVA's ability to pay the interest on its bonds and notes. A calculation of Interest Coverage utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Interest Coverage
(in millions)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Net Cash Provided from Operating Activities	3,290	1,462	1,985	1,788	1,967	2,163	1,901	2,437	2,574	2,119	2,378
Gross Interest Expense	1,403	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,521	1,524
Interest Coverage	3.34	2.06	2.39	2.27	2.41	2.65	2.38	2.70	2.78	2.39	2.56

Tennessee Valley Authority

Budget Proposal and Management Agenda (Performance Report)



For the Fiscal Year Ending
September 30, 2015

Submitted to Congress
March 2014



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Introduction

TVA's Mission and Vision

TVA was built for the people, created by Congress in 1933 and charged with a unique mission – to improve the quality of life in a seven-state region through the integrated management of the region's resources. As it helped lift the Tennessee Valley out of the Great Depression, TVA built dams for flood control, provided low-cost power and commercial shipping, restored depleted lands, and raised the standard of living across the region. As times have changed, TVA has changed with them by updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation. While TVA's mission has not changed since it was established in 1933, the environment in which TVA operates continues to evolve. The business and economic environment has become more challenging, and demand for power and related revenues have decreased due to customer usage and increased energy efficiency and demand response."

Rates

TVA is committed to providing all of its customers power at the lowest feasible rates. This customer focus requires scrutiny of all projects and use of resources so that the organization operates as efficiently and responsibly as possible. TVA is focused on managing rates and funding capital projects through rates with less debt financing.

Asset Portfolio

Balancing TVA's asset portfolio is vital as many of its facilities are increasing in age. In 2011, the TVA Board of Directors ("Board" or "TVA Board") accepted the Integrated Resource Plan ("IRP"), which recommends a strategic direction focusing on a diverse mix of electricity generation sources, including nuclear power, renewable energy, and natural gas, as well as traditional coal and hydroelectric power. TVA is increasing its low or no emission generation. TVA considers fuel mix in making decisions about generation, and is expected to rely on nuclear, natural gas-fired capacity and energy efficiency as the primary means to meet future electricity needs. TVA began a refreshed version of the IRP in the fall of 2013. The new report is expected to be published in 2015.

Debt

TVA is committed to long-term debt reduction through employing a conservative approach as it relates to capital projects and payback to bondholders. While the need for financing continues to be necessary, the organization is committed to managing its debt under the ceiling established by Congress.

Stewardship

TVA's responsibility for stewardship of the waters and public lands of the Tennessee Valley was established in the TVA Act. These responsibilities include flood control, improved navigation of the Tennessee River, land and shoreline management as well as agricultural and industrial development. TVA is committed to increasing its role in many of these areas as activities are planned for dam safety and reservoir operation enhancements, stabilization of eroding shorelines and the redevelopment of Muscle Shoals properties. This redevelopment is expected to improve public relations, enhance marketability and reduce the maintenance cost of ownership.

From 1977 to 2013, TVA spent approximately \$5.6 billion on controls to reduce emissions from its coal-fired power plants. In addition, TVA has reduced emissions by retiring or idling coal-fired units and relying more on cleaner energy resources including renewables, natural gas and nuclear generation.

SO₂ Emissions. To reduce SO₂ emissions, TVA has installed scrubbers on 17 of its coal-fired units, and switched to lower-sulfur coals at 41 coal-fired units. In August 2011, the TVA Board approved adding scrubbers to 4 units at Gallatin Fossil Plant ("Gallatin") subject to completing appropriate environmental reviews. Additionally, TVA recently upgraded the scrubbers for Paradise Units 1 and 2 to further reduce SO₂ emissions.

NO_x Emissions. To reduce NO_x emissions, TVA installed selective catalytic reduction systems ("SCRs") on 21 coal-fired units, installed selective non-catalytic reduction systems on 2 coal-fired units (although TVA is no longer operating one of these systems because of technical challenges), installed High Energy Reagent Technology systems on 7 coal-fired units, installed low-NO_x burners or low-NO_x combustion systems on 46 coal-fired units, optimized combustion on 12 coal-fired units, and began operating NO_x control equipment year round when units are operating (except during startup, shutdown, and maintenance periods) starting in October 2008. In addition, in August 2011, the TVA Board approved adding SCRs to 4 units at Gallatin subject to completing appropriate environmental reviews. TVA has SCRs operating on all 5 gas-fired combined cycle combustion turbine plants to reduce NO_x emissions.

Particulate Emissions. To reduce particulate emissions, TVA has equipped all of its coal-fired units with scrubbers, mechanical collectors, electrostatic precipitators, and/or bag houses.

Primarily due to the actions described above, fiscal year ("FY") 2012 emissions of NO_x and SO₂ on the TVA system were 90 percent below peak 1995 levels and 94 percent below FY 1977 levels, respectively. These controls also have provided a co-benefit of reducing hazardous air pollutants, including mercury, at some units.

Executive Summary

Power Program

TVA is a corporate agency of the United States government that was created in 1933 by legislation enacted by the U.S. Congress. TVA operates the nation's largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of over 9 million people. TVA has not received appropriated funds from the federal government for its power program since 1959 although appropriated funds for its nonpower and multi-purpose programs continued through 1999. Additionally, TVA makes annual payments to the U.S. Treasury as a return of and a return on the government's original \$1.4 billion appropriation investment in the power program. Through FY 2014, TVA expects to have paid approximately \$3.67 billion as a return of and return on this investment.

TVA now funds all of its operations almost entirely from the sale of electricity and power system financings. TVA's power system financings consist primarily of the sale of debt securities and secondarily of alternative forms of financing such as lease arrangements.

TVA is primarily a wholesaler of power. It sells power to Local Power Company Customers ("LPCs") which then resell power to their customers at retail rates. TVA's LPCs consist of (1) municipalities and other local government entities ("municipalities") and (2) customer-owned entities ("cooperatives"). These municipalities and cooperatives operate public power electric systems that are not doing business for profit but are operated primarily for the purpose of supplying electricity to the general public or members. TVA also sells power to directly served customers, consisting primarily of federal agencies and industrial customers with large or unusual loads. In addition, power that exceeds the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with other electric systems.

Power generating facilities operated by TVA at September 30, 2013, included 29 conventional hydroelectric sites, a pumped-storage hydroelectric site, 10 coal-fired sites, 3 nuclear sites, 14 natural gas and/or oil-fired sites, and a diesel generator site, although certain of these facilities were out of service as of September 30, 2013. In FY 2015, TVA expects sales of about 154 billion kilowatt-hours ("kWh") of electricity. TVA's renewable energy program, Green Power Switch, includes 16 solar energy sites, digester gas co-firing capacity at a coal-fired site, biomass co-firing potential (located at coal-fired sites), and a wind energy site (out of service).

As of September 30, 2013, TVA's coal-fired units had 12,901 MW of net summer capability. The 10 coal-fired plants generated about 43 percent of the power from TVA-operated facilities during FY 2013. TVA's system also includes 98 generators powered by natural gas and/or oil-fired units with a total net summer capability of 9,242 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided 9 percent of the power from TVA-operated facilities in FY 2013.

The 6 nuclear units have a combined net summer capability of 6,724 MW and generated 36 percent of the power from TVA-operated facilities in FY 2013.

TVA-owned hydroelectric units have a combined net summer capability of 5,433 MW and generated about 12 percent of the power from TVA-operated facilities in FY 2013.

Integrated Resource Plan

TVA's vision sets the stage for its strategic planning process that includes strategic objectives, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the IRP.

The 2011 IRP study, entitled *TVA's Energy and Environmental Future*, supports TVA's comprehensive mission, which includes providing the region with an affordable, reliable, environmentally sustainable supply of electricity. The power

supply plans evaluated in this study identified the most likely new resources needed to satisfy expected energy demand in the region during a 20-year planning horizon under various scenarios of the future. The resulting recommended planning direction is consistent with TVA's Environmental Policy and fully supports TVA's vision.

The IRP guides TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The recommended planning direction provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the plan balance costs, energy efficiency, system reliability, and environmental responsibility for TVA's stakeholders.

Beginning in the fall of 2013, TVA began a refresh of the 2011 IRP. The new report is expected to be published in 2015.

Transmission System

The 2,471 miles of 500 kilovolt lines in TVA's 16,111 mile transmission system are a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

The TVA transmission system is one of the largest in North America. TVA's transmission system has 68 interconnections with 12 neighboring electric systems, and delivered nearly 165 billion kWh of electricity to TVA customers in FY 2013. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 14 years in delivering electricity to customers.

TVA's transmission system interconnects with systems of surrounding utilities and consisted primarily of the following assets at September 30, 2013:

- 513 transmission substations, power switchyards, and switching stations
- 1,278 customer connection points (customer, generation, and interconnection)

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of reservoir shoreline, approximately 293,000 acres of reservoir land, and 49 reservoirs encompassing approximately 650,000 surface acres of reservoir water used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In addition, TVA manages over 170 agreements for commercial recreation (such as campgrounds and marinas) and is responsible for over 80 public recreation areas throughout the Tennessee Valley. In accordance with its 2008 Environmental Policy, the TVA Board of Directors accepted the Natural Resource Plan ("NRP") to guide TVA's cultural and natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation and water resources, as well as biological and cultural resources on TVA lands and reservoirs, lands planning and public engagement. The NRP will be reviewed and updated approximately every 5 years.

Tennessee River System

Approximately 42,000 miles of rivers, streams and tributaries, including the 652-mile-long Tennessee River, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production, and cooling water for TVA's generation units. The watersheds of the Tennessee River and its 16 tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development, along with energy production and environmental stewardship, is one of the core missions of TVA. TVA works with LPCs, regional, state, and local agencies and communities to showcase the advantages available to businesses locating or expanding in TVA's service area. TVA's primary economic development goals are to recruit major business operations to locate in the Tennessee Valley, encourage the location and expansion of companies that provide quality jobs, prepare communities in the Tennessee Valley for economic growth and offer support to help grow and sustain small businesses. TVA seeks to meet these goals through a combination of initiatives and partnerships designed to provide program support, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 170

companies into the TVA service area during FY 2013. These companies announced capital investments of approximately \$5.0 billion and the expected creation and/or retention of over 52,000 jobs.

Technology Innovation

Consistent with the Tennessee Valley Authority Act of 1933, as amended (the "TVA ACT"), TVA makes investments in science and technological innovation to assist TVA in meeting future challenges in key areas. These are identified as "Signature Technologies" wherein TVA is seeking to establish national leadership in research, development, and demonstration. TVA is currently focused on three Signature Technologies: small modular nuclear reactors ("SMRs"), grid modernization for transmission and distribution systems, and energy utilization technologies, with a particular emphasis on energy efficiency, load management, and electric transportation and infrastructure. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

TVA also seeks to leverage research and development activities through partnerships with LPCs, the Electric Power Research Institute ("EPRI"), the Department of Energy ("DOE"), Oak Ridge National Laboratory, other utilities, universities, and industry vendors and participation in professional societies.

Conclusion

TVA is a leader in public power, a model built on trust and partnerships with the people TVA serves. This time-tested model continues to deliver reliable, affordable electricity to more than 9 million people and 700,000 businesses. It enables effective, integrated resource management and environmental stewardship in parts of seven southeastern states. TVA promotes alliances with others that help attract and retain jobs and investments that support economic development in the Tennessee Valley.

As TVA looks forward to its next 80 years, TVA recognizes that continued achievement in public power will require a different approach from the past. TVA is more flexible in its planning and more nimble in its execution. TVA is also working to respond more quickly than ever to continually changing market conditions.

TVA has a plan to be financially sound and to continue to provide competitive rates and reliable power to our customers. TVA plans to reduce operation and maintenance to match decreased demand for electricity and revenues. TVA plans to adjust capital based on market and regulatory conditions. One thing will not change – is TVA's commitment to provide rates as low as feasible and reliable electricity.

TVA is proud to honor this commitment and looks forward to sharing the benefits of public power for many years to come.

Budget Overview

Asset Portfolio

TVA, like the rest of the electric utility industry, is challenged to meet customer demand with cleaner, low-cost energy resources. This will require substantial capital investments during the next decade. TVA funds asset investments through power revenues, the issuance of bonds up to a limit set by Congress, and alternative financings including lease financings.

TVA faces significant uncertainty from external factors such as weather, the economy, loss of its largest direct served customer during 2013 (which accounted for 5 percent of revenues), and decreased demand from energy efficiency and demand response initiatives. TVA's financial information includes estimates, which are affected by these and other changing conditions. TVA projects total revenue to be \$10.8 billion in FY 2015, which includes revenues related to fuel cost recovery and an adjustment to fund investments associated with TVA's clean air program. The fuel cost recovery mechanism adjusts power rates monthly to reflect the changing costs of fuel, purchased power, and emission allowances. Although TVA power sales increased an average of approximately one percent annually during the past decade, the past two years have not seen this growth.

In March 2013, TVA announced it is proceeding with a \$1.1 billion emissions control project at Gallatin. The project includes the installation of SCR systems and scrubbers at all four units of the 976 MW plant. The scrubbers are expected to be completed in 2016, with the SCR systems to follow in 2018. Due to the age, lower capacity, and lower efficiency of TVA's older coal-fired units, it may not be economical to continue to operate some units in the future, particularly if new environmental laws or regulations become effective. However, discontinuing the use of some coal-fired units may be constrained by transmission reinforcement that will be required before the units are taken out of service.

TVA is also planning to convert its wet fly ash and gypsum facilities to dry collection facilities. The estimated cost of this conversion is between \$1.5 billion and \$2.0 billion, and the current schedule for completion is December 2022.

TVA's nuclear construction is an important element in a diversified portfolio for the future. Construction of Watts Bar Unit 2 is continuing in accordance with the schedule and budget expectations approved by the TVA Board in April 2012. The total estimated cost of completion is in the range of \$4.0 billion to \$4.5 billion. Construction is currently expected to be completed by December 2015.

During the first quarter of FY 2014, TVA finalized a new estimate to complete Bellefonte Nuclear Plant ("Bellefonte") Unit 1. The total estimated cost of completion is in the range of \$7.5 billion to \$8.7 billion. Work at the site has been slowed to better allocate resources on nearer-term priorities as both budget and staffing levels have been reduced in the FY 2014 budget. TVA believes that the resulting budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA plans to utilize its integrated resource planning process to help determine how Bellefonte best supports TVA's overall efforts to continue to meet customer demand with low-cost, reliable power.

In FY 2015, TVA estimates that it will invest about \$3.2 billion in capital projects for the power system. These investments are subject to approval in the FY 2015 budgeting process scheduled for August 2014.

Stewardship

TVA operates and maintains a vast system of dams, reservoirs, and lands. Based on the provisions in the Energy and Water Development Appropriations Act, 1998, TVA funds its traditional essential water and land stewardship activities including the NRP with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999 and none are requested for FY 2015.

TVA Operating Budget*(Millions of dollars)*

	2013	2014	2015
	Actual	Estimate	Estimate
Revenue	\$ 10,956	\$ 10,468	\$ 10,766
Operating Expenses			
Fuel & Purchased Power	(3,846)	(3,498)	(3,595)
Operating, Maintenance, & Other	(3,428)	(3,437)	(3,184)
Depreciation & Amortization	(1,680)	(1,791)	(1,749)
Tax Equivalents	<u>(548)</u>	<u>(513)</u>	<u>(513)</u>
Total Operating Expenses	<u>(9,503)</u>	<u>(9,240)</u>	<u>(9,040)</u>
Operating Income	1,453	1,229	1,726
Other Income	44	41	36
Interest Expense, net	<u>(1,226)</u>	<u>(1,269)</u>	<u>(1,292)</u>
Net Income	\$ 271	\$ 1	\$ 470

Capital Budget & Cash Flow

(Millions of dollars)

	2013 Actual	2014 Estimate	2015 Estimate
Cash flows from operating activities			
Net income	\$ 271	\$ 1	\$ 470
Items affecting operating activities	2,326	2,229	2,178
Net cash provided by operating activities	2,597	2,230	2,648
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(308)	(310)	(310)
Fossil	(118)	(220)	(218)
Hydro	(66)	(112)	(119)
Transmission	(95)	(147)	(192)
Other Base Capital	(124)	(157)	(187)
Total Base Capital	(712)	(946)	(1,027)
Clean Air	(196)	(642)	(559)
Ash Remediation	(75)	(115)	(160)
Water Remediation	-	(0)	(2)
Total Environmental Costs	(271)	(758)	(721)
Watts Bar Unit 2	(708)	(858)	(619)
Bellefonte	(163)	(98)	(105)
Other Capacity Expansion	(198)	(208)	(249)
Total Capacity Expansion	(1,069)	(1,164)	(973)
Nuclear Fuel Capital	(287)	(385)	(422)
Other Investing Activities	(46)	(28)	(20)
Net cash used in investing activities	(2,385)	(3,281)	(3,161)
Capacity Expansion Financing	1,069	1,164	973
Other Cash (Uses)/Sources	(547)	(213)	(509)
Net cash provided by financing activities	522	951	464
Net change in cash and cash equivalents	734	(100)	(50)
Cash Payments to U.S. Treasury	(27)	(26)	(18)
Reduction/(Increase) in Total Debt and Debt-Like Obligations **	(561)	(898)	(394)

** Statutory debt peaks in FY 2015 and then reduces thereafter based on the FY 2015 President's Budget. These increases and subsequent decreases are primarily driven by the completion of Watts Bar Unit 2.

Business Plan

TVA is governed by the nine-member TVA Board, which is responsible for approving an annual budget. The information in this document is based on the FY 2014 annual budget, which was approved by the TVA Board in August 2013. The following were considered in preparing the budget.

Borrowing Limit

TVA must manage its finances efficiently to achieve its mission-related performance goals of supplying low-cost, reliable power, supporting environmental stewardship and a thriving river system, stimulating economic growth, and supporting technological innovation. In balancing these goals while following sound financial principles, TVA uses financing selectively. Generally, financing is used to fund capital investments for new generation capacity and environmental controls while maintenance of the power system and other capital expenditures are generally funded with revenues.

TVA has the authority in the TVA Act to issue bonds, notes and other evidences of indebtedness subject to a \$30.0 billion limit, sometimes referred to as TVA's statutory debt limit. TVA's bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2013, TVA had \$24.8 billion of net bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30.0 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$46.1 billion (as of September 30, 2013). TVA's balance of financing obligations is projected to increase in the coming years to meet expected capital investment needs which are primarily driven by the completion of Watts Bar Unit 2. However, the total investment in power system assets is expected to continue to exceed any net increase in financing obligations.

Nuclear Program

TVA is making a significant investment in safe and reliable nuclear power. Completion of the second unit at the Watts Bar Plant will require funding of \$4.0 to \$4.5 billion. TVA finalized a new estimate to complete Bellefonte Unit 1 during the first quarter of 2014 putting the total estimated cost of completion in the range of \$7.5 billion and \$8.7 billion. Work at the site has been slowed as TVA considers the long-term need for power and associated options.

Pension Fund

As of September 30, 2013, TVA's qualified pension plan had assets of \$7.2 billion compared with liabilities of \$11.5 billion. The plan currently has approximately 36,000 participants, of which approximately 23,000 are retirees or beneficiaries currently receiving benefits. Benefits of approximately \$622 million were paid to participants in 2013.

Coal-Fired Fleet Evaluation

TVA began its coal-fired plant construction program in the 1940s, and its coal-fired units were placed in service between 1951 and 1973. Coal-fired units are either active or inactive. TVA considers units to be in an active state when the unit is generating, available for service, or temporarily unavailable due to equipment failures, inspections, or repairs. As of September 30, 2013, TVA had 10 coal-fired plants consisting of 46 active units, accounting for 12,901 MW of summer net capability. As of September 30, 2013, TVA had 14 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. TVA currently has four retired units: John Sevier Fossil Plant ("John Sevier") Units 1 and 2 and Widows Creek Fossil Plant ("Widows Creek") Units 3 and 5. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of September 30, 2013, TVA had nine mothballed units: Shawnee Fossil Plant ("Shawnee") Unit 10, Johnsonville Fossil Plant ("Johnsonville") Units 7 and 8, Widows Creek Units 1, 2, 4 and 6 and John Sevier Units 3 and 4. As of September 30, 2013, TVA had one unit in inactive reserve: Colbert Fossil Plant ("Colbert") Unit 5. TVA refers to units which are in inactive reserve or mothballed status as idled. On October 1, 2013, Johnsonville 5, 6, 9, and 10 and Colbert Unit 5 were mothballed. On November 14, 2013, the Board approved the retirement of Colbert Units 1-5 and, Widows Creek Unit 8, and Paradise Fossil Plant ("Paradise") Units 1 and 2 with effective dates to be determined. Paradise Unit 3 will continuously operate emission control equipment.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the Clean Air Act ("CAA") and subsequent laws and regulations. Increasing regulatory costs require consideration of whether to make the required capital investments to continue operating, or to decommission these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements"). The first

agreement is a Federal Facilities Compliance Agreement with the Environmental Protection Agency ("EPA"). The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. Under the Environmental Agreements, TVA agreed to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review ("NSR") requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

The following table summarizes actions TVA is required to take under the Environmental Agreements, as well as other coal-fired generation actions taken or to be taken by TVA, and the status of those actions.

Fossil Plant	Total Units	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Actions Taken or Planned to be Taken by TVA
Allen	3	SCRs on all three units	Install scrubbers or retire no later than December 31, 2018	Plan was to add scrubbers on all three units but TVA is currently re-evaluating options
Bull Run	1	Scrubber and SCRs on unit	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	<ul style="list-style-type: none"> Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 Remove from service, control, or retire Unit 5 no later than December 31, 2015 Control or retire removed from service units within three years 	<ul style="list-style-type: none"> Idled Unit 5 in October 2013 On November 14, 2013, the Board approved the retirement of Units 1-5 with effective dates to be determined
Cumberland	2	Scrubbers and SCRs on both units	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Gallatin	4	None	Control, convert, or retire all four units no later than December 31, 2017	Add scrubbers and SCRs on all four units by December 31, 2017
John Sevier	4	None	<ul style="list-style-type: none"> Retire Units 1 and 2 no later than December 31, 2012 Remove from service Units 3 and 4 no later than December 31, 2012 and control, convert, or retire those units no later than December 31, 2015 	<ul style="list-style-type: none"> Retired Units 1 and 2 effective December 31, 2012 Idled Units 3 and 4 in December 2012 Retire Units 3 and 4 effective December 31, 2015
Johnsonville	10	None	<ul style="list-style-type: none"> Retire six units no later than December 31, 2015 Retire four units no later than December 31, 2017 	<ul style="list-style-type: none"> Retire six units by December 31, 2015 Retire four units by December 31, 2017 Idled Units 7 and 8 effective March 1, 2012 Idled Units 5-6 and Units 9-10 on October 1, 2013
Kingston	9	Scrubbers and SCRs on all nine units	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Paradise	3	Scrubbers and SCRs on all three units	<ul style="list-style-type: none"> Upgrade scrubbers on Units 1 and 2 no later than December 31, 2013 Continuously operate emission control equipment on all three units 	<ul style="list-style-type: none"> On November 14, 2013, the Board approved the retirement of Units 1 and 2, and replacement with gas-fired generation; with effective dates to be determined. Continuously operate emission control equipment on Unit 3
Shawnee	10	None	Control, retire, or convert Units 1 and 4 no later than December 31, 2017	<ul style="list-style-type: none"> Still evaluating what actions to take with respect to Units 1-9 Idled Unit 10 in October 2010

Widows Creek	8	Scrubbers and SCRs on Units 7 and 8	<ul style="list-style-type: none"> · Retire two of Units 1-6 no later than July 31, 2013 · Retire two of Units 1-6 no later than July 31, 2014 · Retire two of Units 1-6 no later than July 31, 2015 · Continuously operate current and any new emissions control equipment on Units 7 and 8 	<ul style="list-style-type: none"> · Idled Units 1-6 in October 2011 · Retired Units 3 and 5 effective July 31, 2013 · Continuously operate current or equivalent emissions control equipment on Units 7 and 8 · Continue to evaluate alternatives for Unit 7 · On November 14, 2013, the Board approved the retirement of Unit 8 with an effective date to be determined
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Kingston Ash Spill

In December 2008, a dike around one of the dredge cells at the Kingston Fossil Plant failed, releasing approximately 5.4 million cubic yards of coal ash. TVA estimates the cost of cleanup and recovery efforts will range from \$1.1 billion to \$1.2 billion. Costs incurred since the event through September 30, 2013 totaled \$956 million. The remaining estimated cost at September 30, 2013, was \$169 million.

Approximately 3.0 million cubic yards were recovered from the adjacent Emory River in 2009 and 2010. It was transported offsite for disposal. In June 2013, TVA finished recovering and placing approximately 2.4 million cubic yards of ash from the adjacent Swan Pond Embayment into the onsite ash landfill. The ash landfill will be closed by constructing a multi-layer cap over the ash. In June 2013, TVA began placing the first section of the multi-layer cap. The final cap is forecasted to be completed by early FY 2015. A perimeter wall was constructed to stabilize the perimeter of the landfill to contain the ash. The wall construction was completed in mid-August 2013, and repairs are expected to continue into the second quarter of FY 2014.

Long-term monitoring of the Emory River was initiated in the spring of 2013 and will continue for up to 30 years. Results of this monitoring will be used to evaluate the ecological resources in the river system and the river's natural processes for remediating any residual ash in the river. In addition, TVA is restoring the ecological habitat along the Emory River and in the Swan Pond Embayment. That work will begin in the second quarter of FY 2014, and is expected to be finished by spring 2015. A final assessment, issuance of a completion report, and approval by the State of Tennessee and the EPA are expected to occur by the third quarter of FY 2015.

Coal Combustion Residuals Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's coal combustion residual ("CCR") facilities. The first phase of the evaluation, which was completed in June 2009, involved a detailed inspection of all CCR facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program, which was completed in April 2011, included geotechnical explorations, material testing, stability analyses, and studies. The study determined that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston at the time of the ash spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection facilities and remediating or eliminating the CCR facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCR work is between \$1.5 billion and \$2.0 billion, and currently the work is scheduled to be completed in December 2022.

Seven States Power Corporation Obligation

Seven States Power Corporation ("Seven States"), through its subsidiary, Seven States Southaven, LLC ("SSSL"), exercised its option to purchase from TVA an undivided 90 percent interest in a combined-cycle combustion turbine facility in Southaven, Mississippi. As part of interim joint-ownership arrangements, Seven States had the right at any time during the interim period, and for any reason, to require TVA to buy back SSSL's interest in the facility. The

interim period under the joint ownership arrangements was to expire on April 23, 2013. On April 18, 2013, TVA and Seven States, through SSSL, agreed to extend the expiration date of the interim joint ownership arrangements to September 5, 2013. The other material terms and conditions of the arrangements were not changed. On August 9, 2013, TVA completed a lease-purchase transaction of the facility.

Wholesale Rate Structure Changes

TVA implemented a revised wholesale rate structure in April 2011. The rate structure provides price signals intended to encourage LPCs and end-use customers to shift energy usage from high-cost generation periods to less expensive generation periods. Under the revised wholesale structure, weather can positively or negatively impact both volume and average rates, while only volume was impacted under the former wholesale structure. This is because the wholesale structure includes two components: a demand charge and an energy charge. The demand charge is based on the customer's peak monthly usage and increases as the peak increases. The energy charge is based on the kWhs used by the customer. In conjunction with the change, the rate structure was also revised to establish a separate fuel rate that includes the costs of natural gas, fuel oil, purchased power, coal, emission allowances, nuclear fuel and other fuel-related commodities; realized gains and losses on derivatives purchased to hedge the costs of such commodities; and tax equivalents associated with the fuel cost adjustments.

Renewable Energy

In accordance with TVA's vision and Integrated Resource Plan, TVA plans to obtain additional power supply from renewable sources by 2020. TVA defines its renewable energy as energy that is sustainable and often naturally replenished, such as wind, solar, biomass, and hydroelectric generation.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including: hydro, wind, solar, and biomass. As of September 30, 2013, TVA maintained 29 conventional hydroelectric dams, accounting for 3,817 MW of summer net capability. TVA also controls 16 solar energy sites, capability for digester gas co-firing, biomass co-firing potential (located at coal-fired sites), and 3 wind turbines. The wind turbines and biomass co-firing potential did not provide any summer net capability at September 30, 2013, because they were not operational. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into 8 contracts with 8 Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all 8 contracts. The first wind farm, located in Illinois; began providing 300 MW (nameplate capacity) under a 20-year contract in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other seven contracts provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee.

In 2003, TVA developed a Generation Partners ("GP") pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. Since 2009, TVA has seen the program grow from fewer than 80 installations to more than 1,500 installations in operation providing more than 77 MW of solar, wind, low-impact hydro, and biomass generation. Solar installations made up 66 MW. The GP pilot program ended on September 30, 2012, and was replaced with the Green Power Providers ("GPP") program, a permanent program that began October 1, 2012. As of September 30, 2013, the GPP program comprised more than 5 MW of operating generation with over 4 MW of additional approved capacity that has yet to begin generating.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA will purchase certain types of renewable energy at market rates from projects that meet the requirement of the RSO program as long as there is sufficient available capacity in the program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kilowatts ("kW"), but no greater than 20 MW in nameplate capacity. TVA accepted 97 MW of renewable capacity through calendar year 2012. This included a diverse portfolio of 13 total projects, including over 41 MW of solar, 18 MW of wind, 20 MW of biomass, and 18 MW of landfill gas or methane projects. TVA demonstrated its continued commitment to renewable energy by issuing an additional 100 MW under the RSO program in 2013. As of September 30, 2013, TVA had received applications for 22 MW. TVA is taking steps that could significantly increase TVA's solar energy capacity in 2014 while ensuring TVA's green power programs remain sustainable and cost effective. TVA is offering a total of 126 MW of renewable capacity in FY 2014 through a variety of power-purchasing programs for homes, businesses and commercial installations, marking a 7 percent increase over FY 2013. TVA will be adding capacity and reducing pricing incentives to reflect lower technology costs for generators and to support lower electric rates for the Tennessee Valley's 9 million residents. TVA currently has

128 MW of operating or committed solar projects under contract at more than 2,000 locations across the region. TVA's renewables portfolio also includes 1,500 MW from wind and 60 MW from biomass.

The Solar Solution Initiative ("SSI") is a pilot program that began in February 2012 and provides incentive payments for mid-sized (greater than 50 kW up to 1 MW) solar projects in TVA's RSO program if the projects use local certified installers in the Tennessee Valley region. SSI is a targeted incentive that aims to support the existing local solar industry, while also serving as a recruitment tool for new industry in the Tennessee Valley region, adding investment and jobs.

TVA's Green Power Switch® ("GPS") program is a voluntary program that supports the production of renewable energy by allowing consumers to purchase renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In 2012, GPS supported roughly 101,000 MWh of renewable energy. TVA is continuing to refine the program by testing two additional customer options. In the original GPS, consumers buy 150 KWh renewable energy blocks for \$4 per month. Supply includes Green-e certified renewable energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two pilot options are testing customer demand for a 100 percent solar option sourced from TVA's growing GPP supply as well as a lower priced bulk option for larger commercial and industrial customers. Supply for the bulk option is sourced from TVA-contracted renewable energy credits ("RECs") in the greater Southeastern region. Specifically, the pilot supply will be from the Tapoco Hydroelectric project owned by Brookfield Renewable Energy Partners.

Payments in Lieu of Taxes

TVA provided \$547 million in tax equivalent payments in FY 2013 to state and local governments where it sells electricity or has power properties. TVA pays tax equivalent payments annually in the eight states where it sells electricity or owns generating plants, transmission lines, substations and other power assets and directly to 146 county governments where TVA owns power properties that were previously owned and operated by another utility company.

The TVA Act requires TVA to return 5 percent of gross power sales revenues from the previous year (excluding sales or deliveries to other federal agencies and off-system sales with other utilities, with a provision for minimum payments under certain circumstances) in the form of tax equivalent payments. The payments compensate state and local governments that cannot levy property or sales tax on TVA as a federal entity, and makes TVA one of the largest "taxpayers" in Tennessee and Alabama.

State and local governments distribute the funds according to their own formulas and discretion to support a variety of initiatives, including schools, fire departments and other emergency response agencies, tourism and recreation, and human service organizations.

Since 1941, TVA has made more than \$10.9 billion in tax equivalent payments, with payments in the past 10 years totaling \$4.6 billion.

Federal Salary Freeze

TVA reviewed the freeze on federal employees' base rates of pay that was proposed by President Obama and approved by Congress in December 2010. After considering the language and intent of the freeze, TVA applied the principles to its executives, managers, specialists, and excluded employees. This freeze was in effect for calendar years 2011 and 2012 and included TVA senior executives.

Legislation was subsequently passed to extend the federal salary freeze through the end of calendar year 2013. Based on the intent and language of the legislation, and consistent with TVA's implementation of the salary freeze for calendar years 2011 and 2012, TVA extended the salary freeze to December 31, 2013, for its executives, managers, specialists, and excluded employees, and lifted the freeze at that time consistent with direction from the administration. The freeze did not affect positions represented by collective bargaining units.

Management Initiatives

Rates

As a result of diminished power demand, TVA experienced a 2 percent decrease in revenues in FY 2013 as compared to the prior year. The lower revenue in FY 2013 was primarily due to mild weather variations and continued sluggish economic conditions in the Tennessee Valley region. Similar to FY 2012, TVA undertook cost savings initiatives in FY 2013 in response to lower sales and revenues. Continued actions included reductions in discretionary spending, deferral of program spending, and identification of productivity enhancements to improve the overall cost effectiveness of existing programs and projects. In addition, TVA continued to eliminate certain layers of management and reduced contractor and consultant services. TVA is seeking to reduce costs to maintain financial health in the near-term, while improving competitiveness over the longer-term. TVA recorded a net income of \$271 million for FY 2013.

Reliability: Balanced Portfolio

TVA is focusing on delivering more energy efficiency as part of its balanced portfolio approach. TVA uses a variety of programs that reduce the use of energy (“energy efficiency”) and also decrease peak demand (“demand response”). TVA collaborates with its customers, such as LPCs, directly served customers and governmental agencies, to establish and implement effective programs across the Tennessee Valley. TVA is also working with industry experts to tailor these programs to produce the best results.

TVA continues to expand the EnergyRight® Solutions program to include residential, commercial, industrial and power systems initiatives.

- **EnergyRight® Solutions for the Home** - Allows residential customers to play an active role in saving energy in their homes through improvements to weatherization, HVAC systems and water heating.
- **EnergyRight® Solutions for Business** - Offers energy information and assistance to help businesses save energy with rebates and other financial incentives available to help offset project expenses.
- **EnergyRight® Solutions for Industry** – Provides customized technical evaluations to assess plant-wide energy efficiency opportunities, along with financial incentives for qualified projects.
- **EnergyRight® Solutions for Power Systems**– Works to optimize power delivery systems by shifting or reducing consumer demand at peak times of the day to avoid supplying high-priced peak power and improve reliability through physical (e.g., direct cycling of residential and commercial equipment), contractual (e.g., voluntary reductions for payment) and voltage optimization (e.g., regulating voltage to the lower region of the prescribed range) means.

A key aspect of TVA's vision is to increase TVA nuclear power generation. The 2011 IRP provides a summary of TVA's last analysis of diversified energy resources, including more energy efficiency and demand reduction programs, renewable energy resources, energy storage resources and natural gas and nuclear capacity. TVA is currently undertaking a refresh of the 2011 IRP with the new report expected to be published in 2015.

Completion of Watts Bar Unit 2 is an integral part of TVA's vision. Watts Bar Unit 2 is expected to be completed in December 2015 and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule and budget expectations approved by the TVA Board in April 2012. The unit was approximately 80 percent complete at September 30, 2013.

Responsibility

Cyber Security

TVA has an established risk-based Cyber Security Program that is designed to ensure alignment with applicable regulations, industry requirements, and best practices. The program has established security standards, training, and metrics that assign clear accountability for all cyber security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective, and efficient execution of the program across TVA. Cyber security management processes have been implemented agency-wide with the goal of being systematic, repeatable, and effective in achieving the strategic security goals of the program.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components is integrated into the business planning process and is maintained in a five-year cyber security strategic plan covering all information security functions.

Governance for the program is provided by TVA's Chief Information Officer. The program objectives are aligned with business strategy and support the goals of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to and recover from threats against its systems. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change. TVA plans to spend approximately \$40 million to \$50 million for cyber security updates between FY 2014 and FY 2016.

Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood risk reduction, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level environmental policy. The current Environmental Policy was initially approved by the TVA Board in 2008 and is reviewed on a biennial basis. The overarching environmental objective is to provide clean, reliable, and affordable energy, support sustainable economic growth, and engage in proactive environmental stewardship in a balanced and ecologically sound manner. In August 2012, TVA conducted its most recent review of the 2008 Environmental Policy. The review found that progress has been made on the Environmental Objectives for all six guiding principles of the Environmental Policy and policy revisions were not needed. The Environmental Policy remains consistent with stated TVA Board strategy and policy.

On June 28, 2013, TVA submitted its fourth Strategic Sustainability Performance Plan ("SSPP"). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions, reduce solid waste generation and disposal, improve water use efficiency, improve building and energy efficiency, promote electronic stewardship, and encourage the purchase of sustainable products and services. Implementation is expected to reduce TVA's operational costs and risks over the long term.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's 2008 Environmental Policy, TVA is obtaining additional power supply from clean and renewable sources. TVA's Environmental Policy also aims to limit growth in the volume of greenhouse gas emissions and reduce the rate of emissions by FY 2020.

The TVA Board has approved guiding principles for an Energy Efficiency and Demand Response plan and a Renewable and Clean Energy plan. The Energy Efficiency and Demand Response plan seeks to slow the rate of growth in the region's power demand by providing opportunities for residential, commercial and industrial consumer groups to use energy more efficiently. The Renewable and Clean Energy plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions. The plan advises TVA to reduce the carbon intensity of the power generation in a cost-effective manner by conservation measures, by preferentially reviewing regional renewable and clean energy supply options, and by considering technology innovations that address intermittency issues associated with renewable options.

In August 2011, the TVA Board accepted the Natural Resource Plan ("NRP"), a companion document to TVA's IRP, which focused on the agency's power supply assets portfolio. The NRP provides strategic guidance to integrate TVA's management and protection of the natural and cultural resources on TVA managed lands and waterways within the Tennessee River Watershed. The NRP includes programs that address biological resources (plants, animals and aquatic species), cultural resources (archaeological sites, historical sites, and artifacts), recreation, water resources, reservoir lands planning, and public engagement. TVA's investment will help it sustain the cultural and natural resources and recreational opportunities for the region's stakeholders and visitors in an efficient and effective manner.

The NRP was developed with public input including participation from federal and state resource management agencies and TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. The NRP, which is TVA's first long-term natural resource management plan, provides a model for other agencies involved in similar stewardship activities. Implementation of NRP programs will be staged over a 20-year period with reviews and updates occurring approximately every 5 years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth.

Navigation on the Tennessee River is made possible by a system of dams and locks and provides significant contributions to the regional economy. Construction of a new lock at Chickamauga Dam above Chattanooga is essential to maintain navigation on the upper Tennessee River. The existing lock may eventually need to be closed due to safety issues stemming from concrete growth. Concurrently, a new lock project is underway at Kentucky Dam, near Paducah, Kentucky. This project is necessary to handle the current and projected growth in traffic on the lower Tennessee River. The U.S. Army Corps of Engineers is responsible for both construction projects.

TVA also manages the river system to provide water for hydro-generation and cooling water for TVA power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is upgrading equipment at several dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use. As part of the NRP, TVA implements several programs including Tennessee Valley Clean Marinas, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring and Aquatic Ecological Management and a Strategic Partnership Initiative. Under the Stream and Tailwater Monitoring Program in the NRP, TVA performs annual monitoring and analysis of streams and rivers within the Tennessee River Watershed. Upon request, TVA provides the monitoring data to other agencies, educational institutions, non-government organizations, and stakeholders.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the EPA shows air quality in the nation has steadily improved with significant declines in collective emissions of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance and is making further improvements in air quality by recent controls at Bull Run and Kingston Fossil Plants.

The Environmental Agreements also require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which become more stringent year-to-year as more units are required to be retired.

Economic Development

TVA works to be a source for economic development leadership, information, and services across the seven-state Tennessee Valley region. TVA's investments in newer, cleaner power supply resources create new jobs, retain local industries, and support the national economy with purchases for fuel, materials, and services. The Watts Bar Nuclear Plant Unit 2 project which is currently under construction and the John Sevier Combined Cycle Plant which was recently completed combined to create more than 4,000 construction jobs and provide economic benefits for surrounding communities.

TVA's partnerships with its customers and communities have helped create quality jobs and attract significant capital investments by new and existing companies. Economic development efforts are done in partnership with private and public organizations, including local, regional, and state agencies. TVA helps meet the needs of its stakeholders for regional economic development which contributes to a better quality of life for Tennessee Valley residents. TVA's innovative programs and services combine to create effective tools for sustainable economic development. These programs and services include, but are not limited to, the following:

Global Business

Industrial Recruiting Services

TVA works with LPCs and their customers, and local, state, and regional economic development organizations to recruit industrial prospects through an integrated package of economic development resources.

Regional Development

TVA assigns a regional development specialist with economic development expertise to serve counties in a specific area to help create, sustain, and foster job growth.

Community Preparedness

TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering training to local community leaders.

Community Development Training

TVA helps communities by providing need-specific training to increase the competitiveness of its communities in economic development.

Rural Initiative Strategy

TVA helps rural communities better market their sites and area to prospective companies and site selection consultants.

Retail Development

Retail Development is a program that links communities with retail business opportunities, expansions, and retentions.

Research

TVA provides communities with economic and market research that better prepares them for receiving industrial prospect visits, being competitive and taking advantage of opportunities.

Business and Technical Resources*Existing Industry Support*

An array of products and services is geared to meet the expansion and retention needs of existing industries. These include financial support, technical services, and industry consulting services.

Economic Development Loan Fund

The fund is designed to stimulate job creation and leverage capital investment in the TVA power service region. Loans are available to primary manufacturing companies and other institutions, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties Loan Fund

This fund is available to the region's most economically distressed counties. Loans are made to assist with industrial expansion, job creation, and site/building improvements.

Business Incubation Network

Business incubators provide support that many companies need to survive the challenging early stages of business start-up. TVA provides technical and research assistance to incubators where clients can share services, equipment, and building space.

Diversity Alliance

TVA helps the region's high-growth sectors of woman-owned and minority-owned businesses increase their job creation and capital investment opportunities by partnering with local organizations that provide business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing and New Customers

The Valley Investment Initiative offers financial incentives to existing companies and new companies that contribute to the economic development of the region and complement TVA's power system.

Appalachian Regional Commission Project Administration

TVA is the lead agency for administering grants from the Appalachian Regional Commission in the Tennessee Valley region.

Technical Services

TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities market themselves for prospects and growth.

Here are the results of some of TVA's innovative economic development programs and offerings:

- The TVA Board approved a new industrial rate program and enhanced an existing economic development program to preserve and grow Valley industry and the benefits that come from that growth.
- For the eighth consecutive year, TVA made *Site Selection* magazine's list of the top 10 utilities in North America for economic development activity, one of only three utilities to earn this distinction.
- TVA won a Gold Excellence Award for its Megasites program from the International Economic Development Council for excellence in economic development. Megasites teams TVA with local partners to market large industrial tracts to manufacturers. It remains one of TVA's most successful economic development efforts.
- TVA continues to market two Megasites --I-24 Megasite in Hopkinsville, Kentucky and the Memphis Regional Megasite in Tennessee -- after successfully selling Megasites to companies such as Volkswagen, Toyota, PACCAR, and Severstal since 2004.
- TVA Economic Development recruits new companies and investments to the region in these primary targeted industry sectors: Transportation-Related Manufacturing, Food Processing and Packaging, Advanced Manufacturing and Data Centers.
- There are a total of 23 available, ready-for-development data center sites across the TVA Region.
- TVA staff provided ongoing economic development assistance through the Valley Investment Initiative, technical services, economic research, proposal writing, training and other services.
- The Valley Investment Initiative, offered by TVA and LPCs, continues to be very successful in helping new and existing companies which locate or expand and make a commitment to enhance economic development in the region.
- Assisting communities to be prepared for economic growth opportunities continued to be a focus and more than 150 communities were directly assisted.
- The Valley Sustainable Communities Program was launched in 2013. It is a community preparedness offering to assist communities in cataloging their sustainable assets and improve their competitiveness when companies are looking to invest in new or expanded locations in the Valley. To date, there are 13 communities which are going through this program to highlight and increase their sustainability efforts to differentiate their communities.
- TVA's Rural Development strategy focuses on supporting economic development efforts in rural and economically distressed areas.
- TVA's Retail Development program helps foster business growth for commercial businesses.
- TVA offers two award-winning Economic Development websites, TVAed.com and TVAsites.com, containing demographics, a searchable building and land database, and other key information about the benefits of the Tennessee Valley region.
- 2013 announcements include:
 - Alabama: 8,100 jobs and \$768 million
 - Kentucky: 6,400 jobs and \$605 million
 - Middle Tennessee: 12,500 jobs and \$1.04 billion
 - Mississippi: 3,900 jobs and \$593 million
 - Northeast Tennessee and Virginia: 6,400 jobs and \$796 million
 - Southeast Tennessee, Georgia and North Carolina: 5,100 jobs and \$373 million
 - West Tennessee: 9,600 jobs and \$824 million

Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a national leader in technological innovation. A key element in TVA achieving its vision is technology innovation. TVA strives to be at the forefront of innovation in the utility industry.

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low cost power and clean energy. Three signature technologies have been identified for special emphasis. These are SMRs, grid modernization for transmission and distribution systems, and energy utilization technologies, with a particular emphasis on energy efficiency, load management, and electric transportation and infrastructure. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future. Technology Innovation works collaboratively with line organizations to develop technology roadmaps for these signature technologies. These roadmaps will include technology gaps in an integrated plan for advancing the technologies over the next 3 to 5 years.

In addition to signature technologies, TVA's research activities include several issue areas where TVA is pursuing technology innovation critical to the transition to a cleaner energy economy, including air and water quality, clean

energy and integration, and long-term operations of generating assets. TVA's research portfolio selection enables TVA to focus resources on new technologies in these issue areas. Each year TVA's annual research portfolio and research strategic plan is updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development operations.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with the EPRI, DOE, national labs, federal agencies, academic institutions, the Center for Energy Advancements through Technological Innovation, the National Rural Electric Cooperative Association, and other research consortiums. Technology evaluations are most often accomplished through applied field scale research to document performance, needs and requirements. TVA delivers or transfers results to the operational units or other stakeholders through reporting, technology transfer events, and educational outreach. TVA also serves as a technology advisor for TVA's LPCs and directly served customers.

Signature Technologies

Small Modular Reactors

TVA has chosen SMRs as one of three signature technologies that support TVA's technology innovation mission, and they could provide an important option for clean, reliable energy for TVA's customers. TVA is a member of the B&W mPower™ America team, which DOE selected in November 2012 for a grant award for the design and licensing of B&W mPower SMRs. Specifically, under a contract that TVA executed with B&W in February 2013, TVA, B&W, and Generation mPower, LLC (a B&W affiliate, minority owned by Bechtel Power), are preparing a license application to the Nuclear Regulatory Commission ("NRC") to license up to four B&W mPower SMRs at TVA's Clinch River Site in Oak Ridge, TN. In April 2013, B&W and DOE executed a cooperative agreement implementing the DOE award, under which TVA (through B&W) is reimbursed by DOE for roughly half of its qualified costs, retroactive to October 2012. Currently, TVA is performing site characterization work, including gathering meteorological data, surveying species and cultural and archeological resources, and studying site hydrology. TVA is gathering environmental information that will support an Environmental Impact Statement and a license application to the NRC. A decision by TVA to submit the license application to the NRC is not expected until mid-2015, and a subsequent construction decision would not be expected before 2-3 years after that.

Energy Utilization

In the area of energy utilization, TVA's near-term concentration is on the development and maintenance of a pipeline of emerging energy efficiency and load management technologies for market and program readiness. TVA's efforts are directed towards demonstrating and validating the performance and reliability of new efficiency technology as well as the value of energy efficiency and load management technologies for both the consumer and the utility.

TVA coordinates investment and activities with EPRI and industry stakeholders related to transportation electrification to support operational fleet requirements and the needs of regional distributors of TVA power to provide guidance on matters of plug-in electric vehicle grid integration and readiness for on-road and non-road transportation electrification technologies. TVA is conducting demonstrations to support the development of an electric transportation and infrastructure business plan.

Current initiatives include:

- TVA utilizes three residential test houses in the Knoxville area to further its residential research efforts. These projects evaluate residential building techniques, energy efficiency, demand response technologies, and consumer smart grid concepts in a controlled, simulated occupancy research environment. Test results are being used to educate builders, developers, consumers, and TVA program designers to develop the best, most cost-effective residential energy efficiency and demand reduction projects. Test results can apply to both new home and retrofit markets. Revisions to the original test house configurations include installation of a carbon dioxide ("CO₂") based heat pump water heater, variable capacity air-source heat pumps, integrated (space conditioning and water heating) geothermal heat pumps, and load managed heat pump water heaters.
- In 2012, TVA began conducting a comparative field test to evaluate the energy and demand savings potential of grid-enabled residential appliances. The project will also evaluate and test consumer behavior using a suite of smart grid demand responsive Energy Star appliances, a home energy management system, and other GE home energy management devices in the 20 residential test sites. Baseline data collection has been completed for the existing appliances and the new energy star appliances. Testing of the demand response signals and the associated consumer behavior is underway.
- TVA is in the process of planning and implementing three transportation-related projects to support the Environmental Agreements. These include the bucket /pickup truck and charging infrastructure project,

solar assisted charging, and non-road electrification and infrastructure development. The bucket truck project received EPA approval in March 2012 and DOE approval of EPRI's revised project plan in January 2013. TVA received EPA approval on the remaining two projects in January 2013.

- The TVA Melton Hill Dam Sustainable Recreation Area showcases and models retrofit integrations of renewable energy technologies, energy efficiency and water conservation improvements, storm water management, recycling, electric vehicle charging infrastructure, and coal combustion product reuse. Within this recreation environment arrays of solar photovoltaic panels and a wind turbine generate clean and renewable energy, and solar and grid connected LED lighting and solar thermal water heating reduce energy use across the site. This sustainable recreation area serves as a model of technology transfer for TVA, state and local agencies, as well as general public education. Please visit www.tva.com/meltonhill to access the fact sheet and performance data dashboard.

Grid Modernization

TVA's grid modernization research focuses on technology development and demonstration activities that help sustain reliability, lower costs, and mitigate risks for TVA and LPCs. TVA's initiatives not only include technologies that encompass the bulk power system but also technologies that potentially impact the distributor network as well.

In cooperation with the Tennessee Valley Public Power Association, LPCs, and EPRI, TVA has developed a vision and roadmap for coordinated grid modernization in the Tennessee Valley. Guided by overarching principles of sustaining reliability, increasing energy efficiency, and integrating clean energy sources, the roadmap identifies: industry and regulatory drivers that necessitate modernization; barriers and interdependencies that must be addressed for successful implementation; critical gaps in technology deployment; key opportunities for investment guided by overall benefits; system planning requirements; pricing and product objectives; and system operational needs.

EPRI and TVA are engaged in the development of an advanced and intelligent transformer that applies solid-state technology for voltage conversion while providing additional functionality to regulate voltage, compensate for reactive power, and facilitate distribution automation. When combined with communications technology, the solid-state transformer can become a smart node in TVA's smart grid architecture.

Another significant effort includes demonstrations of new power system sensing and control technologies that will increase operator situational awareness, provide better control of power flows, and optimize asset management.

Current initiatives include:

- TVA has developed and is evaluating a number of low-cost, multi-purpose sensors that enable the capability to monitor, maintain, optimize, and extend the life of critical power system equipment assets. Specific monitoring applications of interest include: temperatures, pressures, vibration, currents, acoustic emission, sag/displacement, geo-magnetically induced currents, voltages, and gas-in-oil. Successful sensor applications are anticipated to become part of TVA's smart grid deployments.
- TVA is working with EPRI to develop a standardized approach to field data integration for both asset management and for grid operations. This collaboration will take advantage of TVA's joint sensor work, Phasor Measurement Unit ("PMU") involvement, standardization involvement, and asset management focus to push towards a standardized method for data integration and application.
- TVA has partnered with DOE, Smart Wire Grid, and National Electric Energy Testing Research & Applications Center to develop and demonstrate a hardware solution that will enable TVA to better manage underutilized transmission line assets. The Smartwire device clamps onto existing transmission lines and provides more consistent control of power flow on the grid in real-time. The Smartwire device functions to improve transmission line congestion scenarios.
- TVA has partnered with DOE and EPRI to demonstrate a Synchrophasor-based Situational Awareness System that provides system operators with real-time information about disturbances that could affect operations. The Wide Area Situational Awareness Tool uses real-time PMU data to support both power system visualization and early warning detection.
- TVA is partnering with EPRI and other utilities, through participation in the SunBurst Network; to deploy sensors for monitoring Geomagnetically Induced Current ("GIC") on select transformers within the TVA service territory. The sensors will support the evaluation of potential effects of GIC and solar storm related activity to electrical grids.

Other Technologies

The following are areas of additional technology innovation that have potential for helping TVA achieve its mission and vision.

Air and Water Quality

The following projects are in collaboration with EPRI:

- Quantifying risk of exposure to air pollutants and levels of acceptable risk to advise development of air standards and communicate risks based on sound science to stakeholders.
- Addressing knowledge gaps in the linkage between acid/nutrient deposition, water quality, and aquatic ecosystem health. Data will inform regulation development regarding potential secondary SO_x/NO_x standards proposed by the EPA.
- Assessing the air quality impacts of introducing electric vehicles into the U.S. transportation fleet.
- Conducting fugitive emissions studies to sample airborne particles resulting from material handling operations at fossil plants. Results will be used to support air permits issued under more stringent Particulate Matter 2.5 regulations.
- Collaborating with EPRI, Oak Ridge National Laboratory, and Tennessee Tech University on a thermal plume study at Cumberland Fossil Plant to monitor the behavior of fish residing in and near a heated discharge to determine impacts of thermal discharges on the fish community in situ.
- Comparing alternative cooling water intake screens to the conventional Ristroph traveling screen to provide cost effective technology options to reduce fish impingement mortality while managing high levels of debris.
- Addressing challenges regarding closure of ponds containing coal combustion products in a cost-effective, timely, and safe manner in accordance with anticipated EPA regulations and developing monitoring strategies and long-term land use options.
- Conducting long-term acidic deposition monitoring across five southern states since 1986 in support of the National Atmospheric Deposition Program. The purpose is to determine the magnitude of acid deposition across North America.
- Conducting rural background air quality monitoring at Look Rock in the Great Smoky Mountains National Park and also testing a new aerosol monitoring technology that may provide information about the organic compounds that comprise the airborne particles contributing to the total particle mass smaller than 2.5 micrometers. This could have possible future regulatory applications (i.e. the PM_{2.5} standard).
- TVA has patented a process to remove CO₂ from gasification and Integrated Gasification Combined Cycle ("IGCC") units. The Cryogenic Acid Gas Removal ("CAGR") technology uses a multi-stage, auto-refrigeration process to separate CO₂ and sulfur-bearing acid gases (like hydrogen sulfide) from the hydrogen-rich syngas. TVA's analysis of the CAGR process using process simulation software predicts it will use 60 percent to 75 percent less energy than current CO₂ capture technologies for IGCC units. TVA has obtained U.S. and Canadian patents on this technology.
- The Ohio River Basin Water Quality Trading Program to develop a cost effective and mutually beneficial mechanism to improve nutrient levels and water quality in regional watersheds. The project has initiated the first interstate water quality trading program for nutrients in the U.S.

Long-Term Operations of Generating Assets

To support long-term operations of generation assets, TVA is participating in the following developmental projects:

- Continuing flexible operation research for lower load operation, ramp rate procedures, and fuel flexibility alternatives supporting load dispatch requirements with increased reliability and mitigating the effects of cycling on the coal fleet.
- Conducting fossil plant material degradation research to reduce the impacts to high-temperature materials used in boiler and heat recovery steam generator components caused by fast ramping and increased load-following.
- Conducting coal plant assessments for environmental control integration strategies and long-term impacts related to SCR and bag house operation and maintenance.

Sustainability

Sustainability relates to everything TVA does to remain healthy and thriving long into the future for the benefit of the environment, economy and stakeholders. Sustainability is incorporated into the work performed at TVA to protect the miles of reservoir shoreline, to preserve reasonable electricity rates, to reinforce TVA's commitment to a safe

employee workplace environment and public safety, and to support TVA's economic development efforts throughout the region. In short, it is TVA's commitment to keeping the Tennessee Valley a vibrant place to live, work and play.

Sustainability is embedded in TVA's Vision for 2020, TVA's Environmental Policy and Presidential Executive Order ("EO") 13514, "Federal Leadership in Environmental, Energy, and Economic Performance." In June 2010, TVA issued its first SSPP under Executive Order 13514. The EO challenges TVA and other federal agencies to develop, implement and annually update sustainability plans to help "create a clean-energy economy." This plan captures and enhances TVA's ongoing sustainability focus given TVA's unique mission to sustain the people, economic culture and natural resources in the region. TVA submitted its fourth SSPP to OMB on June 28, 2013.

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from 3 full-time members to 9 part-time members who are responsible for providing strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer ("CEO") position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission ("SEC") rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404(a) of the Sarbanes-Oxley Act became effective for TVA for FY 2008.
- As a non-accelerated filer, the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act are not applicable. However, TVA implemented the auditor attestation requirements of Section 404(b) in FY 2009 and continues to do so on a voluntary basis.
- The Dodd-Frank Act deferred indefinitely the auditor attestation requirements for non-accelerated filers; however, management has chosen to continue to have external auditor attestations.

TVA Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office ("GAO"), the Office of Management and Budget ("OMB"), the U.S. Treasury, and an independent inspector general.

TVA is governed by the TVA Board. The TVA Board has 9 part-time members, at least 7 of whom shall be legal residents of the TVA service area. The TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board's responsibilities include formulating broad goals, objectives, and policies for TVA. Also, the TVA Board's responsibilities include approving plans for their implementation, reviewing and approving annual budgets, setting and overseeing rates, and establishing a compensation plan for employees.

Audit Committee – The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and the TVA Inspector General.

Independent Auditor – An independent auditor audits TVA's annual financial statements in accordance with standards of the Public Company Accounting Oversight Board (United States) and with Government Auditing Standards issued by the Comptroller General of the U.S. The auditor also provides an opinion as to whether those statements are presented in conformity with Generally Accepted Accounting Principles ("GAAP").

Independent Inspector General – An independent Office of Inspector General ("OIG") conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants Generally Accepted Auditing Standards. The OIG has about 108 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semi-annual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$23 million for FY 2015, which includes amounts for OIG training and support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2015 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

Congressional Oversight – Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the Government Accountability Office, also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch – TVA routinely submits budget information to OMB, and TVA's budget is included in the consolidated budget of the U.S. Government. TVA's financial results also are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by GAO.

The TVA Act – TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act ("GPRA"), which requires that a strategic plan and an annual performance report be submitted to Congress.

Other Regulatory Oversight – In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the EPA, state environmental agencies, the SEC, and the NRC. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission ("FERC"), this commission has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Corporation and the industry-based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted Government Auditing Standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Accounting and Financial Reporting

On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represent TVA's comparative, consolidated, department-level financial statements, to the U.S. Department of Treasury to comply with the requirements of the U.S. Department of Treasury Financial Manual, for the purpose of providing financial information to the U.S. Department of Treasury and the U.S. Government Accountability Office to use in preparing the Financial Report of the U.S. Government. TVA's independent auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by the Federal Accounting Standards Advisory Board. TVA's financial transactions are subject to audit by the Comptroller General under various statutes.

TVA also submits financial information to the OMB, SEC, NRC, U.S. Treasury, Energy Information Agency, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board. These financial statements are annually audited by an independent financial auditor.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise. The monthly financial performance reports contain analysis for the income statement, cash flow statement, and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

Enterprise Risk Management

TVA has a designated Enterprise Risk Management ("ERM") organization within its Financial Services organization, responsible for coordinating risk assessment efforts at TVA organizations. ERM facilitates enterprise risk discussions at all levels of the organization, develops and improves risk governance structure and risk assessment processes and methodologies, and supports risk-based decision making.

ERM at TVA is an ongoing and evolving process to protect the value of the enterprise and realize opportunities for stakeholders by promoting the efficient and effective management of risk across TVA. TVA is committed to the management of risk using an enterprise-wide approach. The TVA Enterprise Risk Management Policy provides overarching guidance on all risk management activities within TVA, including but not limited to personnel safety, operational contingency, risk control, and financial hedging.

TVA has cataloged major short-term and long-term enterprise level risks across the organization. TVA will further integrate risk management practices into all aspects of the business as ERM continues to evolve in a manner best suited to support TVA's mission.

Annual Performance Report - Government Performance and Results Act (GPRA)

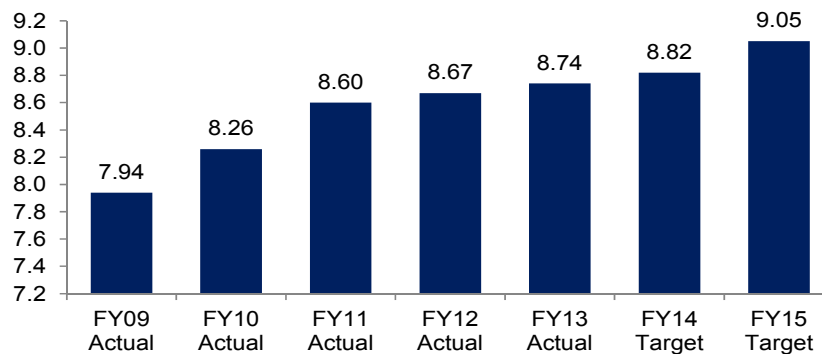
Rates

Retail Rates (¢ / kWh Sales) - 12-month rolling average

Definition: The average of the previous twelve months' LPCs reported retail power revenue and directly served power revenue divided by sum of LPCs reported retail power sales and directly served power sales

Calculation: (LPCs reported power revenue + Direct Served power revenue) / (LPCs reported sales + Direct Served power sales)

Retail Rates (cents/kWh) - 12 Month Rolling Avg

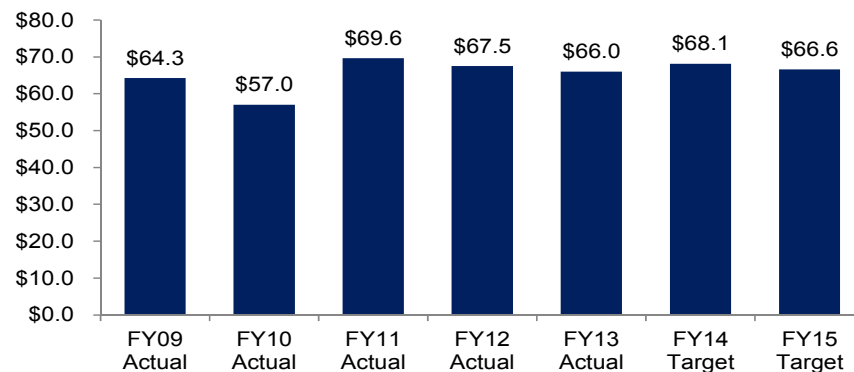


Delivered Cost of Power (\$ / MWh Sales)

Definition: Delivered Cost of Power Excluding FCA Costs (\$ / MWh Sales) = TVA's total costs in dollars per MWh of power sold to customers

Calculation: (Total Income Statement Expenses +/- Other Income) / Total Sales Volume (MWh)

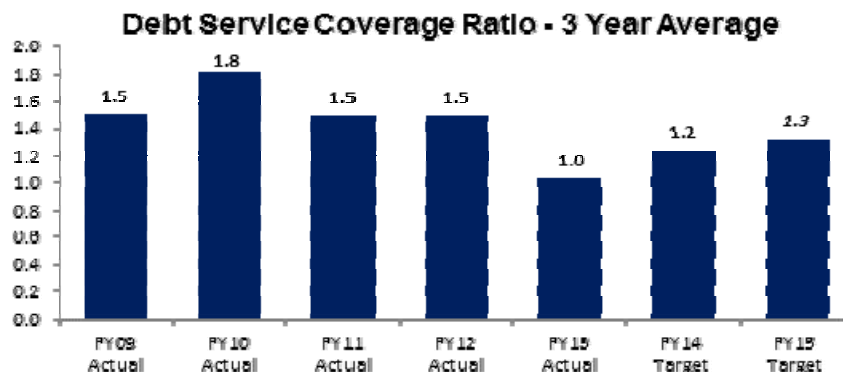
Delivered Cost of Power (\$/MWh)



Debt Service Coverage - 3 year rolling average

Definition: The Debt Service Coverage Ratio ("DSCR"), calculated on a 3-year average, demonstrates TVA's ability to cover interest payments and current maturities of long-term debt and leaseback obligations. TVA has elected this as the measure due to the fact that TVA's annual DSCR varies significantly due to the use of mostly bullet maturity bonds. See Appendix A for a calculation of DSCR, which is a non-GAAP measure, utilizing financial statement line items reported in accordance with GAAP.

Calculation: $(\text{Operating Income} + \text{Depreciation, Amortization, and Accretion}) / (\text{Current Maturities of Long-Term Debt} + \text{Gross Interest Expense})$



Note: For calculation, current maturities of long term debt ("LTD") includes prior year current portion LTD + prior year current portion LTD Variable Interest Entity + current maturity of leases

Reliability

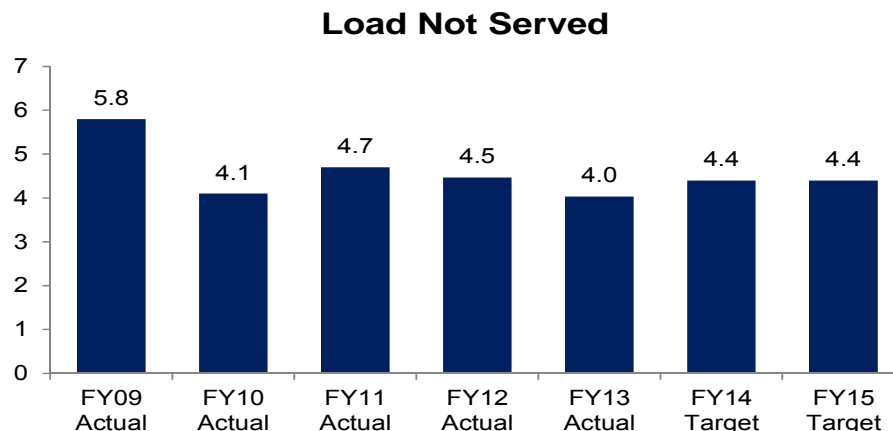
TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, maintained 99.999 percent reliability for delivering electricity to its LPCs and directly served large industrial and government customers. The TVA transmission organization offers services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate transmission functions from TVA's marketing functions.

Load Not Served

Definition: Load Not Served ("LNS") measures the magnitude and duration of transmission system outages that affect TVA customers expressed in system minutes.

Calculation: Percent of total load not served x number of minutes in period



Equivalent Availability Factor

Definition: Equivalent Availability Factor is a ratio of actual available generation from all TVA Coal, Combined-Cycle & Nuclear generating assets in a given period compared to maximum availability. Equivalent Availability Factor reflects the percentage of hours within the period that the asset was available to operate.

Calculation: $EAF = \frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((AVH * NMC)) * 100}{\sum \text{of all Coal, Combined Cycle \& Nuclear units } (PH * NMC)}$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand Hours)

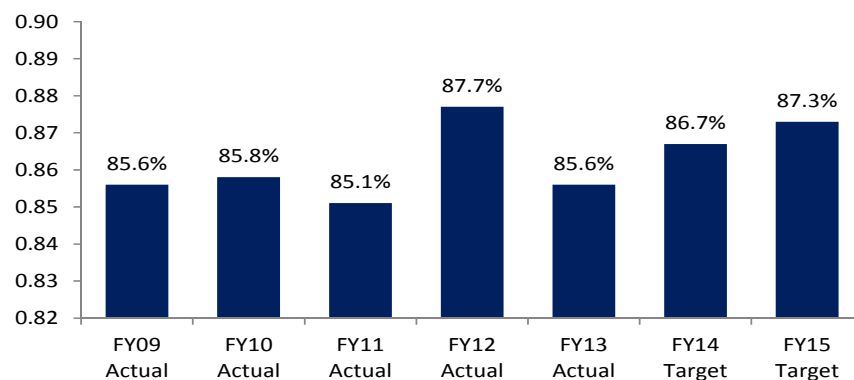
PH = Period Hours

NMC = Net Maximum Capacity = Winter NDC for Thermal Units

MWhL = MWh Losses due to forced outage or derating

SchMWhL = MWh Losses due to scheduled outages (planned or maintenance) or derating

Equivalent Availability Factor



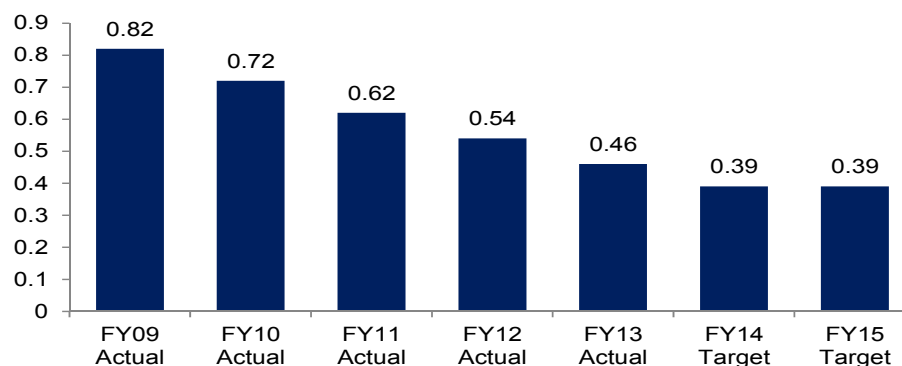
Responsibility

Recordable Injury Rate

Definition: This metric is a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty/job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and staff augmentation contractors.

Calculation: Safe Workplace (RIR) Rate = $(\text{number of recordable injuries} \times 200,000) / (\text{number of employee-hours worked})$

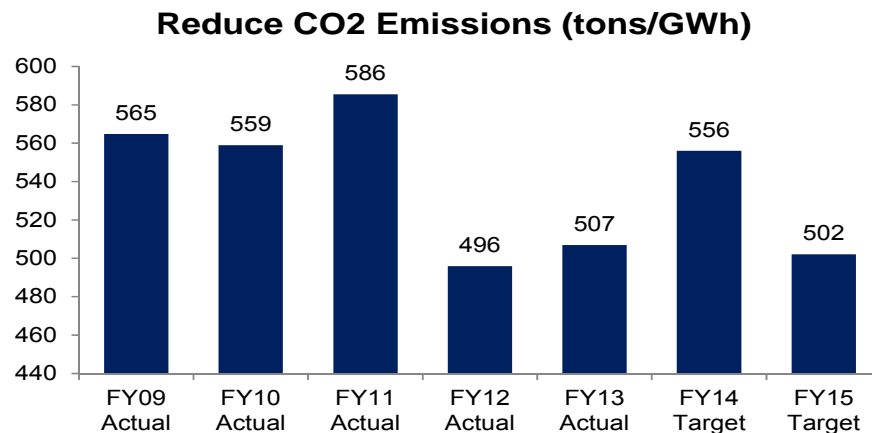
Recordable Incident Rate (Safe Workplace)



Reduce CO₂ Emissions (Emissions Tons/GWh)

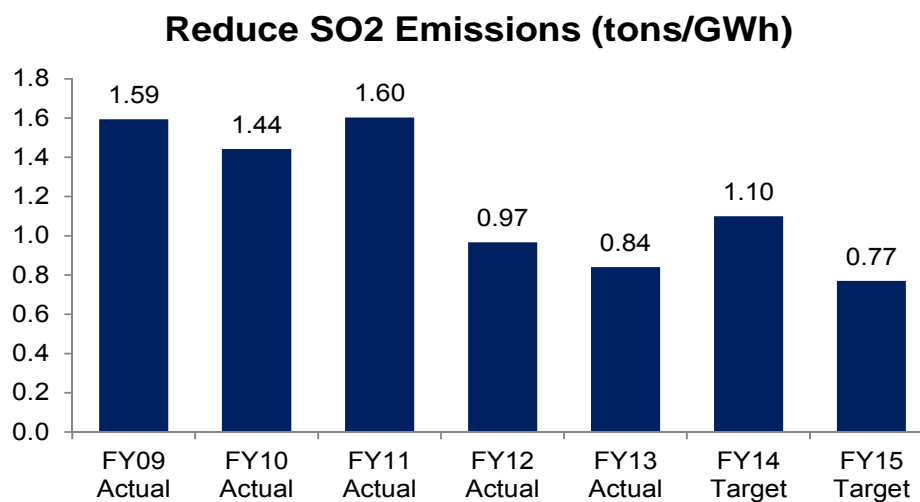
Definition: Measure of TVA's commitment to manage greenhouse gas emissions through efficient operation of its diverse generation mix

Calculation: Annual reduction of CO₂ Emissions = ktons

Reduce SO₂ Emissions (Emissions Tons/GWh)

Definition: Measure of TVA's commitment to reduce SO₂ emissions to improve air quality in the Tennessee Valley and to reduce acid deposition in sensitive areas such as the Great Smoky Mountains

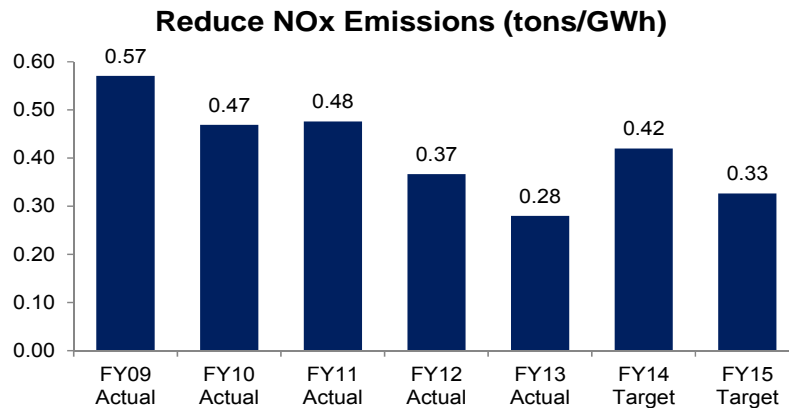
Calculation: Annual reduction of SO₂ Emissions = ktons



Reduce NO_x Emissions (Emissions Tons/GWh)

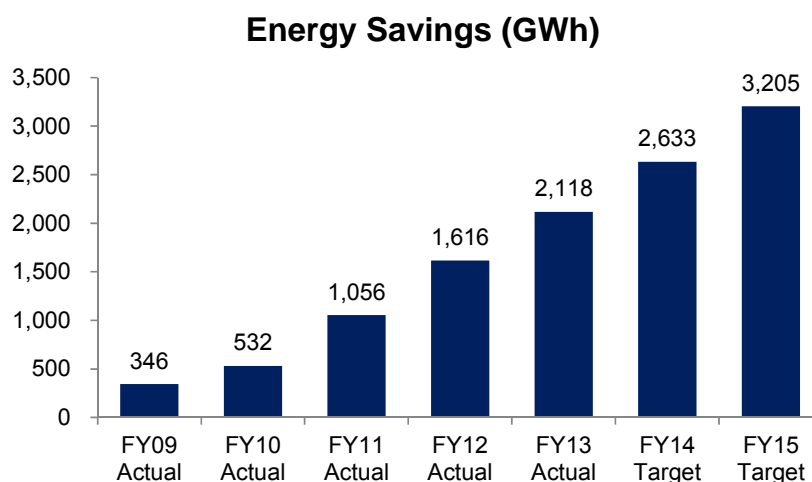
Definition: This metric directs emissions of NO_x from the combustion of carbon-based fuels for energy generation and excludes purchased power

Calculation: Annual reduction of NO_x Emissions = ktons

Energy Savings (GWh)

Definition: Energy efficiency (“EE”) savings measured in GWh from internally and externally focused programs, demonstrations, pricing products and structures supported or funded by TVA which promote the efficient use of electricity

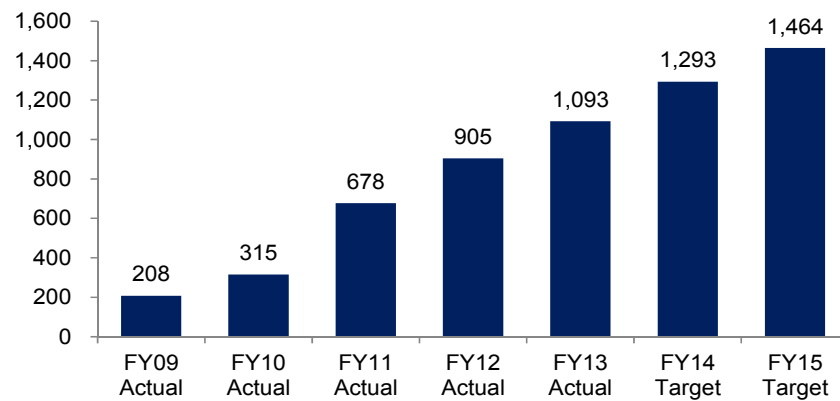
Calculation: FY Incremental Energy Efficiency Savings = [(Individual EnergyRight Solutions product kWh impacts) * (FY individual EnergyRight Solutions installations)/1,000,000] + [FY kWh energy efficiency achieved by Industrial and Commercial projects + FY kWh energy efficiency impacts from Demand Response programs + FY kWh energy efficiency impacts achieved through information/outreach programs + FY kWh energy efficiency impacts achieved by wholesale & retail pricing products + FY kWh energy efficiency impacts from TVA facilities improvements +....+ FY kWh energy efficiency impacts from TVA-supported loan funds administered by others + FY kWh energy efficiency impacts from state programs receiving TVA support]/1,000,000



Peak Demand Reduction (MW)

Definition: Incremental summer peak demand reduction potential measured in gross MW from internally and externally focused programs; demonstrations; pricing products and partnerships supported or funded by TVA which promote the efficient use of electricity and demand reduction

Calculation: FY Energy Efficiency MW + FY Demand Response MW + FY Green Power Providers MW + ... + FY Demonstration MW + FY State Efficiency Programs Supported by TVA MW

Peak Demand Reduction (MW)Nuclear Capacity Additions (MW)

Definition: The addition of nuclear capacity in the generation mix

Calculation: Sum additional MW from nuclear capacity additions

Note: The estimated completion date for Watts Bar Unit 2 is currently expected to be December 2015. The unit is expected to add 1,180 megawatts (MW) of capacity to TVA's generating portfolio when it begins commercial operation.

Other Financial and Operational Measures

Financial Metrics

TVA's financial information includes estimates that have significant uncertainty relative to the weather, the economy, fuel prices, and other matters that are subject to changing conditions. TVA is self-funded primarily from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. However, TVA's liquidity is enhanced by several factors. The fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's Discount Notes (short-term debt) program provides TVA access to short-term financing needed to maintain liquidity and to fund daily operations.

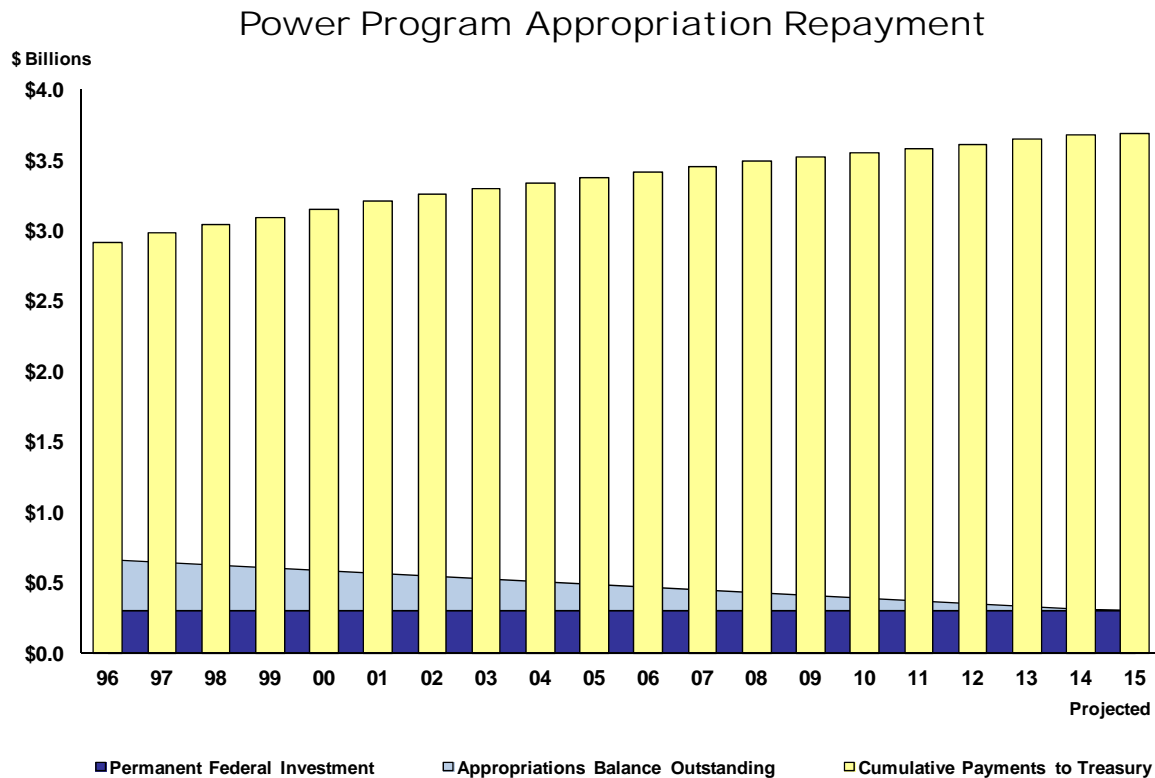
Under a memorandum of understanding, pursuant to the TVA Act, the U.S. Treasury provides TVA a credit facility for up to \$150 million. TVA also has three multi-year, staggered maturity credit facilities with commercial banks which allow TVA to borrow up to \$2.5 billion. The facilities are generally treated as a backup source of liquidity rather than a tool to manage daily cash operations or a primary funding source. Any outstanding borrowings under any of the facilities would count as debt subject to TVA's \$30.0 billion statutory limit on bonds, notes and other evidences of indebtedness. As of September 30, 2013 the commercial credit facilities accommodated the issuance of letters of credit up to \$2.5 billion and there were approximately \$822 million of letters of credit outstanding, with no borrowings under any of the lines. From time to time, TVA provides letters of credit in lieu of cash or other assets to meet collateral requirements under certain agreements.

The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide, among other things, funds for operation, maintenance and administration of its power system and additional margin as the TVA Board may consider desirable for investment in power system assets, retirement of outstanding bonds in advance of maturity, additional reduction of the Power Program Appropriation Investment, and other purposes connected with TVA's power business. In setting rates, the TVA Board has the primary responsibility of achieving the objectives of the TVA Act including the objective that power shall be sold at rates as low as are feasible.

TVA is focused on several strategic imperatives, which include maintaining low power rates, living within its means, optimizing the value of its asset portfolio, and being responsible stewards of the Tennessee Valley's resources. TVA's financial objectives are aligned with these strategic imperatives. Key financial objectives include aligning operating and maintenance expenses with revenues, effectively managing cash and debt levels, and making investments to support the power generating portfolio, while realizing the benefits of hydroelectric generation.

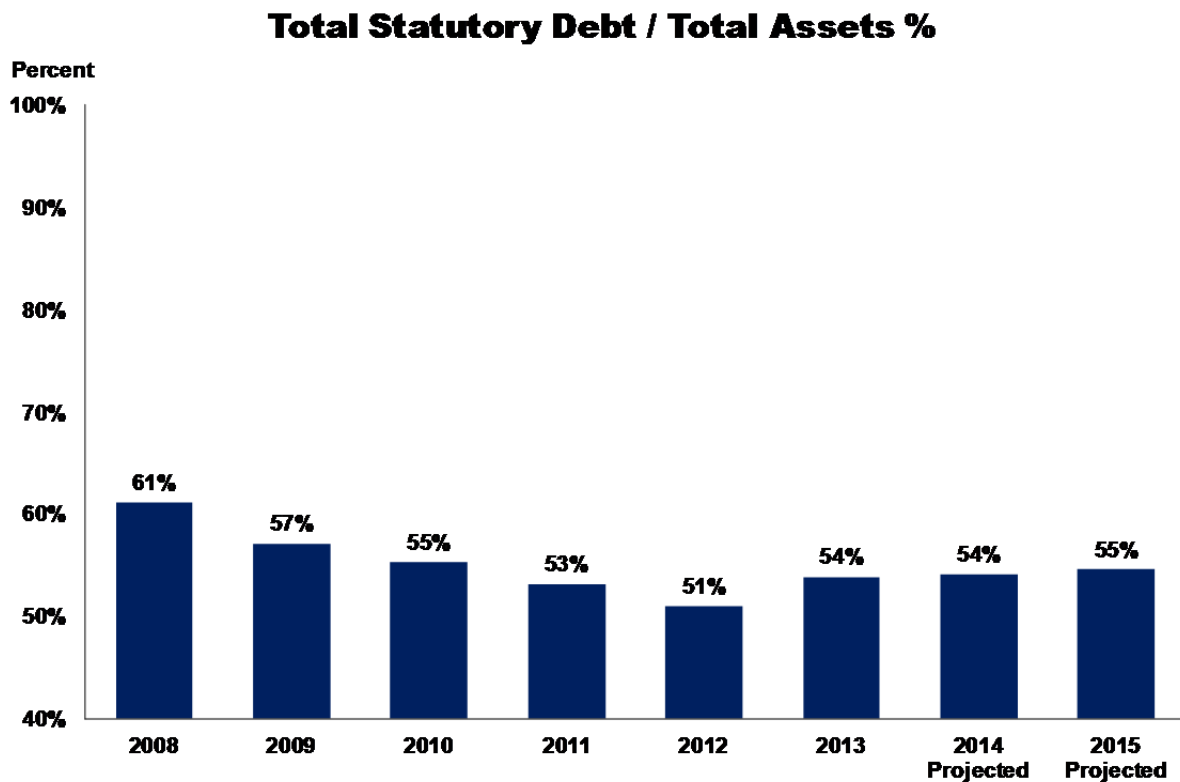
Power Program Appropriation Repayment

For more than forty years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on the outstanding appropriation investment. Through FY 2014, these payments are expected to total an estimated \$3.7 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA. The government has the benefit of an equity position in TVA, but neither the government nor taxpayers are liable for TVA's debt, as stated in the TVA Act.



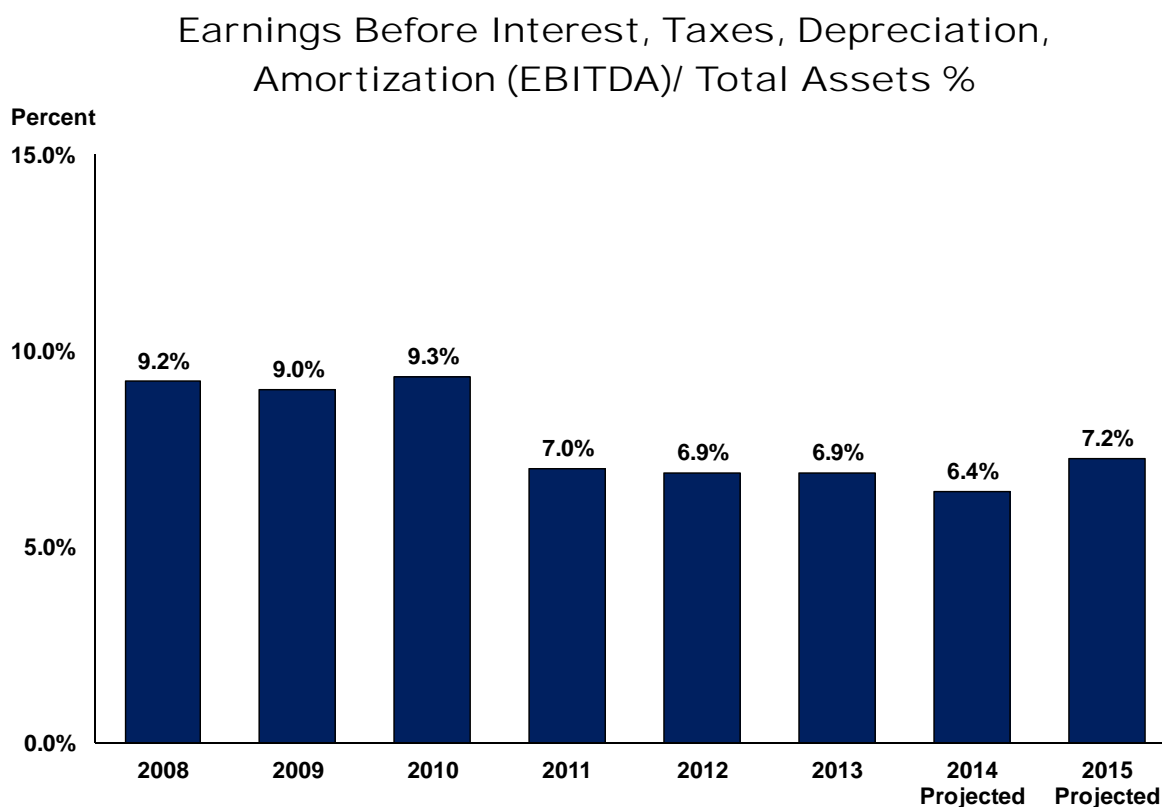
Total Statutory Debt as a Percent of Total Assets

TVA maintains a balance of financing obligations that is manageable and commensurate with its level of assets. Along with the debt service coverage ratio, TVA will track its financial health by measuring total statutory debt (defined for purposes of this document as bonds and notes) as a percent of total assets.



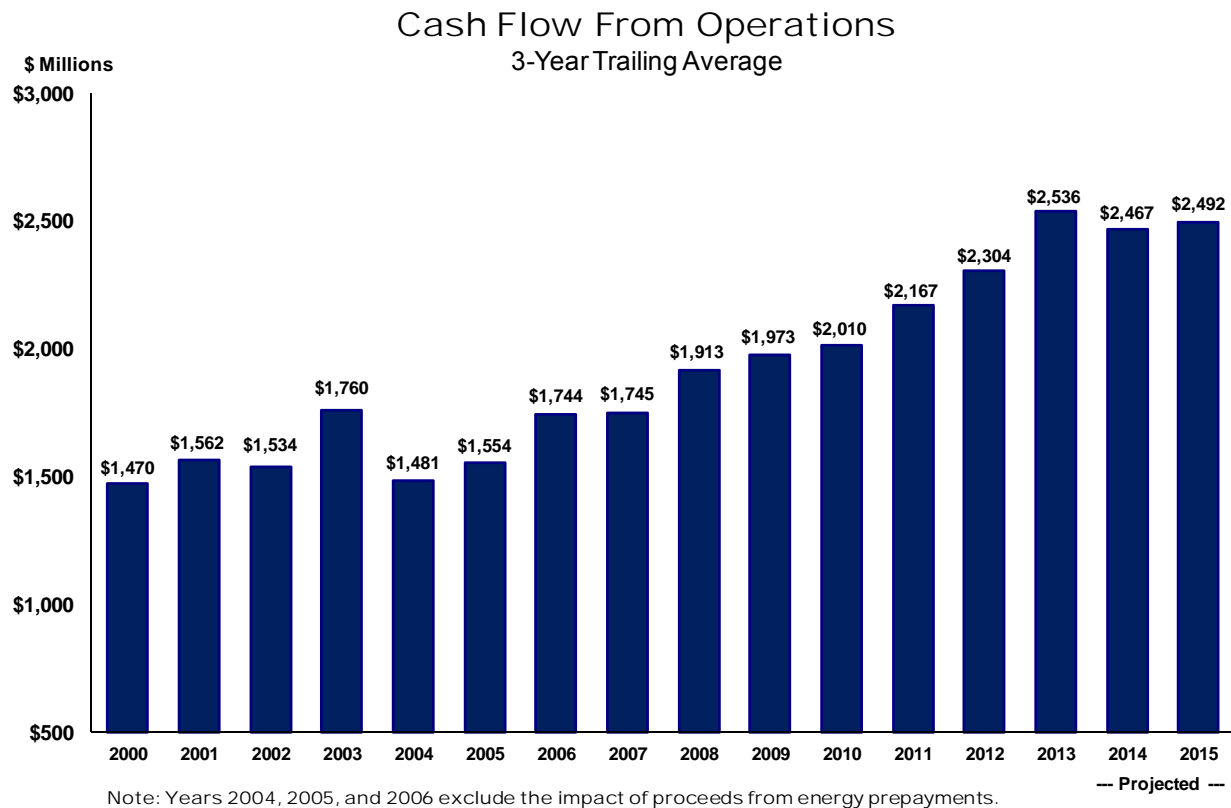
Earnings before Interest, Taxes, Depreciation, Amortization (EBITDA)/Total Assets

In addition to sound criteria for new investments, improving non-fuel operating and maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of EBITDA to Total Assets. See Appendix B for a reconciliation of EBITDA, which is a non-GAAP measure, to the most directly comparable GAAP measure.



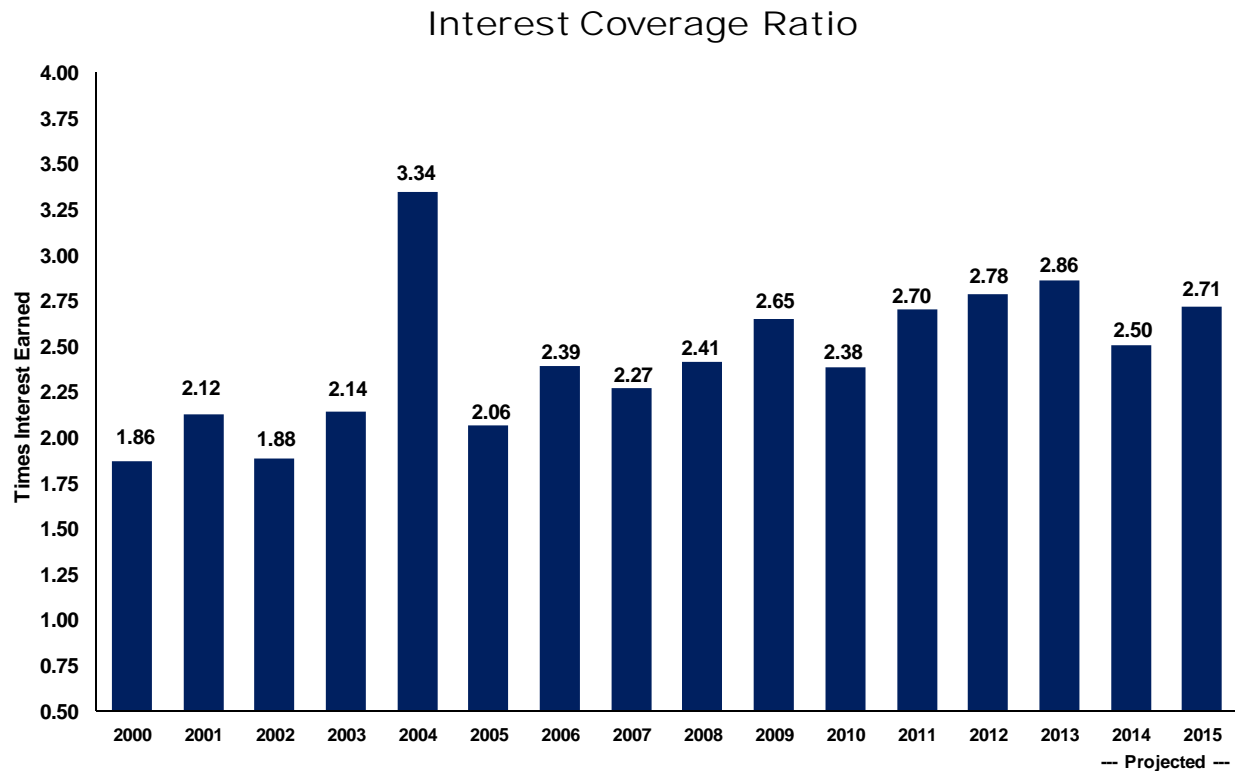
Cash Flow from Operations (3-Year Trailing Average)

The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA's ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a 3-year trailing average cash flow to provide a measure of its financial health.



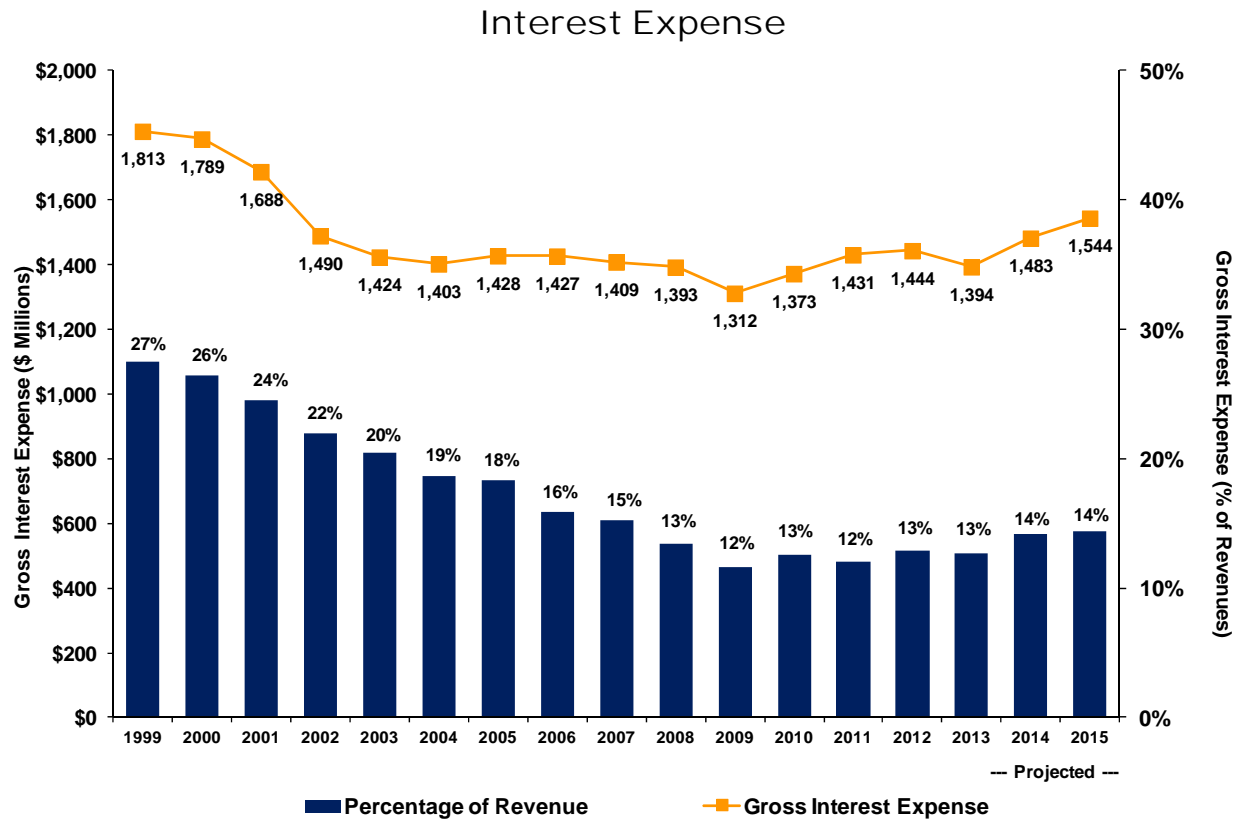
Interest Coverage Ratio

TVA's ability to pay the interest on its bonds and notes, measured by the degree to which cash flows from operations cover interest obligations, has also improved over the past several years. Interest Coverage Ratio, which is a non-GAAP measure, utilizes financial statement line items reported in accordance with GAAP. See Appendix C for a calculation of the Interest Coverage Ratio using financial statement line items reported in accordance with GAAP.



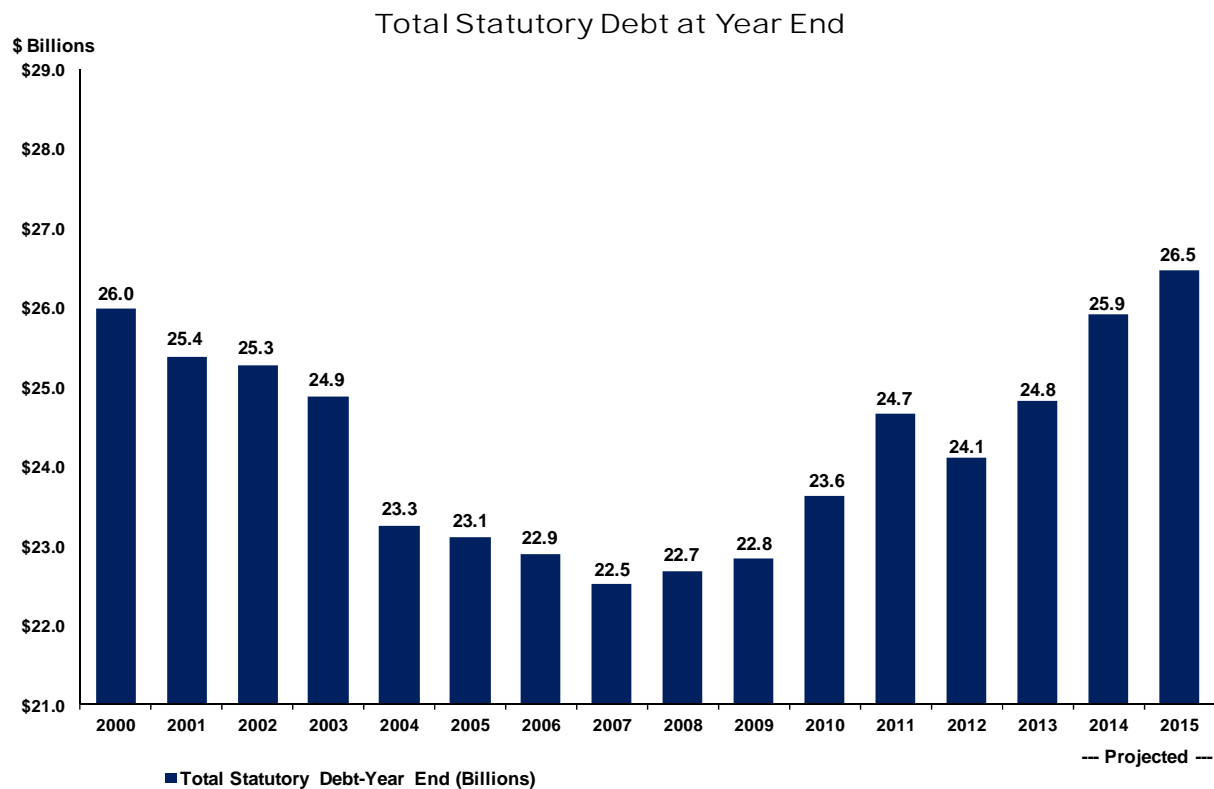
Interest Expense

TVA manages its fixed costs including interest expense. Annual interest expense was more than \$2.0 billion at its peak in FY 1998. This amount declined 28 percent to \$1.4 billion in FY 2013. In FY 1998, annual interest expense as a percentage of total revenues was 30 percent. That figure is expected to be 14 percent in FY 2016.



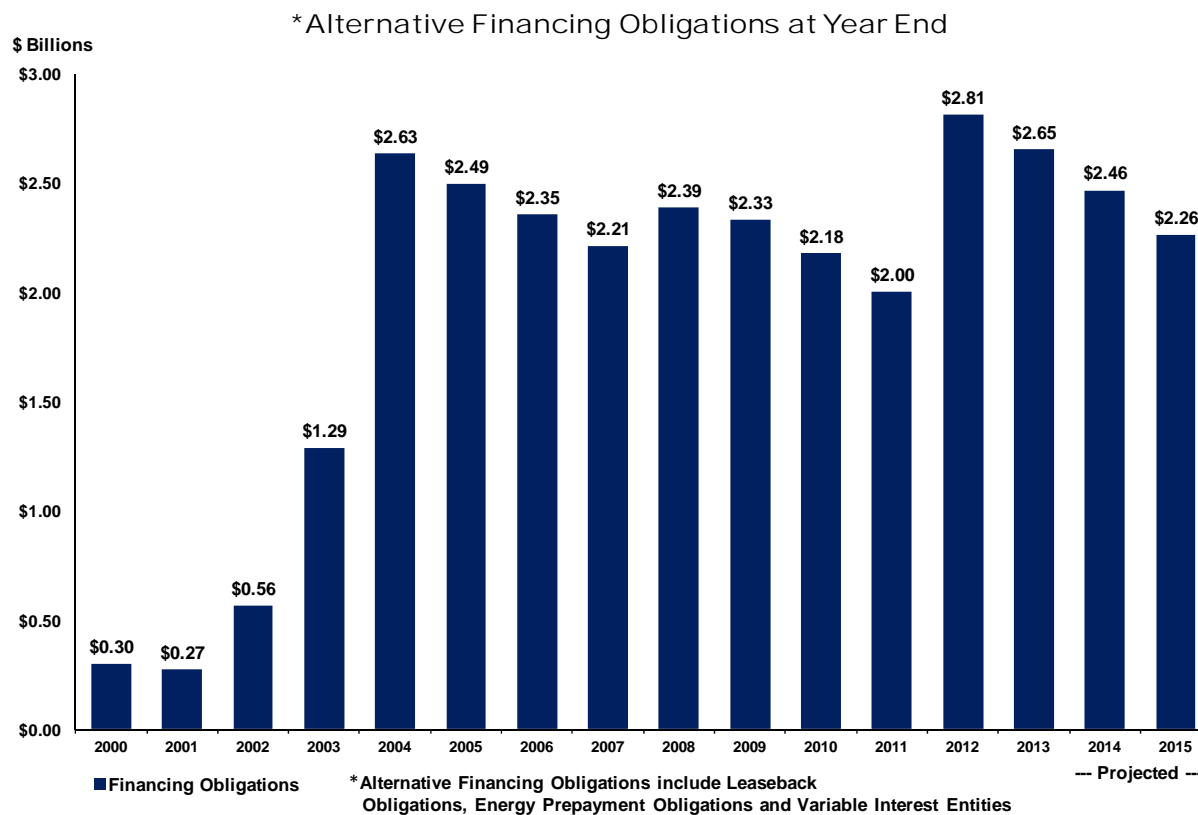
Total Financing Balance

From FY 2000 to FY 2013, TVA increased its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by \$1.2 billion. TVA's debt and alternative financing obligations are expected to increase approximately \$898 million in FY 2014 and \$394 million in FY15 to fund capacity expansion.



Alternative Financing Obligations

TVA uses alternative sources of financing from time to time to provide cost-savings, flexibility or other benefits. TVA's alternative financings include lease-leaseback, lease-purchase, and energy prepayment obligations. On January 17, 2012, TVA entered into a \$1.0 billion lease-purchase transaction for the John Sevier Combined Cycle facility located in Hawkins County, Tennessee. TVA will lease the facility through January 17, 2042, after which the facility will remain TVA's property. In addition, on August 9, 2013, TVA entered into a \$400 million lease-purchase transaction involving the Southaven Combined Cycle facility located in DeSoto County, Mississippi. TVA will lease the facility through August 15, 2033.



Operational Metrics

Power Sales and Revenue

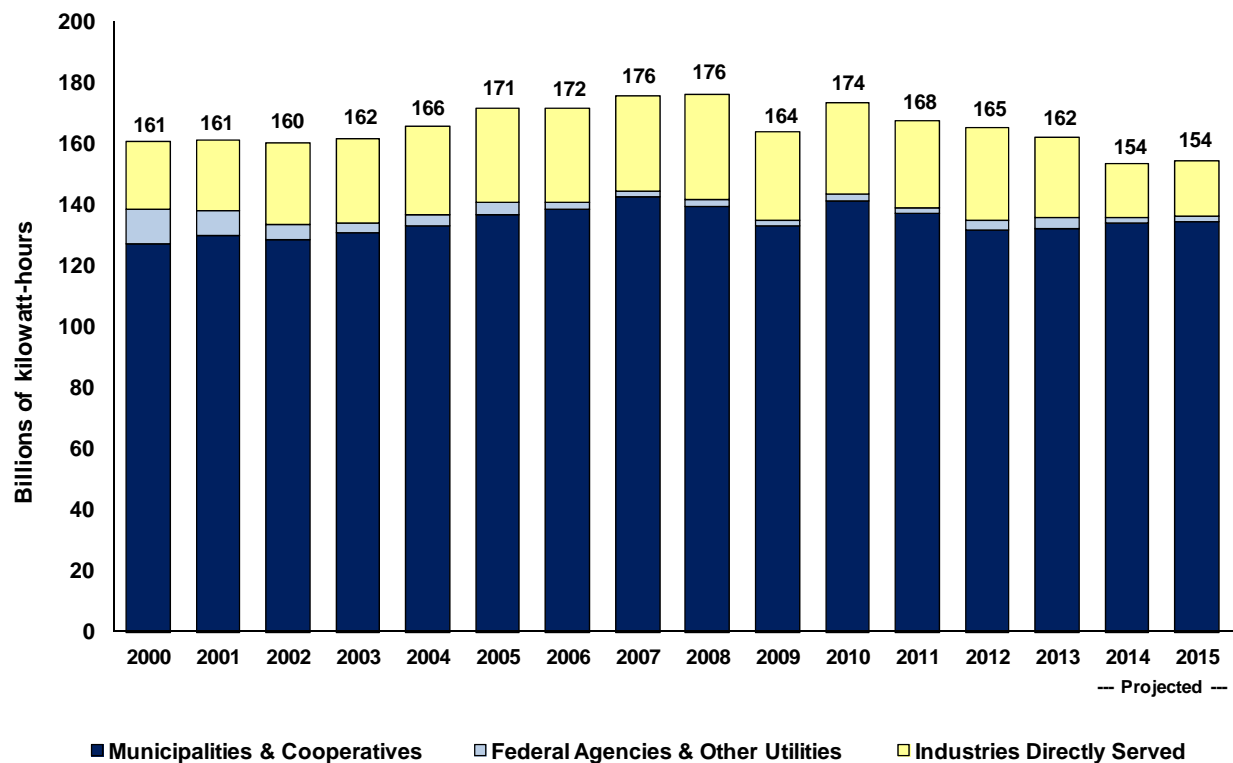
TVA sells electricity to three main customer groups:

Municipalities & Cooperatives: TVA delivers power to wholesale customers which include municipal utility companies and cooperatives that resell that power to consumers. Cooperatives are customer-owned companies, many of which were formed to bring electricity to the farthest reaches of the Tennessee Valley. These municipal and cooperative LPCs represent the majority of TVA's business.

Industrial Directly Served Customers: TVA also sells power directly to industrial customers with large or unusual loads. FY 2014 projections include reduced demand in this segment from large customers.

Federal Agencies and Others: TVA sells power directly to federal agencies. TVA is authorized under the TVA Act to sell power under exchange power agreements to certain neighboring utility systems. Off-system sales are included in the "Other" category. Sales to these companies typically represent less than one percent of TVA's total power sales.

TVA Total Sales



Demand in the TVA Service Territory

In FY 2013, TVA sold 162 billion kilowatt-hours of electricity, and TVA estimates that it will sell 160 billion kilowatt-hours in FY 2014. Demand for electricity in the TVA region grew approximately one percent annually from FY 1995 through FY 2013. While economic conditions have reduced power demand in recent years, TVA plans to meet demand by making capital investments in the current year, as well as future years.

TVA System Capability

Summer net capability (MW) at September 30, 2013

Coal-Fired ⁽¹⁾	12,901	35%
Nuclear	6,724	19%
Hydroelectric ⁽²⁾	5,433	15%
Combustion Turbine (owned or leased)	9,242	25%
Power Purchase Agreements	2,242	6%
Other ⁽³⁾	<u>52</u>	<u><1%</u>
Capacity ⁽⁴⁾	36,594	100%

(1) Since September 30, 2012, TVA has retired John Sevier Fossil Plant Units 1 and 2, idled John Sevier Fossil Plant Units 3 and 4, retired Widows Creek Fossil Plant Units 3 and 5, idled Johnsonville Fossil Plant Units 5-6 and Units 9-10, and idled Colbert Fossil Plant Unit 5. In addition, TVA has announced plans to retire John Sevier Fossil Plant Units 3 and 4 effective December 31, 2015, to retire Colbert Fossil Plant Units 1-5 no later than June 30, 2016, to retire Paradise Fossil Plant Units 1 and 2 after completion of a gas-fired plant at the current location of Paradise Fossil Plant, and to retire Widows Creek Fossil Plant Unit 8 in the future.

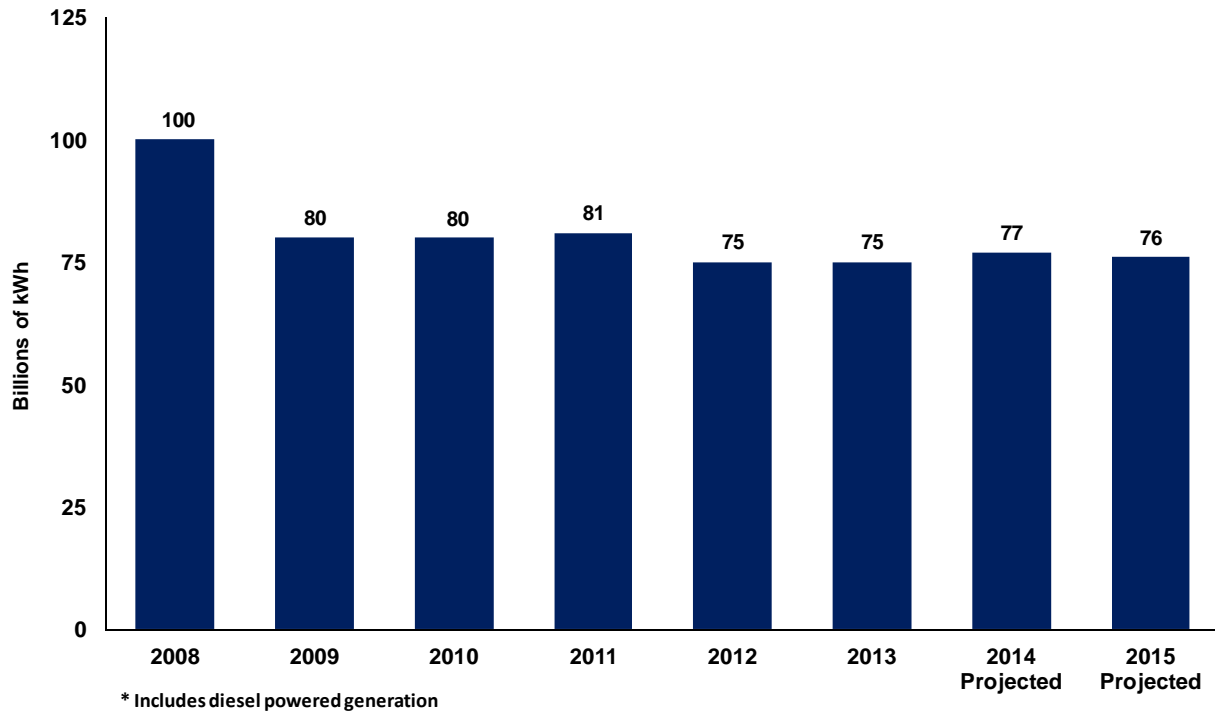
(2) Hydroelectric capacity includes pumped-storage.

(3) Other includes 43 MW of Contract Renewable Resources (non-hydro) and 9 MW of Diesel Generator capacity.

(4) Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP

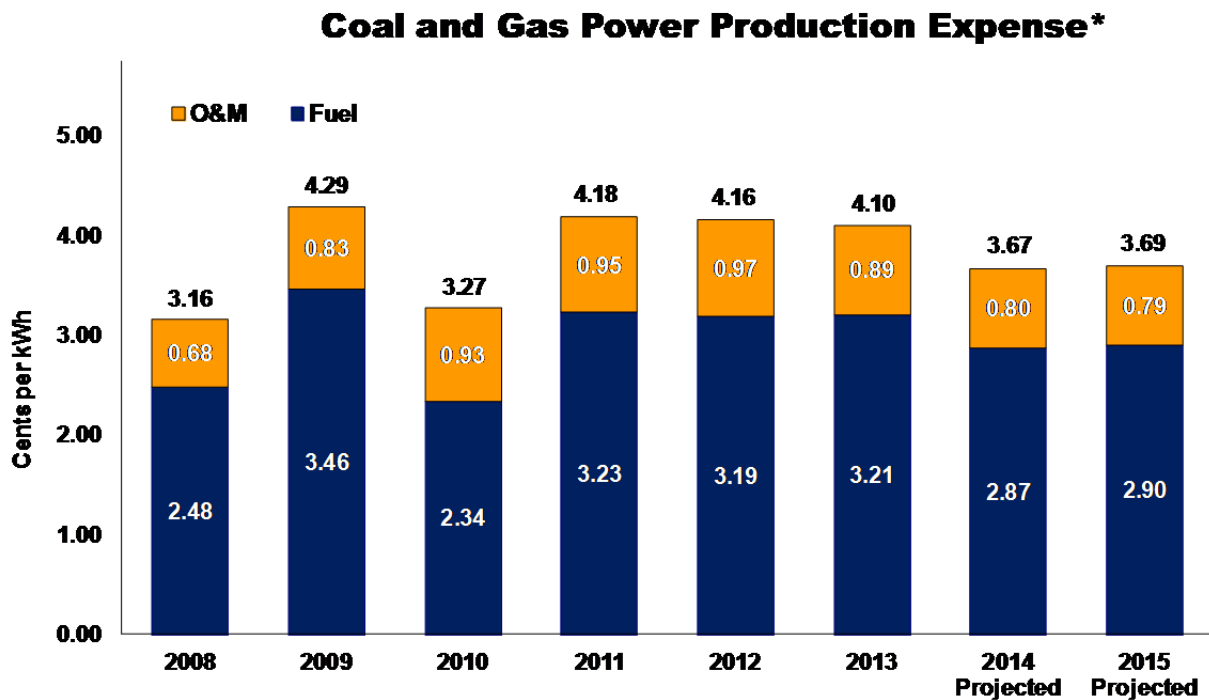
Coal and Gas Power Generation

Coal and gas generation for FY 2013 was slightly higher than FY 2012, but the mix between coal and gas production changed due to rising gas prices in FY 2013. Coal generation as a percentage of total TVA generation increased from 41% in FY 2012 to 43% in FY 2013, and gas generation decreased to 9% from 12% for FY 2013 and FY 2012, respectively. For FY 2014 and FY 2015, coal generation is expected to decrease as new nuclear and gas generation come on line, and coal generating units are idled.

TVA Coal and Gas Power Generation*

Coal and Gas Production Expense

Production expense per kilowatt-hour is expected to decrease from FY 2013 to FY 2014 due primarily to more favorable fuel costs and the continued savings initiatives implemented in FY 2013. Operating and maintenance ("O&M") expenses for the gas fleet are expected to increase as production increases, partially offset by less O&M expenses for the coal fleet as units are idled or retired. In FY 2015, production cost per kilowatt-hour is expected to increase slightly as compared to FY 2014 due primarily to less favorable fuel costs.

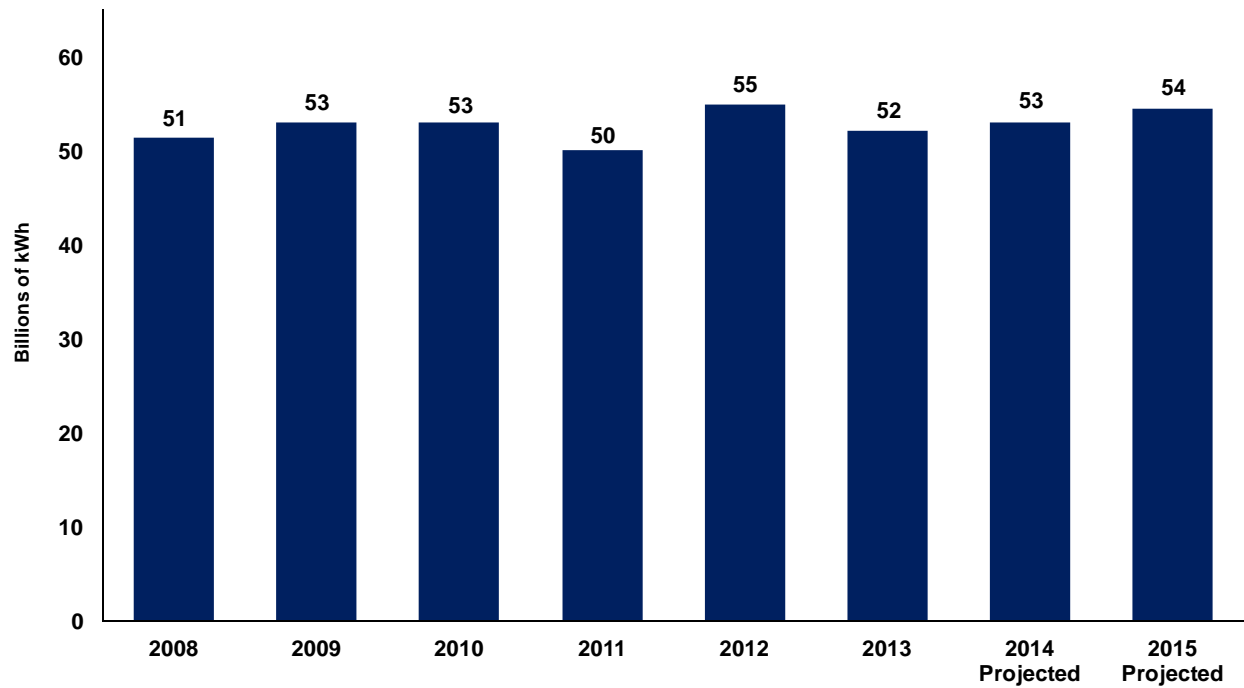


* Production includes diesel power

Nuclear Power Generation

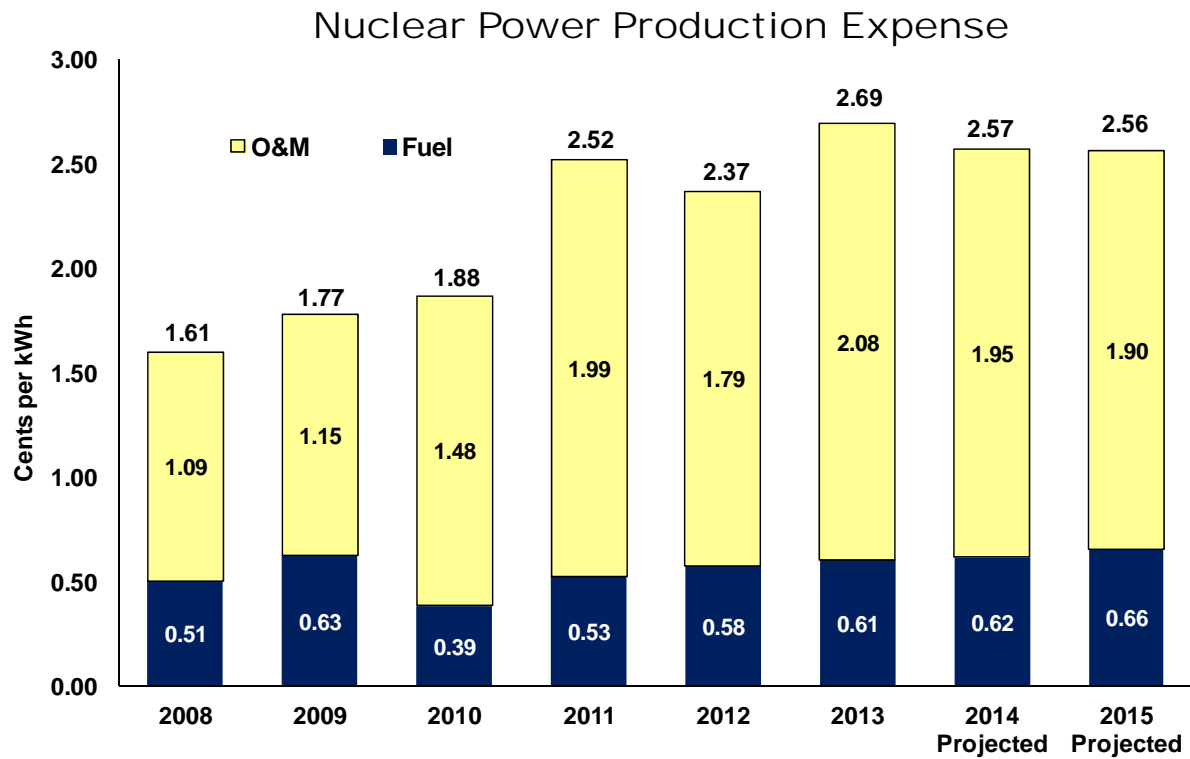
TVA's nuclear operations are critical to meet the region's power needs. In FY 2015, TVA's nuclear units are expected to generate 54 billion kilowatt-hours of electricity, which should represent approximately 33 percent of TVA's total net generation.

TVA Nuclear Generation



Nuclear Power Production Expense

TVA's total nuclear production expense on a per-kilowatt-hour basis increased in FY 2013 due to higher regulatory spending. Initiatives to improve efficiencies and reduce O&M expense are expected to decrease production costs in FY 2014 and FY 2015.



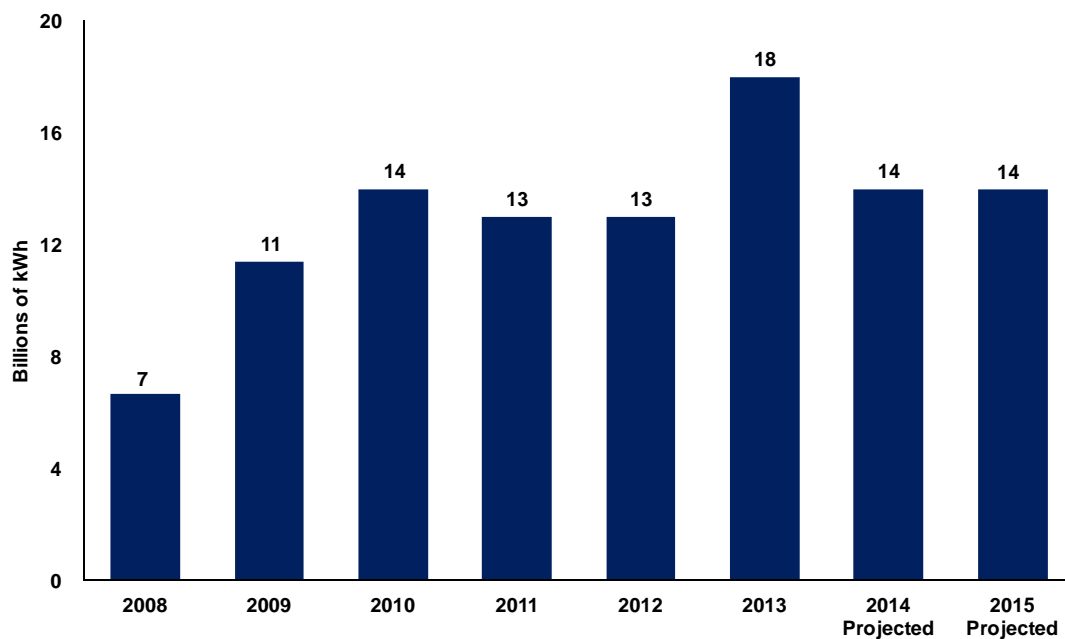
Hydroelectric Power Generation

In FY 2013, hydro generation was 18 billion kilowatt-hours, which is above normal due to the above normal rainfall and runoff observed in the Tennessee Valley watershed. For FY 2014 and FY 2015, TVA's integrated hydroelectric power system of dams and pumped-storage units are expected to generate at a normal level, which represents 14 billion kilowatt-hours of electricity. This would represent approximately between 8 to 11 percent of TVA's owned generation. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power is an important element in TVA's total portfolios.

TVA's hydroelectric facilities have very low operating costs and can be used as base-load, intermediate, or peaking units, depending on water availability and system needs. TVA's Raccoon Mountain pumped-storage facility allows TVA to store electricity in the form of potential energy by using inexpensive off-peak electricity to pump water to a mountaintop reservoir. This water is then used to generate electricity on-peak when power is more expensive or otherwise unavailable.

In the second quarter of 2012, all four of TVA's Raccoon Mountain pumped-storage units, which total 1,616 MW, were withdrawn from service after cracks were found in their rotors. In a limited capacity, one unit was returned to service in October 2012, but was later taken out of service due to vibration concerns. New rotors have been purchased for all four units and maintenance overhauls are proceeding in anticipation of the delivery and installation of the new rotors in the 2014 timeframe. TVA is dispatching generation from other TVA units and purchasing power if needed to compensate for the loss in generating capacity.

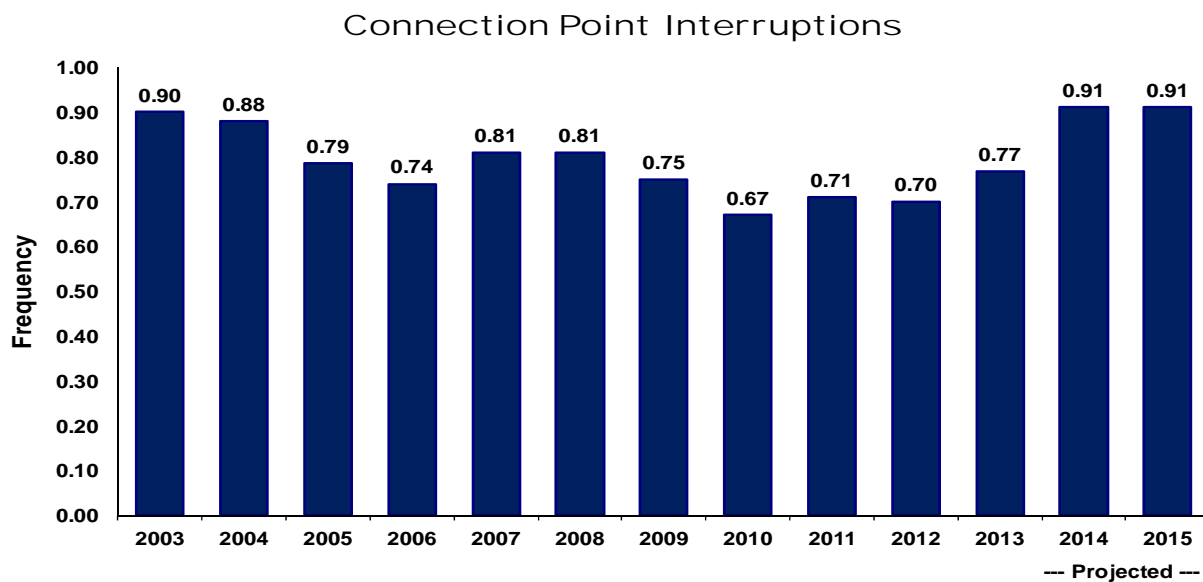
TVA Hydro-System Net Power Generation



TVA Transmission System

The TVA transmission system, one of the largest in North America, maintained 99.999 percent reliability for delivering electricity to its LPCs and directly served large industrial and government customers. The TVA transmission organization offers services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate transmission functions from TVA's marketing functions.

Connection point interruptions ("CPI") measure reliability from our customers' perspective. It is calculated as the number of momentary interruptions caused by the transmission system but excluding interruptions caused by declared major storms. CPI is lightning normalized. CPI is driven primarily by weather, and can be particularly difficult to reduce across large transmission systems such as TVA's, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA's transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by 53 percent since FY 1995 by investing annually in lightning mitigation projects. In the graph below projected values shown for future years are based on industry benchmarks; TVA's targets may be lower.



Appendix A

EBITDA is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. EBITDA represents net income before interest, taxes, depreciation, and amortization. TVA presents EBITDA because it considers EBITDA an important indicator of TVA's fiscal health and performance. EBITDA should be considered in addition to, and not as a substitute for, TVA's other measures of performance that are reported in accordance with GAAP. A reconciliation of net income to EBITDA follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Reconciliation of Net Income to EBITDA
(in millions)

	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Net Income	\$ 817	\$ 726	\$ 972	\$ 162	\$ 60	\$ 271	\$ 1	\$ 470
Add back:								
Interest Expense	1,376	1,272	1,294	1,305	\$ 1,273	\$ 1,226	\$ 1,269	\$ 1,292
Depreciation & Amortization	1,224	1,598	1,724	1,772	1,919	1,680	1,791	1,749
Total EBITDA	\$ 3,417	\$ 3,596	\$ 3,990	\$ 3,239	\$ 3,252	\$ 3,177	\$ 3,061	\$ 3,511

Appendix B

Debt Service Coverage Ratio (DSCR) calculated on a three year average is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Annual DSCR coverage is measured by dividing Operating Income and Depreciation and Amortization by Interest Expense and the previous year's Current Maturities of Long-Term Debt and Current Portion of Leaseback Obligations. Then to compute the three year average you average the current year annual ratio and previous two years annual ratios. A calculation of DSCR calculated on a three year average utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Debt Service Coverage
(in millions)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Operating Income	1,337	1,423	1,543	2,184	1,973	2,242	1,437	1,301	1,453	1,229	1,726
Depreciation and Amortization	1,154	1,500	1,473	1,224	1,598	1,724	1,772	1,919	1,680	1,791	1,749
Net Operating Income	2,491	2,923	3,016	3,408	3,571	3,966	3,209	3,219	3,134	3,020	3,475
Gross Interest Expense	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,394	1,428	1,544
Current Maturities of Long-Term Debt	2,693	985	90	2,030	8	1,008	1,537	2,308	32	1,034	34
Current Portion of Leaseback Obligations	35	37	43	54	463	74	80	443	70	83	79
	4,105	2,449	1,542	3,477	1,783	2,455	3,048	4,195	1,496	2,545	1,657
3-Year Average DSCR	1.1	0.7	0.9	1.4	1.5	1.8	1.5	1.5	1.0	1.3	1.3

Appendix C

Interest Coverage is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Interest Coverage is measured by dividing Net Cash Provided by Operating Activities and Interest Expense by Interest Expense. TVA presents Interest Coverage because it describes TVA's ability to pay the interest on its bonds and notes. A calculation of Interest Coverage utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Interest Coverage
(in millions)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Net Cash Provided from Operating Activities	1,462	1,985	1,788	1,967	2,163	1,901	2,437	2,574	2,597	2,230	2,648
Gross Interest Expense	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,394	1,428	1,544
Interest Coverage	2.06	2.39	2.27	2.41	2.65	2.38	2.70	2.78	2.86	2.56	2.71

Tennessee Valley Authority

Budget Proposal and Management Agenda (Performance Report)



For the Fiscal Year Ending
September 30, 2016

Submitted to Congress
February 2015



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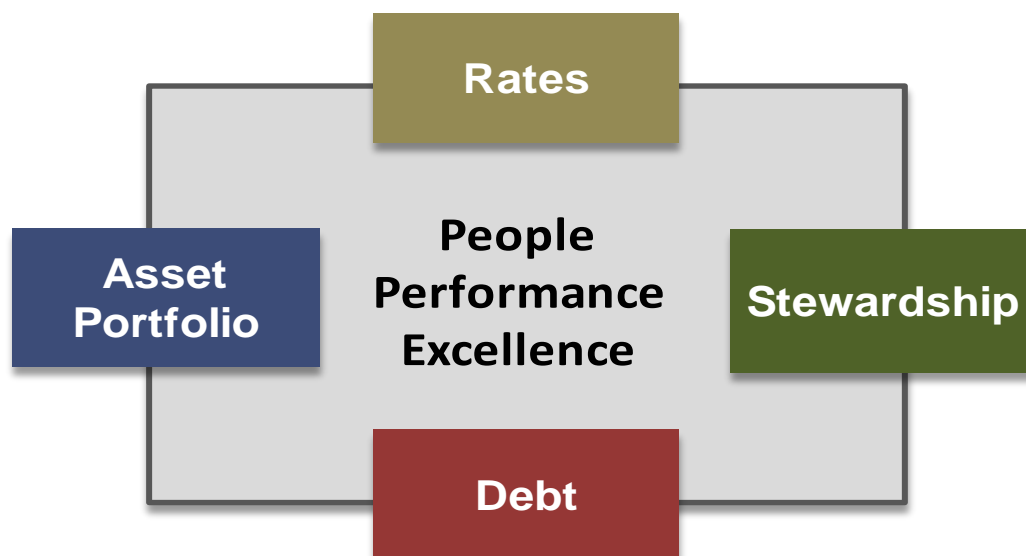
Introduction

TVA's Mission

TVA was built for the people, created by Congress in 1933 and charged with a unique mission – to improve the quality of life in a seven-state region through the integrated management of the region's resources. As it helped lift the Tennessee Valley out of the Great Depression, TVA built dams for flood control, provided low-cost power and commercial shipping, restored depleted lands, and raised the standard of living across the region. As times have changed, TVA has changed with them by updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation. While TVA's mission has not changed since its inception, the environment in which TVA operates continues to evolve. The business and economic environment has become more challenging, and demand for power and related revenues have decreased due to reduced customer usage and increased energy efficiency and demand response.

Strategic Imperatives

In order to continue TVA's mission of service to the region, TVA must address four strategic imperatives: (1) maintain rates as low as feasible, (2) live within its means, (3) manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to improve in these areas and become safer, better, faster, and leaner.



Rates

TVA is committed to providing all of its customers power at the lowest feasible rates. This customer focus requires scrutiny of all projects and use of resources so that the organization operates as efficiently and responsibly as possible.

Debt

TVA is committed to long-term debt management through employing a conservative approach as it relates to capital projects. While financing continues to be an important tool for funding TVA's long-term power system investments, the organization is committed to managing its debt under the ceiling established by Congress.

Asset Portfolio

Balancing TVA's assets with a diverse portfolio is vital to serving its customers reliably and at the lowest cost. In 2011, the TVA Board of Directors ("Board" or "TVA Board") accepted the Integrated Resource Plan ("IRP"), which recommends a strategic direction focusing on a diverse mix of electricity generation sources, including nuclear power, renewable energy, and natural gas, as well as traditional coal and hydroelectric power. TVA is increasing its low or no emission generation. TVA considers many factors, including fuel mix, in making decisions about generation, and

plans to rely on a mix of assets including nuclear, natural gas-fired capacity, hydro, renewables, and energy efficiency to meet future electricity needs. TVA is refreshing the IRP, and the report is expected to be published in 2015.

Stewardship

TVA's responsibility for stewardship of the waters and public lands of the Tennessee Valley was established in the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). These responsibilities include flood control, improved navigation of the Tennessee River, land and shoreline management as well as agricultural and industrial development. TVA is committed to increasing its role in many of these areas as activities are planned for dam safety and reservoir operation enhancements, stabilization of eroding shorelines, and the redevelopment of Muscle Shoals properties. This redevelopment is expected to improve public relations, enhance marketability, and reduce the maintenance cost of ownership.

Since the 1970's, TVA has spent approximately \$5.9 billion on controls to reduce emissions from its coal-fired power plants. In addition, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas and nuclear generation.

To reduce SO₂ emissions, TVA installed scrubbers on 17 coal-fired units, with scrubbers planned on six more units, and switched to lower-sulfur coal at 24 coal-fired units. To reduce NO_x emissions, TVA installed selective catalytic reduction systems ("SCRs") on 20 coal-fired units with SCRs planned on six more units, operates selective non-catalytic reduction systems on four units, installed low-NO_x burners or low-NO_x combustion systems on 25 units, optimized combustion on five units, and operates NO_x control equipment year round when units are operating (except during start-up, shutdown, and maintenance periods). TVA has also retired or announced plans to retire 32 of 59 coal-fired units and expects all coal-fired units will either have scrubbers and SCRs, be repowered to renewable biomass, or be retired.

To reduce particulate emissions of air pollutants, TVA has equipped all of its coal-fired units with scrubbers, mechanical collectors, electrostatic precipitators, and/or bag houses.

Primarily due to the actions described above, emissions of NO_x and SO₂ on the TVA system have been reduced by 91 percent below peak 1995 levels and by 95 percent below 1977 levels, respectively. These controls also have provided a cobenefit of reducing hazardous air pollutants, including mercury, at some units. For calendar year ("CY") 2013, TVA's emission of CO₂ from its sources was 72 million tons, a 32 percent reduction from 2005 levels. To remain consistent and provide clear information and to align with the Environmental Protection Agency's ("EPA") reporting requirements, TVA will continue to report CO₂ emissions on a CY basis.

There could be additional material costs if reductions of greenhouse gases, including CO₂, are mandated by legislative, regulatory, or judicial actions and if more stringent emission reduction requirements for conventional pollutants are established. These costs cannot reasonably be predicted at this time because of the uncertainty of these actions. A number of emerging EPA regulations establishing more stringent air, water, and waste requirements could result in significant changes in the structure of the U.S. power industry, especially in the eastern half of the country. One such emerging regulation is the EPA's proposed Clean Power Plan.

On June 2, 2014, the EPA proposed the Clean Power Plan, a rule under section 111(d) of the Clean Air Act ("CAA"), as part of President Obama's Climate Action Plan, to reduce carbon emissions from existing power plants. The Clean Power Plan proposes state-specific emission rate goals to lower CO₂ emissions from power plants, targeting a 30 percent nationwide reduction in CO₂ emissions from 2005 levels by 2030. Each state's guideline is an output-based emissions rate (fossil CO₂ lbs/adjusted megawatt hours ("MWh")) based on 2012 historical emissions and generation. The EPA identified four sets of measures or "building blocks" that are in use today by some states and utilities, and that together make up the best system of emission reduction for reducing carbon pollution: (1) heat rate improvements at coal-fired units, (2) increased dispatch of natural gas combined cycle units, (3) increased utilization of non-emitting resources, and (4) increased demand-side energy efficiency. Each state's emission guideline is calculated by applying these four building blocks to 2012 historical fossil emissions and generation. The EPA is proposing an "interim goal" that a state must meet on average over the 10-year period from 2020-2029 and a "final goal" that a state must meet at the end of that period in 2030 and thereafter based on a three-year average. States must develop and submit plans to meet their goals and can comply individually or within a multi-state framework. States would be required to submit their plans to the EPA by June 30, 2016. The final form of these standards is uncertain. Comments on the proposed rule were due to the EPA by December 1, 2014, and the EPA expects to finalize the rule by summer 2015.

TVA currently anticipates spending significant amounts on environmental projects through 2025 including investments in new clean energy generation including natural gas, nuclear, and renewables to reduce TVA's overall environmental footprint.

Power Program

TVA operates the nation's largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of over 9 million people. TVA has not received appropriated funds from the federal government for its power program since 1959 although appropriated funds for its nonpower and multi-purpose programs continued through 1999. The 1959 amendment to the TVA Act required TVA, beginning in 1961, to make annual payments to the U.S. Treasury from net power proceeds as a repayment of and as a return on the government's appropriation investment in the power program until \$1.0 billion of the total had been repaid. With the 2014 payment, TVA fulfilled its requirement to repay an additional \$1.0 billion of the Power Program Appropriation Investment. The TVA Act requires TVA to continue making payments to the U.S. Treasury as a return on the remaining \$258 million of the Power Program Appropriation Investment.

TVA now primarily funds all of its operations from the sale of electricity and power system financings. TVA's power system financings consist primarily of the sale of debt securities and secondarily of alternative forms of financing such as lease arrangements.

TVA is primarily a wholesaler of power. It sells power to local power company customers ("LPCs") which then resell power to their customers at retail rates. TVA's LPCs consist of: (1) municipalities and other local government entities ("municipalities"), and (2) customer-owned entities ("cooperatives"). These municipalities and cooperatives operate public power electric systems that are not doing business for profit but are operated primarily for the purpose of supplying electricity to the general public or members. TVA also sells power to directly served customers, consisting primarily of federal agencies and industrial customers with large or unusual loads. In addition, power that exceeds the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with other electric systems. In FY 2016, TVA expects sales of about 158 billion kilowatt-hours ("kWh") of electricity.

Power generating facilities operated by TVA at September 30, 2014, included 29 conventional hydroelectric sites, a pumped-storage hydroelectric site, 10 coal-fired sites, three nuclear sites, 14 natural gas and/or oil-fired sites, and a diesel generator site, although certain of these facilities were out of service as of September 30, 2014. TVA's renewable energy program, Green Power Switch[®], includes 16 solar energy sites, digester gas co-firing capacity at a coal-fired site, biomass co-firing potential (located at coal-fired sites), and a wind energy site (out of service).

As of September 30, 2014, TVA's coal-fired units had 11,933 megawatts ("MW") of net summer capability. The 10 coal-fired plants generated about 44 percent of the power from TVA-operated facilities during FY 2014. TVA's system also includes 98 generators powered by natural gas and/or oil-fired units with a total net summer capability of 9,242 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided nine percent of the power from TVA-operated facilities in FY 2014.

The six nuclear units have a combined net summer capability of 6,724 MW and generated 38 percent of the power from TVA-operated facilities in FY 2014.

TVA-owned hydroelectric units have a combined net summer capability of 5,418 MW and generated about nine percent of the power from TVA-operated facilities in FY 2014.

Integrated Resource Plan

TVA's mission sets the stage for its strategic planning process that includes strategic objectives, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the IRP.

The 2011 IRP study, entitled *TVA's Energy and Environmental Future*, supports TVA's comprehensive mission, which includes providing the region with an affordable, reliable, environmentally sustainable supply of electricity. The power supply plans evaluated in this study identified the most likely new resources needed to satisfy expected energy demand in the region during a 20-year planning horizon under various scenarios of the future. The resulting recommended planning direction is consistent with TVA's Environmental Policy.

The IRP guides TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The recommended planning direction provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the IRP seek to balance cost, risk, system reliability, and environmental responsibility in providing power for TVA's customers.

In the fall of 2013, TVA started a refresh of the 2011 IRP. This effort responds to changes in the industry and in the TVA service area that were not fully captured in that study. In addition to realigning some planning assumptions for this current effort, TVA is also enhancing the analytic framework used to model energy efficiency and renewable energy resources while maintaining the comprehensive treatment of uncertainty used in the prior study. The updated IRP report, along with a supplemental Environmental Impact Statement, is expected to be published in 2015.

Transmission System

The approximately 2,500 miles of 500 kilovolt lines in TVA's transmission system are a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

The TVA transmission system is one of the largest in North America. TVA's transmission system has 69 interconnections with 12 neighboring electric systems, and delivered nearly 161 billion kWh of electricity to TVA customers in FY 2014. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 15 years in delivering electricity to customers.

TVA's transmission system interconnects with systems of surrounding utilities and consisted primarily of the following assets at September 30, 2014:

- Approximately 2,500 circuit miles of 500 kilovolt, 11,500 circuit miles of 161 kilovolt, and 2,200 circuit miles of other voltage transmission lines
- 511 transmission substations, power switchyards, and switching stations
- 1,278 customer connection points (customer, generation, and interconnection)

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of reservoir shoreline, approximately 293,000 acres of reservoir land, and 49 reservoirs encompassing approximately 650,000 surface acres of reservoir water used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In addition, TVA manages over 170 agreements with private entities for commercial recreation (such as commercial campgrounds and marinas), manages 130 agreements with public agencies for public recreation (such as public parks, day use areas, boat launches, and swimming areas), and is responsible for over 80 public recreation areas throughout the Tennessee Valley. In accordance with its 2008 Environmental Policy, the TVA Board accepted the Natural Resource Plan ("NRP") in 2011 to guide TVA's cultural and natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation and water resources, as well as biological and cultural resources on TVA lands and reservoirs, land planning, and public engagement. The NRP will be reviewed and updated approximately every 5 years.

Tennessee River System

Approximately 42,000 miles of rivers, streams, and tributaries, including the 652-mile-long Tennessee River, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production, and cooling water for TVA's generation units. The watersheds of the Tennessee River and its 16 tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development, along with energy production and environmental stewardship, is one of the core missions of TVA. TVA works with LPCs, regional, state, and local agencies and communities to showcase the advantages available to businesses locating or expanding in TVA's service area. TVA's primary economic development goals are to recruit major business operations to locate in the Tennessee Valley, encourage the location and expansion of companies that provide quality jobs, prepare communities in the Tennessee Valley for economic growth, and offer support to help grow and sustain small businesses. TVA seeks to meet these goals through a combination of initiatives and partnerships designed to provide program support, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 190 companies into the TVA service area during FY 2014. These companies announced capital investments of approximately \$8.5 billion and the expected creation and/or retention of over 60,300 jobs.

Technology Innovation

Consistent with the TVA Act, TVA makes investments in science and technological innovation to assist the agency in meeting future business and operational challenges in key areas and to establish national leadership in research, development, and demonstration. In addition to research that directly supports optimization of its generation and delivery assets, TVA is also focused on emerging technological advances in small modular nuclear reactors ("SMRs"), grid modernization, energy utilization technologies, and distributed energy resources. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

TVA also seeks to leverage research and development activities and investments through partnerships with LPCs, the Electric Power Research Institute ("EPRI"), the Department of Energy ("DOE"), the Oak Ridge National Laboratory ("ORNL") and other national labs, research consortiums, peer utilities, universities, and vendors and participation in professional societies.

Commitment to the Future

TVA is a leader in public power, a model built on trust and partnerships with the people TVA serves. This model continues to deliver reliable, affordable electricity to more than 9 million people and 700,000 businesses. It enables effective, integrated resource management and environmental stewardship in parts of seven southeastern states. TVA promotes alliances with others that help attract and retain jobs and investments that support economic development in the Tennessee Valley.

TVA recognizes that the environment in which TVA does business continues to evolve. TVA is more flexible in its planning and more nimble in its execution. TVA is also working to respond more quickly than ever to continually changing market conditions.

TVA is taking steps to improve its operating and financial performance. TVA plans to control operating and maintenance costs and adjust capital spending based on market and regulatory conditions. One thing will not change – TVA's commitment to provide reliable electricity at rates as low as are feasible.

TVA is proud to honor this commitment.

Budget Overview

Asset Portfolio

TVA, like the rest of the electric utility industry, is challenged to meet customer demand with cleaner, reliable, low-cost energy resources. This will require substantial capital investments during the next decade. TVA funds asset investments through power revenues, the issuance of bonds up to a limit set by Congress, and alternative financings including lease financings.

TVA faces significant uncertainty from external factors such as weather, the economy, and decreased demand from energy efficiency and demand response initiatives. TVA's financial information includes estimates, which are affected by these and other changing conditions. TVA projects total revenue to be \$10.9 billion in FY 2016, which includes revenues related to fuel cost recovery and an adjustment to fund investments associated with TVA's clean air program. The fuel cost recovery mechanism adjusts power rates monthly to reflect the changing costs of fuel, purchased power, and emission allowances.

In March 2013, TVA announced it is proceeding with an emissions control project at Gallatin Fossil Plant ("Gallatin"). The project includes the installation of SCR systems and scrubbers at all four units of the 976 MW plant. The scrubbers are expected to be completed in 2016, with the SCR systems to follow in 2018. Due to the age, lower capacity, and lower efficiency of TVA's older coal-fired units, it may not be economical to continue to operate some units in the future, particularly if new environmental laws or regulations become effective. However, discontinuing the use of some coal-fired units may be constrained by transmission reinforcement that will be required before the units are taken out of service.

In November 2013, the TVA Board approved the completion of a natural gas-fired facility at the Paradise Fossil Plant ("Paradise") site and subsequent retirement of Paradise coal-fired Units 1 and 2. Paradise Unit 3, a coal-fired unit, will continue to be operated. At its August 21, 2014 meeting, the TVA Board approved the completion of a natural gas-fired facility at the Allen Fossil Plant ("Allen") site. TVA plans to retire the Allen coal-fired units no later than December 31, 2018. On December 30, 2014, the TVA Board also approved adding additional pollution controls on Units 1 and 4 at the Shawnee Fossil Plant ("Shawnee") site.

TVA is also planning to convert its wet fly ash and gypsum facilities to dry collection facilities. The estimated cost of this conversion is between \$1.5 billion and \$2.0 billion, and the current schedule for completion is December 2022.

TVA's nuclear construction is an important element in a diversified portfolio for the future. Construction of Watts Bar Unit 2 is continuing in accordance with the schedule and budget expectations approved by the TVA Board in April 2012. The total estimated cost of completion is between \$4.0 billion and \$4.5 billion. Construction is currently expected to be completed by December 2015.

Although work on the Bellefonte Unit 1 site was slowed in 2014, TVA believes that the resulting budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA plans to utilize its integrated resource planning process to help determine how Bellefonte best supports TVA's overall efforts to continue to meet customer demand with low-cost, reliable power.

In FY 2016, TVA estimates that it will invest about \$2.3 billion in capital projects for the power system. These investments are subject to approval in the FY 2016 budgeting process.

Stewardship

TVA operates and maintains one of the nation's largest systems of dams, reservoirs, and lands. Based on the provisions in the Energy and Water Development Appropriations Act, 1998, TVA funds its traditional essential water and land stewardship activities including the NRP with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999, and none are requested for FY 2016.

TVA Operating Budget
(Millions of dollars)

	FY 2014 Actual	FY 2015 Estimate	FY 2016 Estimate
Revenue	11,137	10,697	10,902
Operating Expenses			
Fuel & Purchased Power	(3,824)	(3,552)	(3,486)
Operating, Maintenance, & Other	(3,341)	(2,989)	(2,917)
Depreciation & Amortization	(1,843)	(1,863)	(2,008)
Tax Equivalents	(540)	(532)	(524)
Total Operating Expenses	(9,548)	(8,936)	(8,935)
Operating Income	1,589	1,761	1,967
Other Income	49	35	36
Interest Expense, net	(1,169)	(1,202)	(1,398)
Net Income	469	594	605

Capital Budget & Cash Flow

(Millions of dollars)

	FY 2014 Actual	FY 2015 Estimate	FY 2016 Estimate
Cash flows from operating activities			
Net income	469	594	605
Items affecting operating activities	2,511	1,888	2,141
Net cash provided by operating activities	2,980	2,482	2,746
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(212)	(302)	(317)
Power Operations	(219)	(189)	(195)
River Operations	(89)	(88)	(88)
Transmission	(129)	(169)	(206)
Other Base Capital	(184)	(211)	(195)
Total Base Capital	(833)	(959)	(1,001)
Clean Air	(332)	(296)	(170)
Ash Remediation	(96)	(77)	(48)
Water Remediation	-	-	(26)
Total Environmental Costs	(428)	(373)	(244)
Watts Bar Unit 2	(896)	(823)	(146)
Paradise CC	(137)	(436)	(216)
Allen CC	-	(99)	(363)
Other Capacity Expansion	(90)	(646)	(316)
Total Capacity Expansion	(1,123)	(2,004)	(1,041)
Nuclear Fuel Capital	(326)	(382)	(302)
Other Investing Activities	(46)	(50)	(50)
Net cash used in investing activities	(2,756)	(3,768)	(2,638)
Borrowings (net of redemptions)	(1,213)	1,225	36
Other financing activities	(113)	(139)	(144)
Net cash provided by financing activities	(1,326)	1,086	(108)
Net change in cash and cash equivalents	(1,102)	(200)	-
Cash and cash equivalents at beginning of year	1,602	500	300
Cash and cash equivalents at end of year	500	300	300
Cash Payments to U.S. Treasury *	(15)	(8)	(8)
Reduction/(Increase) in Total Debt and Debt-Like Obligations	1,402	(1,016)	178

* For federal reporting purposes Payments to U.S. Treasury are not considered disbursements.

Note: Included budget estimates are subject to change by TVA management and the TVA Board.

Business Plan

TVA is governed by the nine-member TVA Board of Directors, which is responsible for approving an annual budget. The information in this document is based on the FY 2015 annual budget, which was approved by the TVA Board in August 2014. The following were considered in preparing the budget.

Borrowing Limit

TVA must live within its means to achieve its mission of supplying low-cost, reliable power, supporting environmental stewardship, and stimulating economic development. In achieving its mission while following sound financial principles, TVA uses financing selectively. Generally, financing is used to fund capital investments for new generation capacity and environmental controls while maintenance of the power system and other capital expenditures are generally funded with revenues.

TVA has the authority in the TVA Act to issue bonds, notes, and other evidence of indebtedness subject to a \$30 billion limit, sometimes referred to as TVA's statutory debt limit. TVA's bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2014, TVA had \$23.6 billion of bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$45.6 billion (as of September 30, 2014). TVA's balance of financing obligations is projected to increase in FY 2015 to meet expected capital investment needs which are primarily driven by capacity expansion projects, including the completion of Watts Bar Unit 2 and projects at Paradise and Allen. However, TVA will continue to remain below the statutory debt limit.

Nuclear Program

TVA is making a significant investment in safe and reliable nuclear power. The estimated completion cost of Watts Bar Unit 2 is between \$4.0 billion and \$4.5 billion.

Pension Fund

As of September 30, 2014, TVA's qualified pension plan had assets of \$7.5 billion compared with liabilities of \$12.2 billion. The plan has approximately 35,000 participants, of which approximately 23,400 are retirees or beneficiaries currently receiving benefits. Benefits of approximately \$650 million were paid to participants in 2014.

Coal-Fired Fleet Evaluation

TVA began its coal-fired plant construction program in the 1940s, and its coal-fired units were placed in service between 1951 and 1973. Coal-fired units are either active or inactive. TVA considers units to be in an active state when the unit is generating, available for service, or temporarily unavailable due to equipment failures, inspections, or repairs. As of September 30, 2014, TVA had 10 coal-fired plants consisting of 41 active units, accounting for 11,933 MW of summer net capability. As of September 30, 2014, TVA had 18 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. As of September 30, 2014, TVA had 11 retired units: John Sevier Fossil Plant ("John Sevier") Units 1-4, Shawnee Unit 10, and Widows Creek Fossil Plant ("Widows Creek") Units 1-6. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of September 30, 2014, TVA had seven mothballed units: Johnsonville Fossil Plant ("Johnsonville") Units 5-10 and Colbert Fossil Plant ("Colbert") Unit 5. Inactive reserve units are unavailable for service but can be brought back into service after some repairs in a relatively short duration of time, typically measured in days. As of September 30, 2014, TVA had no units in inactive reserve. TVA refers to units which are in inactive reserve or mothballed status as idled. In addition, as of October 1, 2014, TVA mothballed Widows Creek Unit 8.

During FY 2014, the TVA Board took several actions related to the retirement of certain coal-fired units. Upon the completion of a natural gas-fired generation facility at the Paradise site, coal-fired Units 1 and 2 at Paradise with a summer net capability of 1,230 MW will be retired, and upon the completion of a natural gas-fired generation facility at the Allen site, coal-fired Units 1-3 at Allen with a summer net capability of 741 MW will be retired. The TVA Board also approved the retirement of Colbert Unit 5 with a summer net capability of 472 MW no later than December 31, 2015, Colbert Units 1-4 with a summer net capability of 712 MW no later than June 30, 2016, and Widows Creek Unit 8 with a summer net capability of 465 MW in the future. Additionally, on December 30, 2014, the TVA Board approved adding additional pollution controls on Shawnee Units 1 and 4.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the CAA and subsequent laws and regulations. Increasing regulatory costs require consideration of whether to make the required capital investments to continue operating, or to decommission these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements"). The first agreement is a Federal Facilities Compliance Agreement with the EPA. The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. Under the Environmental Agreements, TVA agreed to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

Fossil Plant	Total Units	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Actions Taken or Planned to be Taken by TVA
Allen	3	SCRs on all three units	Install scrubbers or retire no later than December 31, 2018	<ul style="list-style-type: none"> - The Board approved the construction of a gas-fired plant at the current Allen coal-fired site - Retire Units 1-3 after completion of the gas-fired plant
Bull Run	1	Scrubber and SCRs on unit	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	<ul style="list-style-type: none"> - Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 - Remove from service, control, or retire Unit 5 no later than December 31, 2015 - Control or retire removed from service units within three years 	<ul style="list-style-type: none"> - Idled Unit 5 in October 2013 - Retire Unit 5 no later than December 31, 2015, and Units 1-4 no later than June 30, 2016
Cumberland	2	Scrubbers and SCRs on both units	Continuously operate existing emission control equipment	Continuously operate existing emission control equipment
Gallatin	4	None	Control, convert, or retire all four units no later than December 31, 2017	Add scrubbers and SCRs on all four units by December 31, 2017
John Sevier	4	None	<ul style="list-style-type: none"> - Retire Units 1 and 2 no later than December 31, 2012 - Remove from service Units 3 and 4 no later than December 31, 2012 and control, convert, or retire those units no later than December 31, 2015 	<ul style="list-style-type: none"> - Retired Units 1 and 2 effective December 31, 2012 - Retired Units 3 and 4 in June 2014
Johnsonville	10	None	<ul style="list-style-type: none"> - Retire six units no later than December 31, 2015 - Retire four units no later than December 31, 2017 	<ul style="list-style-type: none"> - Retire six units by December 31, 2015 - Retire four units by December 31, 2017 - Idled Units 7 and 8 effective March 1, 2012 - Idled Units 5-6 and Units 9-10 on October 1, 2013
Kingston	9	Scrubbers and SCRs on all nine units	Continuously operate existing emission control equipment	Continuously operate existing emission control equipment
Paradise	3	Scrubbers and SCRs on all three units	<ul style="list-style-type: none"> - Upgrade scrubbers on Units 1 and 2 no later than December 31, 2013 - Continuously operate emission control equipment on all three units 	<ul style="list-style-type: none"> - On November 14, 2013, the Board approved the retirement of Units 1 and 2, and replacement with gas-fired generation, with effective dates to be determined. - Continuously operate emission control equipment on Unit 3

Shawnee	10	None	Control, retire, or convert Units 1 and 4 no later than December 31, 2017	<ul style="list-style-type: none"> - On December 30, 2014, the Board approved adding additional pollution controls on Units 1 and 4 - Retired Unit 10 in June 2014
Widows Creek	8	Scrubbers and SCRs on Units 7 and 8	<ul style="list-style-type: none"> - Retire two of Units 1-6 no later than July 31, 2013 - Retire two of Units 1-6 no later than July 31, 2014 - Retire two of Units 1-6 no later than July 31, 2015 - Continuously operate existing emissions control equipment on Units 7 and 8 	<ul style="list-style-type: none"> - Retired Units 3 and 5 effective July 31, 2013 - Retired Units 1,2,4, and 6 in June 2014 - Continuously operate existing emissions control equipment on Units 7 and 8 - Idled Unit 8 on October 1, 2014, and plan to retire Unit 8 in the future

Kingston Ash Spill

In December 2008, a dike around one of the dredge cells at the Kingston Fossil Plant failed, releasing approximately 5.4 million cubic yards of coal ash. TVA estimates the cost of cleanup and recovery efforts to be \$1.1 billion. Costs incurred since the event through September 30, 2014, totaled \$1.1 billion. The remaining estimated liability at September 30, 2014, was \$21 million.

Approximately 3.0 million cubic yards were recovered from the adjacent Emory River in 2009 and 2010. It was transported off-site for disposal. In June 2013, TVA finished recovering and placing approximately 2.4 million cubic yards of ash from the adjacent Swan Pond Embayment into the on-site ash landfill. The ash landfill will be closed by constructing a multi-layer cap over the ash. In June 2013, TVA began placing the first section of the multi-layer cap. The final cap is forecasted to be completed by early FY 2015. A perimeter wall was constructed to stabilize the perimeter of the landfill to contain the ash. The wall construction was completed in mid-August 2013, and repairs were completed in February 2014.

Long-term monitoring of the Emory River was initiated in the spring of 2013 and will continue for up to 30 years. Results of this monitoring will be used to evaluate the ecological resources in the river system and the river's natural processes for remediating any residual ash in the river. In addition, TVA is restoring the ecological habitat along the Emory River and in the Swan Pond Embayment. That work began in the second quarter of FY 2014, and is expected to be finished by the spring of 2015. A final assessment, issuance of a completion report, and approval by the State of Tennessee and the EPA are expected to occur by the third quarter of FY 2015.

Coal Combustion Residuals Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's coal combustion residual ("CCR") facilities. The first phase of the evaluation, which was completed in June 2009, involved a detailed inspection of all CCR facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program, which was completed in April 2011, included geotechnical explorations, material testing, stability analyses, and studies. The studies determined that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston at the time of the ash spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection processes and facilities. In addition, TVA has implemented strategies that have decreased the risk classification of CCR facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCR work is between \$1.5 billion and \$2.0 billion, and currently the work is scheduled to be completed in December 2022. Costs incurred since the start of the work through September 30, 2014 totaled \$618 million.

Southaven

On August 9, 2013, TVA entered into a lease financing arrangement with Southaven Combined Cycle Generation, LLC ("SCCG") for the lease by TVA of the Southaven Combined Cycle Facility ("Southaven CCF"). SCCG is a special single-purpose limited liability company formed in June 2013 to finance the Southaven CCF through a \$360 million

secured notes issuance (the "SCCG notes") and the issuance of \$40 million of membership interests subject to mandatory redemption. The membership interests were purchased by Seven States Southaven, LLC. Southaven Holdco, LLC ("SHLLC") is a special single-purpose entity, also formed in June 2013, established to acquire and hold the membership interests of SCCG. A non-controlling interest in SHLLC is held by a third party through nominal membership interests, to which none of the income, expenses, and cash flows of SHLLC are allocated. The membership interests held by SHLLC were purchased with proceeds from the issuance of \$40 million of secured notes and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each August 15 and February 15, with a final payment due on August 15, 2033.

Wholesale Rate Structure Changes

TVA implemented a revised wholesale rate structure in April 2011. The rate structure provides price signals intended to encourage LPCs and end-use customers to shift energy usage from high-cost generation periods to less expensive generation periods. Under the revised wholesale structure, weather can positively or negatively impact both volume and average rates, while only volume was impacted under the former wholesale structure. This is because the wholesale structure includes two components: a demand charge and an energy charge. The demand charge is based on the customer's peak monthly usage and increases as the peak increases. The energy charge is based on the kWhs used by the customer. In conjunction with the change, the rate structure was also revised to establish a separate fuel rate that includes the costs of natural gas, fuel oil, purchased power, coal, emission allowances, nuclear fuel and other fuel-related commodities; realized gains and losses on derivatives purchased to hedge the costs of such commodities; and tax equivalents associated with the fuel cost adjustments.

Renewable Energy

In accordance with the 2011 IRP, TVA plans to obtain between 1,500 to 2,500 MW of cost-effective renewable energy by 2020. TVA defines its renewable energy as energy that is sustainable and often naturally replenished, such as wind, solar, biomass, and hydroelectric generation.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including: hydro, wind, solar, and biomass. As of September 30, 2014, TVA maintained 29 conventional hydroelectric dams, accounting for 3,802 MW of summer net capability. TVA also controls 16 solar energy sites, digester gas co-firing at Allen Fossil Plant, and three wind turbines. The wind turbines did not provide any summer net capability as of September 30, 2014, because they were not operational. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into eight contracts with eight Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all eight contracts. The first wind farm, located in Illinois, began providing 300 MW (nameplate capacity) under a 20-year contract in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other seven contracts provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee.

In 2003, TVA developed a Generation Partners ("GP") pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. In October of 2012, the GP program transitioned to a long-term, sustainable program called Green Power Providers ("GPP"). Since 2009, TVA has seen strong growth in small scale renewable energy projects, from fewer than 80 installations to more than 2,200 installations in operation providing close to 90 MW of solar, wind, low-impact hydro, and biomass generation. Solar installations alone total approximately 77 MW of this generation.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA will purchase certain types of renewable energy at market rates from projects that meet the requirement of the RSO program as long as there is sufficient available capacity in the program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kilowatts ("kW"), but no greater than 20 MW in nameplate capacity. Since October 2010, TVA has offered 300 MW of RSO renewable capacity through CY 2014 and currently has nearly 230 MW of projects including 20 MW of biomass, nearly 18 MW of landfill gas and 192 MW of solar technologies operating or committed. TVA is taking steps that could significantly increase TVA's solar energy capacity while ensuring TVA's green power programs remain sustainable and cost effective. TVA is offering a total of 130 MW of renewable capacity in CY 2015 through a variety of power-purchasing programs for homes, businesses and commercial installations. TVA will continue to add capacity and reduce pricing incentives to reflect lower technology costs for generators and to support lower electric rates for the Tennessee Valley's nine million residents.

The Solar Solution Initiative ("SSI") is a pilot program that began in February 2012 and provides incentive payments for mid-sized (greater than 50 kW up to 1 MW) solar projects in TVA's RSO program if the projects use local certified installers in the Tennessee Valley region. SSI is a targeted incentive that aims to support the existing local solar industry, while also serving to add renewable investment and jobs. Since February 2012, TVA has offered 36 MW of renewable solar capacity through SSI, with over 32 MW operating or committed.

TVA's Green Power Switch® ("GPS") program is a voluntary purchase program that supports and promotes the production of renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In FY 2014, GPS had approximately 199,000 MWh sales through the three GPS program options. TVA continued the original GPS program and the testing of two new customer options. In the original GPS, consumers have the option to purchase 150 kWh renewable energy blocks for \$4 per month. Supply includes certified Green-e Energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two additional pilot options test customer demand for a 100-percent solar option sourced from TVA's growing GPP supply as well as a lower priced bulk option for larger commercial and industrial customers. As of September 30, 2014, supply for the bulk option is sourced from TVA-contracted renewable energy credits in the greater Southeastern region.

Payments in Lieu of Taxes

TVA provided \$533 million in tax equivalent payments in FY 2014 to state and local governments where it sells electricity or has power properties. TVA pays tax equivalent payments annually to the eight states where it sells electricity or owns generating plants, transmission lines, substations or other power assets, and directly to 146 county governments where TVA owns power properties that were previously privately owned and operated and subject to ad valorem taxes.

The TVA Act requires TVA to return five percent of gross revenues from the sale of power during the previous fiscal year (excluding sales or deliveries to other federal agencies and off-system sales with other utilities, with a provision for minimum payments under certain circumstances) in the form of tax equivalent payments. The payments compensate state and local governments that cannot levy property or sales tax on TVA as a federal entity, and makes TVA one of the largest "taxpayers" in Tennessee and Alabama.

State and local governments distribute the funds according to their own formulas and discretion to support a variety of initiatives, including schools, fire departments and other emergency response agencies, tourism and recreation, and human service organizations.

Since 1941, TVA has made more than \$11.4 billion in tax equivalent payments, with payments in the past 10 years totaling \$4.8 billion.

Management Initiatives

Rates/Debt

TVA is undertaking cost and debt reduction initiatives with the goal of keeping rates as low as feasible, keeping reliability high, maintaining a healthy financial position, and continuing to fulfill its broader mission of environmental stewardship and economic development. TVA is focused on reducing operating and maintenance costs through further efficiency gains and streamlining the organization. The goal is to reduce TVA's operating and maintenance costs by \$500 million by FY 2015 as compared to its FY 2013 budget. As part of these cost reduction initiatives, an organizational restructuring occurred in 2014, which resulted in approximately 2,000 position reductions achieved through attrition, elimination of vacant positions, and employees leaving TVA either voluntarily or involuntarily.

Asset Portfolio

TVA is focusing on delivering more energy efficiency as part of its balanced portfolio approach. TVA uses a variety of programs that reduce the use of energy ("energy efficiency") and also support system optimization through programs that shift or reduce peak demand ("demand response"). TVA collaborates with its customers, such as LPCs, directly served industrial customers and governmental agencies, to establish and implement effective programs across the Tennessee Valley. TVA is also working with industry experts to tailor these programs to produce the best results.

TVA continues to expand the EnergyRight® Solutions program to include residential, commercial, industrial and power systems initiatives.

- **EnergyRight® Solutions for the Home** - Allows residential customers to play an active role in saving energy in their homes through improvements to weatherization, HVAC systems and water heating.
- **EnergyRight® Solutions for Business** - Offers energy information and assistance to help businesses save energy with rebates and other financial incentives available to help offset project expenses.
- **EnergyRight® Solutions for Industry** - Provides customized technical evaluations to assess plant-wide energy efficiency opportunities, along with financial incentives for qualified projects.
- **EnergyRight® Solutions for Customer Systems** - Works to optimize power delivery systems by shifting or reducing consumer demand at peak times of the day to avoid supplying high-priced peak power and improve system optimization and reliability through physical (e.g., direct cycling of residential and commercial equipment), contractual (e.g., voluntary reductions for payment) and voltage optimization (e.g., regulating voltage to the lower region of the prescribed range) means.

The 2011 IRP provides a summary of TVA's last analysis of diversified energy resources and recommends a strategic direction focusing on a diverse mix of electricity generation sources, including nuclear power, renewable energy, and natural gas, as well as traditional coal and hydroelectric power. TVA is currently undertaking a refresh of the 2011 IRP with the new report expected to be published in 2015.

Completion of Watts Bar Unit 2 is an integral part of TVA's balanced portfolio approach. Watts Bar Unit 2 is expected to be completed in December 2015 and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule and budget expectations approved by the TVA Board in April 2012.

Cyber Security

TVA has an established risk-based Cyber Security Program that is designed to ensure alignment with applicable regulations, industry requirements, and best practices. The program has established security standards, training, and metrics that assign clear accountability for all cyber security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective, and efficient execution of the program across TVA. Cyber security management processes have been implemented agency-wide with the goal of being systematic, repeatable, and effective in achieving the strategic security goals of the program. Governance for the program is provided by TVA's Chief Information Officer.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components are integrated into the business planning process and are maintained in a three-year cyber security strategic plan covering all information security functions. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change.

TVA understands that timely, accurate and reliable information is critical to the success of the TVA mission and the role it plays as a National Critical Infrastructure Key Resource and Bulk Electric System provider. The program objectives are aligned with business strategy and support the goals of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to and recover from threats against its systems. TVA plans to invest approximately \$25 million to \$35 million in its Cyber Security programs between FY 2014 and FY 2016 to ensure it meets its mission objectives.

People/Stewardship

Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood risk reduction, power production, water supply, improved water quality, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level Environmental Policy. The current Environmental Policy was initially approved by the TVA Board in 2008 and is reviewed on a biennial basis. The overarching environmental objective is to provide clean, reliable, and affordable energy, support sustainable economic growth, and engage in proactive environmental stewardship in a balanced and ecologically sound manner. In August 2012, TVA conducted its most recent review of the 2008 Environmental Policy. The review found that progress has been made on the Environmental Objectives for all six guiding principles of the Environmental Policy and policy revisions were not needed. The Environmental Policy remains consistent with stated TVA Board strategy and policy.

On June 27, 2014, TVA submitted its fifth Strategic Sustainability Performance Plan ("SSPP") to the White House Council on Environmental Quality and the Office of Management and Budget ("OMB"). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions, reduce solid waste generation and disposal, improve water use efficiency, improve building and energy efficiency, promote electronic stewardship, and encourage the purchase of sustainable products and services while reducing TVA's long-term operational costs and risks.

TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's Environmental Policy, TVA is obtaining additional power supply from clean and renewable sources.

Specifically, the TVA Board has approved guiding principles for an Energy Efficiency and Demand Response plan and a Renewable and Clean Energy plan. The Energy Efficiency and Demand Response plan seeks to slow the rate of growth in the region's power demand by providing opportunities for residential, commercial and industrial consumer groups to use energy more efficiently. The Renewable and Clean Energy plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions as well as reduce the carbon intensity of TVA's power generation and purchased power in a cost-effective manner by utilizing conservation measures, reviewing regional renewable and clean energy supply options, and considering technology innovations that address intermittency issues associated with renewable options.

In August 2011, the TVA Board accepted the NRP, a companion document to TVA's IRP, which focused on the agency's power supply assets portfolio. The NRP provides strategic guidance to integrate TVA's management and protection of the natural and cultural resources and recreation on TVA managed lands and waterways within the Tennessee River Watershed. The NRP includes programs that address biological resources (plants and animals including aquatic species), cultural resources (archaeological sites, historical sites, and artifacts), recreation, water resources, reservoir lands planning, and public engagement. TVA's investment will help it sustain the cultural and natural resources and recreational opportunities for the region's stakeholders and visitors in an efficient and effective manner.

The NRP was developed with public input including participation from federal and state resource management agencies and TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. The NRP, which is TVA's first long-term natural resource management plan, provides a model for other agencies involved in similar stewardship activities. Implementation of NRP programs will be staged over a 20-year period with reviews and updates occurring approximately every five years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth.

Navigation on the Tennessee River is made possible by a system of dams and locks and contributes to the regional economy. TVA owns 14 lock chambers at 10 dam sites on the Tennessee River and one tributary. The U.S. Army Corps of Engineers operates and maintains these locks and dams for navigation. This provides an alternative mode of transportation for businesses in the region to ship their products. Barges can move bulk cargo on 652 miles of this river, which ends where it flows into the Ohio River near Paducah, Kentucky.

TVA also manages the river system to provide water for hydroelectric generation and cooling water for TVA power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is maintaining equipment at several dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use. As part of the NRP, TVA has implemented several programs including Tennessee Valley Clean Marinas, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring and Aquatic Ecological Management and a Strategic Partnership Initiative. Under the Stream and Tailwater Monitoring Program in the NRP, TVA performs annual monitoring and analysis of streams and rivers within the Tennessee River Watershed. Upon request, TVA provides the monitoring data to other agencies, educational institutions, non-government organizations, and stakeholders.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the EPA shows air quality in the nation has steadily improved with significant declines in collective emissions of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance including improvements in air quality through controls at Bull Run and Kingston Fossil Plants and is making further improvement in air quality through construction of new scrubbers and SCRs on all four Gallatin units by December 31, 2017.

In addition, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas and nuclear generation. During FY 2014, the TVA Board took several actions related to the retirement of certain coal-fired units. Upon the completion of a natural gas-fired generation facility at Paradise, coal-fired Units 1 and 2 at Paradise will be retired, and upon the completion of a natural gas-fired generation facility at Allen, coal-fired Units 1-3 at Allen will be retired. The TVA Board also approved the retirement of Colbert Units 1-4 and 5 no later than June 30, 2016, and December 31, 2015, respectively, as well as the retirement of Widows Creek Unit 8 in the future. Additionally, on December 30, 2014, the TVA Board approved adding additional pollution controls on Shawnee Units 1 and 4.

The Environmental Agreements also require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which become more stringent year-to-year as more units are required to be retired.

Economic Development

TVA's partnerships with its customers and communities have helped create quality jobs and attract significant capital investments by new and existing companies. Economic development efforts are done in partnership with private and public organizations, including local, regional, and state agencies. TVA serves the needs of its stakeholders for regional economic development which contributes to a better quality of life for Tennessee Valley residents. TVA's innovative programs and services combine to create effective tools for sustainable economic development. These programs and services include, but are not limited to, the following:

- **Industrial Recruiting Services** - TVA works with LPCs and their customers and local, state, and regional economic development organizations to recruit companies through an integrated package of economic development resources.
- **Regional Development** - TVA assigns a regional development specialist with economic development expertise to serve counties in a specific area to help create and sustain job growth.

- **Community Preparedness** - TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering resources and training to local community leaders.
- **Rural Initiative Strategy** - TVA helps rural communities develop and better market their sites and buildings to prospective companies. TVA also offers leadership development, planning and project assistance.
- **Retail Development** - Retail Development is a program that links communities with retail business opportunities, insights, and market intelligence.
- **Research** - TVA provides economic and market research to help build the business case for the location and expansion of companies and prepare communities for future growth opportunities.
- **Business Development Support** - An array of products and services are geared to meet the needs of prospective or existing industries. These include financial support and industry consulting services. This work provides vision to businesses for locating and being successful in the Tennessee Valley.
- **Technical Services** - TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities market themselves for prospects and growth.
- **Diversity Alliance** - TVA helps the region's high-growth sectors of woman-owned and minority-owned businesses increase their job creation and capital investment opportunities by partnering with local organizations that provide business tools and opportunities that help grow and sustain these targeted businesses.

Results

The results of some of TVA's innovative economic development programs and offerings are briefly described below.

- For the ninth consecutive year, TVA made *Site Selection* magazine's list of the top 10 utilities in North America for economic development activity, one of only three utilities to earn this distinction.
- TVA Economic Development recruits new companies and investments to the region in these primary targeted industry sectors: Transportation-Related Manufacturing, Food Processing and General Manufacturing, Advanced Manufacturing, Data Centers and Product Development.
- There are a total of 24 available, ready-for-development data center sites across the TVA region.
- TVA staff provided ongoing economic development assistance through technical services, economic research, proposal writing, training and other services.
- Financial support, offered by TVA and LPCs, continues to be very successful in helping new and existing companies which locate or expand and make a commitment to enhance economic development in the region.
- Assisting communities to be prepared for economic growth opportunities continued to be a focus and more than 250 communities were directly assisted.
- The Valley Sustainable Communities Program was launched in 2013. It is a community preparedness offering to assist communities in cataloging their sustainable assets and improve their competitiveness when companies are looking to invest in new or expanded locations in the Valley. To date, there are 25 communities which have completed this program to highlight and increase their sustainability efforts to differentiate their communities.
- TVA's Rural Development strategy focuses on supporting economic development efforts in rural and economically distressed areas.
- TVA's Retail Development program helps foster business growth for commercial businesses.
- TVA offers two award-winning Economic Development websites, TVAed.com and TVAsites.com, containing demographics, a searchable building and land database, and other key information about the benefits of the Tennessee Valley region.
- FY 2014 announcements include:
 - Alabama: 5,800 jobs and \$428 million
 - Kentucky: 4,600 jobs and \$909 million
 - Middle Tennessee: 18,800 jobs and \$2.3 billion
 - Mississippi: 4,700 jobs and \$1.2 billion

- Northeast Tennessee and Virginia: 11,800 jobs and \$1.1 billion
- Southeast Tennessee, Georgia and North Carolina: 7,000 jobs and \$1.4 billion
- West Tennessee: 7,600 jobs and \$1.2 billion.

Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a national leader in technological innovation. A key element in achieving this vision is an annual investment in science and technology that enables TVA to be at the forefront of innovation in the utility industry and to help the agency meet future business and operational challenges. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

Each year TVA's annual research portfolio and research strategic plan is updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development. Core research activities directly support optimization of TVA's generation and delivery assets, air and water quality, and clean energy integration. Additional focus is placed on emerging technological advances in SMRs, grid modernization for transmission and distribution systems, energy utilization technologies, and distributed energy resources. Technology evaluations are most often accomplished through studies and field scale demonstrations to document performance, needs and requirements. TVA delivers or transfers results to the operating organizations and other stakeholders through reporting, technology transfer events, and educational outreach. TVA also serves as a technology advisor for LPCs and directly served customers.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with LPCs, EPRI, DOE, other research consortiums, ORNL and other national labs, federal agencies, peer utilities, universities, and vendors and participation in professional societies.

Key Focus Areas

Small Modular Reactors

SMRs are a next generation nuclear technology with potential for improved safety and increased flexibility while providing an important option for clean, reliable energy for TVA's customers. TVA is preparing an early site permit application to the Nuclear Regulatory Commission ("NRC") to license SMRs at its Clinch River Site in Oak Ridge, Tennessee. TVA's project has a great deal of flexibility at this early stage of new technology development, and TVA will be ready to implement whatever decision is in the best interests of the people of the Tennessee Valley.

Grid Modernization

TVA's grid modernization research focuses on technology development and demonstration activities that help sustain reliability, lower costs, and mitigate risks to the bulk power system and the distributor network systems. In cooperation with the Tennessee Valley Public Power Association, LPCs, and EPRI, TVA has developed a vision and roadmap for coordinated grid modernization in the Tennessee Valley. Guided by overarching principles of sustaining reliability, increasing energy efficiency, and integrating clean energy sources, the roadmap identifies: industry and regulatory drivers that necessitate modernization; barriers and interdependencies that must be addressed for successful implementation; critical gaps in technology deployment; key opportunities for investment guided by overall benefits; system planning requirements; and system operational needs. Key focus areas include asset optimization, situational awareness, system modeling, advanced control strategies, and information and communication strategies. Current key initiatives include:

- Demonstration of a number of low-cost, multi-purpose sensors that enable the capability to monitor, maintain, optimize, and extend the life of critical power system equipment assets. Specific monitoring applications of interest include: temperature, pressure, voltage, vibration, current, acoustic emission, sag/displacement, geo-magnetically induced currents, and gas-in-oil. Successful sensor applications are anticipated to become part of TVA's overall smart grid deployment.
- Collaboration with EPRI to develop a standardized approach to field data integration and application for both asset management and grid operations. This collaboration with EPRI will take advantage of TVA's sensor research and conventional asset monitoring to develop standardized data architecture and user applications for improved asset management.
- Partnership with DOE, Smart Wire Grid, and the National Electric Energy Testing Research & Applications Center to demonstrate a power flow control device, called Smart Wire Distributed Series Reactor ("DSR"), that will enable TVA to better manage underutilized transmission line assets. The Smart Wire DSR clamps onto existing transmission lines and provides real time control of power flow on the grid to mitigate line congestion and improve utilization of transmission lines.

- Partnership with EPRI and other utilities, through participation in the SunBurst Network, to deploy sensors that monitor the magnitude of geomagnetically induced current (“GIC”) on select transformers in the TVA service territory and to model the GICs and their impacts on the system. The product will be national models that can help mitigate the impacts of GICs and solar storms to the bulk power system.

Energy Utilization

TVA’s near-term concentration is on the development and maintenance of a pipeline of emerging energy efficiency and load management technologies for market and program readiness. TVA’s efforts are directed towards demonstrating and validating the performance, reliability, and consumer acceptance of new efficiency technology as well as the value of energy efficiency and load management technologies for both the consumer and the utility. TVA also coordinates investment and activities with EPRI and industry stakeholders related to transportation electrification to support operational fleet requirements and the needs of regional distributors of TVA power to provide guidance on matters of plug-in electric vehicle grid integration and readiness for on-road and non-road transportation electrification technologies. Current key initiatives include:

- Three residential test houses in the Knoxville area to further residential research efforts and evaluate residential building techniques, energy efficiency, demand response technologies, and consumer smart grid concepts in a controlled, simulated occupancy research environment. Test results are being used to educate builders, developers, consumers, and TVA program designers to develop the best, most cost-effective residential energy efficiency and demand reduction programs. Example technology evaluations include: building construction and envelopes, windows, advanced heat pump water heaters, variable capacity air-source heat pumps, and load managed heat pump water heaters.
- Partnership with LPCs to evaluate the energy and demand savings potential of grid-enabled residential appliances and to evaluate consumer behavior using such devices. Example technology evaluations include: a suite of smart grid demand responsive Energy Star appliances, home energy management systems, programmable communicating thermostats, grid-connected heat pump water heaters with higher temperature storage, and other home energy management devices in residential test sites.
- Partnership with LPCs to implement three transportation-related projects to support the Environmental Agreements. These include the bucket /pickup truck and charging infrastructure project, solar assisted charging, and non-road electrification and infrastructure development. The bucket truck project received EPA approval in March 2012 and DOE approval of EPRI’s revised project plan in January 2013. TVA received EPA approval on the remaining two projects in January 2013.

Clean Energy Integration

TVA seeks to understand the scope and impact of integrating distributed energy resources (“DER”) on operations and business economics to develop strategies, in the form of programs, policy/regulatory approaches, and organizational practices/protocols, for adapting to the evolving electricity landscape in the Tennessee Valley. Of particular interest is analyzing existing and expected solar power deployments and modeling selected distribution feeders to evaluate system impacts and to determine the full extent of the positive and/or negative impacts of the DER as it relates to size/location, feeder characteristics, and DER technology. In turn, a cost-benefit analysis will be conducted to value the DER to a distribution system and subsequently the bulk system as a whole.

Operational Research

The following are areas of additional technology innovation that have potential for helping TVA achieve its mission.

Air and Water Quality

The following projects are in collaboration with EPRI:

- Addressing knowledge gaps in the linkage between acid/nutrient deposition, water quality, and aquatic ecosystem health. Data will inform regulation development regarding potential secondary SO₂/NO_x standards proposed by the EPA.
- Assessing the air quality impacts of introducing electric vehicles into the U.S. transportation fleet.
- Conducting fugitive emissions studies to sample airborne particles resulting from material handling operations at fossil plants. Results will be used to support air permits issued under more stringent Particulate Matter 2.5 regulations.
- Collaborating with EPRI, ORNL, and Tennessee Tech University on a thermal plume study at Cumberland Fossil Plant to monitor the behavior of fish residing in and near a heated discharge to determine impacts of thermal discharges on the fish community in situ.
- Addressing challenges regarding closure of ponds containing coal combustion products in a cost-effective, timely, and safe manner in accordance with anticipated EPA regulations and developing monitoring strategies and long-term land use options.

- Conducting long-term acidic deposition monitoring across five southern states since 1986 in support of the National Atmospheric Deposition Program. The purpose is to determine the magnitude of acid deposition across North America. TVA's involvement in this work ended in September 2014.
- Testing a new aerosol monitoring technology that may provide information about the organic compounds that comprise the airborne particles contributing to the total particle mass smaller than 2.5 micrometers. This could have possible future regulatory applications (i.e., the PM_{2.5} standard). TVA's involvement in this ended in September 2014.
- The Ohio River Basin Water Quality Trading Program to develop a cost effective and mutually beneficial mechanism to improve nutrient levels and water quality in regional watersheds. The project has initiated the first interstate water quality trading program for nutrients in the U.S.
- Demonstrating and evaluating treatment technologies for flue gas desulfurization wastewater to meet EPA's future Effluent Limitation Guidelines in a cost-effective and reliable manner.

Power Generation

To support long-term operations of generation assets, TVA is participating in the following developmental projects:

- Continuing flexible operation research for lower load operation, ramp rate procedures, and fuel flexibility alternatives supporting load dispatch requirements with increased reliability and mitigating the effects of cycling on the coal fleet.
- Conducting fossil plant material degradation research to reduce the impacts to high-temperature materials used in boiler and heat recovery steam generator components caused by fast ramping and increased load-following.
- Conducting coal plant assessments for environmental control integration strategies and long-term impacts related to SCR and bag house operation and maintenance. Conducting research through a Maintenance and Diagnostic Center to support remote monitoring and diagnostics of coal, gas, pumped storage, and hydro site component assets; integration of advanced pattern recognition for condition assessment; and application of advanced communication technologies for centralized assessment of component alarms, failure analysis, and repair recommendations.

Sustainability

Sustainability relates to everything TVA does to remain healthy and thriving long into the future for the benefit of the environment, economy and stakeholders. Sustainability is incorporated into the work performed at TVA to protect the miles of reservoir shoreline, to keep electricity rates as low as feasible, to reinforce TVA's commitment to a safe employee workplace and public safety, and to support TVA's economic development efforts throughout the region. In short, it is TVA's commitment to keeping the Tennessee Valley a vibrant place to live, work and play.

Sustainability is embedded in TVA's mission and TVA's Environmental Policy. Additionally, as directed by Presidential Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, TVA maintains and annually updates a SSPP that captures and enhances TVA's ongoing sustainability focus given TVA's unique mission to sustain the people, economy and natural resources in the region. TVA submitted its fifth SSPP in June 2014.

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from three full-time members to nine part-time members who are responsible for providing strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer ("CEO") position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission ("SEC") rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404(a) of the Sarbanes-Oxley Act became effective for TVA for FY 2008.
- As a non-accelerated filer, the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act are not applicable. However, TVA implemented the auditor attestation requirements of Section 404(b) in FY 2009 and continues to do so on a voluntary basis.
- The Dodd-Frank Act deferred indefinitely the auditor attestation requirements of Section 404(b) for non-accelerated filers; however, management has chosen to continue to have external auditor attestations.

TVA Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office ("GAO"), OMB, the U.S. Treasury, and an independent inspector general.

TVA is governed by the TVA Board. The TVA Board has nine part-time members, at least seven of whom shall be legal residents of the TVA service area. The TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board's responsibilities include formulating broad goals, objectives, and policies for TVA, approving plans for their implementation, reviewing and approving annual budgets, setting and overseeing rates, and establishing a compensation plan for employees.

Audit Committee

The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and the TVA Inspector General.

Independent Auditor

An independent auditor audits TVA's annual financial statements in accordance with standards of the Public Company Accounting Oversight Board and with Government Auditing Standards issued by the Comptroller General of the U.S. The auditor also provides an opinion as to whether those statements are presented in conformity with Generally Accepted Accounting Principles ("GAAP").

Independent Inspector General

An independent Office of Inspector General ("OIG") conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants Generally Accepted Auditing Standards. The OIG has about 110 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semi-annual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$24 million for FY 2016, which includes amounts for OIG training and support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2016 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

OIG Actual/Proposed Spend

(\$ millions)

2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 OIG Proposed	2016 OIG Proposed
\$19	\$21	\$21	\$21	\$22	\$23	\$24

Congressional Oversight

Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the GAO, also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch

TVA routinely submits budget information to OMB, and TVA's budget is included in the consolidated budget of the U.S. Government. TVA's financial results also are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by GAO.

The TVA Act

TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act, which requires that a strategic plan and an annual performance report be submitted to Congress.

Other Regulatory Oversight

In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the EPA, state environmental agencies, the SEC, and the NRC. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission ("FERC"), this commission has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Corporation and the industry-based Institute of Nuclear Power Operations.

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted Government Auditing Standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Accounting and Financial Reporting

On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represent TVA's comparative, consolidated, department-level financial statements, to the U.S. Treasury to comply with the requirements of the U.S. Treasury Financial Manual, for the purpose of providing financial information to the U.S. Treasury and the GAO to use in preparing the Financial Report of the U.S. Government. TVA's independent auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by the Federal Accounting Standards Advisory Board. TVA's financial transactions are subject to audit by the Comptroller General under various statutes.

TVA also submits financial information to the OMB, SEC, NRC, U.S. Treasury, Energy Information Administration, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board. These financial statements are annually audited by an independent financial auditor.

Consistent with the Improper Payments Information Act of 2002, as amended by the Improper Payments Elimination and Recovery Act of 2010 and the Improper Payments Elimination and Recovery Improvement Act of 2012, TVA has determined that none of its programs or activities are susceptible to significant improper payments.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise. The monthly financial performance reports contain analysis for the income statement, cash flow statement, and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

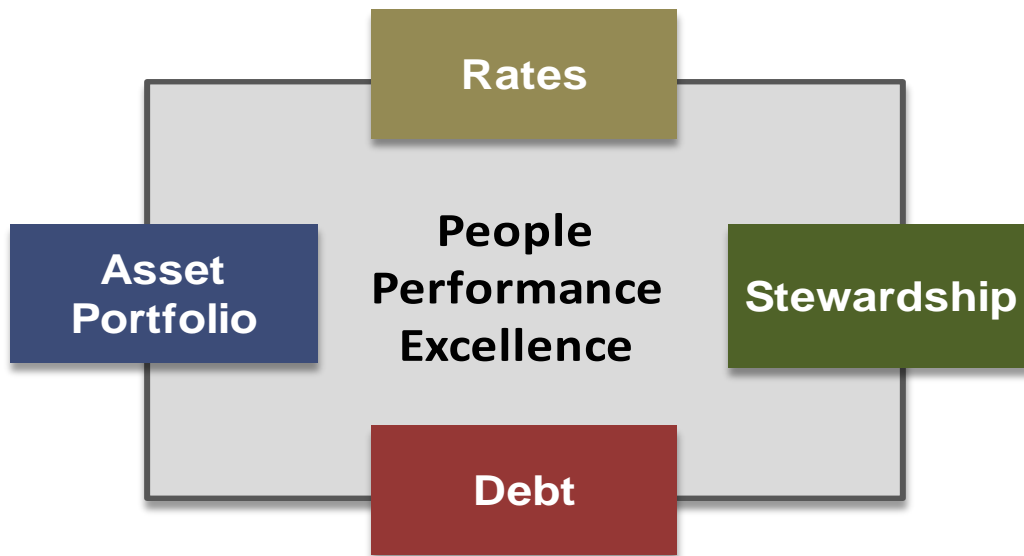
Enterprise Risk Management

Enterprise Risk Management ("ERM") is a strategic business function with its core mission to provide the business with a comprehensive risk perspective to more effectively identify and manage risks, capitalize on opportunities, and improve the risk management behaviors at TVA. ERM is specifically responsible for overseeing the risk governance structure, performing risk assessments and analysis, and facilitating enterprise risk discussions to evaluate the risk as an interrelated portfolio to support risk informed decisions.

Strategic Goals, Strategic Objectives, and Performance Goals

Strategic Goals

As discussed above, TVA has established four strategic goals: (1) maintain rates as low as feasible, (2) live within its means, (3) manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to bring these goals to life and become safer, better, faster, and leaner.



Strategic Objectives

In order to help ensure that TVA accomplishes its strategic goals, TVA is focusing on the following strategic objectives:

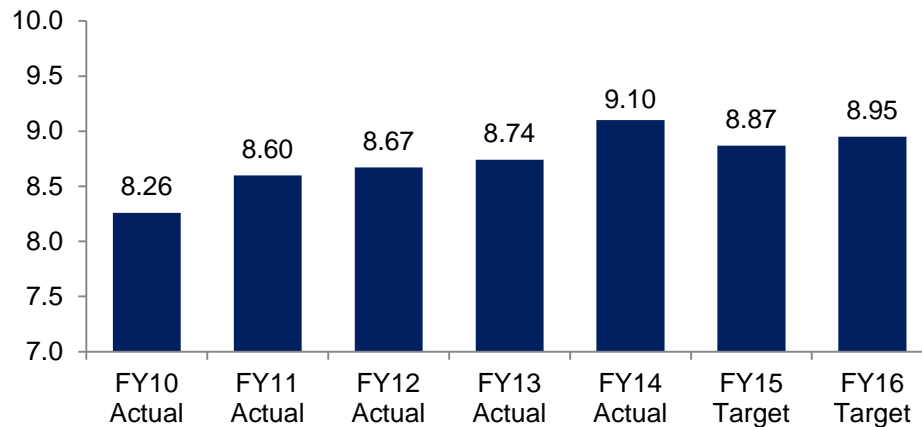
- Maintain low rates and align O&M spending with revenues
- Effectively manage debt to ensure long-term financial health
- Work safely and effectively
- Proactively seek opportunities for continuous improvement
- Focus on values and behaviors
- Pursue operational excellence
- Position Watts Bar Unit 2 for successful commercial operations in 2015
- Balance the portfolio to provide cleaner, reliable, and affordable energy
- Stimulate economic development and investment in the Tennessee Valley
- Strengthen customer loyalty and relationships
- Manage the Tennessee River system
- Protect and improve the natural resources and the use and enjoyment of public lands

Performance Goals

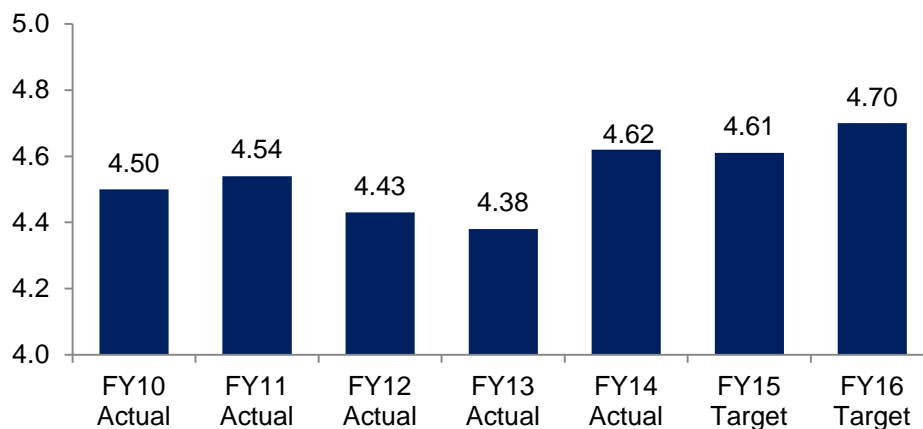
To help measure how effective TVA is in achieving its strategic objectives, TVA has established several performance goals. These performance goals include the following:

- Rates/Debt
 - Retail Rates
 - Wholesale Rates, excluding Fuel
 - Operating Cash Flow
 - Net Income
 - Total Financing Obligations
- Asset Portfolio
 - Load Not Served
 - Coal Seasonal Equivalent Forced Outage Rate (“EFOR”)
 - Institute of Nuclear Power Operations (“INPO”) Index
 - Combined Cycle Seasonal EFOR
 - Nuclear Unit Capability Factor
 - Energy Savings
- People/Stewardship
 - Recordable Incident Rate
 - CO₂ Emissions Rate
 - Reportable Environmental Events
 - Jobs Created and Retained

Each of these performance goals is described in more detail below.

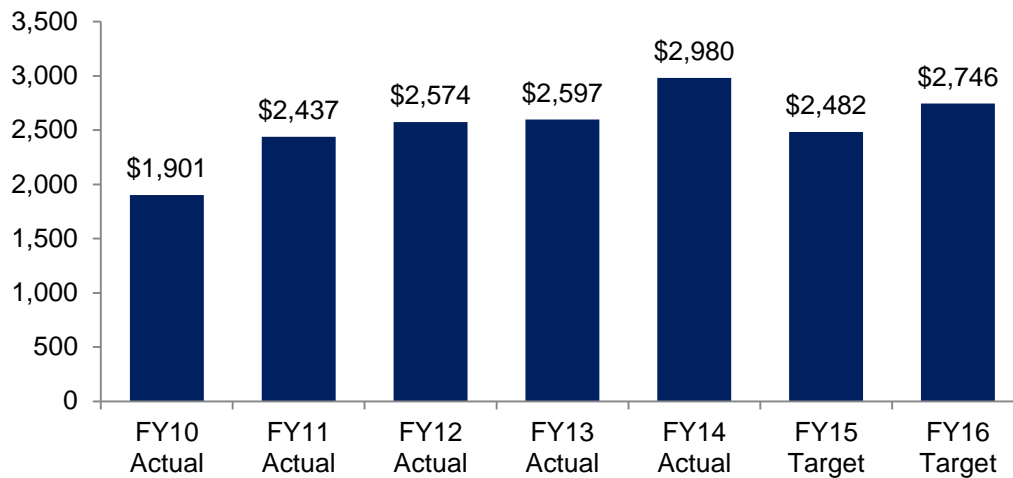
Rates/Debt**Retail Rates (cents/kWh) - 12 Month Rolling Avg**

Definition	Average of the previous twelve months' LPC reported retail power revenue and directly served power revenue divided by LPC reported retail power sales and directly served power sales
Calculation	$\frac{(\text{LPC reported retail power revenue} + \text{Directly served power revenue})}{(\text{LPC reported retail power sales} + \text{Directly served power sales})}$

Wholesale Rate excluding Fuel (cents/kWh)

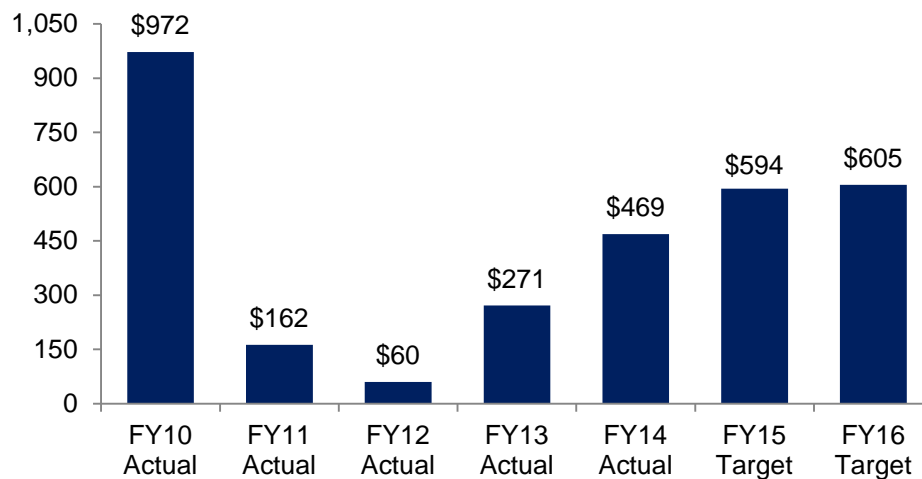
Definition	The Wholesale Rate excluding Fuel measure represents TVA's electric sales revenue excluding fuel divided by electric power sales.
Calculation	$\frac{\text{TVA's electric sales revenue excluding fuel}}{\text{TVA's electric power sales}}$

Operating Cash Flow (\$M)



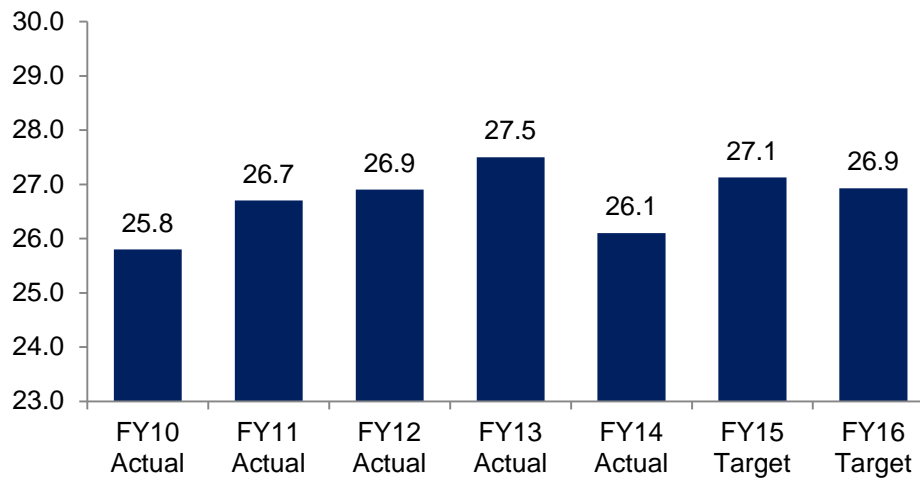
Definition	Operating Cash Flow refers to the amount of cash generated from power production and other mission-related activities and is generally defined as Operating Revenues received less cash payments made for Operating Expenses. This amount can be found on the Statement of Cash Flows under Cash Flow from Operating Activities.
Calculation	Net income + Non-cash expenses + Impact of changes in working capital and other deferred operating items

Net Income (\$M)



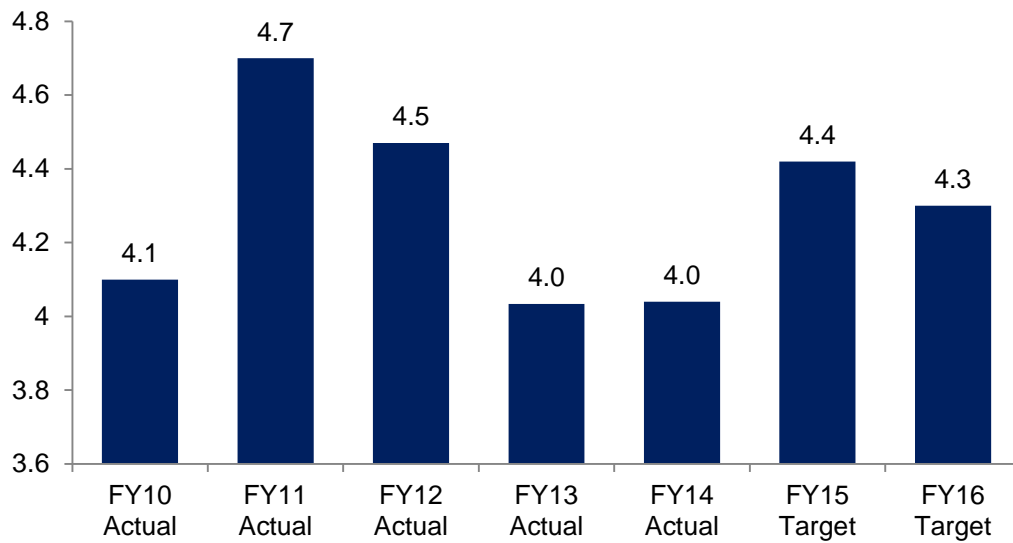
Definition	Net Income is an entity's net earnings derived by adjusting revenues for the cost of doing business, including cost of sales, depreciation, interest, taxes, and other expenses. This amount is shown on the bottom line of the Statement of Operations.
Calculation	Operating Revenues - Operating Expenses + Other Income/(Expense) - Net Interest Expense

Total Financing Obligations (\$B)



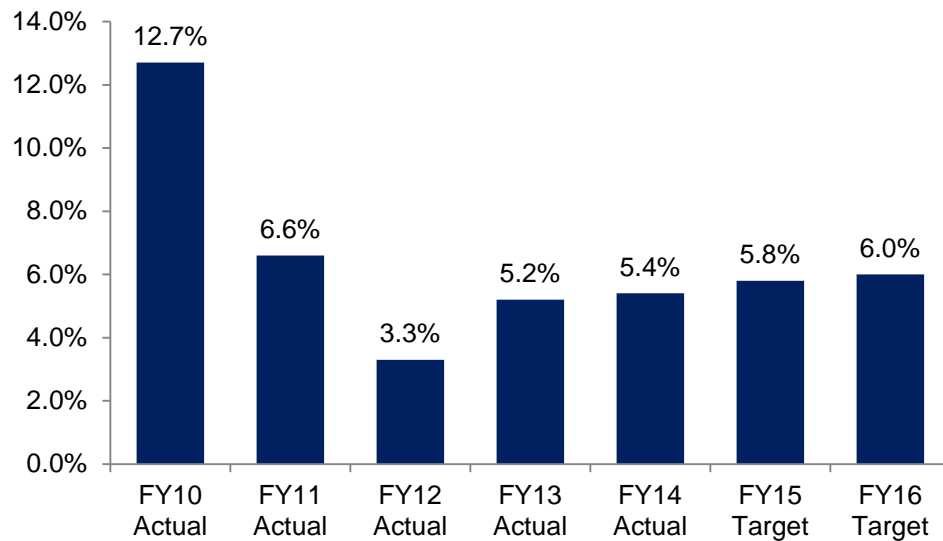
Definition	Total Financing Obligations ("TFOs") include all statutory debt and other financing obligations, as shown on TVA's balance sheet.
Calculation	Long-term Debt + Short-Term Debt + Leaseback Obligations + Energy Prepayment Obligations + Debt of Variable Interest Entities

* See Appendix A for a calculation of Total Financing Obligations utilizing financial statement line items reported in accordance with Generally Accepted Accounting Principles.

Asset Portfolio**Load Not Served (System Minutes)**

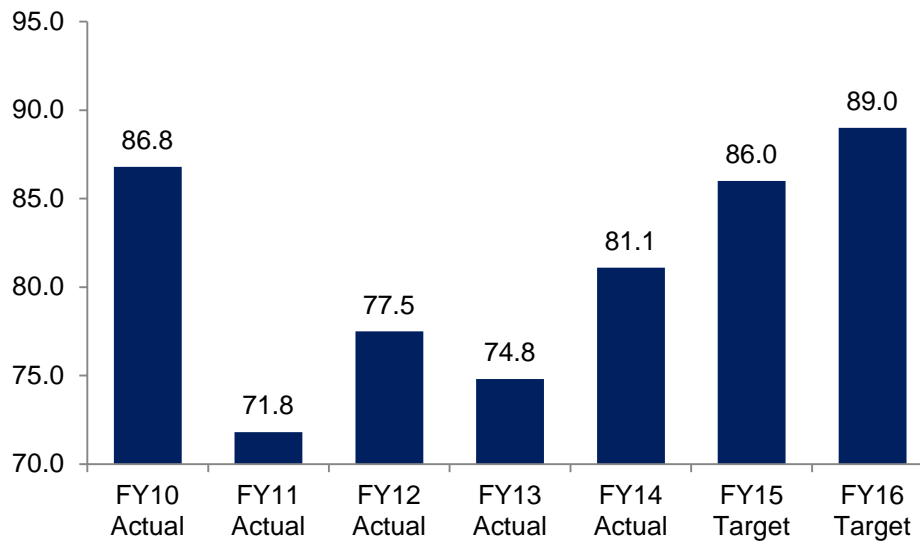
Definition	Load Not Served measures the magnitude and duration of transmission system outages that affect TVA customers. This measure is expressed in system minutes and excludes events during declared major storms.
Calculation	Percent of total load not served x Number of minutes in period

Coal Seasonal EFOR



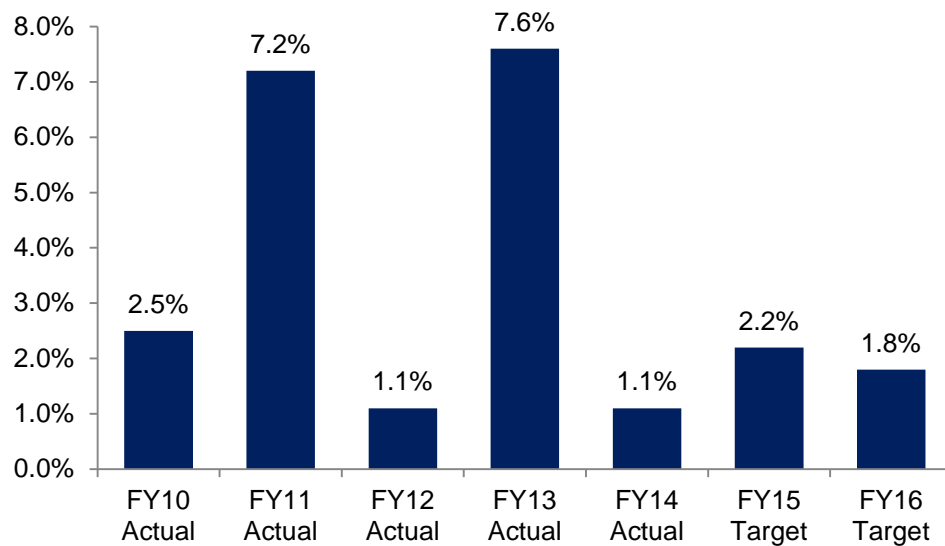
Definition	Coal Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December through March and June through September and includes the Allen, Cumberland, Gallatin, Kingston, Paradise and Shawnee coal plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$((\text{FOH} \times \text{WNDC}) + \text{Forced MWhL}) / [(\text{FOH} + \text{SH}) \times \text{WNDC}] \times 100$ <p> FOH = Forced Outage Hours SH = Service Hours WNDC = Winter Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating </p>

INPO Index



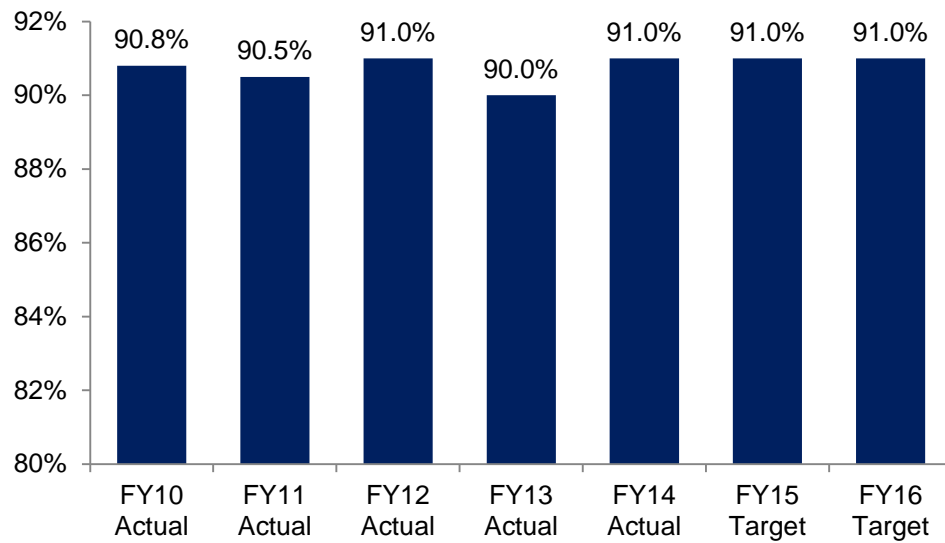
Definition	The INPO Index is a weighted combination of the Institute of Nuclear Power Operations' key performance indicators based on standard nuclear industry definitions for station performance.
Calculation	The INPO Index for each unit is calculated using a weighted combination of key performance indicators based on standard nuclear industry definitions, with the maximum obtainable being 100 points. TVA's fleet-level INPO Index is a simple average of the performance of each unit.

Combined Cycle Seasonal EFOR

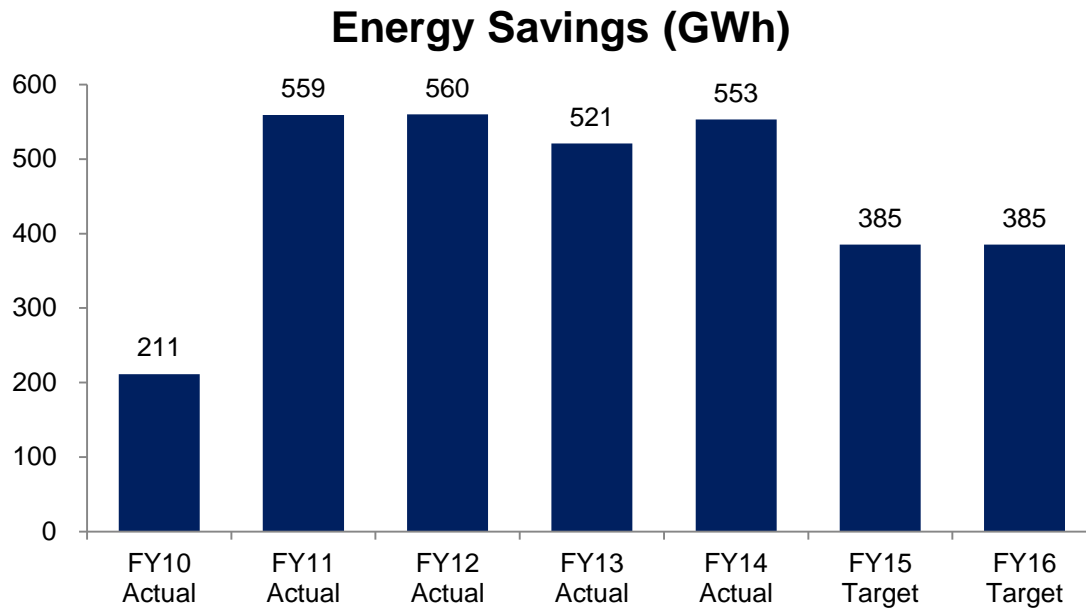


Definition	Combined Cycle Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December to March and June to September and includes Caledonia, John Sevier, Lagoon Creek, Magnolia and Southaven combined cycle plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$((\text{FOH} \times \text{NDC}) + \text{Forced MWhL}) / [(\text{FOH} + \text{SH}) \times \text{NDC}] \times 100$ <p> FOH = Forced Outage Hours SH = Service Hours NDC = Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating </p>

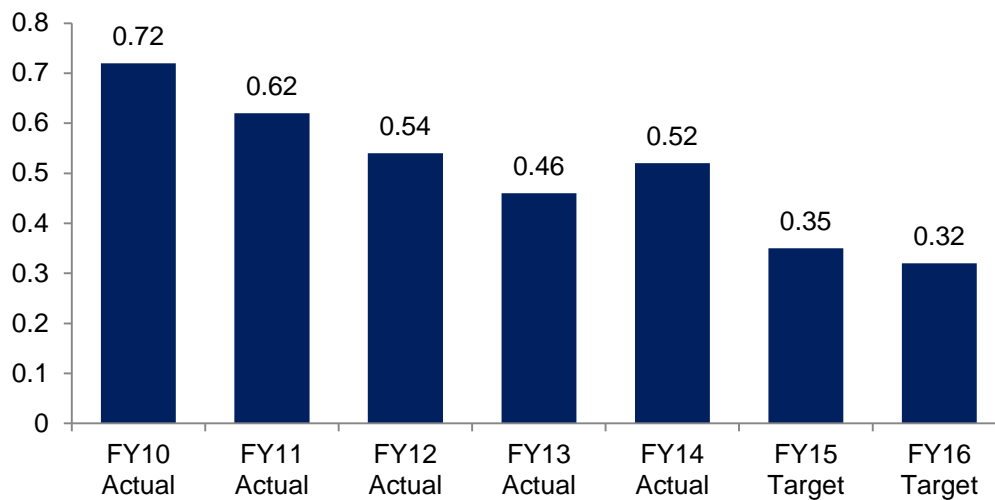
Nuclear Unit Capability Factor



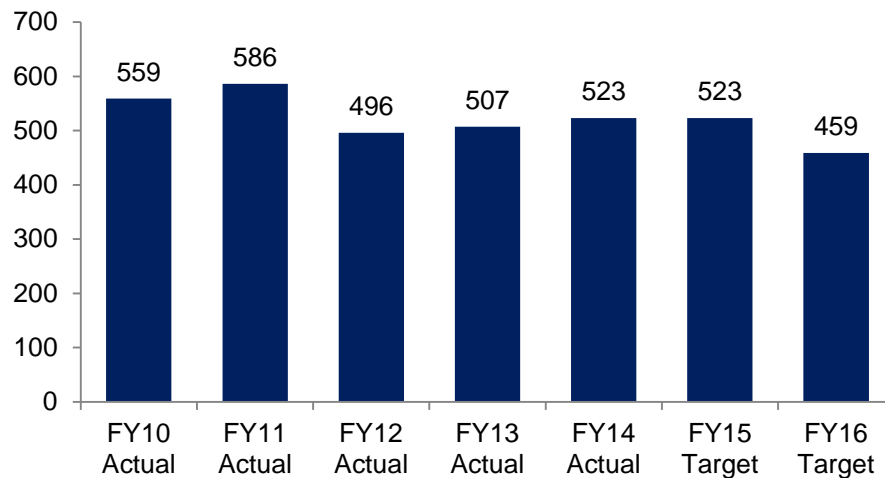
Definition	Nuclear Unit Capability Factor is the ratio of available energy generation over a given period of time to the reference energy generation over the same time period, expressed as a percentage.
Calculation	$[(REG - PEL - UEL - OEL) / REG] \times 100$ <p> REG = Reference Energy Generation PEL = Planned Losses UEL = Unplanned Losses OEL = Outage Extension Losses </p>



Definition	Total All-In Program Cost for entire energy efficiency and demand response portfolio divided by the sum of the individual program impacts multiplied by their associated life spans.
Calculation	$\frac{[(\text{Individual EnergyRight Solutions product kWh impacts}) * (\text{Individual EnergyRight Solutions installations}) / 1,000,000] + [\text{kWh energy efficiency achieved by industrial and commercial projects} + \text{kWh energy efficiency impacts from demand response programs} + \text{kWh energy efficiency impacts achieved through information/outreach programs} + \text{kWh energy efficiency impacts achieved by wholesale and retail pricing products} + \text{kWh energy efficiency impacts from TVA facilities improvements} + \text{kWh energy efficiency impacts from TVA-supported loan funds administered by others} + \text{kWh energy efficiency impacts from state programs receiving TVA support} + \text{kWh energy efficiency impacts from other TVA initiatives}]}{1,000,000}$

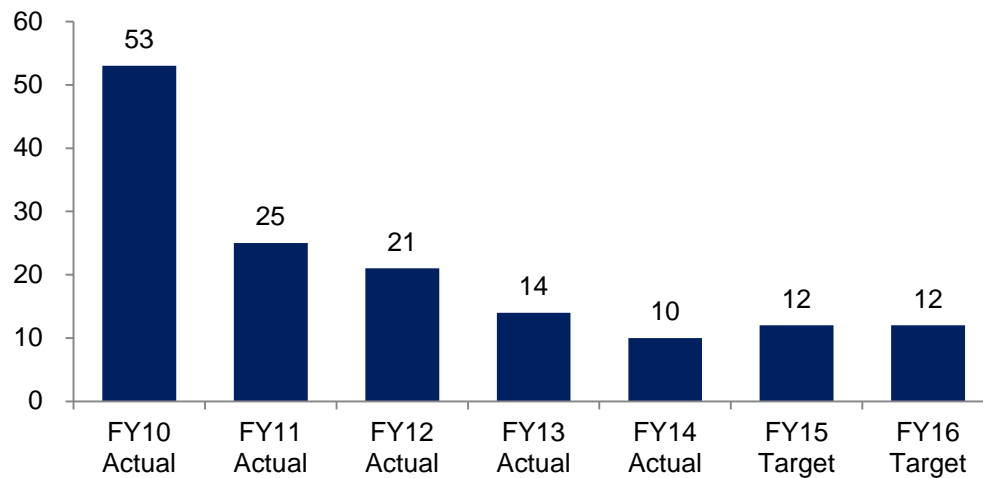
People/Stewardship**Safe Workplace (Recordable Incident Rate)**

Definition	The number of recordable injuries (as defined by TVA's safety program) per 200,000 employee-hours worked by TVA employees and staff augmentation contractors
Calculation	$(\text{Number of recordable injuries} \times 200,000) / (\text{Number of employee-hours worked})$

CO₂ Emissions Rate (tons/GWh)

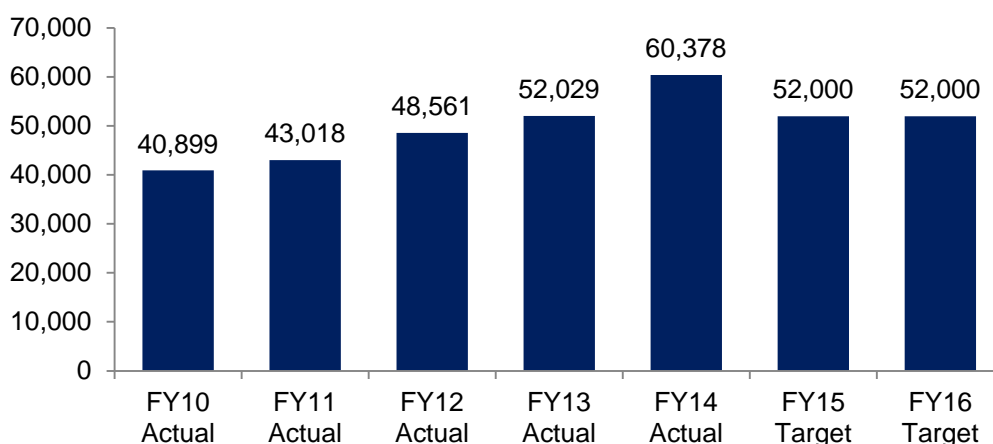
Definition	This measure reflects TVA's commitment to manage greenhouse gas emissions through efficient operation of its diverse generation mix.
Calculation	$\text{Tons of CO}_2 \text{ emissions reduced} / \text{GWh of generation}$

Reportable Environmental Events



Definition	An environmental event at a TVA facility or elsewhere caused by TVA or TVA contractors that violates permit conditions or other regulatory requirements and triggers regulatory required oral or written notification to or enforcement action by a regulatory agency. Multiple parameters or multiple media/regulatory violations that result from the same root cause/event are counted as one reportable environmental event ("REE"). However, repeat occurrences count as separate REEs if they occur in a different reporting period. In cases where there is lag time between the event and receipt of a Notice of Violation ("NOV"), the receipt date for the NOV will be used as the date of the REE if the NOV has not previously been counted as a REE, and if the fiscal year reporting deadline for TVA-level environmental metrics has passed.
Calculation	Number of Reportable Environmental Events

Economic Development - Jobs Created & Retained



Definition	Jobs Created and Retained measures the number of new or retained jobs in the Tennessee Valley for which TVA has played a role in the recruitment or retention of the economic development project.
Calculation	Number of Jobs Created and Retained as reported through TVA channels

Other Information

Data Validation and Verification

Much of the data contained in this Performance Report was derived from TVA's Annual Report on SEC Form 10-K for the year ended September 30, 2014 (the "Annual Report"). TVA filed the Annual Report with the SEC, and TVA's Chief Executive Officer and Chief Financial Officer certified the Annual Report in accordance with the requirements of the Sarbanes-Oxley Act. In addition, TVA's independent auditor, Ernst & Young LLP, audited the financial statements contained in the Annual Report.

TVA's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934 and required by Section 404 of the Sarbanes-Oxley Act. TVA's internal control over financial reporting is designed to provide reasonable, but not absolute, assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with generally accepted accounting principles. Because of the inherent limitations in all control systems, internal controls over financial reporting and systems may not prevent or detect misstatements.

TVA's management, including the Chief Executive Officer, the Chief Financial Officer, and the Controller, evaluated the design and effectiveness of TVA's internal control over financial reporting as of September 30, 2014, based on the framework in *Internal Control — Integrated Framework (1992)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, TVA's management concluded that TVA's internal control over financial reporting was effective as of September 30, 2014.

Although management's report on the effectiveness of internal control over financial reporting was not required to be subject to attestation by TVA's registered public accounting firm, TVA has chosen to obtain such a report. Ernst & Young LLP issued an attestation report on TVA's internal control over financial reporting as of September 30, 2014.

Lower-Priority Program Activities

TVA has determined that it does not have any lower-priority program activities for purposes of 31 U.S.C. § 1115(b)(10).

Hyperlinks

Hyperlinks to documents discussed in this Performance Report are set forth below:

Document	Hyperlink
Integrated Resource Plan	http://www.tva.gov/environment/reports/irp/archive/index.htm
Natural Resource Plan	http://www.tva.gov/environment/reports/nrp/
Annual Report	http://www.snl.com/IRWebLinkX/docs.aspx?iid=4063363

Appendix A

Total Financing Obligations ("TFO") is a financial measure that, although commonly used, is not calculated and presented in accordance with Generally Accepted Accounting Principles ("GAAP"). TFO is measured by summing bonds and notes, gross, debt related to variable interest entities ("VIE"), leaseback obligations, energy prepayment obligations and the membership interests issued in connection with the Southaven lease financing transaction. A calculation of TFO utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY							
Unaudited Reconciliation of Total Financing Obligations							
(in millions)							
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015 Projected	FY 2016 Projected
Total Financing Obligations	\$ 25,803	\$ 26,659	\$ 26,912	\$ 27,473	\$ 26,071	\$ 27,087	\$ 26,909
Energy prepayment obligations	(822)	(717)	(611)	(510)	(410)	(310)	(210)
Leaseback obligations	(1,354)	(1,282)	(1,204)	(761)	(691)	(616)	(537)
Membership interests of VIE subject to mandatory redemption	-	-	-	(40)	(39)	(37)	(35)
Debt of VIE	-	-	(994)	(1,341)	(1,311)	(1,279)	(1,246)
Bonds and Notes, gross	23,627	24,660	24,103	24,821	23,620	24,845	24,881
Exchange loss	14	7	41	43	44	-	-
Unamortized discounts, premiums, and other	(217)	(236)	(60)	(85)	(88)	(9)	(9)
Debt of variable interest entities	-	-	994	1,341	1,311	1,279	1,246
Total outstanding debt	<u>\$ 23,424</u>	<u>\$ 24,431</u>	<u>\$ 25,078</u>	<u>\$ 26,120</u>	<u>\$ 24,887</u>	<u>\$ 26,115</u>	<u>\$ 26,118</u>



Tennessee Valley Authority

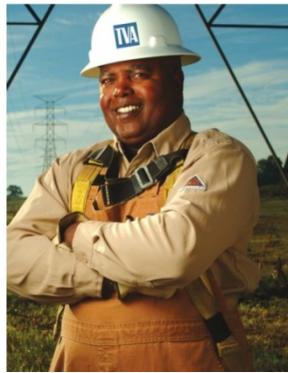
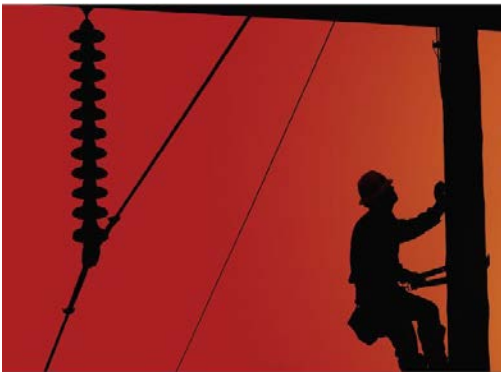
400 W. Summit Hill Drive

Knoxville, Tennessee 37902

www.tva.com

Tennessee Valley Authority

Budget Proposal and Management Agenda (Performance Report)



For the Fiscal Year Ending
September 30, 2017

Submitted to Congress
February 2016



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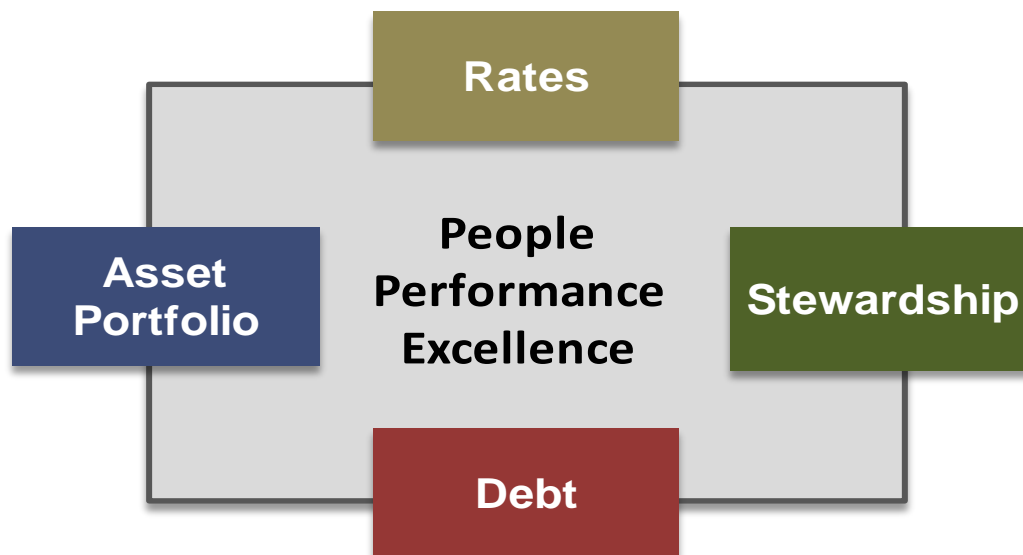
Introduction

TVA's Mission

TVA was built for the people, created by Congress in 1933 and charged with a unique mission – to improve the quality of life in a seven-state region through the integrated management of the region's resources. As it helped lift the Tennessee Valley out of the Great Depression, TVA built dams for flood control, provided low-cost power and commercial shipping, restored depleted lands, and raised the standard of living across the region. As times have changed, TVA has changed with them by updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation. While TVA's mission has not changed since its inception, the environment in which TVA operates continues to evolve. The business and economic environment has become more challenging, and demand for power and related revenues have decreased due to reduced customer usage and increased energy efficiency and demand response.

Strategic Imperatives

In order to continue TVA's mission of service to the region, TVA must address four strategic imperatives: (1) rates: maintain rates as low as feasible, (2) debt: live within its means, (3) assets: manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) stewardship: be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to improve in these areas and become safer, better, faster, and leaner.



Rates

TVA is committed to providing its customers power at the lowest feasible rates. This customer focus requires scrutiny of all projects and use of resources so that the organization operates as efficiently and responsibly as possible.

Debt

TVA is committed to long-term debt management through employing a conservative approach as it relates to capital projects. While financing continues to be an important tool for funding TVA's long-term power system investments, the organization is committed to managing its debt under the ceiling established by Congress.

Asset Portfolio

Balancing TVA's assets with a diverse portfolio is vital to serving its customers reliably and at the lowest cost. In 2015, the TVA Board of Directors ("Board" or "TVA Board") approved the Integrated Resource Plan ("IRP"), which provides strategic guidance on the resource mix to respond to changing market conditions while maintaining a reliable, low-cost supply for customers. The diverse portfolio identified in this study includes additional commitments to energy efficiency, renewables, and natural gas-fired generation as part of the least-cost plan.

Stewardship

TVA's responsibility for stewardship of the waters and public lands of the Tennessee Valley was established in the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). These responsibilities include flood control, improved navigation of the Tennessee River, and land and shoreline management as well as agricultural and industrial development. TVA is committed to increasing its role in many of these areas as activities are planned for dam safety and reservoir operation enhancements, stabilization of eroding shorelines, and the redevelopment of Muscle Shoals properties. This redevelopment is expected to improve public relations, enhance marketability, and reduce the maintenance cost of ownership.

Since the 1970's, TVA has spent approximately \$6.2 billion on controls to reduce emissions from its coal-fired power plants. In addition, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas, nuclear, and hydro generation.

To reduce sulfur dioxide ("SO₂") emissions, TVA installed scrubbers on 17 coal-fired units, with scrubbers planned on six more units, and switched to lower-sulfur coal at 24 coal-fired units. To reduce nitrogen oxides ("NO_x") emissions, TVA installed selective catalytic reduction systems ("SCRs") on 20 coal-fired units with SCRs planned on six more units, operates selective non-catalytic reduction systems on four units, installed low-NO_x burners or low-NO_x combustion systems on 25 units, optimized combustion on five units, and operates NO_x control equipment year-round when units are operating (except during start-up, shutdown, and maintenance periods). TVA has also retired or announced plans to retire 33 of 59 coal-fired units, and the remaining coal-fired units will either have scrubbers and SCRs, be repowered to renewable biomass, or be retired.

To reduce particulate emissions of air pollutants, TVA has equipped all of its coal-fired units with scrubbers, mechanical collectors, electrostatic precipitators, and/or bag houses.

Primarily due to the actions described above, emissions of NO_x and SO₂ on the TVA system have been reduced by 90 percent below peak 1995 levels and by 94 percent below 1977 levels through calendar year ("CY") 2014, respectively. For CY 2014, TVA's emission of carbon dioxide ("CO₂") from its sources was 77.5 million tons, a 27 percent reduction from 2005 levels. To remain consistent, provide clear information and align with the Environmental Protection Agency's ("EPA") reporting requirements, TVA will continue to report CO₂ emissions on a CY basis.

There may be additional material costs if reductions of greenhouse gases, including CO₂, are mandated by legislative, regulatory, or judicial actions and/or if more stringent emission reduction requirements for conventional pollutants are established. These costs cannot reasonably be predicted at this time because of the uncertainty of these actions. A number of emerging EPA regulations establishing more stringent air, water, and waste requirements could result in significant changes in the structure of the U.S. power industry, especially in the eastern half of the country. One such regulation is the EPA's Clean Power Plan.

On August 3, 2015, the EPA issued the Clean Power Plan ("CPP"), a rule under section 111(d) of the Clean Air Act ("CAA"), to reduce carbon emissions from existing power plants burning fossil fuels. The CPP, which is part of President Obama's Climate Action Plan strategy, establishes state-specific emission goals to lower CO₂ emissions from power plants, targeting a 32 percent nationwide reduction in CO₂ emissions from 2005 levels by 2030. The EPA established an "interim goal" that states must meet on average over the eight-year period from 2022-2029 and a "final goal" that states must meet in 2030 and thereafter based on a two-year average. States must submit to the EPA final plans, or "initial plans" with a request for an extension, by September 6, 2016. States that receive an extension must submit final plans by September 6, 2018. The impact of these rules on TVA and the states in TVA's service territory cannot be determined until the state plans are developed and approved by the EPA, but the impact on TVA could be significant.

Additionally, on August 3, 2015, the EPA finalized New Source Performance Standards for carbon emissions from new, modified, and reconstructed power plants. These standards apply to two types of fossil-fuel fired sources: (1) stationary combustion turbines, generally firing natural gas, and (2) electric utility steam generating units, generally firing coal. These standards reflect the degree of emission limitation achievable through the application of the best system of emission reduction that the EPA has determined to be adequately demonstrated for each type of source. These standards will apply to the new combined-cycle plants that TVA is constructing at its Allen and Paradise facilities, and TVA believes that its current plans for those plants will enable it to comply with the new standards.

TVA currently anticipates making significant investments in environmental projects through 2025 including new clean energy generation such as natural gas, nuclear, and renewables to reduce TVA's overall environmental footprint. Based on options for certain coal-fired units under two environmental agreements TVA entered into in 2011, and the recommended resource ranges approved in the 2015 IRP, the amount and timing of expenditures could change.

Power Program

TVA operates the nation's largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of more than nine million people. In 1959, Congress passed an amendment to the TVA Act that required TVA's power program to be self-financing from power revenues and proceeds from power program financings. While TVA's power program did not directly receive appropriated funds after it became self-financing, TVA continued to receive appropriations for certain multipurpose and other nonpower mission-related activities as well as for its stewardship activities. TVA has not received any appropriations from Congress for any activities since 1999, and since that time, TVA has funded stewardship program activities primarily with power revenues, with the remainder funded with user fees and other forms of revenues derived in connection with those activities.

The 1959 amendment to the TVA Act also required TVA, beginning in 1961, to make annual payments to the U.S. Treasury from net power proceeds as a repayment of and as a return on the Power Program Appropriation Investment. With the 2014 payment, TVA fulfilled its requirement to repay \$1.0 billion of the Power Program Appropriation Investment. The TVA Act requires TVA to continue making payments to the U.S. Treasury as a return on the remaining \$258 million of the Power Program Appropriation Investment. The amount of the return on the Power Program Appropriation Investment is based on the Power Program Appropriation Investment balance at the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations at the same date.

TVA now funds all of its operations primarily from the sale of electricity and power system financings. TVA's power system financings consist primarily of the sale of debt securities and secondarily of alternative forms of financing such as lease arrangements.

TVA is primarily a wholesaler of power. It sells power to local power company customers ("LPCs") which then resell power to their customers at retail rates. TVA's LPCs consist of: (1) municipalities and other local government entities ("municipalities"), and (2) customer-owned entities ("cooperatives"). These municipalities and cooperatives operate public power electric systems whose primary purpose is not to make a profit but to supply electricity to the general public or its members. TVA also sells power to directly served customers, primarily customers with very large loads and federal agencies with loads larger than 5,000 kilowatts ("kW"). In addition, power in excess of the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with certain electric systems. In fiscal year ("FY") 2017, TVA expects sales of about 161 billion kilowatt-hours ("kWh") of electricity.

Power generating facilities operated by TVA at September 30, 2015, included 29 conventional hydroelectric sites, a pumped-storage hydroelectric site, nine coal-fired sites, three nuclear sites, 15 natural gas and/or oil-fired sites, and a diesel generator site. TVA's renewable energy program, Green Power Switch®, includes 14 solar energy sites, digester gas co-firing capacity at a coal-fired site, biomass co-firing potential (located at coal-fired sites), and a wind energy site (out of service). At September 30, 2015, certain of TVA's power generating facilities were out of service. On April 14, 2015, TVA added to its natural gas-fired fleet by acquiring a 700-megawatt ("MW") combined-cycle gas plant located in Ackerman, Mississippi, included above.

As of September 30, 2015, TVA's coal-fired units had 10,995 MW of net summer capability. The nine coal-fired plants generated about 38 percent of the power from TVA-operated facilities during FY 2015. TVA's system also includes 99 generators powered by natural gas and/or oil with a total net summer capability of 9,947 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided 14 percent of the power from TVA-operated facilities in FY 2015.

TVA's six nuclear units have a combined net summer capability of 6,736 MW and generated 37 percent of the power from TVA-operated facilities in FY 2015.

TVA-owned hydroelectric units have a combined net summer capability of 5,412 MW and generated about nine percent of the power from TVA-operated facilities in FY 2015.

Additionally, TVA realized 412 GWh of savings through energy efficiency programs.

Integrated Resource Plan

TVA's mission sets the stage for its strategic planning process that includes strategic objectives, priorities, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the IRP study. The power supply plans evaluated in this study identify the most

likely new resources needed to satisfy expected energy demand in the region during a 20-year planning horizon under various scenarios of the future.

The IRP guides TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The target power supply mix provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the IRP seek to balance cost, risk, system reliability, and environmental responsibility in providing power for TVA's customers.

In the fall of 2013, TVA started a refresh of the 2011 IRP. This effort was in response to changes in the industry and in the TVA service area. In addition to realigning certain planning assumptions for this current effort, TVA created an innovative method to model energy efficiency and renewable energy in a manner similar to more traditional energy resources based on least-cost planning principles while maintaining the comprehensive treatment of uncertainty used in the prior study. The recommendation in this IRP provides strategic guidance on the resource mix to successfully respond to changing market conditions while maintaining a reliable, low-cost supply for customers. The diverse portfolio identified in this study includes additional commitments to energy efficiency, renewables, and natural gas-fired generation as part of the least-cost plan. The IRP was developed with input from the public and contributions from a working group of stakeholders from LPCs, environmental organizations and other public and private entities, including an extensive public outreach that included a series of open meetings around the Tennessee Valley. The IRP report, along with a supplemental Environmental Impact Statement, was published in July 2015, and the Board approved the IRP in August 2015.

Transmission System

TVA's transmission system is a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

The TVA transmission system is one of the largest in North America. TVA's transmission system has 70 interconnections with 12 neighboring electric systems and delivered over 158 billion kWh of electricity to TVA customers in FY 2015. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 16 years in delivering electricity to customers.

TVA's transmission system interconnects with systems of surrounding utilities and consisted primarily of the following assets at September 30, 2015:

- Approximately 2,500 circuit miles of 500 kilovolt, 11,500 circuit miles of 161 kilovolt, and 2,200 circuit miles of other voltage transmission lines
- 512 transmission substations, power switchyards, and switching stations
- 1,293 customer connection points (customer, generation, and interconnection)

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of reservoir shoreline, approximately 293,000 acres of reservoir land, and 49 reservoirs encompassing approximately 650,000 surface acres of reservoir water used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In addition, TVA manages over 170 agreements with private entities for commercial recreation (such as commercial campgrounds and marinas), manages 130 agreements with public agencies for public recreation (such as public parks, day use areas, boat launches, and swimming areas), and is responsible for over 80 public recreation areas throughout the Tennessee Valley. In accordance with its 2008 Environmental Policy, the TVA Board accepted the Natural Resource Plan ("NRP") in 2011 to guide TVA's cultural and natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation and water resources, as well as biological and cultural resources on TVA lands and reservoirs, land planning, and public engagement. The NRP will be reviewed and updated approximately every 5 years.

Tennessee River System

Approximately 42,000 miles of rivers, streams, and tributaries, including the 652-mile-long Tennessee River, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production, and cooling water for TVA's generation units. The watersheds of the Tennessee River and its 16 tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development is a component of the core mission of TVA, along with energy production and environmental stewardship. TVA works with LPCs, regional, state, and local agencies, and communities to showcase the advantages available to businesses locating or expanding in TVA's service area. TVA's primary economic development goals are to recruit major business operations to locate in the Tennessee Valley, encourage the location and expansion of companies that provide quality jobs, prepare communities in the Tennessee Valley for economic growth, and offer support to help grow and sustain small businesses. TVA seeks to meet these goals through a combination of initiatives and partnerships designed to provide program support, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 224 companies into the TVA service area during FY 2015. These companies announced capital investments of over \$7.8 billion and the expected creation and/or retention of over 76,200 jobs.

Technology Innovation

Consistent with the TVA Act, TVA makes investments in science and technological innovation to assist the agency in meeting future business and operational challenges in key areas and to establish national leadership in research, development, and demonstration. In addition to research that directly supports optimization of its generation and delivery assets, TVA is also focused on emerging technological advances in small modular nuclear reactors ("SMRs"), grid modernization, energy utilization technologies, and distributed energy resources ("DER"). TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

TVA also seeks to leverage research and development activities and investments through partnerships with LPCs, the Electric Power Research Institute ("EPRI"), the Department of Energy ("DOE"), the Oak Ridge National Laboratory ("ORNL") and other national labs, research consortiums, peer utilities, universities, and vendors and through participation in professional societies.

Commitment to the Future

TVA is a leader in public power, a model built on trust and partnerships with the people TVA serves. This model continues to deliver reliable, affordable electricity to more than nine million people and 700,000 businesses. It enables effective, integrated resource management and environmental stewardship in parts of seven southeastern states. TVA promotes alliances with others that help attract and retain jobs and investments that support economic development in the Tennessee Valley.

TVA recognizes that the environment in which TVA does business continues to evolve. TVA is more flexible in its planning and more nimble in its execution. TVA is also working to respond more quickly than ever to continually changing market conditions.

TVA continues to work on improving its operating and financial performance, including controlling operating and maintenance costs and adjusting capital spending based on market and regulatory conditions. One thing will not change – TVA's commitment to provide safe, clean, reliable electricity at rates as low as are feasible.

TVA is proud to honor this commitment.

Budget Overview

Asset Portfolio

TVA, like the rest of the electric utility industry, is challenged to meet customer demand with cleaner, reliable, low-cost energy resources. This will require substantial capital investments during the next decade. TVA funds asset investments through power revenues, the issuance of bonds up to a limit set by Congress, and alternative financings including lease financings.

TVA faces significant uncertainty from external factors such as weather, the economy, and decreased demand from energy efficiency and demand response initiatives. TVA's financial information includes estimates, which are affected by these and other changing conditions. TVA projects total revenue to be \$11.1 billion in FY 2017, which includes revenues related to fuel cost recovery and an adjustment to fund investments associated with TVA's clean air program. The fuel cost recovery mechanism adjusts power rates monthly to reflect the changing costs of fuel, purchased power, and emission allowances.

In March 2013, TVA announced it is proceeding with an emissions control project at Gallatin Fossil Plant ("Gallatin"). The project includes the installation of SCR systems and scrubbers at all four units of the 976 MW plant. The scrubbers are expected to be completed in 2016, with the SCR systems to follow in 2018. Due to the age, lower capacity, and lower efficiency of TVA's older coal-fired units, it may not be economical to continue to operate some units in the future, particularly if new environmental laws or regulations become effective. However, discontinuing the use of some coal-fired units may be constrained by transmission reinforcement that will be required before the units are taken out of service.

In November 2013, the TVA Board approved the completion of a natural gas-fired facility at the Paradise Fossil Plant ("Paradise") site and the subsequent retirement of Paradise coal-fired Units 1 and 2. Paradise Unit 3, a coal-fired unit, will continue to be operated. At its August 21, 2014, meeting, the TVA Board approved the completion of a natural gas-fired facility at the Allen Fossil Plant ("Allen") site. TVA plans to retire the Allen coal-fired units no later than December 31, 2018. On December 30, 2014, the TVA Board also approved adding additional pollution controls on Units 1 and 4 at the Shawnee Fossil Plant ("Shawnee") site.

TVA is also converting its wet ash and gypsum facilities to dry collection facilities. The estimated cost of its coal combustion residual ("CCR") conversion program is \$2.1 billion, and the current schedule for completion is by 2022, with the exception of the new landfill at Shawnee to accommodate the addition of air pollution controls and the closure of the ponds at Gallatin. This program includes costs associated with pond closures, conversion of wet to dry handling, and landfill activities. TVA will continue to undertake CCR projects past 2022 in order to support long-term plant generation, including projects to build new landfills, expand landfills, and close landfills.

TVA's nuclear construction is an important element in a diversified portfolio for the future. On October 22, 2015, the Nuclear Regulatory Commission ("NRC") issued a forty-year operating license for Watts Bar Unit 2. Construction of Watts Bar Nuclear Unit 2 is continuing with project costs to date now exceeding the \$4.5 billion upper range previously approved by the TVA Board and commercial operations still scheduled to begin by June 30, 2016. The TVA Board approved additional funding of the project in January 2016, up to a total estimated cost of \$4.7 billion.

Although work on the Bellefonte Nuclear Unit 1 site was slowed in 2014, TVA believes that budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA's 2015 IRP does not envision any immediate needs for significant baseload plants such as Bellefonte.

In FY 2017, TVA estimates that it will invest about \$2.7 billion in capital projects for the power system. These investments are subject to approval in the FY 2017 budgeting process.

Stewardship

TVA operates and maintains one of the nation's largest systems of dams, reservoirs, and lands. Based on the provisions in the Energy and Water Development Appropriations Act, 1998, TVA funds its traditional essential water and land stewardship activities, including the NRP, with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999, and none are requested for FY 2017.

TVA Operating Budget*(Millions of dollars)*

	2015 Actual	2016 Estimate	2017 Estimate
Revenue	\$ 11,003	\$ 10,753	\$ 11,088
Operating Expenses			
Fuel & Purchased Power	(3,394)	(3,406)	(3,467)
Operating, Maintenance, & Other	(2,838)	(2,919)	(2,875)
Depreciation & Amortization	(2,031)	(1,976)	(1,992)
Tax Equivalents	<u>(525)</u>	<u>(532)</u>	<u>(527)</u>
Total Operating Expenses	(8,788)	(8,833)	(8,861)
Operating Income	2,215	1,920	2,227
Other Income	29	37	36
Interest Expense, net	<u>(1,133)</u>	<u>(1,365)</u>	<u>(1,479)</u>
Net Income	\$ 1,111	\$ 592	\$ 784

Capital Budget & Cash Flow

(Millions of dollars)

	2015 Actual	2016 Estimate	2017 Estimate
Cash flows from operating activities			
Net income	\$ 1,111	\$ 592	\$ 784
Items affecting operating activities*	<u>2,204</u>	<u>2,040</u>	<u>1,998</u>
Net cash provided by operating activities	3,315	2,632	2,782
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(285)	(327)	(329)
Power Operations	(161)	(241)	(299)
River Operations	(82)	(116)	(117)
Transmission	(185)	(208)	(204)
Other Base Capital	<u>(247)</u>	<u>(203)</u>	<u>(212)</u>
Total Base Capital	(960)	(1,095)	(1,161)
Clean Air	(248)	(312)	(162)
Ash Remediation	(84)	(103)	(155)
Water Remediation	<u>-</u>	<u>(3)</u>	<u>(3)</u>
Total Environmental Costs	(332)	(418)	(320)
Watts Bar Unit 2	(863)	(130)	-
Paradise CC	(429)	(253)	(301)
Allen CC	(152)	(427)	(268)
Other Capacity Expansion	<u>(595)</u>	<u>(382)</u>	<u>(453)</u>
Total Capacity Expansion	(2,039)	(1,192)	(1,022)
Nuclear Fuel Capital	(350)	(370)	(325)
Other Investing Activities	<u>96</u>	<u>(100)</u>	<u>(50)</u>
Net cash used in investing activities	(3,585)	(3,175)	(2,878)
Borrowings (net of redemptions)	230	688	248
Other financing activities	<u>(160)</u>	<u>(145)</u>	<u>(152)</u>
Net cash provided by financing activities	70	543	96
Net change in cash and cash equivalents	(200)	-	-
Cash and cash equivalents at beginning of year	500	300	300
Cash and cash equivalents at end of year	300	300	300
Cash Payments to U.S. Treasury**	(5)	(8)	(8)
Reduction/(Increase) in Total Debt and Debt-Like Obligations	\$ (49)	\$ (474)	\$ (29)

*Kingston Ash Spill, Bellefonte and Ash ARO expenses are included in Operating Activities

** For federal reporting purposes Payments to U.S. Treasury are not considered disbursements.

Note: Included budget estimates are subject to change by TVA management and the TVA Board.

Business Plan

TVA is governed by the nine-member TVA Board of Directors, which is responsible for approving an annual budget. The information in this document is based on the FY 2016 annual budget, which was approved by the TVA Board in August 2015. The following were considered in preparing the budget.

Borrowing Limit

TVA works to fulfill its mission of supplying low cost and reliable power, providing environmental stewardship, and stimulating economic development while effectively managing debt and living within its means. In achieving its mission while following sound financial principles, TVA generally uses financing to fund capital investments for new generation capacity and environmental controls.

TVA has the authority per the TVA Act to issue bonds, notes, and other evidence of indebtedness subject to a \$30 billion limit, sometimes referred to as TVA's statutory debt limit. TVA bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2015, TVA had \$23.9 billion of bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$48.8 billion as of September 30, 2015. TVA's balance of financing obligations is projected to increase in FY 2016 to meet expected capital investment needs which are primarily driven by capacity expansion and environmental projects. However, TVA will continue to effectively manage its debt and remain below the statutory debt limit.

Nuclear Program

TVA is making a significant investment in safe and reliable nuclear power. The completion of Watts Bar Unit 2 is expected to cost up to \$4.7 billion.

Pension Fund

As of September 30, 2015, TVA's qualified pension plan had assets of \$6.8 billion compared with liabilities of \$12.8 billion. The plan has approximately 35,000 participants, of which approximately 23,700 are retirees or beneficiaries currently receiving benefits. Benefits of approximately \$690 million were paid to retirees and beneficiaries in 2015. TVA contributed \$275 million to the Tennessee Valley Authority Retirement System ("TVARS"), compared to a minimum required contribution under the TVARS rules of \$215 million, and incurred \$511 million in actuarial costs in 2015.

Coal-Fired Fleet Evaluation

TVA began its coal-fired plant construction program in the 1940s, and its coal-fired units were placed in service between 1951 and 1973. Coal-fired units are either active or inactive. TVA considers units to be in an active state when the unit is generating, available for service, or temporarily unavailable due to equipment failures, inspections, or repairs. As of December 31, 2015, TVA had nine coal-fired plants consisting of 39 active units, accounting for 10,995 MW of summer net capability, and 20 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. As of December 31, 2015, TVA had 19 retired units: John Sevier Fossil Plant ("John Sevier") Units 1-4, Johnsonville Fossil Plant ("Johnsonville") Units 5-10, Shawnee Unit 10, and Widows Creek Fossil Plant ("Widows Creek") Units 1-8. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of December 31, 2015, TVA had one mothballed unit: Colbert Fossil Plant ("Colbert") Unit 5. Inactive reserve units are unavailable for service but can be brought back into service after some repairs in a relatively short duration of time, typically measured in days. As of December 31, 2015, TVA had no units in inactive reserve. TVA refers to units which are in inactive reserve or mothballed status as idled. TVA continues to assess its power generating facilities.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the CAA and subsequent laws and regulations. Increasing regulatory costs require consideration of whether or not to make the required capital investments to continue operating these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements") to address a dispute under the CAA. The first agreement is a Federal Facilities Compliance Agreement with the EPA. The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. Under the Environmental Agreements, TVA agreed

to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

The following table summarizes the actions TVA is required to take under the Environmental Agreements, and other coal-fired generation actions taken or to be taken by TVA.

Fossil Plant	Total Units	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Actions Taken or Planned to be Taken by TVA
Allen	3	SCRs on all three units	- Install scrubbers or retire no later than December 31, 2018	- The Board approved the construction of a gas-fired plant at the current Allen coal-fired site - Retire Units 1-3 after completion of the gas-fired plant
Bull Run	1	Scrubber and SCRs on unit	- Continuously operate current emission control equipment	- Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	- Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 - Remove from service, control, or retire Unit 5 no later than December 31, 2015 - Control or retire removed from service units within three years	- Idled Unit 5 in October 2013 - Retire Units 1-5 no later than April 15, 2016
Cumberland	2	Scrubbers and SCRs on both units	- Continuously operate existing emission control equipment	- Continuously operate existing emission control equipment
Gallatin	4	None	- Control, convert, or retire all four units no later than December 31, 2017	- Add scrubbers and SCRs on all four units by December 31, 2017
John Sevier	4	None	- Retire two units no later than December 31, 2012 - Remove from service two units no later than December 31, 2012, and control, convert, or retire those units no later than December 31, 2015	- Retired Units 1 and 2 effective December 31, 2012 - Retired Units 3 and 4 in June 2014
Johnsonville	10	None	- Retire six units no later than December 31, 2015 - Retire four units no later than December 31, 2017	- Retired Units 5-10 effective December 31, 2015 - Retire Units 1-4 by December 31, 2017
Kingston	9	Scrubbers and SCRs on all nine units	- Continuously operate existing emission control equipment	- Continuously operate existing emission control equipment
Paradise	3	Scrubbers and SCRs on all three units	- Upgrade scrubbers on Units 1 and 2 no later than December 31, 2012 - Continuously operate emission control equipment on all three units	- The Board approved the retirement of Units 1 and 2, and replacement with gas-fired generation, with effective dates to be determined. - Continuously operate emission control equipment on Unit 3
Shawnee	10	None	- Control, retire, or convert Units 1 and 4 no later than December 31, 2017	- Retired Unit 10 in June 2014 - Add scrubbers and SCRs on Units 1 and 4 by December 31, 2017
Widows Creek	8	Scrubbers and SCRs on Units 7 and 8	- Retire two of Units 1-6 no later than July 31, 2013 - Retire two of Units 1-6 no later than July 31, 2014 - Retire two of Units 1-6 no later than July 31, 2015 - Continuously operate existing emissions control equipment on Units 7 and 8	- Retired Units 3 and 5 effective July 31, 2013 - Retired Units 1, 2, 4, and 6 on July 31, 2014 - Retired Units 7 and 8 on September 30, 2015

After TVA completes the actions described in the above table, TVA anticipates that it will have 7,884 MW of summer net capability of coal-fired generation, a reduction of 6,689 MW from TVA's coal-fired capacity as of September 30, 2010. TVA is moving towards a more balanced generation plan with greater reliance on lower-cost and cleaner energy generation technologies. TVA's long-range plans will continue to consider the costs and benefits of significant environmental investments at its remaining coal-fired plants.

Kingston Ash Spill

In December 2008, one of the dredge cells at Kingston Fossil Plant ("Kingston") failed, and over five million cubic yards of water and coal fly ash flowed out of the cell. TVA, in coordination with federal and state agencies, has completed cleanup and recovery efforts. TVA completed the removal of time-critical ash from the river during the third quarter of 2010. In November 2012, the EPA and the Tennessee Department of Environment and Conservation approved a plan to allow the Emory River's natural processes to remediate the remaining ash in the river, and to conduct a long-term monitoring program. TVA submitted a final completion report to the EPA on April 22, 2015, for review and approval. The report was approved by the EPA on September 9, 2015.

In August 2009, TVA began using regulatory accounting treatment to defer all actual costs already incurred and expected future costs related to the ash spill. The cost is being charged to expense as it is collected in rates over 15 years, beginning October 1, 2009. As of September 30, 2015, TVA had spent \$1.1 billion related to the ash spill. The remaining estimated liability at September 30, 2015, was \$6 million and is included in accounts payable and accrued liabilities.

TVA had property and excess liability insurance programs in place at the time of the Kingston ash spill. TVA pursued claims under both the property and excess liability programs and has received total insurance proceeds of \$336 million. The insurance proceeds are being recorded as reductions to the regulatory asset and will reduce costs collected in future rates.

Coal Combustion Residuals Facilities

On April 17, 2015, the EPA published a final rule related to CCRs that regulates CCRs as nonhazardous waste under Subtitle D of the Resource Conservation and Recovery Act. The rule also regulates landfill and impoundment location, design, and operations; dictates certain pond-closure conditions; and establishes groundwater monitoring and closure and post-closure standards. While not required, states may adopt the rule's requirements into their regulatory programs. The rule is effective October 19, 2015, with certain provisions having later effective dates.

TVA has committed to a programmatic approach to the elimination of wet storage of CCRs within the TVA service area. Under this program (the "CCR Conversion Program"), TVA has committed to (1) convert all operational coal plants to dry CCR storage, (2) close all wet storage facilities, and (3) meet all applicable state and federal regulations. To carry out its CCR Conversion Program, TVA is undertaking the following actions:

- Dry generation and dewatering projects: Conversion of coal plant CCR wet processes to dry generation or dewatering is complete at Bull Run Fossil Plant ("Bull Run") and is underway at Kingston, Gallatin, Cumberland Fossil Plant ("Cumberland"), Shawnee and Paradise.
- Landfills: Lined and permitted dry storage facilities have been constructed at Bull Run and Kingston, are under construction at Gallatin, and are in the planning or engineering phases at Cumberland, Paradise, and Shawnee.
- Wet CCR impoundment closures: TVA is planning to close wet CCR impoundments in accordance with federal and state requirements when (1) coal plants are converted to dry CCR processes and dry storage landfills become operational or (2) plant operations cease. Closure project schedules and costs are driven by the selected closure technology (e.g., cap and close in place or clean closure). As environmental studies are performed and closure methodologies are determined, detailed project schedules and estimates will be prepared.
- Groundwater monitoring: Compliance with the EPA's CCR rule will require additional engineering and analysis as well as implementation of a comprehensive groundwater monitoring program.

The CCR Conversion Program is scheduled to be completed by 2022 with two exceptions. First, a new landfill at Shawnee will be required to accommodate the addition of air pollution controls and is scheduled to be completed by 2026. Once the new landfill is in service, the existing bottom ash pond and dry stack will be closed in accordance with federal and state requirements. Second, the ponds at Gallatin are pending additional studies to determine the final closure methodology and schedule. Through December 31, 2015, TVA had spent approximately \$795 million on its CCR Conversion Program. TVA expects to spend an additional \$1.3 billion on the CCR Conversion Program through 2022. Once the CCR Conversion Program is completed, TVA will continue to undertake certain CCR projects to support long-term plant generation, including building new landfill sections under existing permits and closing existing sections once they reach capacity.

Variable Interest Entities

On August 9, 2013, TVA entered into a lease financing arrangement with Southaven Combined Cycle Generation, LLC ("SCCG") for the lease by TVA of the Southaven Combined Cycle Facility ("Southaven CCF"). SCCG is a special single-purpose limited liability company formed in June 2013 to finance the Southaven CCF through a \$360 million secured notes issuance (the "SCCG notes") and the issuance of \$40 million of membership interests subject to mandatory redemption. The membership interests were purchased by Seven States Southaven, LLC. Southaven Holdco, LLC ("SHLLC") is a special single-purpose entity, also formed in June 2013, established to acquire and hold the membership interests of SCCG. A non-controlling interest in SHLLC is held by a third-party through nominal membership interests, to which none of the income, expenses, and cash flows of SHLLC are allocated. The membership interests held by SHLLC were purchased with proceeds from the issuance of \$40 million of secured notes and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each August 15 and February 15, with a final payment due on August 15, 2033.

On January 17, 2012, TVA entered into a \$1.0 billion construction management agreement and lease financing arrangement with John Sevier Combined Cycle Generation LLC ("JSCCG") for the completion and lease by TVA of the John Sevier Combined Cycle Facility ("John Sevier CCF"). JSCCG is a special single-purpose limited liability company formed in January 2012 to finance the John Sevier CCF through a \$900 million secured note issuance (the "JSCCG notes") and the issuance of \$100 million of membership interests subject to mandatory redemption. The membership interests were purchased by John Sevier Holdco LLC ("Holdco"). Holdco is a special single-purpose entity, also formed in January 2012, established to acquire and hold the membership interests in JSCCG. A non-controlling interest in Holdco is held by a third-party through nominal membership interests, to which none of the income, expenses, and cash flows of Holdco are allocated. The membership interests held by Holdco in JSCCG were purchased with proceeds from the issuance of \$100 million of secured notes (the "Holdco notes") and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each January 15 and July 15, with a final payment due on January 15, 2042.

Wholesale Rate Structure Changes

Since the fall of 2013, TVA and its customers have worked collaboratively to develop and implement a long-term pricing direction. This strategic direction will guide TVA's long-term development of rates and will provide customers additional clarity to make future business decisions and evaluate technology investment. On August 21, 2015, the TVA Board approved a wholesale rate change that is consistent with this strategic direction and a further improvement to the wholesale rate structure implemented in April 2011. The rate structure provides price signals to further encourage LPCs and end-use customers to shift demand and energy consumption from high-cost periods to less expensive periods. Under the new wholesale structure, all LPCs will take service under a time of use structure. Although weather can still impact consumption and average effective rates, customers are given stronger price signals and therefore greater incentives to control their demand and energy utilization. In conjunction with the wholesale rate change, the fuel cost recovery mechanism has been revised to move from average fuel cost allocation to an actual fuel cost allocation approach. This means that the total monthly fuel cost will be allocated to two major classes of customers (small customers of the LPCs and large customers of TVA and the LPCs) based on their hourly load profiles and TVA's hourly dispatch costs. These changes will improve the alignment of rates with the cost causation. The wholesale rate change, along with a modification to the fuel cost adjustment methodology, became effective October 1, 2015.

Renewable Energy

As recommended in the 2015 IRP, TVA intends to pursue adding between 150 MW and 800 MW of cost-effective renewable resources (primarily utility-scale solar) to the power supply mix by 2023. Based on future capacity and energy supply needs, and meeting appropriate cost and performance targets, solar and wind resources additions could increase to as much as 2,000 MW.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including hydro, wind, solar, and biomass. As of September 30, 2015, TVA maintained 29 conventional hydroelectric dams, accounting for 3,796 MW of summer net capability. TVA also controls 14 solar energy sites, digester gas co-firing at Allen, and three wind turbines. The wind turbines did not provide any summer net capability as of September 30, 2015, because they were not operational. EPRI is currently undertaking a research project to assess the condition of these three TVA-owned turbines to evaluate options for their future. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into eight contracts with Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all eight contracts. The first wind farm, located in Illinois, began providing 300 MW (nameplate capacity) under a 20-year contract in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other seven contracts

provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee, and 4.5 MW of nameplate capacity from a solar farm in Haywood County, Tennessee.

In 2003, TVA developed a Generation Partners ("GP") pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. In October 2012, the GP program transitioned to a long-term, sustainable program called Green Power Providers ("GPP"). As of September 30, 2015, TVA had more than 2,500 renewable installations in operation, providing close to 93 MW of solar, wind, low-impact hydro, and biomass generation. Solar installations alone total approximately 82 MW of this generation. The GPP program will continue to move forward as a viable option for small-scale renewable generation (less than 50 kW) to serve residential and small commercial market segments.

The Solar Solution Initiative ("SSI") is a pilot program that began in February 2012 and provides incentive payments for mid-sized (greater than 50 kW up to 1 MW) solar projects that utilize local certified installers in the Tennessee Valley region. SSI helps support the existing local solar industry, while also adding renewable investment and jobs to the region. As of September 30, 2015, TVA had offered 56 MW of renewable solar capacity through SSI, with nearly 44 MW operating or committed. At the beginning of CY 2016, SSI transitioned to the Distributed Solar Solutions pilot to encourage projects led by TVA's LPC customers partners that help enhance the distribution system grid or encourage creative business model development.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA purchases renewable energy at market rates from projects that meet the requirement of the RSO program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kW, but no greater than 20 MW in nameplate capacity. As of September 30, 2015, TVA had offered 400 MW of RSO renewable capacity and currently has over 300 MW of projects including 20 MW of biomass, nearly 18 MW of landfill gas and 260 MW of solar technologies operating or committed. The utility-scale renewable energy sector has matured in recent years and can now compete with traditional energy resources. As a result, starting in CY 2016, utility-scale renewable energy projects will no longer be limited by programmatic caps, but will be competitively evaluated alongside other generation sources.

TVA's Green Power Switch® ("GPS") program is a voluntary purchase program that supports and promotes the production of renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In FY 2015, GPS had approximately 195,558 megawatt-hour ("MWh") sales through three GPS program options: the original GPS program and the testing of two other customer options. In the original GPS, consumers have the option to purchase 150 kWh renewable energy blocks for \$4 per month. Supply includes certified Green-e Energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two additional pilot options test customer demand for a 100-percent solar option sourced from TVA's GPP supply as well as a lower priced bulk option for larger commercial and industrial customers. The solar pilot ended in July 2015. The bulk option continues, and as of September 30, 2015, the supply was sourced from TVA-contracted renewable energy credits in the greater Southeastern region.

Payments in Lieu of Taxes

TVA provided nearly \$542 million in tax equivalent payments in FY 2015 to state and local governments where it sells electricity or has power properties. TVA pays tax equivalent payments annually to the eight states where it sells electricity or owns generating plants, transmission lines, substations or other power assets, and directly to 146 county governments where TVA owns power properties that were previously privately owned and operated and subject to ad valorem taxes.

The TVA Act requires TVA to return five percent of gross revenues from the sale of power during the previous fiscal year (excluding sales or deliveries to other federal agencies and off-system sales with other utilities, with a provision for minimum payments under certain circumstances) in the form of tax equivalent payments. The payments compensate state and local governments that cannot levy property or sales tax on TVA as a federal entity and make TVA one of the largest "taxpayers" in Tennessee and Alabama.

State and local governments distribute the funds according to their own formulas and discretion to support a variety of initiatives, including schools, fire departments and other emergency response agencies, tourism and recreation, and human service organizations.

Since 1941, TVA has made more than \$12 billion in tax equivalent payments, with payments in the past 10 years totaling more than \$5 billion.

Management Initiatives

Rates/Debt

TVA is undertaking cost and debt reduction initiatives with the goal of keeping rates as low as feasible, keeping reliability high, maintaining a healthy financial position, and continuing to fulfill its broader mission of environmental stewardship and economic development. TVA is focused on reducing operating and maintenance costs through further efficiency gains and streamlining the organization. At the end of 2015, TVA had exceeded its \$500 million target on operating and maintenance cost savings, as compared to its 2013 budget, by over \$100 million. As part of the cost reduction initiatives, an organizational restructuring occurred in 2014, which resulted in approximately 2,000 position reductions achieved through attrition, elimination of vacant positions, and employees leaving TVA either voluntarily or involuntarily.

TVA plans to continue to evaluate its operations after reaching its 2015 cost reduction goal. In May 2015, TVA announced a limited reduction in force for selected business units. A voluntary reduction package was offered to minimize the impact of involuntary reductions on current personnel. Certain employees were eligible for severance payments as a result of these additional cost reduction initiatives, which resulted in approximately 200 position reductions.

Asset Portfolio

TVA is focusing on delivering more energy efficiency as part of its balanced portfolio approach. TVA uses a variety of programs that reduce the use of energy ("energy efficiency") and also support system optimization through programs that shift or reduce peak demand ("demand response"). TVA collaborates with its customers, such as LPCs, directly served industrial customers, and governmental agencies, to establish and implement effective programs across the Tennessee Valley. TVA is also working with industry experts to tailor these programs to produce the best results.

TVA continues to expand the EnergyRight® Solutions program to include residential, commercial, industrial, and power systems initiatives.

- **EnergyRight® Solutions for the Home** - Allows residential customers to play an active role in saving energy in their homes through improvements to weatherization, HVAC systems, and water heating.
- **EnergyRight® Solutions for Business** - Offers energy information and assistance to help businesses save energy with rebates and other financial incentives available to help offset project expenses.
- **EnergyRight® Solutions for Industry** - Provides customized technical evaluations to assess plant-wide energy efficiency opportunities, along with financial incentives for qualified projects and measures.
- **EnergyRight® Solutions for Customer Systems** - Works to optimize power delivery systems by shifting or reducing consumer demand at peak times of the day to avoid supplying high-priced peak power and improve system optimization and reliability through physical (e.g., direct cycling of residential and commercial equipment), contractual (e.g., voluntary reductions for payment) and voltage optimization (e.g., regulating voltage to the lower portion of the prescribed range) means.

The 2015 IRP provides a summary of TVA's latest analysis of diversified energy resources and recommends a strategic direction focusing on a flexible mix of electricity generation and demand-side sources, including nuclear power, energy efficiency, renewable energy, and natural gas power, as well as traditional coal and hydroelectric power.

Completion of Watts Bar Unit 2 is an integral part of TVA's balanced portfolio approach. Watts Bar Unit 2 is expected to commence commercial operations by June 30, 2016, and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule expectations approved by the TVA Board and is expected to cost up to \$4.7 billion.

Cyber Security

TVA has an established risk-based Cyber Security Program that is designed to ensure alignment with applicable regulations, industry requirements, and best practices. The program has established security standards, training, and metrics that assign clear accountability for all cyber security activities throughout TVA. Security controls have been integrated into business processes, enabling timely, coordinated, effective, and efficient execution of the program across TVA. Cyber security management processes have been implemented agency-wide with the goal of being

systematic, repeatable, and effective in achieving the strategic security goals of the program. Governance for the program is provided by TVA's Chief Information Officer.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components are integrated into the business planning process and are maintained in a three-year cyber security strategic plan covering all information security functions. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change.

TVA understands that timely, accurate, and reliable information is critical to the success of the TVA mission and the role it plays as a National Critical Infrastructure Key Resource and Bulk Electric System provider. The program objectives are aligned with business strategy and support the goals of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to, and recover from threats against its systems. TVA plans to invest approximately \$90 million to \$110 million in its Cyber Security Program between FY 2015 and FY 2017 to ensure it meets its mission objectives. TVA invested approximately \$16.3 million in its Cyber Security Program in FY 2015 with an additional \$26.5 million in cyber security related projects. Inclusion of investment related to Critical Infrastructure Protection projects and programs has increased the investment projections.

People/Stewardship

Environmental Stewardship and River Management

TVA's mission includes managing the Tennessee River, its tributaries, and federal lands along the shoreline to provide, among other things, year-round navigation, flood damage reduction, affordable and reliable electricity, and, consistent with these primary purposes, recreational opportunities, adequate water supply, improved water quality, and natural resource protection.

Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level Environmental Policy. The overarching environmental objective is to provide cleaner, reliable, and affordable energy, support sustainable economic growth, and engage in proactive environmental stewardship. The Environmental Policy provides additional direction in several environmental stewardship areas, including water resource protection and improvements, sustainable land use, and natural resource management. The current Environmental Policy was initially approved by the TVA Board in 2008 and is reviewed on a biennial basis. TVA conducted its most recent review of the 2008 Environmental Policy in 2014 and concluded that the policy as discussed above continues to provide directional alignment for TVA.

Specifically, the TVA Board has approved guiding principles for an energy efficiency and demand response plan and a renewable and clean energy plan. The energy efficiency and demand response plan seeks to slow the rate of growth in the region's power demand by providing opportunities for residential, commercial, and industrial consumer groups to use energy more efficiently. The renewable and clean energy plan strives to add clean energy resources to TVA's generating mix to help reduce carbon emissions as well as reduce the carbon intensity of TVA's power generation and purchased power in a cost-effective manner by utilizing conservation measures, reviewing regional renewable and clean energy supply options, and considering technology innovations that address intermittency issues associated with renewable options.

In August 2011, the TVA Board accepted the NRP, a companion document to TVA's IRP, which focused on the agency's power supply assets portfolio. The NRP provides strategic guidance to integrate TVA's management and protection of the natural and cultural resources and recreation on TVA managed lands and waterways within the Tennessee River Watershed. The NRP includes programs that address biological resources (plants and animals including aquatic species), cultural resources (archaeological sites, historical sites, and artifacts), recreation, water resources, reservoir land planning, and public engagement. TVA's investment will help it sustain the cultural and natural resources and recreational opportunities for the region's stakeholders and visitors in an efficient and effective manner.

The NRP was developed with public input including participation from federal and state resource management agencies and TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. The NRP, which is TVA's first long-term natural resource management plan, provides a model for other agencies involved in similar stewardship activities. Implementation of NRP programs will be staged over a 20-year period with reviews and updates occurring approximately every five years.

On June 30, 2015, TVA submitted its sixth Strategic Sustainability Performance Plan ("SSPP") to the White House Council on Environmental Quality and the Office of Management and Budget ("OMB"). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions, reduce solid waste generation and disposal, improve water use

efficiency, improve building and energy efficiency, promote electronic stewardship, and encourage the purchase of sustainable products and services while reducing TVA's long-term operational costs and risks. TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's Environmental Policy, TVA is obtaining additional power supply from clean and renewable sources.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreational opportunities, adequate water supply, improved water quality, and economic growth.

Navigation on the Tennessee River is made possible by a system of dams and locks and contributes to the regional economy. TVA owns 14 lock chambers at 10 dam sites on the Tennessee River and one tributary. The U.S. Army Corps of Engineers operates and maintains these locks and dams for navigation. This provides an alternative mode of transportation for businesses in the region to ship their products. Barges can move bulk cargo on 652 miles of this river, which ends where it flows into the Ohio River near Paducah, Kentucky.

TVA also manages the river system to provide water for hydroelectric generation and cooling water for TVA power plants. Other water supply activities include issuing permits for water intake structures and promoting regional water supply planning and project implementation.

TVA has installed and is maintaining equipment at several dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use. As part of the NRP, TVA has implemented several programs including Tennessee Valley Clean Marinas, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring and Aquatic Ecological Management, and a Strategic Partnership Initiative. Under the Stream and Tailwater Monitoring Program in the NRP, TVA performs annual monitoring and analysis of streams and rivers within the Tennessee River Watershed. Upon request, TVA provides the monitoring data to other agencies, educational institutions, non-government organizations, and stakeholders.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the EPA shows air quality in the nation has steadily improved with significant declines in collective emissions of the six criteria pollutants: SO₂, NO_x, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance including improvements in air quality through controls at Bull Run and Kingston and is making further improvement in air quality through construction of new scrubbers and SCRs on all four Gallatin units by December 31, 2017. Effective November 4, 2015, the EPA designated the Tennessee portion of the Chattanooga Tennessee-Alabama-Georgia non-attainment area as attainment with respect to the fine particulate matter national ambient air quality standards. The Alabama and Georgia portions of this area were designated attainment in December 2014. Knoxville is the only remaining area in the Tennessee Valley region that is designated non-attainment for fine particulate matter. TVA expects that the EPA will designate the Knoxville area attainment in the near future.

As detailed in previous sections, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas and nuclear generation. Additionally, the Environmental Agreements require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which become more stringent year-to-year as more units are required to be retired.

Economic Development

TVA's partnerships with its customers and communities have helped create quality jobs and attract significant capital investments by new and existing companies. Economic development efforts are done in partnership with private and public organizations, including local, regional, and state agencies. TVA serves the needs of its stakeholders for regional economic development which contributes to a better quality of life for Tennessee Valley residents. TVA's innovative programs and services combine to create effective tools for sustainable economic development. These programs and services include, but are not limited to, the following:

- **Recruiting Services** - TVA works with LPCs and their customers and local, state, and regional economic development organizations to recruit companies through an integrated package of economic development resources.

- **Regional Development** - TVA assigns a regional development specialist with economic development expertise to serve counties in a specific area to help create and sustain job growth.
- **Community Preparedness** - TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering resources and training to local community leaders.
- **Rural Initiative Strategy** - TVA helps rural communities develop and better market their sites and buildings to prospective companies. TVA also offers leadership development, planning, and project assistance.
- **Retail Development** - Retail Development is a program that links communities with retail business opportunities, insights, and market intelligence.
- **Research** - TVA provides economic and market research to help build the business case for the location and expansion of companies and prepare communities for future growth opportunities.
- **Business Development Support** - An array of products and services are geared to meet the needs of prospective or existing industries. These include financial support and industry consulting services. This work provides vision to businesses for locating and being successful in the Tennessee Valley.
- **Technical Services** - TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities market themselves for prospects and growth.
- **Diversity Alliance** - TVA helps the region's high-growth sectors of woman-owned and minority-owned businesses increase their job creation and capital investment opportunities by partnering with local organizations that provide business tools and opportunities that help grow and sustain these targeted businesses.

Results

The results of some of TVA's innovative economic development programs and offerings are briefly described below.

- For the tenth consecutive year, TVA made *Site Selection* magazine's list of the top 10 utilities in North America for economic development activity, one of only three utilities to earn this distinction.
- TVA Economic Development recruits new companies and investments to the region in these primary targeted industry sectors: Transportation-Related Manufacturing, Food Processing and General Manufacturing, Advanced Manufacturing, Data Centers, and Product Development.
- There are 23 available, ready-for-development data center sites across the TVA region.
- TVA staff provided ongoing economic development assistance through technical services, economic research, proposal writing, training, and other services.
- Financial support, offered by TVA and LPCs, continues to be very successful in helping new and existing companies which locate or expand and make a commitment to enhance economic development in the region.
- Assisting communities to be prepared for economic growth opportunities continued to be a focus, and more than 352 communities were directly assisted during 2015.
- The Valley Sustainable Communities Program was launched in 2013. It is a community preparedness offering to assist communities in cataloging their sustainable assets and to improve their competitiveness when companies are looking to invest in new or expanded locations in the Valley. To date, there are 28 communities which have completed this program to highlight and increase their sustainability efforts to differentiate their communities.
- TVA's Rural Development strategy focuses on supporting economic development efforts in rural and economically distressed areas.
- TVA's Retail Development program helps foster business growth for commercial businesses.
- TVA offers two Economic Development websites, TVAed.com and TVAsites.com, containing demographics, a searchable building and land database, and other key information about the benefits of the Tennessee Valley region.
- FY 2015 announcements regarding jobs created and/or retained and capital investment include:
 - Alabama: 4,500 jobs and \$994 million
 - Kentucky: 8,200 jobs and \$844 million
 - Middle Tennessee: 30,200 jobs and \$2.9 billion
 - Mississippi: 4,800 jobs and \$407 million
 - Northeast Tennessee and Virginia: 10,400 jobs and \$1.2 billion
 - Southeast Tennessee, Georgia and North Carolina: 7,800 jobs and \$627 million
 - West Tennessee: 10,300 jobs and \$856 million.

Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a leader in technological innovation. A key element in achieving this vision is an annual investment in science and technology that enables TVA to be at the forefront of innovation in the utility industry and to help the agency meet future business and operational challenges. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

Each year TVA's annual research portfolio and research strategic plan are updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development. Core research activities directly support optimization of TVA's generation and delivery assets, air and water quality, and clean energy integration. Of particular interest is modeling existing and expected solar power deployments in the Tennessee Valley to evaluate the full extent of system impacts of those renewable resources. Initial economic analyses have been conducted to identify the value of DER, particularly solar PV, to both TVA and the LPC system.

Additional research focus is placed on emerging generating technologies, grid modernization for transmission and distribution systems, energy utilization technologies, and DER. In the area of energy utilization, TVA evaluates emerging energy efficiency and load management technologies for market and program readiness. TVA's efforts are directed towards demonstrating and validating the performance, reliability, and consumer acceptance of new efficiency technology as well as the value of energy efficiency and load management technologies for the consumer, the LPCs, and TVA.

TVA also coordinates activities with EPRI and industry stakeholders related to transportation electrification to support operational fleet requirements and the needs of LPCs to provide guidance on matters of plug-in electric vehicle grid integration and readiness for transportation electrification technologies. TVA's distributed/clean energy research effort seeks to understand the scope and impact of integrating DER on operations and business economics and to develop strategies for adapting to the evolving electricity landscape in the Tennessee Valley.

Technology evaluations are most often accomplished through studies and field scale demonstrations to document performance, needs, and requirements. TVA delivers or transfers results to the operating organizations and other stakeholders through reporting, technology transfer events, and educational outreach. TVA also serves as a technology advisor for LPCs and directly served customers.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with LPCs, EPRI and other research consortiums, DOE, ORNL and other national labs, federal agencies, peer utilities, universities, and vendors as well as through participation in professional societies.

Sustainability

Sustainability relates to everything TVA does to remain healthy and thriving long into the future for the benefit of the environment, economy, and stakeholders. Sustainability is incorporated into the work performed at TVA to protect the miles of reservoir shoreline, to keep electricity rates as low as feasible, to reinforce TVA's commitment to a safe employee workplace and public safety, and to support TVA's economic development efforts throughout the region. In short, it is TVA's commitment to keeping the Tennessee Valley a vibrant place to live, work, and play.

Sustainability is embedded in TVA's mission and TVA's Environmental Policy. Additionally, as directed by Presidential Executive Orders 13693 and 13514, Federal Leadership in Environmental, Energy, and Economic Performance, TVA maintains and annually updates a SSPP which captures and enhances TVA's ongoing sustainability focus, including climate. These efforts support TVA's unique mission to sustain the people, economy, and natural resources in the region. TVA submitted its sixth SSPP in June 2015.

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from three full-time members to nine part-time members who are responsible for providing strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer ("CEO") position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission ("SEC") rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

- The management reporting requirements of Section 404(a) of the Sarbanes-Oxley Act became effective for TVA for FY 2008.
- As a non-accelerated filer, the external auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act are not applicable. However, TVA implemented the auditor attestation requirements of Section 404(b) in FY 2009 and continues to do so on a voluntary basis.
- The Dodd-Frank Act deferred indefinitely the auditor attestation requirements of Section 404(b) for non-accelerated filers; however, management has chosen to continue to have external auditor attestations.

TVA Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office ("GAO"), OMB, the U.S. Treasury, and an independent inspector general.

TVA is governed by the TVA Board. The TVA Board has nine part-time members, at least seven of whom must be legal residents of the TVA service area. The TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board's responsibilities include formulating broad goals, objectives, and policies for TVA, approving plans for their implementation, reviewing and approving annual budgets, setting and overseeing rates, and establishing a compensation plan for employees.

Audit Committee

The TVA Board established the Audit, Risk, and Regulation Committee. The committee is responsible for, among other things, recommending an external auditor to the TVA Board, overseeing the auditor's work, and reviewing reports of the auditor and the TVA Inspector General.

Independent Auditor

An independent auditor audits TVA's annual financial statements in accordance with standards of the Public Company Accounting Oversight Board and with Government Auditing Standards issued by the Comptroller General of the U.S. The auditor also provides an opinion as to whether those statements are presented in conformity with Generally Accepted Accounting Principles ("GAAP").

Independent Inspector General

An independent Office of Inspector General ("OIG") conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants Generally Accepted Auditing Standards. The OIG has 108 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semi-annual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$24.3 million for FY 2017, which includes amounts for OIG training and support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2017 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

\$ million	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 OIG Proposed	2017 OIG Proposed
OIG Spend	\$21	\$21	\$21	\$22	\$23	\$24	\$24

Congressional Oversight

Congress provides formal oversight of TVA through two committees, the U.S. House of Representatives Transportation and Infrastructure Committee and the U.S. Senate Environment and Public Works Committee. The audit arm of Congress, the GAO, also conducts audits of various TVA activities and programs, generally at the request of members of Congress.

Executive Branch

TVA routinely submits budget information to OMB, and TVA's budget is included in the consolidated budget of the U.S. Government. TVA's financial results also are included in the federal government's financial statements, which are coordinated with the U.S. Treasury and are subject to audit by GAO.

The TVA Act

TVA's congressional charter, the TVA Act of 1933, as amended, defines the range of TVA's business activities. TVA is also subject to the Government Performance and Results Act, which requires that a strategic plan and an annual performance report be submitted to Congress.

Other Regulatory Oversight

In aspects of its operations, TVA is subject to regulations issued by other governmental agencies, including the EPA, state environmental agencies, the SEC, and the NRC. TVA also complies with applicable regulations of other federal agencies, such as the Department of Labor's Occupational Safety and Health Administration. While TVA is generally not subject to regulations issued by the Federal Energy Regulatory Commission ("FERC"), this commission has some regulatory authority over TVA activities. Other organizations with major influence on TVA and others in the electric utility industry include the North American Electric Reliability Corporation and the industry-based Institute of Nuclear Power Operations ("INPO").

Auditor Independence – Providing Assurance to Stakeholders

The TVA OIG conducts an annual audit of the work of TVA's independent auditor to help ensure compliance with generally accepted Government Auditing Standards. Additionally, a peer review audit of the OIG is conducted every three years by another federal Inspector General's office.

Accounting and Financial Reporting

On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represent TVA's comparative, consolidated, department-level financial statements, to the U.S. Treasury to comply with the requirements of the U.S. Treasury Financial Manual, for the purpose of providing financial information to the U.S. Treasury and the GAO to use in preparing the Financial Report of the U.S. Government. TVA's independent auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by the Federal Accounting Standards Advisory Board. TVA's financial transactions are subject to audit by the Comptroller General under various statutes.

TVA also submits financial information to the OMB, SEC, NRC, U.S. Treasury, Energy Information Administration, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC's Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board. These financial statements are annually audited by an independent financial auditor.

Consistent with the Improper Payments Information Act of 2002, as amended by the Improper Payments Elimination and Recovery Act of 2010 and the Improper Payments Elimination and Recovery Improvement Act of 2012, TVA has determined that none of its programs or activities are susceptible to significant improper payments.

Monthly Reporting Process

Internal financial performance reporting is done on a monthly basis at all levels within the enterprise. The monthly financial performance reports contain analysis for the income statement, cash flow statement, and statement of capital expenditures. The reports also include a balance sheet analysis detailing significant changes during the reporting period. TVA also performs agency-wide financial forecasts on a monthly basis in order to anticipate and respond to events that may have a significant impact on financial performance during the year.

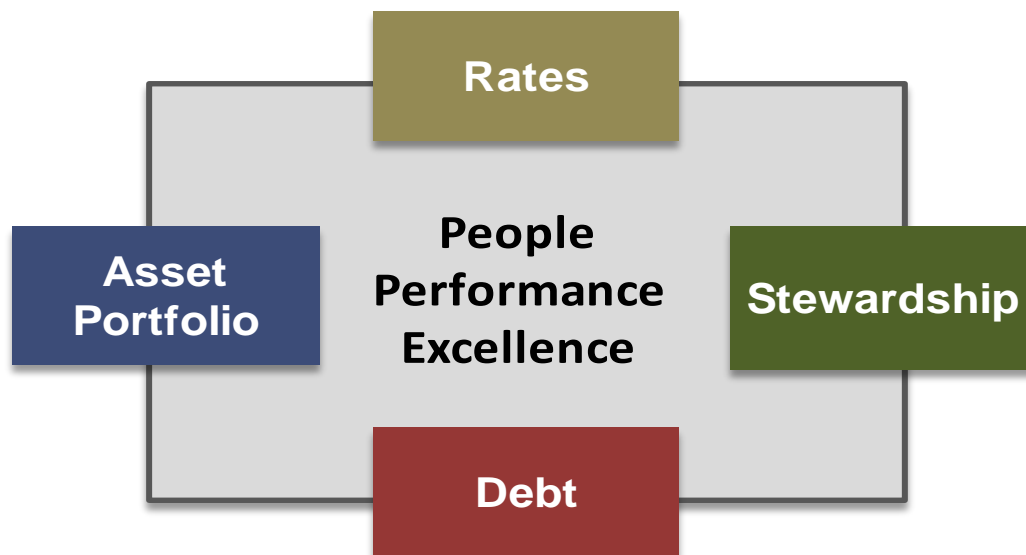
Enterprise Risk Management

Enterprise Risk Management ("ERM") is a strategic business function with its core mission to provide the business with a comprehensive risk perspective to more effectively identify and manage risks, capitalize on opportunities, and improve the risk management behaviors at TVA. ERM is specifically responsible for risk governance structure, performing risk assessments and analysis, and facilitating enterprise risk discussions to evaluate risks as an interrelated portfolio to support risk informed decisions.

Strategic Imperatives, Strategic Objectives, and Performance Goals

Strategic Imperatives

As discussed previously, TVA has established four strategic imperatives: (1) maintain rates as low as feasible, (2) live within its means, (3) manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to bring these goals to life and become safer, better, faster, and leaner.



Strategic Objectives

In order to help ensure that TVA accomplishes its strategic goals, TVA is focusing on the following strategic objectives:

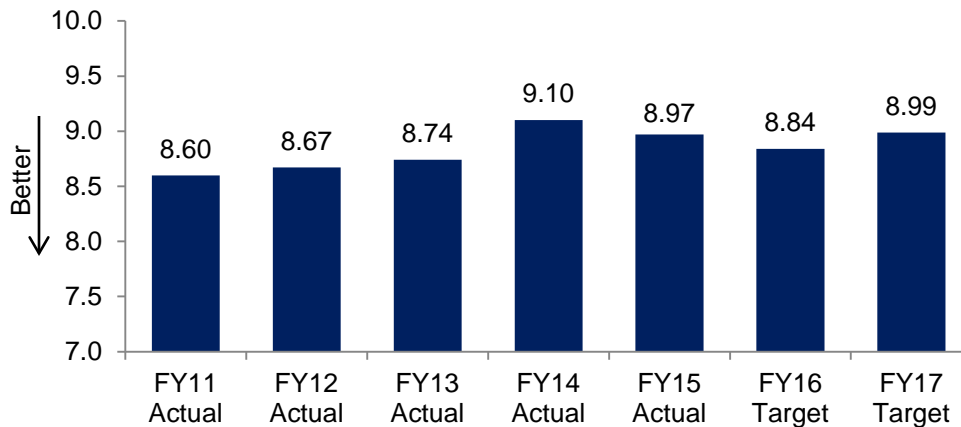
- Maintain low rates and align O&M spending with revenues
- Effectively manage debt to ensure long-term financial health
- Work safely and effectively
- Embrace continuous improvement
- Focus on values, competencies and behaviors
- Pursue operational excellence
- Integrate Watts Bar U1 & U2 for successful commercial operation
- Balance the portfolio to provide cleaner, efficient, and affordable energy
- Stimulate economic development and investment in the Tennessee Valley
- Strengthen customer loyalty and stakeholder relationships
- Maximize potential of the Tennessee River system
- Protect and improve the natural resources and the use and enjoyment of public lands

Performance Goals

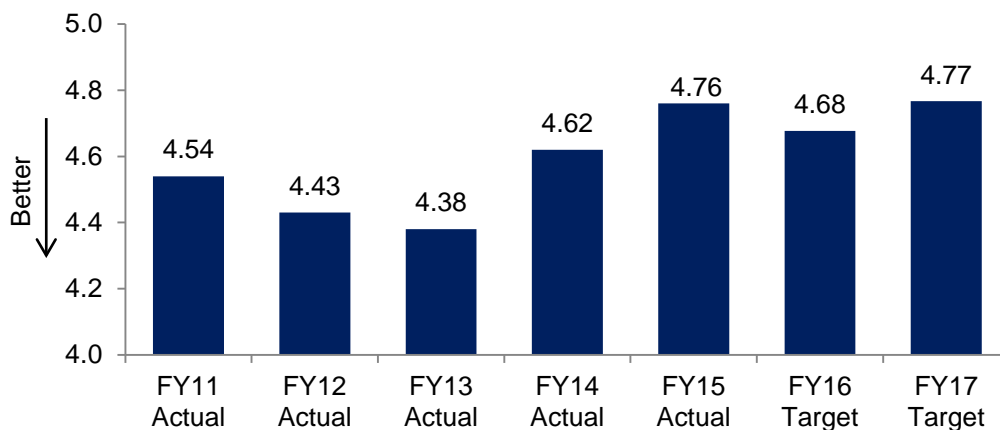
To help measure how effective TVA is in achieving its strategic objectives, TVA has established several performance goals. These performance goals include the following:

- Rates/Debt
 - Retail Rates
 - Wholesale Rate excluding Fuel
 - Operating Cash Flow
 - Net Income
 - Total Financing Obligations
- Asset Portfolio
 - Load Not Served
 - Coal Seasonal Equivalent Forced Outage Rate ("EFOR")
 - INPO Index
 - Combined Cycle Seasonal EFOR
 - Nuclear Unit Capability Factor
 - Energy Savings
- People/Stewardship
 - Recordable Incident Rate
 - CO₂ Emissions Rate
 - Reportable Environmental Events
 - Jobs Created and Retained

Each of these performance goals is described in more detail on the following pages.

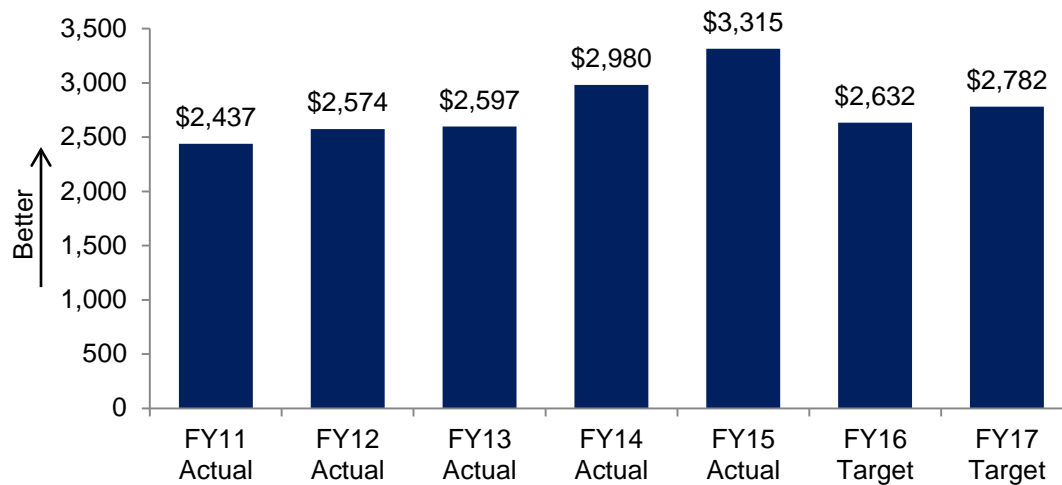
Rates/Debt**Retail Rates (cents/kWh) - 12 Month Rolling Avg**

Definition	Average of the previous twelve months' LPC reported retail power revenue and directly served power revenue divided by LPC reported retail power sales and directly served power sales
Calculation	$\frac{(\text{LPC reported retail power revenue} + \text{Directly served power revenue})}{(\text{LPC reported retail power sales} + \text{Directly served power sales})}$

Wholesale Rate excluding Fuel (cents/kWh)

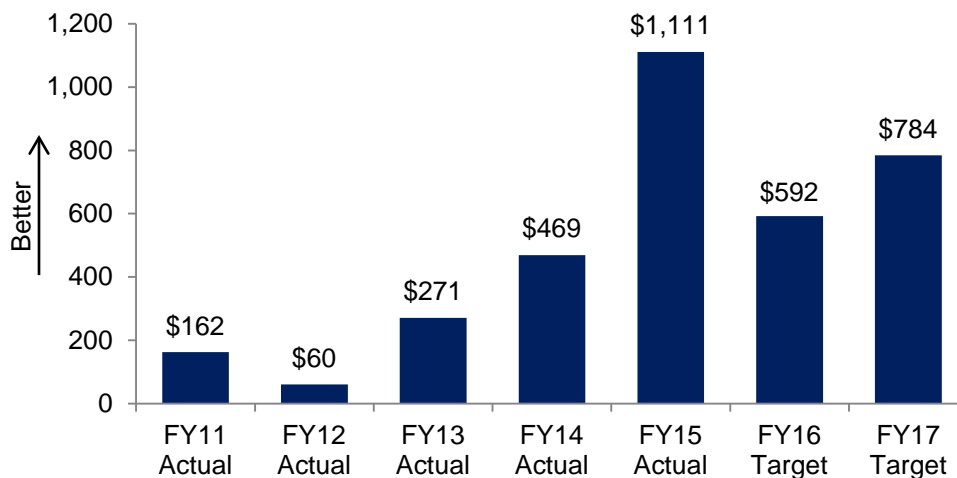
Definition	The Wholesale Rate excluding Fuel measure represents TVA's electric sales revenue excluding fuel divided by electric power sales.
Calculation	$\frac{\text{TVA's electric sales revenue excluding fuel}}{\text{TVA's electric power sales}}$

Operating Cash Flow (\$M)



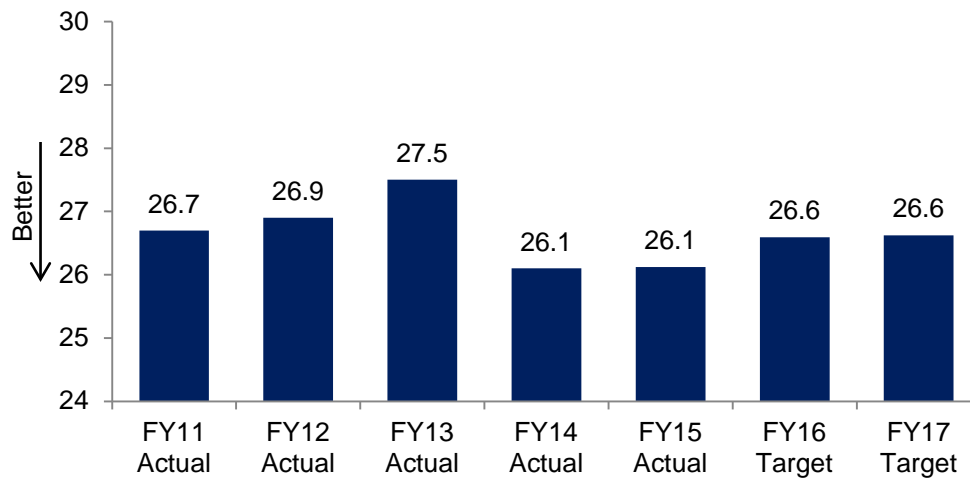
Definition	Operating Cash Flow refers to the amount of cash generated from power production and other mission-related activities and is generally defined as Operating Revenues received less cash payments made for Operating Expenses. This amount can be found on the Statement of Cash Flows under Cash Flow from Operating Activities.
Calculation	Net income +/- Non-cash items +/- Impact of changes in working capital +/- Other items

Net Income (\$M)



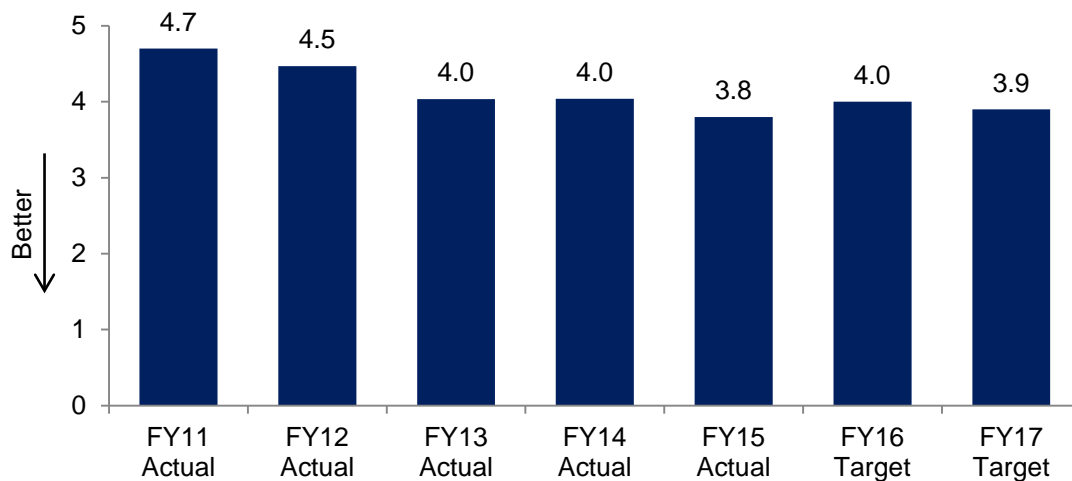
Definition	Net Income is an entity's net earnings derived by adjusting revenues for the cost of doing business, including cost of sales, depreciation, interest, taxes, and other expenses. This amount is shown on the bottom line of the Statement of Operations.
Calculation	Operating Revenues - Operating Expenses + Other Income/(Expense) - Net Interest Expense

Total Financing Obligations (\$B)

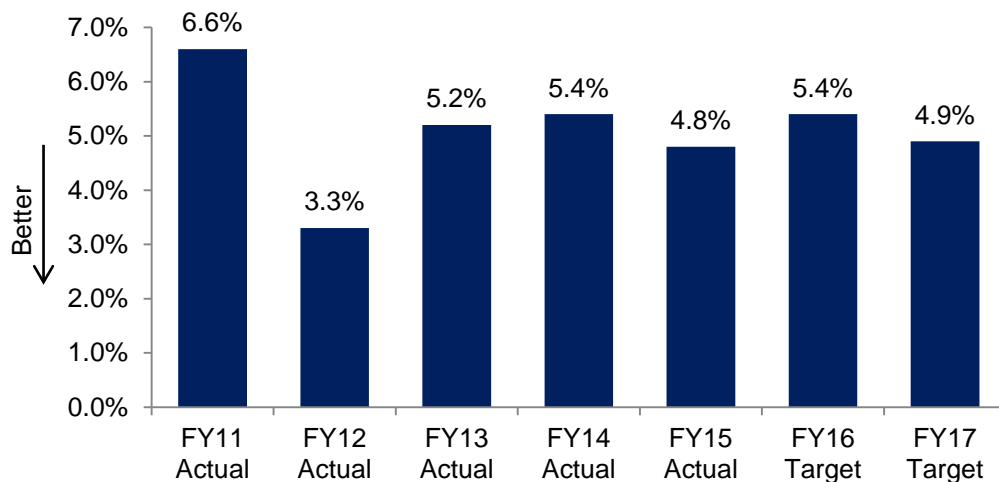


Definition	Total Financing Obligations ("TFOs") include all statutory debt and other financing obligations, as shown on TVA's balance sheet.
Calculation	Long-term Power Bonds + Short-Term Debt + Leaseback Obligations + Energy Prepayment Obligations + Debt of Variable Interest Entities ("VIE") + Membership Interests of VIE Subject to Mandatory Redemption

* See Appendix A for a calculation of TFOs utilizing financial statement line items reported in accordance with Generally Accepted Accounting Principles.

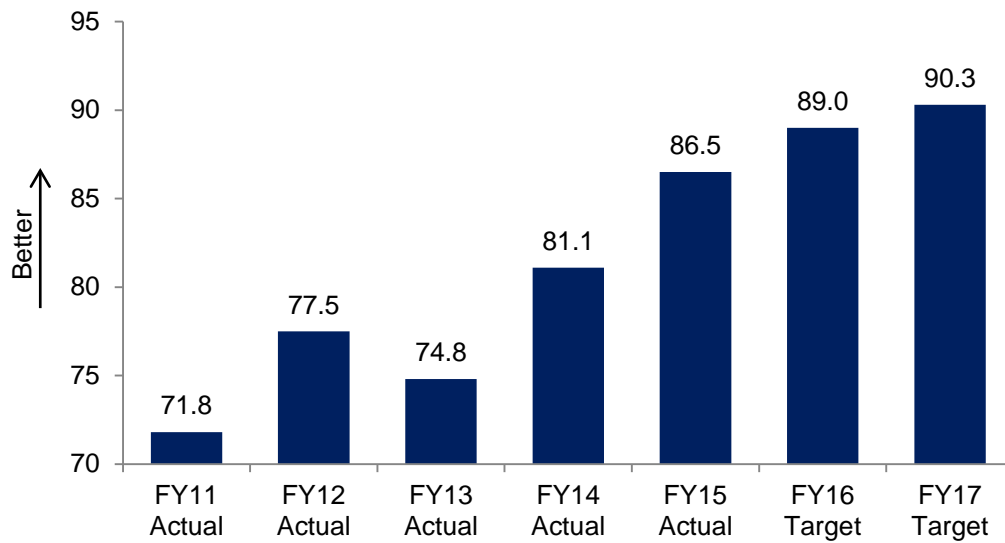
Asset Portfolio**Load Not Served (System Minutes)**

Definition	Load Not Served measures the magnitude and duration of transmission system outages that affect TVA customers. This measure is expressed in system minutes and excludes events during declared major storms.
Calculation	Percent of total load not served X Number of minutes in period

Coal Seasonal EFOR

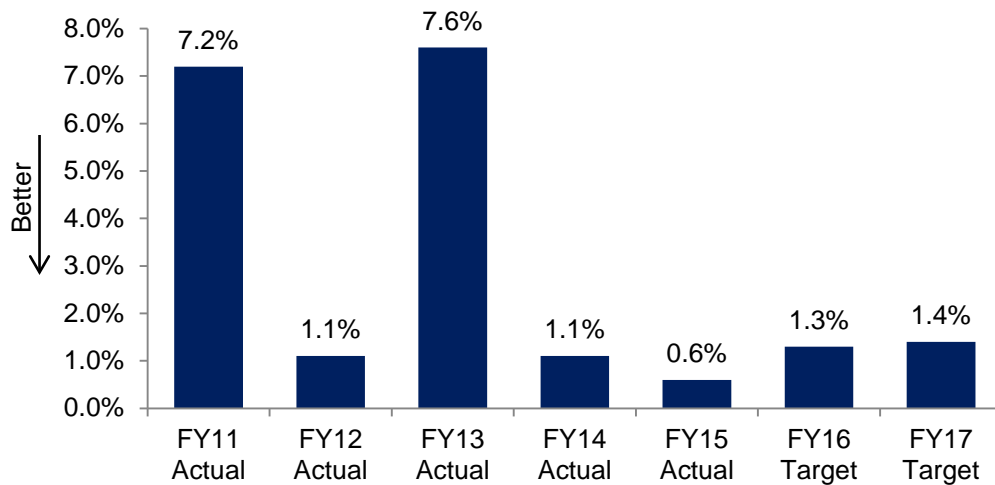
Definition	Coal Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December through March and June through September and includes the Allen, Cumberland, Gallatin, Kingston, Paradise, and Shawnee coal plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$\frac{((\text{FOH} \times \text{WNDC}) + \text{Forced MWhL})}{((\text{FOH} + \text{SH}) \times \text{WNDC})} \times 100$ <p> FOH = Forced Outage Hours SH = Service Hours WNDC = Winter Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating </p>

INPO Index



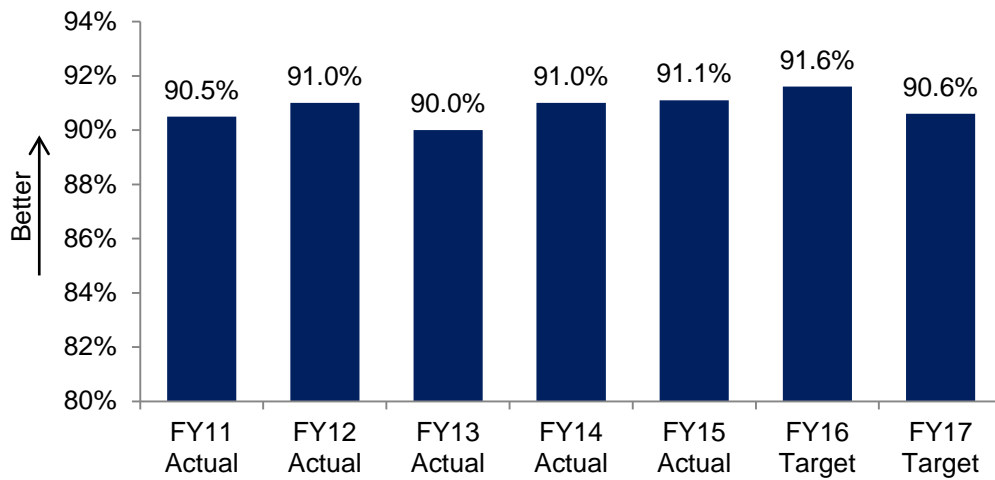
Definition	The INPO Index is a weighted combination of the Institute of Nuclear Power Operations' key performance indicators based on standard nuclear industry definitions for station performance.
Calculation	The INPO Index for each unit is calculated using a weighted combination of key performance indicators based on standard nuclear industry definitions, with the maximum obtainable being 100 points. TVA's fleet-level INPO Index is a simple average of the performance of each unit.

Combined Cycle Seasonal EFOR

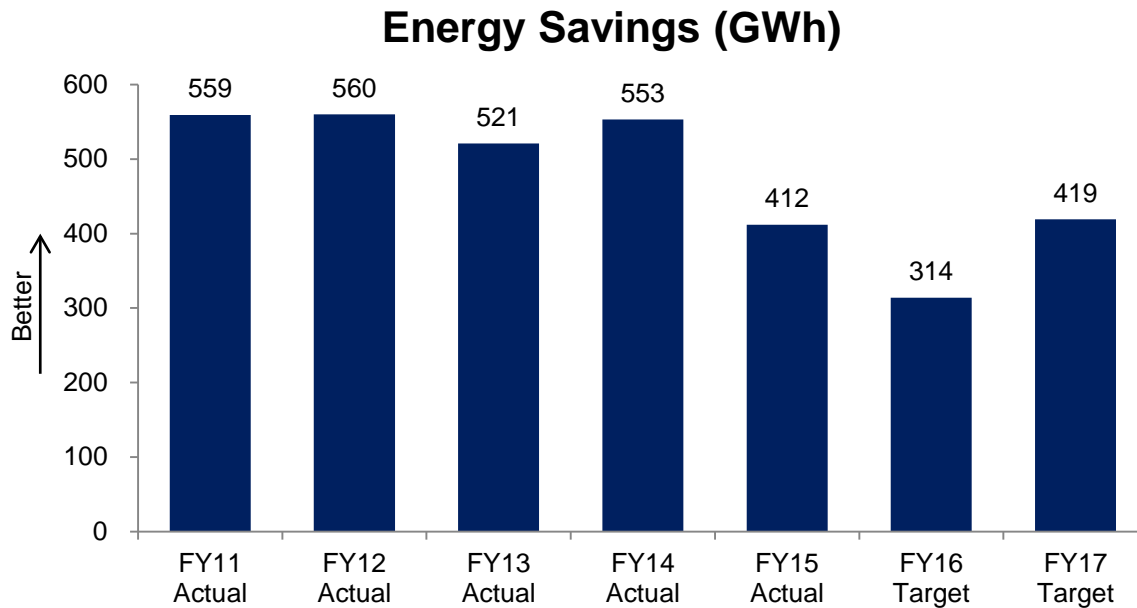


Definition	Combined Cycle Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December to March and June to September and includes Caledonia, John Sevier, Lagoon Creek, Magnolia, and Southaven combined cycle plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$((\text{FOH} \times \text{NDC}) + \text{Forced MWhL}) / ((\text{FOH} + \text{SH}) \times \text{NDC}) \times 100$ <p> FOH = Forced Outage Hours SH = Service Hours NDC = Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating </p>

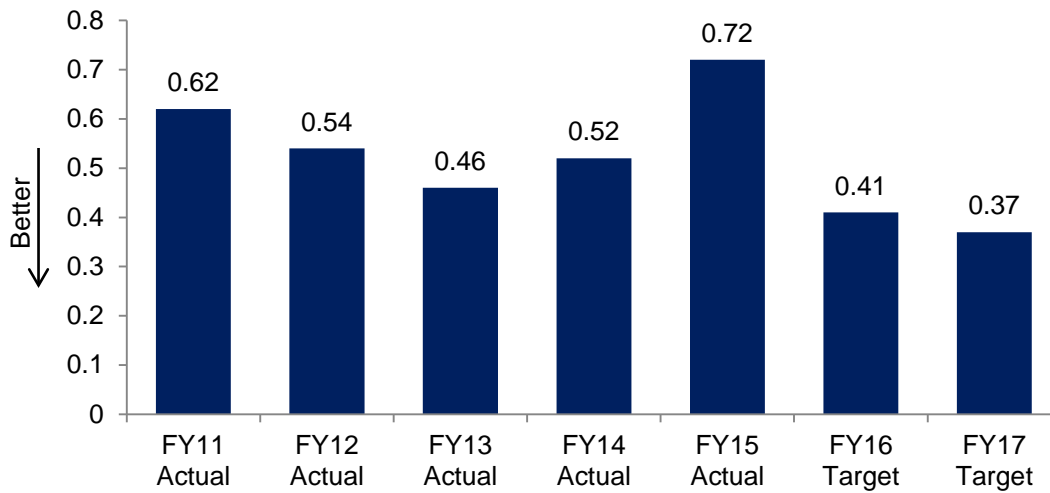
Nuclear Unit Capability Factor



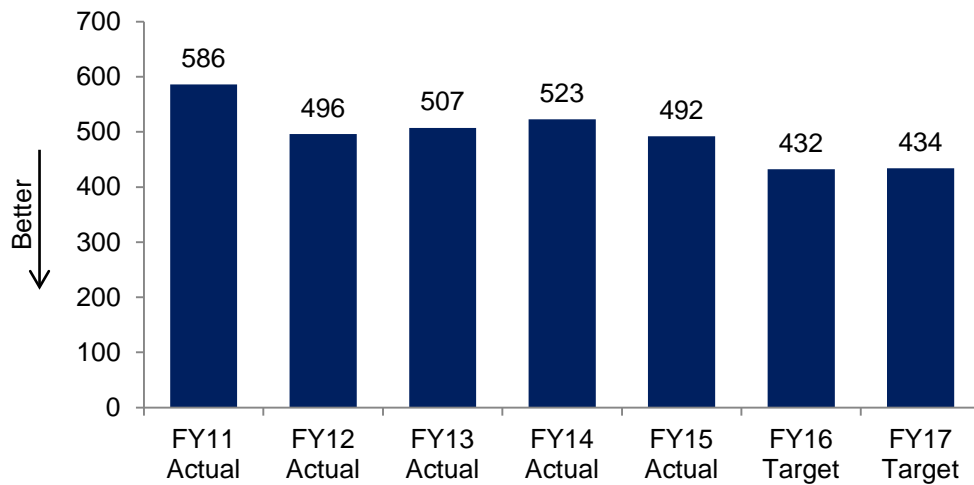
Definition	Nuclear Unit Capability Factor is the ratio of available energy generation over a given period of time to the reference energy generation over the same time period, expressed as a percentage.
Calculation	$[(REG - PEL - UEL - OEL) / REG] \times 100$ <p> REG = Reference Energy Generation PEL = Planned Losses UEL = Unplanned Losses OEL = Outage Extension Losses </p>



Definition	Energy efficiency savings measured in GWh from internally and externally focused programs, demonstrations, pricing products and structures supported or funded by TVA which promote the efficient use of electricity.
Calculation	$[(\text{Individual EnergyRight Solutions product kWh impacts}) \times (\text{Individual EnergyRight Solutions installations}) / 1,000,000] + [\text{kWh energy efficiency achieved by industrial and commercial projects} + \text{kWh energy efficiency impacts from demand response programs} + \text{kWh energy efficiency impacts achieved through information/outreach programs} + \text{kWh energy efficiency impacts achieved by wholesale and retail pricing products} + \text{kWh energy efficiency impacts from TVA facilities improvements} + \text{kWh energy efficiency impacts from TVA-supported loan funds administered by others} + \text{kWh energy efficiency impacts from state programs receiving TVA support} + \text{kWh energy efficiency impacts from other TVA initiatives}] / 1,000,000$

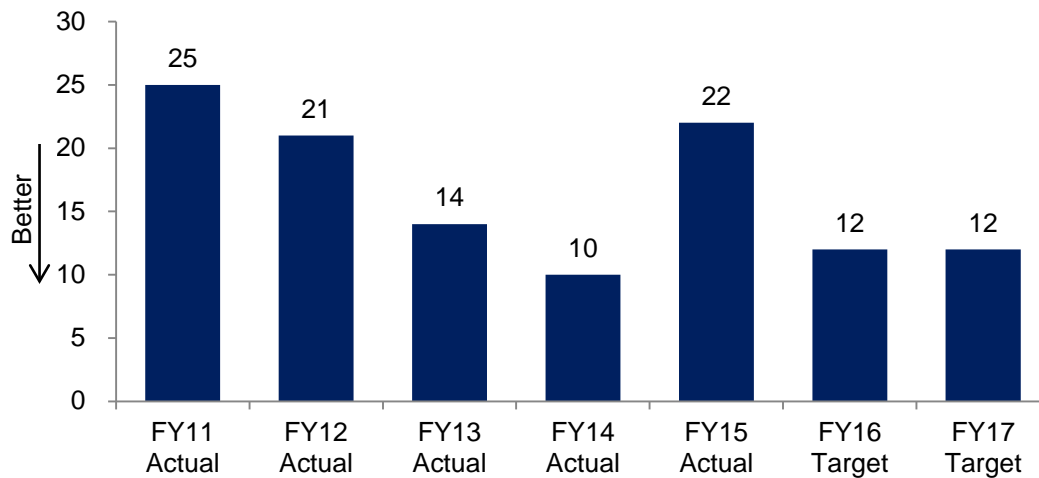
People/Stewardship**Safe Workplace (Recordable Incident Rate)**

Definition	The number of recordable injuries (as defined by TVA's safety program) per 200,000 employee-hours worked by TVA employees and staff augmentation contractors
Calculation	$(\text{Number of recordable injuries} \times 200,000) / (\text{Number of employee-hours worked})$

CO₂ Emissions Rate (tons/GWh)

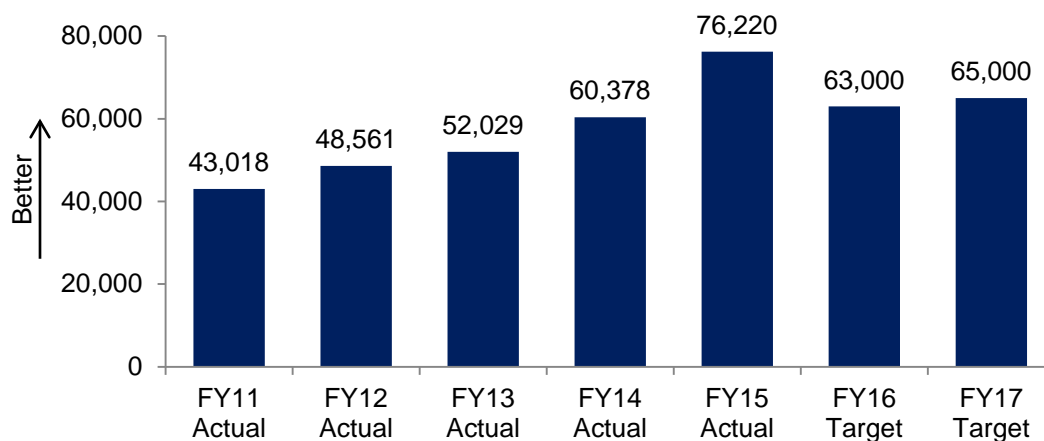
Definition	This measure reflects TVA's commitment to manage greenhouse gas emissions through efficient operation of its diverse generation mix.
Calculation	$\text{Tons of CO}_2 \text{ emissions} / \text{GWh of generation}$

Reportable Environmental Events



Definition	An environmental event at a TVA facility or elsewhere caused by TVA or TVA contractors that violates permit conditions or other regulatory requirements and triggers regulatory required oral or written notification to or enforcement action by a regulatory agency. Multiple parameters or multiple media/regulatory violations that result from the same root cause/event are counted as one reportable environmental event ("REE"). However, repeat occurrences count as separate REEs if they occur in a different reporting period. In cases where there is lag time between the event and receipt of a Notice of Violation ("NOV"), the receipt date for the NOV will be used as the date of the REE if the NOV has not previously been counted as a REE, and if the fiscal year reporting deadline for TVA-level environmental metrics has passed.
Calculation	Number of Reportable Environmental Events

Economic Development - Jobs Created & Retained



Definition	Jobs Created and Retained measures the number of new or retained jobs in the Tennessee Valley for which TVA has played a role in the recruitment or retention of the economic development project.
Calculation	Number of Jobs Created and Retained as reported through TVA channels

Other Information

Data Validation and Verification

Much of the data contained in this Performance Plan was derived from TVA's Annual Report on SEC Form 10-K for the year ended September 30, 2015 (the "Annual Report"). TVA filed the Annual Report with the SEC, and TVA's Chief Executive Officer and Chief Financial Officer certified the Annual Report in accordance with the requirements of the Sarbanes-Oxley Act. In addition, TVA's independent auditor, Ernst & Young LLP, audited the financial statements contained in the Annual Report.

TVA's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934 and required by Section 404 of the Sarbanes-Oxley Act. TVA's internal control over financial reporting is designed to provide reasonable, but not absolute, assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. Because of the inherent limitations in all control systems, internal controls over financial reporting and systems may not prevent or detect misstatements.

TVA's management, including the Chief Executive Officer, the Chief Financial Officer, and the Controller, evaluated the design and effectiveness of TVA's internal control over financial reporting as of September 30, 2015, based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, TVA's management concluded that TVA's internal control over financial reporting was effective as of September 30, 2015.

Although management's report on the effectiveness of internal control over financial reporting was not required to be subject to attestation by TVA's registered public accounting firm, TVA has chosen to obtain such a report. Ernst & Young LLP issued an attestation report on TVA's internal control over financial reporting as of September 30, 2015.

Lower-Priority Program Activities

TVA has determined that it does not have any lower-priority program activities for purposes of 31 U.S.C. § 1115(b)(10).

Hyperlinks

Hyperlinks to documents discussed in this Performance Report are set forth below:

Document	Hyperlink
Integrated Resource Plan	https://www.tva.com/Environment/Environmental-Stewardship/Integrated-Resource-Plan
Natural Resource Plan	https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan
Annual Report	http://www.snl.com/IRWebLinkX/docs.aspx?iid=4063363

Appendix A

Total Financing Obligations ("TFO") is a financial measure that, although commonly used, is not calculated and presented in accordance with Generally Accepted Accounting Principles ("GAAP"). TFO is measured by summing bonds and notes, gross, debt related to variable interest entities ("VIE"), leaseback obligations, energy prepayment obligations, and the membership interests issued in connection with the Southaven lease financing transaction. A calculation of TFO utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY							
Unaudited Reconciliation of Total Financing Obligations							
(in millions)							
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 Projected	FY 2017 Projected
Total Financing Obligations	\$ 26,659	\$ 26,912	\$ 27,473	\$ 26,071	\$ 26,120	\$ 26,594	\$ 26,623
Energy prepayment obligations	(717)	(611)	(510)	(410)	(310)	(210)	(110)
Leaseback obligations	(1,282)	(1,204)	(761)	(691)	(616)	(536)	(454)
Membership interests of VIE subject to mandatory redemption	-	-	(40)	(39)	(37)	(35)	(33)
Debt of VIE	-	(994)	(1,341)	(1,311)	(1,279)	(1,246)	(1,211)
Bonds and Notes, gross	24,660	24,103	24,821	23,620	23,878	24,567	24,815
Exchange loss (gain)	7	41	43	44	(21)	-	-
Unamortized discounts, premiums, and other	(236)	(60)	(85)	(88)	(107)	(123)	(122)
Debt of variable interest entities	-	994	1,341	1,311	1,279	1,246	1,211
Total outstanding debt	<u>\$ 24,431</u>	<u>\$ 25,078</u>	<u>\$ 26,120</u>	<u>\$ 24,887</u>	<u>\$ 25,029</u>	<u>\$ 25,690</u>	<u>\$ 25,904</u>

