Tennessee Valley Authority

Budget Proposal and Management Agenda

For the Fiscal Year Ending
September 30, 2013

Submitted to Congress
February 2012

Table of Contents

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 Partners^{SM} 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*	(662)	(640)	(576)
Total Operating Expenses	(10,404)	(10,373)	(10,300)
Operating Income	1,437	1,676	1,361
Other Income	30	16	13
Net Interest Expense	(1,305)	(1,378)	(1,557)
Net Income (loss)	$ 162	$ 314	$ (183)

**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 Actual	FY 2012 Estimate	FY 2013 Estimate
Operating Activities			
Net Income (loss)	$ 162	$ 314	$ (183)
Items not requiring cash	2,275	2,101	2,179
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	(9)	(100)	(148)
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**	(986)	(1,162)	(825)
Total Capital Projects	(2,853)	(3,286)	(3,145)
Other Sources (Requirements)	(416)	(153)	221
Total Cash Used in Capital Budget	(3,269)	(3,439)	(2,924)
Cash Payments to U.S. Treasury	(27)	(35)	(35)
Net Cash Available for Statutory Debt Reduction/ (Increase)	**$ (1,033)***	**$2,257**	**$(1,144)**
Reduction/ (Increase) in Debt and Alternative Financing Obligations	**$ (859)***	**$ (1,059)**	**$ (963)**

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 (SO_2) 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 SO_2 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 Partners[SM] 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.

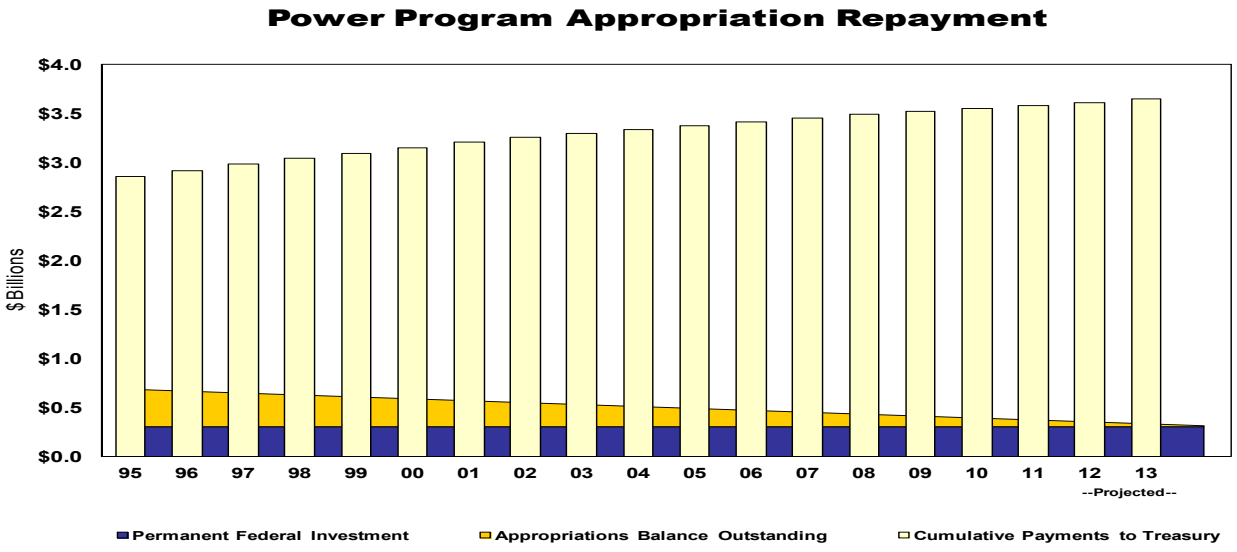
The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide funds for operation, maintenance and administration of its power system and additional margin as the TVA Board may consider desirable for investment in power system assets, retirement of outstanding 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

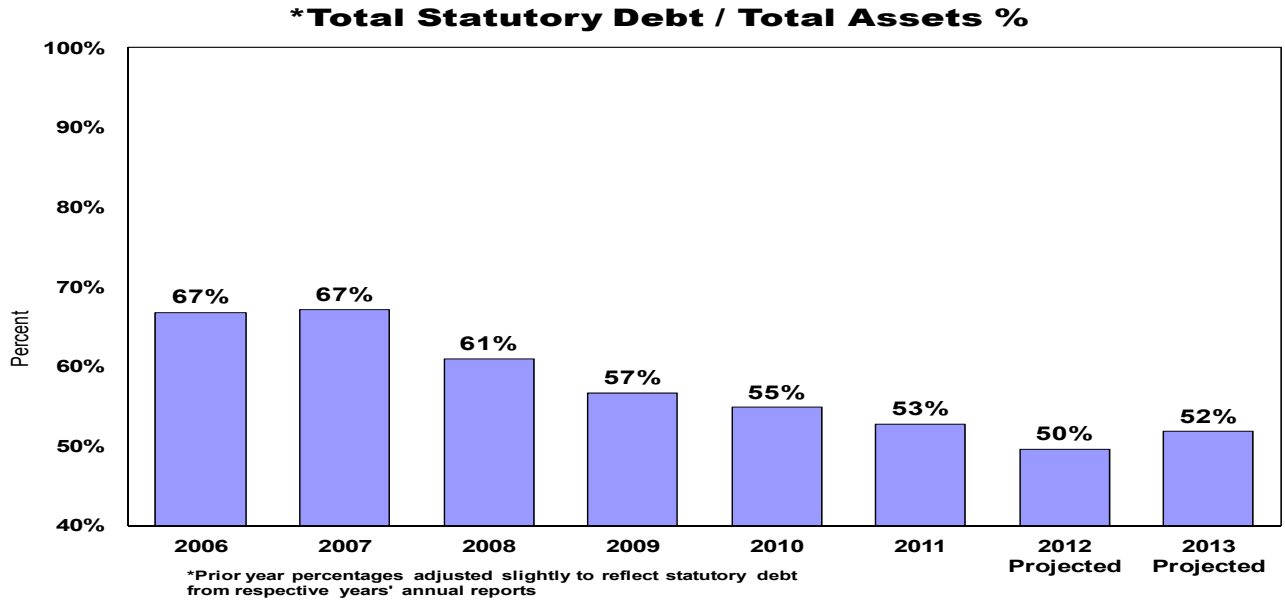
These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets.

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.

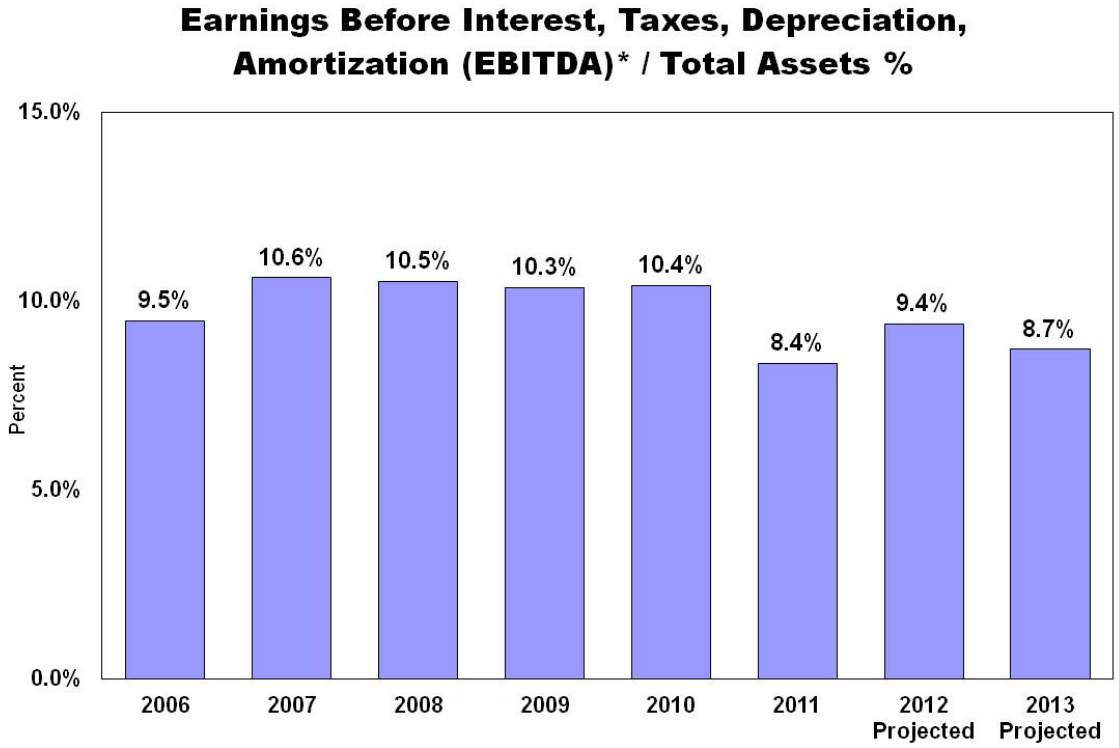


These actions will allow TVA to maintain a balance of financing obligations that is manageable and commensurate with its level of assets. Along with the debt service coverage ratio, TVA will track its financial health by measuring total statutory debt as a percent of total assets.



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

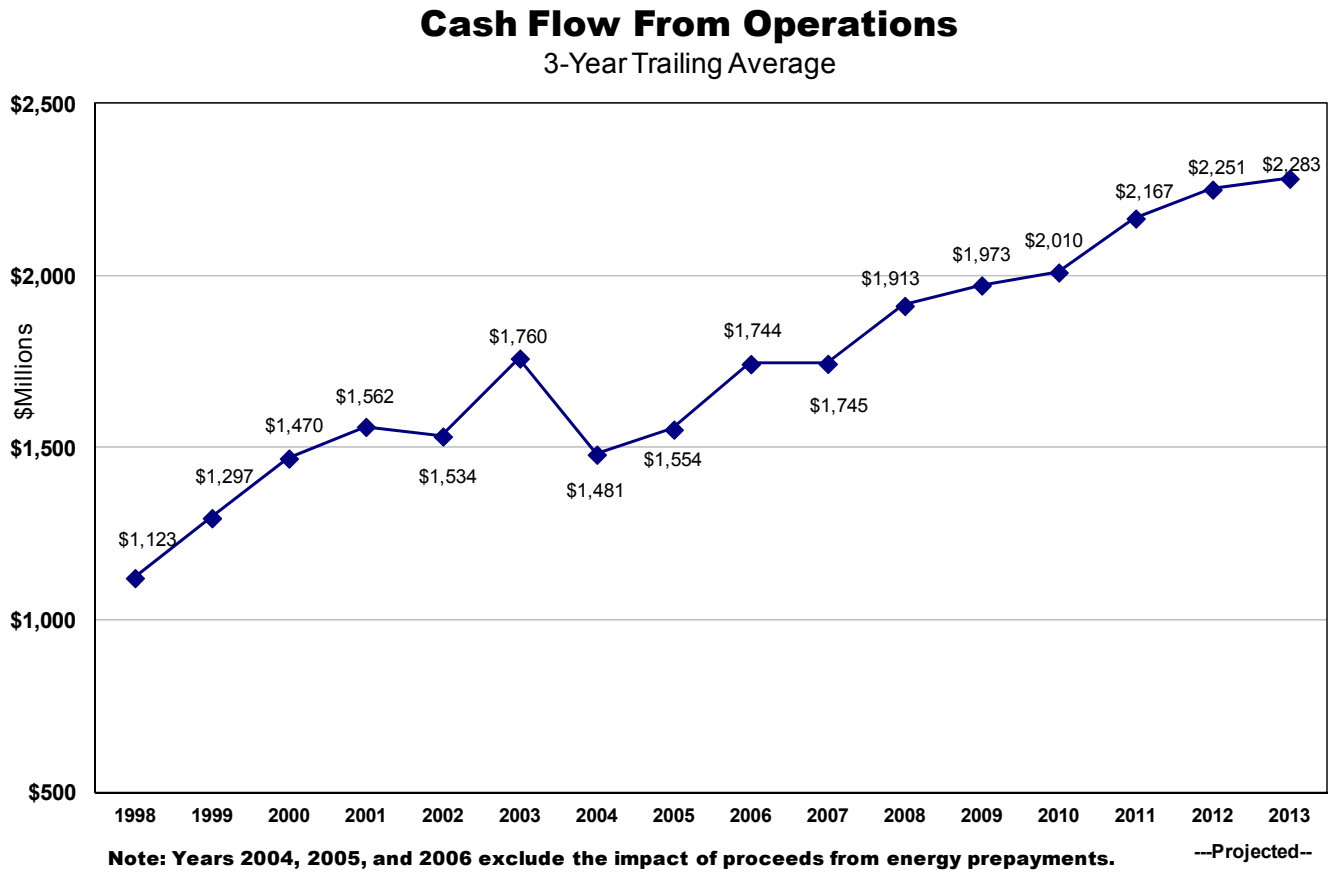
In addition to sound criteria for new investments, improving non-fuel Operating and Maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of Earnings before Taxes, Interest, and Depreciation 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.



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

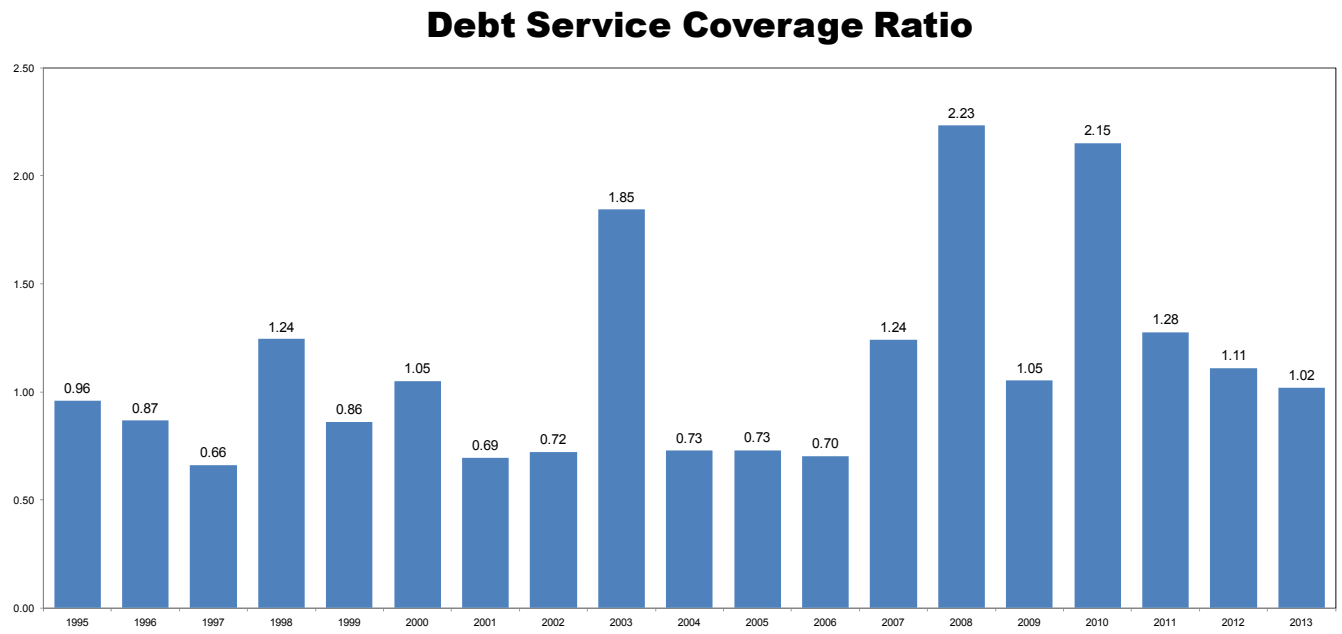
Cash Flow from Operations (3-Year Trailing Average)

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.



Debt Service Coverage Ratio

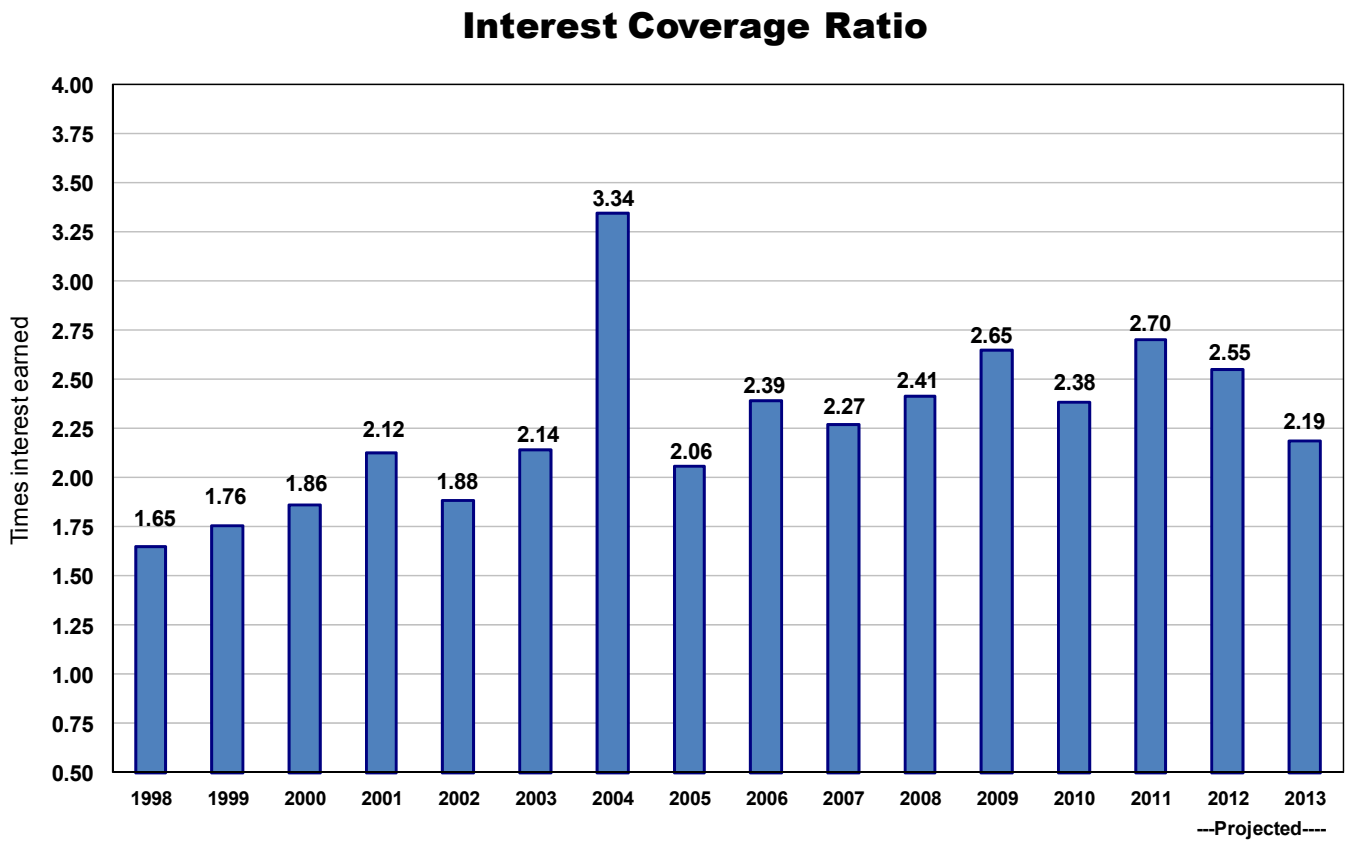
Measured by dividing Net Operating Income by Total Debt Service, the Debt Service Coverage Ratio (DSCR) describes TVA's ability to cover interest payments and current maturities of long-term debt and leaseback obligations. TVA's annual DSCR varies significantly due to TVA's use of mostly bullet maturity 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.



Interest Coverage Ratio

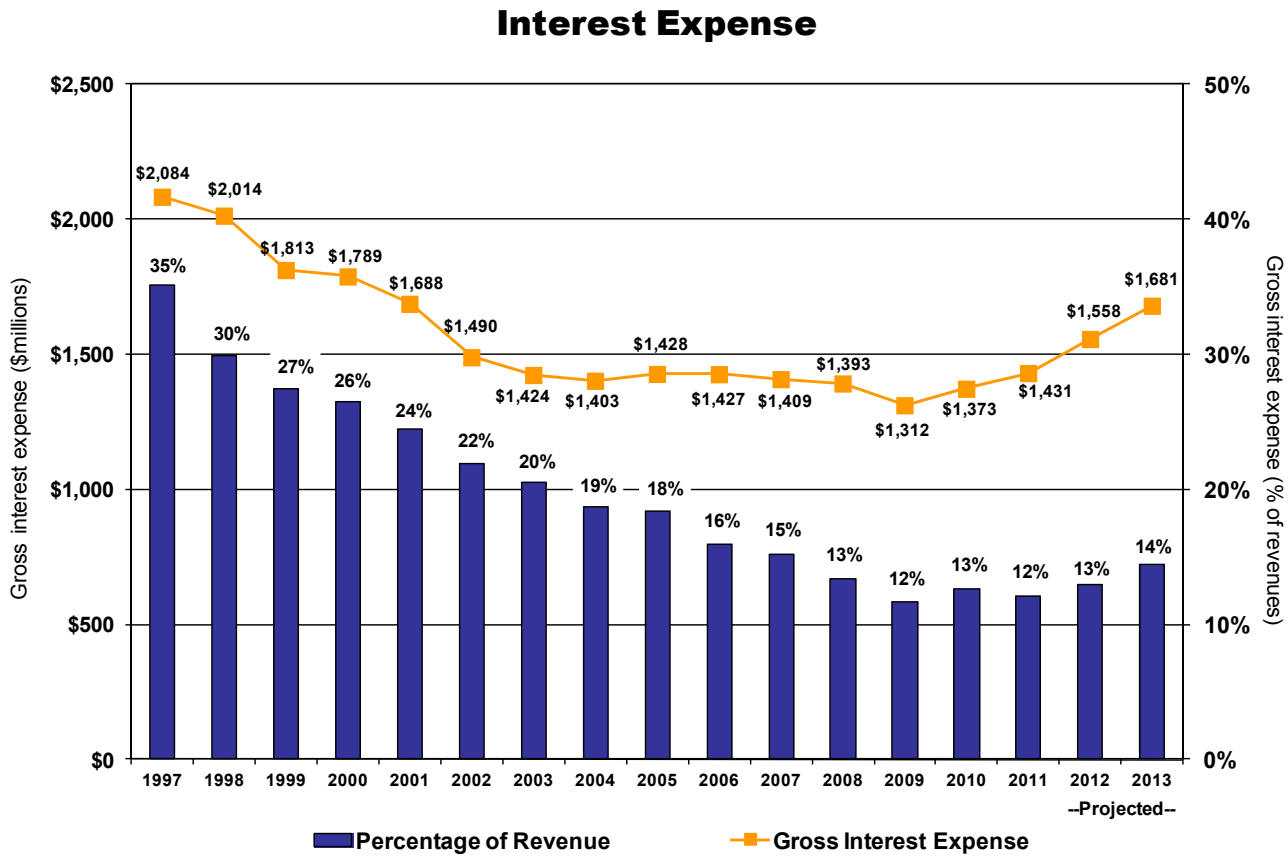
TVA's ability to pay the interest on its bonds and notes, measured by the degree to which cash flows from operations covers interest obligations, has also improved over the past several years.

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.



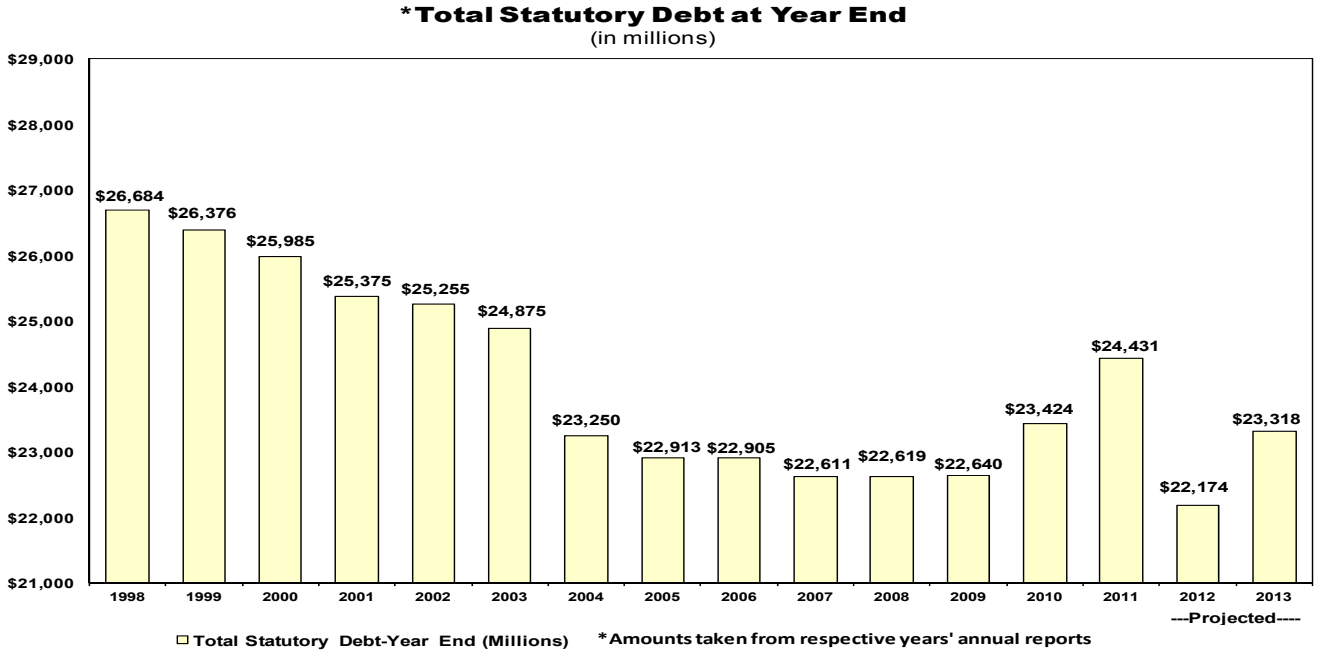
Interest Expense

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.

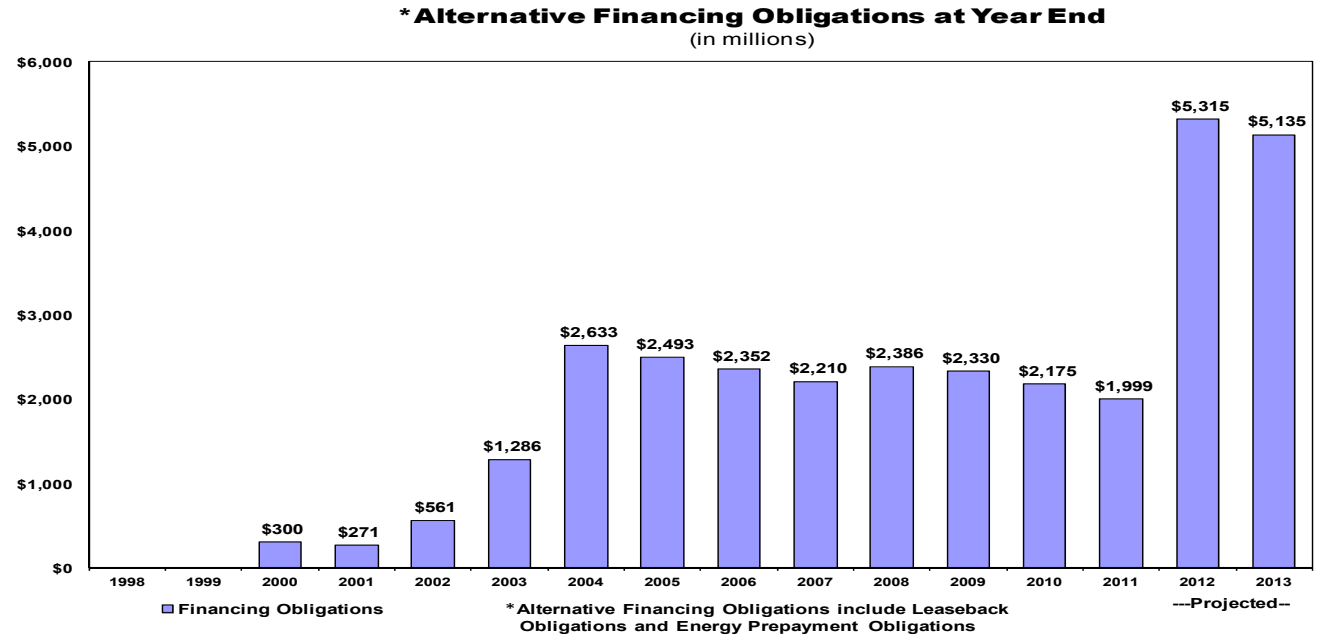


Total Financing Balance

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.



The increase in FY 2012 alternative financing obligations is driven by anticipated alternative financing on assets such 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.



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

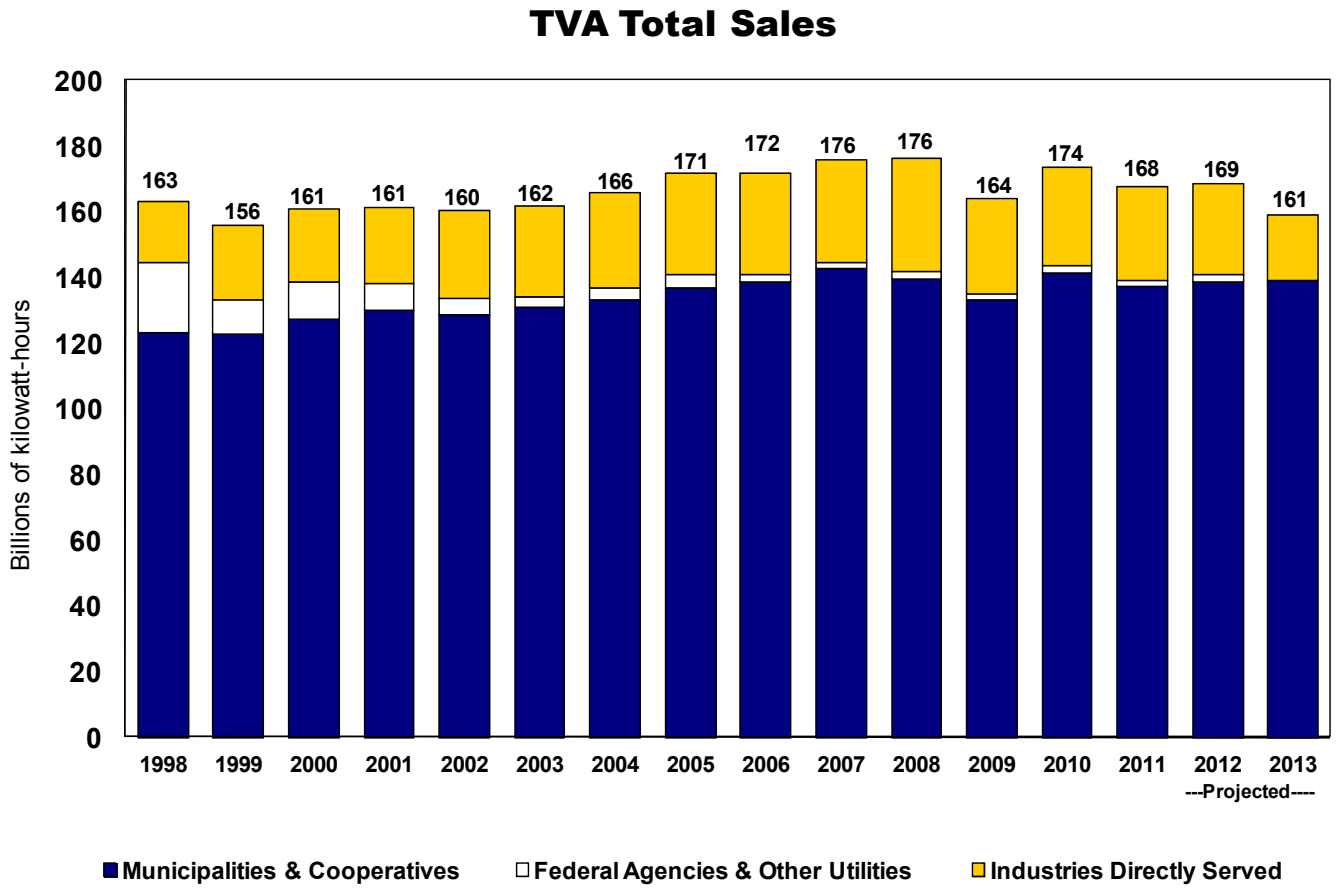
Power Sales and Revenue

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.



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

Summer net capability (MW) at September 30, 2011

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*	**48**	**<1%**
Capacity**	**37,300**	**100%**

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

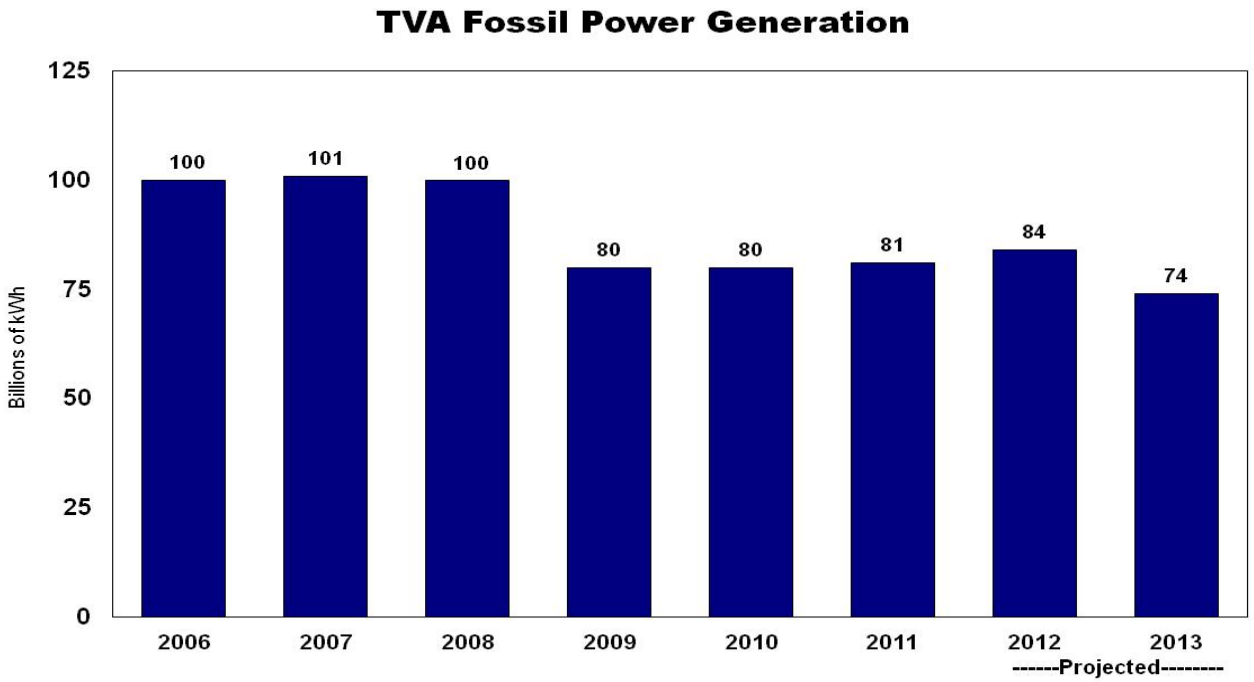
***Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP. Hydro capacity represented includes pumped-storage.*

Operational Performance

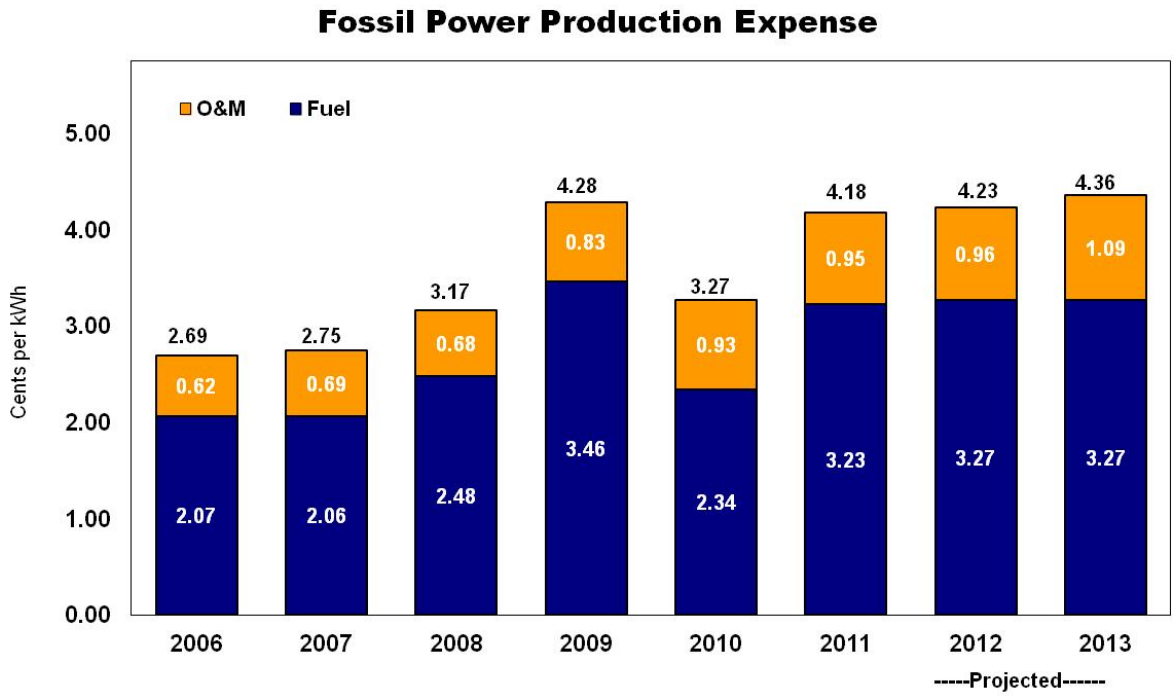
Fossil Power Highlights

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.

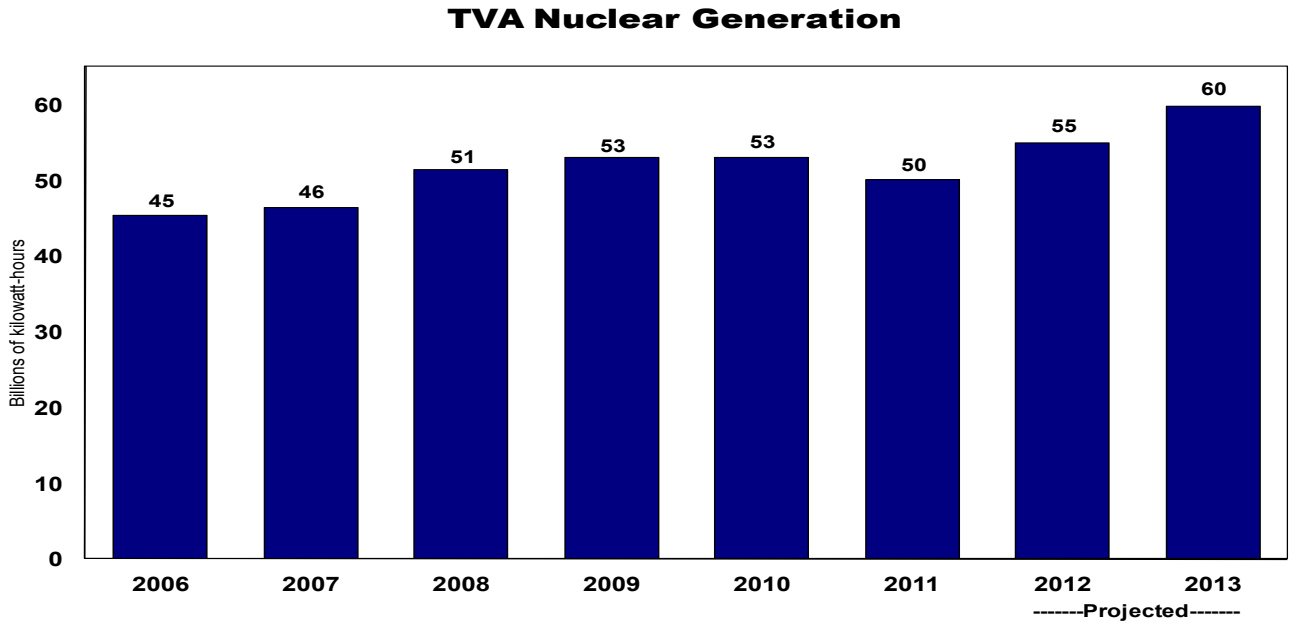


Production expense per kilowatt-hour is expected to increase from FY 2011 to FY 2012 due to increased fuel costs related to higher fossil generation. In FY 2013, production expense per kilowatt-hour is expected to increase slightly from FY 2012. The costs increase is due to higher operation and maintenance 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.

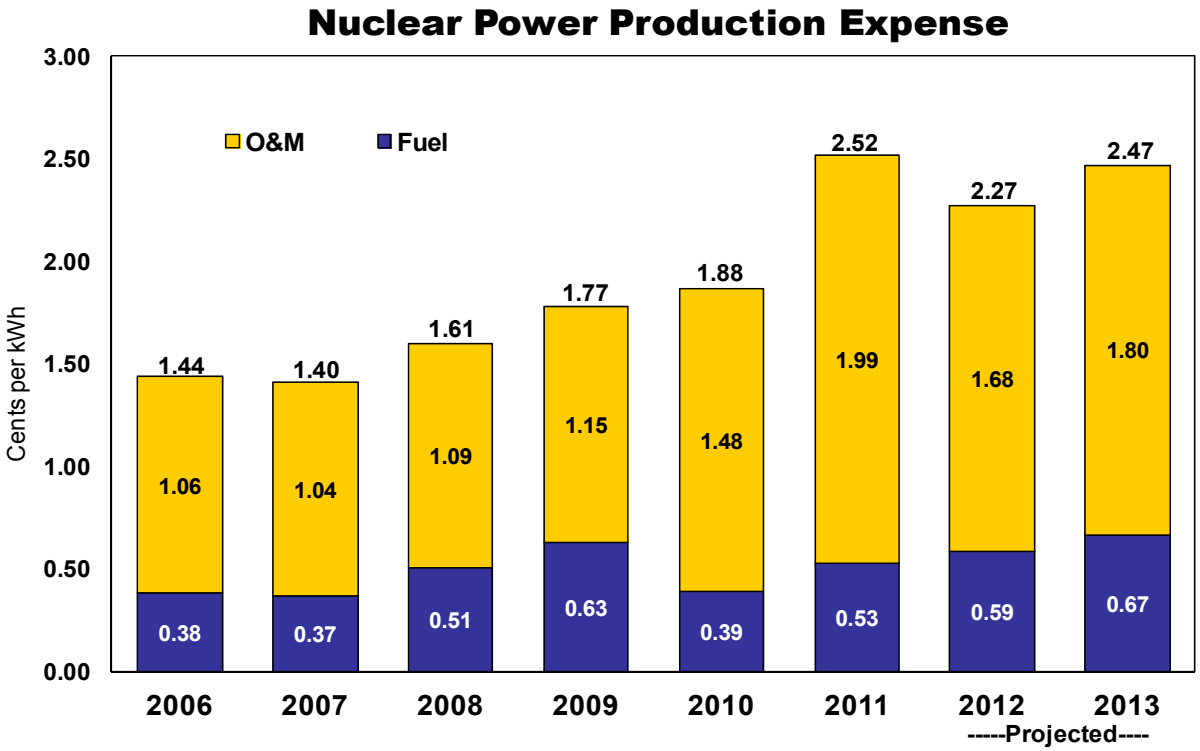


Nuclear Power Group Highlights

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'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.

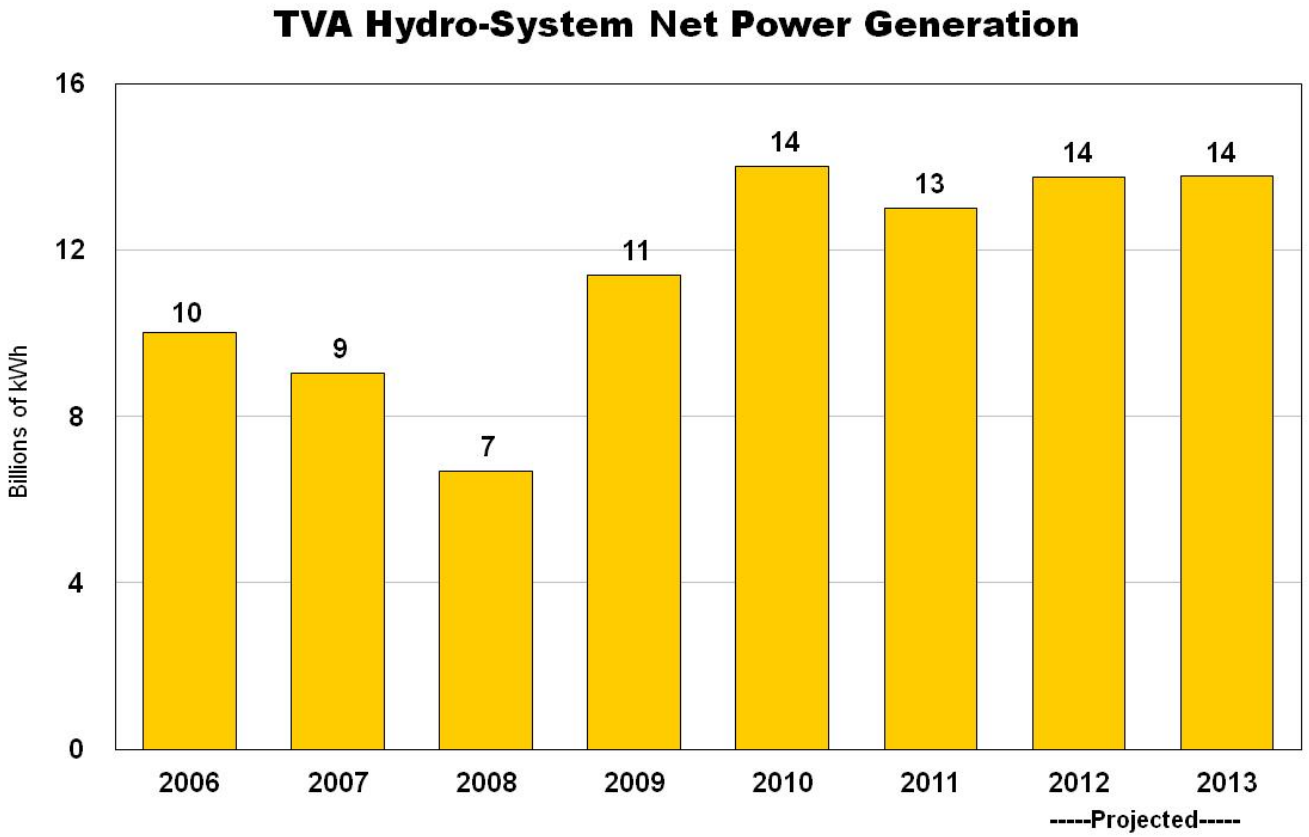


Hydroelectric Power Highlights

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.

.

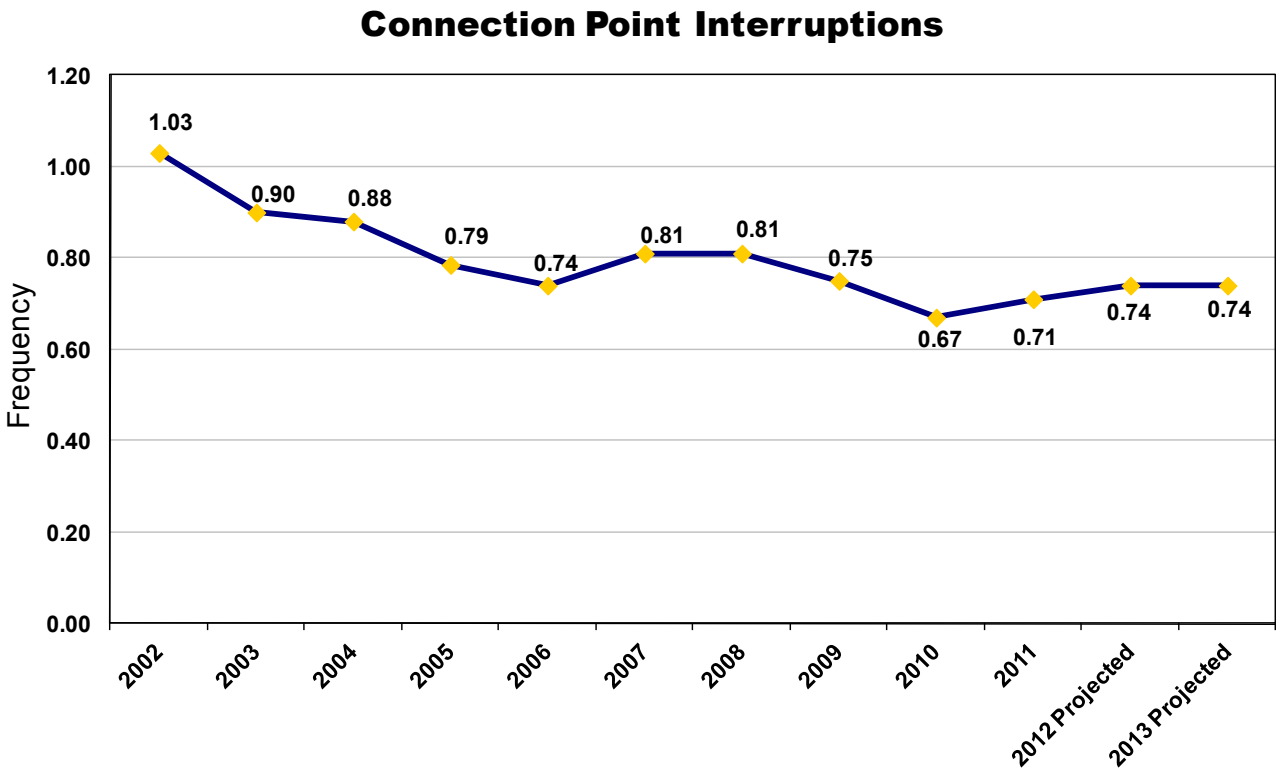


TVA Transmission Highlights

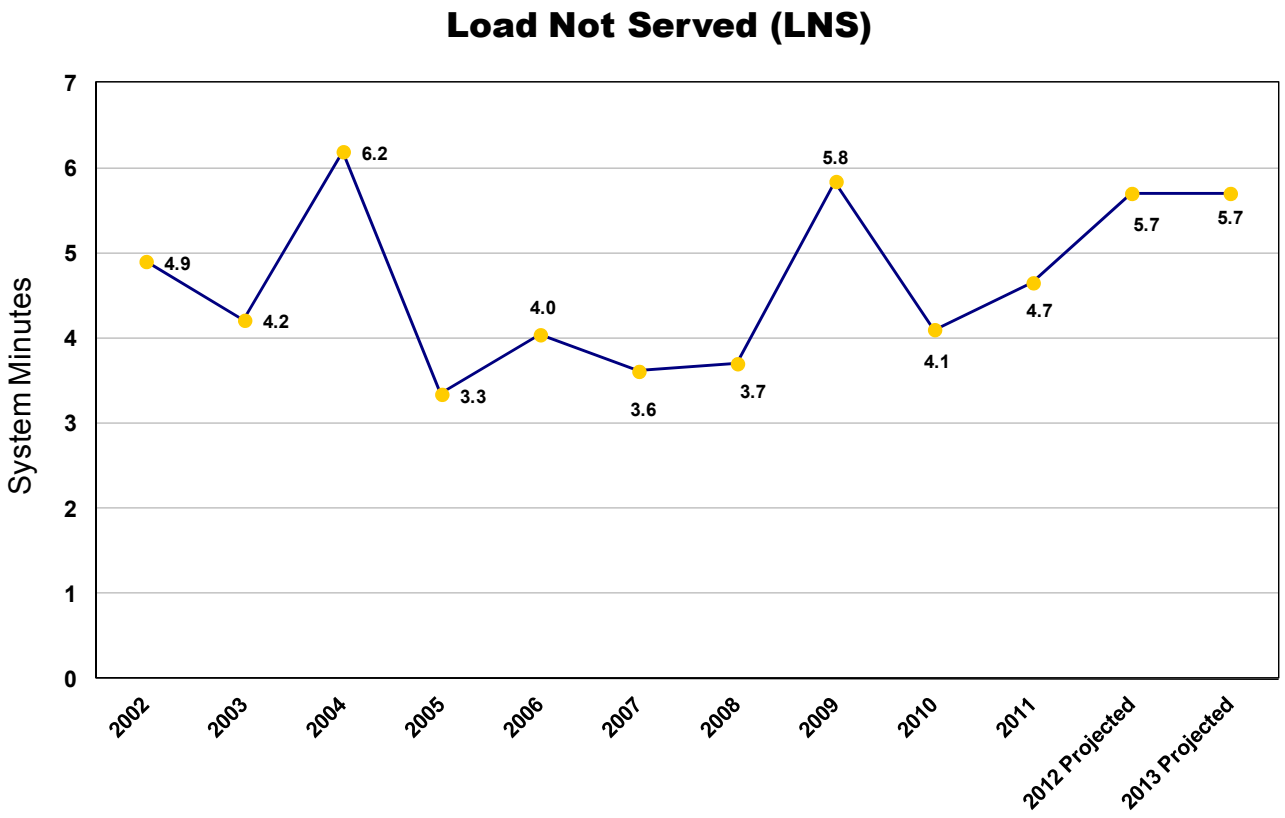
The TVA transmission system, one of the largest in North America, delivered approximately 168 billion kilowatt-hours of electricity sales in FY 2011 and over the past twelve years maintained 99.999 percent reliability for delivering electricity to its local power distributors and directly served large 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.



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.



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 SO_2 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, NOx, 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 SO_2 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 Severcorr (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 (SO_2) 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.

Table of Contents

Section **Page**

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:

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

(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 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:

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

(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:

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

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:

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

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

Calculation:

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

(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:

(Cash Flow from Operations) + (Investing Cash Flow) -
(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, NOx, 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:

Clean energy capacity / 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:

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

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

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 Organization[1] 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	$ 3,253	$ 3,579	$ 3,908	$ 4,140	$ 4,447	$ 3,901	$ 4,181	$ 3,909

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	1,680
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