

Tennessee Valley Authority

Budget Proposal and Management Agenda (Performance Report)



For the Fiscal Year Ending
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Introduction

TVA's Mission and Vision

TVA was built for the people, created by Congress in 1933 and charged with a unique mission – to improve the quality of life in a seven-state region through the integrated management of the region's resources. As it helped lift the Tennessee Valley out of the Great Depression, TVA built dams for flood control, provided low-cost power and commercial shipping, restored depleted lands, and raised the standard of living across the region. As times have changed, TVA has changed with them by updating and refining its work to accomplish its mission of providing affordable electricity, economic and agricultural development, environmental stewardship, integrated river system management, and technological innovation. While TVA's mission has not changed since it was established in 1933, the environment in which TVA operates continues to evolve. The business and economic environment has become more challenging, and demand for power and related revenues have decreased due to customer usage and increased energy efficiency and demand response."

Rates

TVA is committed to providing all of its customers power at the lowest feasible rates. This customer focus requires scrutiny of all projects and use of resources so that the organization operates as efficiently and responsibly as possible. TVA is focused on managing rates and funding capital projects through rates with less debt financing.

Asset Portfolio

Balancing TVA's asset portfolio is vital as many of its facilities are increasing in age. In 2011, the TVA Board of Directors ("Board" or "TVA Board") accepted the Integrated Resource Plan ("IRP"), which recommends a strategic direction focusing on a diverse mix of electricity generation sources, including nuclear power, renewable energy, and natural gas, as well as traditional coal and hydroelectric power. TVA is increasing its low or no emission generation. TVA considers fuel mix in making decisions about generation, and is expected to rely on nuclear, natural gas-fired capacity and energy efficiency as the primary means to meet future electricity needs. TVA began a refreshed version of the IRP in the fall of 2013. The new report is expected to be published in 2015.

Debt

TVA is committed to long-term debt reduction through employing a conservative approach as it relates to capital projects and payback to bondholders. While the need for financing continues to be necessary, the organization is committed to managing its debt under the ceiling established by Congress.

Stewardship

TVA's responsibility for stewardship of the waters and public lands of the Tennessee Valley was established in the TVA Act. These responsibilities include flood control, improved navigation of the Tennessee River, land and shoreline management as well as agricultural and industrial development. TVA is committed to increasing its role in many of these areas as activities are planned for dam safety and reservoir operation enhancements, stabilization of eroding shorelines and the redevelopment of Muscle Shoals properties. This redevelopment is expected to improve public relations, enhance marketability and reduce the maintenance cost of ownership.

From 1977 to 2013, TVA spent approximately \$5.6 billion on controls to reduce emissions from its coal-fired power plants. In addition, TVA has reduced emissions by retiring or idling coal-fired units and relying more on cleaner energy resources including renewables, natural gas and nuclear generation.

SO₂ Emissions. To reduce SO₂ emissions, TVA has installed scrubbers on 17 of its coal-fired units, and switched to lower-sulfur coals at 41 coal-fired units. In August 2011, the TVA Board approved adding scrubbers to 4 units at Gallatin Fossil Plant ("Gallatin") subject to completing appropriate environmental reviews. Additionally, TVA recently upgraded the scrubbers for Paradise Units 1 and 2 to further reduce SO₂ emissions.

NO_x Emissions. To reduce NO_x emissions, TVA installed selective catalytic reduction systems ("SCRs") on 21 coal-fired units, installed selective non-catalytic reduction systems on 2 coal-fired units (although TVA is no longer operating one of these systems because of technical challenges), installed High Energy Reagent Technology systems on 7 coal-fired units, installed low-NO_x burners or low-NO_x combustion systems on 46 coal-fired units, optimized combustion on 12 coal-fired units, and began operating NO_x control equipment year round when units are operating (except during startup, shutdown, and maintenance periods) starting in October 2008. In addition, in August 2011, the TVA Board approved adding SCRs to 4 units at Gallatin subject to completing appropriate environmental reviews. TVA has SCRs operating on all 5 gas-fired combined cycle combustion turbine plants to reduce NO_x emissions.

Particulate Emissions. To reduce particulate emissions, TVA has equipped all of its coal-fired units with scrubbers, mechanical collectors, electrostatic precipitators, and/or bag houses.

Primarily due to the actions described above, fiscal year (“FY”) 2012 emissions of NO_x and SO₂ on the TVA system were 90 percent below peak 1995 levels and 94 percent below FY 1977 levels, respectively. These controls also have provided a co-benefit of reducing hazardous air pollutants, including mercury, at some units.

Executive Summary

Power Program

TVA is a corporate agency of the United States government that was created in 1933 by legislation enacted by the U.S. Congress. TVA operates the nation’s largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of over 9 million people. TVA has not received appropriated funds from the federal government for its power program since 1959 although appropriated funds for its nonpower and multi-purpose programs continued through 1999. Additionally, TVA makes annual payments to the U.S. Treasury as a return of and a return on the government’s original \$1.4 billion appropriation investment in the power program. Through FY 2014, TVA expects to have paid approximately \$3.67 billion as a return of and return on this investment.

TVA now funds all of its operations almost entirely from the sale of electricity and power system financings. TVA’s power system financings consist primarily of the sale of debt securities and secondarily of alternative forms of financing such as lease arrangements.

TVA is primarily a wholesaler of power. It sells power to Local Power Company Customers (“LPCs”) which then resell power to their customers at retail rates. TVA’s LPCs consist of (1) municipalities and other local government entities (“municipalities”) and (2) customer-owned entities (“cooperatives”). These municipalities and cooperatives operate public power electric systems that are not doing business for profit but are operated primarily for the purpose of supplying electricity to the general public or members. TVA also sells power to directly served customers, consisting primarily of federal agencies and industrial customers with large or unusual loads. In addition, power that exceeds the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with other electric systems.

Power generating facilities operated by TVA at September 30, 2013, included 29 conventional hydroelectric sites, a pumped-storage hydroelectric site, 10 coal-fired sites, 3 nuclear sites, 14 natural gas and/or oil-fired sites, and a diesel generator site, although certain of these facilities were out of service as of September 30, 2013. In FY 2015, TVA expects sales of about 154 billion kilowatt-hours (“kWh”) of electricity. TVA’s renewable energy program, Green Power Switch, includes 16 solar energy sites, digester gas co-firing capacity at a coal-fired site, biomass co-firing potential (located at coal-fired sites), and a wind energy site (out of service).

As of September 30, 2013, TVA’s coal-fired units had 12,901 MW of net summer capability. The 10 coal-fired plants generated about 43 percent of the power from TVA-operated facilities during FY 2013. TVA’s system also includes 98 generators powered by natural gas and/or oil-fired units with a total net summer capability of 9,242 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided 9 percent of the power from TVA-operated facilities in FY 2013.

The 6 nuclear units have a combined net summer capability of 6,724 MW and generated 36 percent of the power from TVA-operated facilities in FY 2013.

TVA-owned hydroelectric units have a combined net summer capability of 5,433 MW and generated about 12 percent of the power from TVA-operated facilities in FY 2013.

Integrated Resource Plan

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

The 2011 IRP study, entitled *TVA’s Energy and Environmental Future*, supports TVA’s comprehensive mission, which includes providing the region with an affordable, reliable, environmentally sustainable supply of electricity. The power

supply plans evaluated in this study identified the most likely new resources needed to satisfy expected energy demand in the region during a 20-year planning horizon under various scenarios of the future. The resulting recommended planning direction is consistent with TVA's Environmental Policy and fully supports TVA's vision.

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

Beginning in the fall of 2013, TVA began a refresh of the 2011 IRP. The new report is expected to be published in 2015.

Transmission System

The 2,471 miles of 500 kilovolt lines in TVA's 16,111 mile transmission system are a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

The TVA transmission system is one of the largest in North America. TVA's transmission system has 68 interconnections with 12 neighboring electric systems, and delivered nearly 165 billion kWh of electricity to TVA customers in FY 2013. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 14 years in delivering electricity to customers.

TVA's transmission system interconnects with systems of surrounding utilities and consisted primarily of the following assets at September 30, 2013:

- 513 transmission substations, power switchyards, and switching stations
- 1,278 customer connection points (customer, generation, and interconnection)

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of reservoir shoreline, approximately 293,000 acres of reservoir land, and 49 reservoirs encompassing approximately 650,000 surface acres of reservoir water used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In addition, TVA manages over 170 agreements for commercial recreation (such as campgrounds and marinas) and is responsible for over 80 public recreation areas throughout the Tennessee Valley. In accordance with its 2008 Environmental Policy, the TVA Board of Directors accepted the Natural Resource Plan ("NRP") to guide TVA's cultural and natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation and water resources, as well as biological and cultural resources on TVA lands and reservoirs, lands planning and public engagement. The NRP will be reviewed and updated approximately every 5 years.

Tennessee River System

Approximately 42,000 miles of rivers, streams and tributaries, including the 652-mile-long Tennessee River, and the 49 dams and 14 navigation locks are a vital part of the nation's inland waterway system, transporting more than 50 million tons of cargo annually. In addition to supporting commercial navigation, TVA's integrated management of the river system supports recreation, public and industrial water supply needs, aquatic habitat protection, flood risk reduction, hydroelectric power production, and cooling water for TVA's generation units. The watersheds of the Tennessee River and its 16 tributaries encompass more than 41,000 square miles across 125 counties in portions of seven states.

Economic Development

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development, along with energy production and environmental stewardship, is one of the core missions of TVA. TVA works with LPCs, regional, state, and local agencies and communities to showcase the advantages available to businesses locating or expanding in TVA's service area. TVA's primary economic development goals are to recruit major business operations to locate in the Tennessee Valley, encourage the location and expansion of companies that provide quality jobs, prepare communities in the Tennessee Valley for economic growth and offer support to help grow and sustain small businesses. TVA seeks to meet these goals through a combination of initiatives and partnerships designed to provide program support, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 170

companies into the TVA service area during FY 2013. These companies announced capital investments of approximately \$5.0 billion and the expected creation and/or retention of over 52,000 jobs.

Technology Innovation

Consistent with the Tennessee Valley Authority Act of 1933, as amended (the "TVA ACT"), TVA makes investments in science and technological innovation to assist TVA in meeting future challenges in key areas. These are identified as "Signature Technologies" wherein TVA is seeking to establish national leadership in research, development, and demonstration. TVA is currently focused on three Signature Technologies: small modular nuclear reactors ("SMRs"), grid modernization for transmission and distribution systems, and energy utilization technologies, with a particular emphasis on energy efficiency, load management, and electric transportation and infrastructure. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

TVA also seeks to leverage research and development activities through partnerships with LPCs, the Electric Power Research Institute ("EPRI"), the Department of Energy ("DOE"), Oak Ridge National Laboratory, other utilities, universities, and industry vendors and participation in professional societies.

Conclusion

TVA is a leader in public power, a model built on trust and partnerships with the people TVA serves. This time-tested model continues to deliver reliable, affordable electricity to more than 9 million people and 700,000 businesses. It enables effective, integrated resource management and environmental stewardship in parts of seven southeastern states. TVA promotes alliances with others that help attract and retain jobs and investments that support economic development in the Tennessee Valley.

As TVA looks forward to its next 80 years, TVA recognizes that continued achievement in public power will require a different approach from the past. TVA is more flexible in its planning and more nimble in its execution. TVA is also working to respond more quickly than ever to continually changing market conditions.

TVA has a plan to be financially sound and to continue to provide competitive rates and reliable power to our customers. TVA plans to reduce operation and maintenance to match decreased demand for electricity and revenues. TVA plans to adjust capital based on market and regulatory conditions. One thing will not change – is TVA's commitment to provide rates as low as feasible and reliable electricity.

TVA is proud to honor this commitment and looks forward to sharing the benefits of public power for many years to come.

Budget Overview

Asset Portfolio

TVA, like the rest of the electric utility industry, is challenged to meet customer demand with cleaner, low-cost energy resources. This will require substantial capital investments during the next decade. TVA funds asset investments through power revenues, the issuance of bonds up to a limit set by Congress, and alternative financings including lease financings.

TVA faces significant uncertainty from external factors such as weather, the economy, loss of its largest direct served customer during 2013 (which accounted for 5 percent of revenues), and decreased demand from energy efficiency and demand response initiatives. TVA's financial information includes estimates, which are affected by these and other changing conditions. TVA projects total revenue to be \$10.8 billion in FY 2015, which includes revenues related to fuel cost recovery and an adjustment to fund investments associated with TVA's clean air program. The fuel cost recovery mechanism adjusts power rates monthly to reflect the changing costs of fuel, purchased power, and emission allowances. Although TVA power sales increased an average of approximately one percent annually during the past decade, the past two years have not seen this growth.

In March 2013, TVA announced it is proceeding with a \$1.1 billion emissions control project at Gallatin. The project includes the installation of SCR systems and scrubbers at all four units of the 976 MW plant. The scrubbers are expected to be completed in 2016, with the SCR systems to follow in 2018. Due to the age, lower capacity, and lower efficiency of TVA's older coal-fired units, it may not be economical to continue to operate some units in the future, particularly if new environmental laws or regulations become effective. However, discontinuing the use of some coal-fired units may be constrained by transmission reinforcement that will be required before the units are taken out of service.

TVA is also planning to convert its wet fly ash and gypsum facilities to dry collection facilities. The estimated cost of this conversion is between \$1.5 billion and \$2.0 billion, and the current schedule for completion is December 2022.

TVA's nuclear construction is an important element in a diversified portfolio for the future. Construction of Watts Bar Unit 2 is continuing in accordance with the schedule and budget expectations approved by the TVA Board in April 2012. The total estimated cost of completion is in the range of \$4.0 billion to \$4.5 billion. Construction is currently expected to be completed by December 2015.

During the first quarter of FY 2014, TVA finalized a new estimate to complete Bellefonte Nuclear Plant ("Bellefonte") Unit 1. The total estimated cost of completion is in the range of \$7.5 billion to \$8.7 billion. Work at the site has been slowed to better allocate resources on nearer-term priorities as both budget and staffing levels have been reduced in the FY 2014 budget. TVA believes that the resulting budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA plans to utilize its integrated resource planning process to help determine how Bellefonte best supports TVA's overall efforts to continue to meet customer demand with low-cost, reliable power.

In FY 2015, TVA estimates that it will invest about \$3.2 billion in capital projects for the power system. These investments are subject to approval in the FY 2015 budgeting process scheduled for August 2014.

Stewardship

TVA operates and maintains a vast system of dams, reservoirs, and lands. Based on the provisions in the Energy and Water Development Appropriations Act, 1998, TVA funds its traditional essential water and land stewardship activities including the NRP with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999 and none are requested for FY 2015.

TVA Operating Budget
(Millions of dollars)

	2013	2014	2015
	Actual	Estimate	Estimate
Revenue	\$ 10,956	\$ 10,468	\$ 10,766
Operating Expenses			
Fuel & Purchased Power	(3,846)	(3,498)	(3,595)
Operating, Maintenance, & Other	(3,428)	(3,437)	(3,184)
Depreciation & Amortization	(1,680)	(1,791)	(1,749)
Tax Equivalents	<u>(548)</u>	<u>(513)</u>	<u>(513)</u>
Total Operating Expenses	<u>(9,503)</u>	<u>(9,240)</u>	<u>(9,040)</u>
Operating Income	1,453	1,229	1,726
Other Income	44	41	36
Interest Expense, net	<u>(1,226)</u>	<u>(1,269)</u>	<u>(1,292)</u>
Net Income	\$ 271	\$ 1	\$ 470

Capital Budget & Cash Flow
(Millions of dollars)

	2013 Actual	2014 Estimate	2015 Estimate
Cash flows from operating activities			
Net income	\$ 271	\$ 1	\$ 470
Items affecting operating activities	2,326	2,229	2,178
Net cash provided by operating activities	2,597	2,230	2,648
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(308)	(310)	(310)
Fossil	(118)	(220)	(218)
Hydro	(66)	(112)	(119)
Transmission	(95)	(147)	(192)
Other Base Capital	(124)	(157)	(187)
Total Base Capital	(712)	(946)	(1,027)
Clean Air	(196)	(642)	(559)
Ash Remediation	(75)	(115)	(160)
Water Remediation	-	(0)	(2)
Total Environmental Costs	(271)	(758)	(721)
Watts Bar Unit 2	(708)	(858)	(619)
Bellefonte	(163)	(98)	(105)
Other Capacity Expansion	(198)	(208)	(249)
Total Capacity Expansion	(1,069)	(1,164)	(973)
Nuclear Fuel Capital	(287)	(385)	(422)
Other Investing Activities	(46)	(28)	(20)
Net cash used in investing activities	(2,385)	(3,281)	(3,161)
Capacity Expansion Financing	1,069	1,164	973
Other Cash (Uses)/Sources	(547)	(213)	(509)
Net cash provided by financing activities	522	951	464
Net change in cash and cash equivalents	734	(100)	(50)
Cash Payments to U.S. Treasury	(27)	(26)	(18)
Reduction/(Increase) in Total Debt and Debt-Like Obligations **	(561)	(898)	(394)

** Statutory debt peaks in FY 2015 and then reduces thereafter based on the FY 2015 President's Budget. These increases and subsequent decreases are primarily driven by the completion of Watts Bar Unit 2.

Business Plan

TVA is governed by the nine-member TVA Board, which is responsible for approving an annual budget. The information in this document is based on the FY 2014 annual budget, which was approved by the TVA Board in August 2013. The following were considered in preparing the budget.

Borrowing Limit

TVA must manage its finances efficiently to achieve its mission-related performance goals of supplying low-cost, reliable power, supporting environmental stewardship and a thriving river system, stimulating economic growth, and supporting technological innovation. In balancing these goals while following sound financial principles, TVA uses financing selectively. Generally, financing is used to fund capital investments for new generation capacity and environmental controls while maintenance of the power system and other capital expenditures are generally funded with revenues.

TVA has the authority in the TVA Act to issue bonds, notes and other evidences of indebtedness subject to a \$30.0 billion limit, sometimes referred to as TVA's statutory debt limit. TVA's bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2013, TVA had \$24.8 billion of net bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30.0 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$46.1 billion (as of September 30, 2013). TVA's balance of financing obligations is projected to increase in the coming years to meet expected capital investment needs which are primarily driven by the completion of Watts Bar Unit 2. However, the total investment in power system assets is expected to continue to exceed any net increase in financing obligations.

Nuclear Program

TVA is making a significant investment in safe and reliable nuclear power. Completion of the second unit at the Watts Bar Plant will require funding of \$4.0 to \$4.5 billion. TVA finalized a new estimate to complete Bellefonte Unit 1 during the first quarter of 2014 putting the total estimated cost of completion in the range of \$7.5 billion and \$8.7 billion. Work at the site has been slowed as TVA considers the long-term need for power and associated options.

Pension Fund

As of September 30, 2013, TVA's qualified pension plan had assets of \$7.2 billion compared with liabilities of \$11.5 billion. The plan currently has approximately 36,000 participants, of which approximately 23,000 are retirees or beneficiaries currently receiving benefits. Benefits of approximately \$622 million were paid to participants in 2013.

Coal-Fired Fleet Evaluation

TVA began its coal-fired plant construction program in the 1940s, and its coal-fired units were placed in service between 1951 and 1973. Coal-fired units are either active or inactive. TVA considers units to be in an active state when the unit is generating, available for service, or temporarily unavailable due to equipment failures, inspections, or repairs. As of September 30, 2013, TVA had 10 coal-fired plants consisting of 46 active units, accounting for 12,901 MW of summer net capability. As of September 30, 2013, TVA had 14 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. TVA currently has four retired units: John Sevier Fossil Plant ("John Sevier") Units 1 and 2 and Widows Creek Fossil Plant ("Widows Creek") Units 3 and 5. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of September 30, 2013, TVA had nine mothballed units: Shawnee Fossil Plant ("Shawnee") Unit 10, Johnsonville Fossil Plant ("Johnsonville") Units 7 and 8, Widows Creek Units 1, 2, 4 and 6 and John Sevier Units 3 and 4. As of September 30, 2013, TVA had one unit in inactive reserve: Colbert Fossil Plant ("Colbert") Unit 5. TVA refers to units which are in inactive reserve or mothballed status as idled. On October 1, 2013, Johnsonville 5, 6, 9, and 10 and Colbert Unit 5 were mothballed. On November 14, 2013, the Board approved the retirement of Colbert Units 1-5 and, Widows Creek Unit 8, and Paradise Fossil Plant ("Paradise") Units 1 and 2 with effective dates to be determined. Paradise Unit 3 will continuously operate emission control equipment.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the Clean Air Act ("CAA") and subsequent laws and regulations. Increasing regulatory costs require consideration of whether to make the required capital investments to continue operating, or to decommission these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements"). The first

agreement is a Federal Facilities Compliance Agreement with the Environmental Protection Agency ("EPA"). The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. Under the Environmental Agreements, TVA agreed to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review ("NSR") requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

The following table summarizes actions TVA is required to take under the Environmental Agreements, as well as other coal-fired generation actions taken or to be taken by TVA, and the status of those actions.

Fossil Plant	Total Units	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Actions Taken or Planned to be Taken by TVA
Allen	3	SCRs on all three units	Install scrubbers or retire no later than December 31, 2018	Plan was to add scrubbers on all three units but TVA is currently re-evaluating options
Bull Run	1	Scrubber and SCRs on unit	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	<ul style="list-style-type: none"> · Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 · Remove from service, control, or retire Unit 5 no later than December 31, 2015 · Control or retire removed from service units within three years 	<ul style="list-style-type: none"> · Idled Unit 5 in October 2013 · On November 14, 2013, the Board approved the retirement of Units 1-5 with effective dates to be determined
Cumberland	2	Scrubbers and SCRs on both units	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Gallatin	4	None	Control, convert, or retire all four units no later than December 31, 2017	Add scrubbers and SCRs on all four units by December 31, 2017
John Sevier	4	None	<ul style="list-style-type: none"> · Retire Units 1 and 2 no later than December 31, 2012 · Remove from service Units 3 and 4 no later than December 31, 2012 and control, convert, or retire those units no later than December 31, 2015 	<ul style="list-style-type: none"> · Retired Units 1 and 2 effective December 31, 2012 · Idled Units 3 and 4 in December 2012 · Retire Units 3 and 4 effective December 31, 2015
Johnsonville	10	None	<ul style="list-style-type: none"> · Retire six units no later than December 31, 2015 · Retire four units no later than December 31, 2017 	<ul style="list-style-type: none"> · Retire six units by December 31, 2015 · Retire four units by December 31, 2017 · Idled Units 7 and 8 effective March 1, 2012 · Idled Units 5-6 and Units 9-10 on October 1, 2013
Kingston	9	Scrubbers and SCRs on all nine units	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Paradise	3	Scrubbers and SCRs on all three units	<ul style="list-style-type: none"> · Upgrade scrubbers on Units 1 and 2 no later than December 31, 2013 · Continuously operate emission control equipment on all three units 	<ul style="list-style-type: none"> · On November 14, 2013, the Board approved the retirement of Units 1 and 2, and replacement with gas-fired generation; with effective dates to be determined. · Continuously operate emission control equipment on Unit 3
Shawnee	10	None	Control, retire, or convert Units 1 and 4 no later than December 31, 2017	<ul style="list-style-type: none"> · Still evaluating what actions to take with respect to Units 1-9 · Idled Unit 10 in October 2010

Widows Creek	8	Scrubbers and SCRs on Units 7 and 8	<ul style="list-style-type: none"> · Retire two of Units 1-6 no later than July 31, 2013 · Retire two of Units 1-6 no later than July 31, 2014 · Retire two of Units 1-6 no later than July 31, 2015 · Continuously operate current and any new emissions control equipment on Units 7 and 8 	<ul style="list-style-type: none"> · Idled Units 1-6 in October 2011 · Retired Units 3 and 5 effective July 31, 2013 · Continuously operate current or equivalent emissions control equipment on Units 7 and 8 · Continue to evaluate alternatives for Unit 7 · On November 14, 2013, the Board approved the retirement of Unit 8 with an effective date to be determined
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Kingston Ash Spill

In December 2008, a dike around one of the dredge cells at the Kingston Fossil Plant failed, releasing approximately 5.4 million cubic yards of coal ash. TVA estimates the cost of cleanup and recovery efforts will range from \$1.1 billion to \$1.2 billion. Costs incurred since the event through September 30, 2013 totaled \$956 million. The remaining estimated cost at September 30, 2013, was \$169 million.

Approximately 3.0 million cubic yards were recovered from the adjacent Emory River in 2009 and 2010. It was transported offsite for disposal. In June 2013, TVA finished recovering and placing approximately 2.4 million cubic yards of ash from the adjacent Swan Pond Embayment into the onsite ash landfill. The ash landfill will be closed by constructing a multi-layer cap over the ash. In June 2013, TVA began placing the first section of the multi-layer cap. The final cap is forecasted to be completed by early FY 2015. A perimeter wall was constructed to stabilize the perimeter of the landfill to contain the ash. The wall construction was completed in mid-August 2013, and repairs are expected to continue into the second quarter of FY 2014.

Long-term monitoring of the Emory River was initiated in the spring of 2013 and will continue for up to 30 years. Results of this monitoring will be used to evaluate the ecological resources in the river system and the river's natural processes for remediating any residual ash in the river. In addition, TVA is restoring the ecological habitat along the Emory River and in the Swan Pond Embayment. That work will begin in the second quarter of FY 2014, and is expected to be finished by spring 2015. A final assessment, issuance of a completion report, and approval by the State of Tennessee and the EPA are expected to occur by the third quarter of FY 2015.

Coal Combustion Residuals Facilities

TVA retained an independent third-party engineering firm to perform a multi-phased evaluation of the overall stability and safety of all existing embankments associated with TVA's coal combustion residual ("CCR") facilities. The first phase of the evaluation, which was completed in June 2009, involved a detailed inspection of all CCR facilities, detailed documentation reviews, and a determination of any immediate actions necessary to reduce risks. The second phase of the program, which was completed in April 2011, included geotechnical explorations, material testing, stability analyses, and studies. The study determined that none of TVA's other coal-fired plants showed the same set of conditions that existed at Kingston at the time of the ash spill and that the ongoing remediation work being done at the plants should bring all of them within industry standards in terms of stability. The third phase of the program, which is implementation of recommended actions, is ongoing. This phase includes risk mitigation steps such as performance monitoring, designing and completing repairs, developing planning documents, obtaining permits, and generally implementing the lessons learned from the Kingston ash spill at TVA's other CCR facilities. As a part of this effort, an ongoing dam oversight program has been undertaken, and TVA employees have received additional training in dam safety and monitoring.

TVA is converting its wet fly ash, bottom ash, and gypsum facilities to dry collection facilities and remediating or eliminating the CCR facilities that were classified as "high" risk during the preliminary reassessment. The classifications, such as "high," do not measure the structural integrity of the facility or the possibility of whether a failure could occur. Rather, they are designed to identify where loss of life or significant economic or environmental damage could occur in the event of a failure. The expected cost of the CCR work is between \$1.5 billion and \$2.0 billion, and currently the work is scheduled to be completed in December 2022.

Seven States Power Corporation Obligation

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

interim period under the joint ownership arrangements was to expire on April 23, 2013. On April 18, 2013, TVA and Seven States, through SSSL, agreed to extend the expiration date of the interim joint ownership arrangements to September 5, 2013. The other material terms and conditions of the arrangements were not changed. On August 9, 2013, TVA completed a lease-purchase transaction of the facility.

Wholesale Rate Structure Changes

TVA implemented a revised wholesale rate structure in April 2011. The rate structure provides price signals intended to encourage LPCs and end-use customers to shift energy usage from high-cost generation periods to less expensive generation periods. Under the revised wholesale structure, weather can positively or negatively impact both volume and average rates, while only volume was impacted under the former wholesale structure. This is because the wholesale structure includes two components: a demand charge and an energy charge. The demand charge is based on the customer's peak monthly usage and increases as the peak increases. The energy charge is based on the kWhs used by the customer. In conjunction with the change, the rate structure was also revised to establish a separate fuel rate that includes the costs of natural gas, fuel oil, purchased power, coal, emission allowances, nuclear fuel and other fuel-related commodities; realized gains and losses on derivatives purchased to hedge the costs of such commodities; and tax equivalents associated with the fuel cost adjustments.

Renewable Energy

In accordance with TVA's vision and Integrated Resource Plan, TVA plans to obtain additional power supply from renewable sources by 2020. TVA defines its renewable energy as energy that is sustainable and often naturally replenished, such as wind, solar, biomass, and hydroelectric generation.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including: hydro, wind, solar, and biomass. As of September 30, 2013, TVA maintained 29 conventional hydroelectric dams, accounting for 3,817 MW of summer net capability. TVA also controls 16 solar energy sites, capability for digester gas co-firing, biomass co-firing potential (located at coal-fired sites), and 3 wind turbines. The wind turbines and biomass co-firing potential did not provide any summer net capability at September 30, 2013, because they were not operational. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into 8 contracts with 8 Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all 8 contracts. The first wind farm, located in Illinois; began providing 300 MW (nameplate capacity) under a 20-year contract in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other seven contracts provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee.

In 2003, TVA developed a Generation Partners ("GP") pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. Since 2009, TVA has seen the program grow from fewer than 80 installations to more than 1,500 installations in operation providing more than 77 MW of solar, wind, low-impact hydro, and biomass generation. Solar installations made up 66 MW. The GP pilot program ended on September 30, 2012, and was replaced with the Green Power Providers ("GPP") program, a permanent program that began October 1, 2012. As of September 30, 2013, the GPP program comprised more than 5 MW of operating generation with over 4 MW of additional approved capacity that has yet to begin generating.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA will purchase certain types of renewable energy at market rates from projects that meet the requirement of the RSO program as long as there is sufficient available capacity in the program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kilowatts ("kW"), but no greater than 20 MW in nameplate capacity. TVA accepted 97 MW of renewable capacity through calendar year 2012. This included a diverse portfolio of 13 total projects, including over 41 MW of solar, 18 MW of wind, 20 MW of biomass, and 18 MW of landfill gas or methane projects. TVA demonstrated its continued commitment to renewable energy by issuing an additional 100 MW under the RSO program in 2013. As of September 30, 2013, TVA had received applications for 22 MW. TVA is taking steps that could significantly increase TVA's solar energy capacity in 2014 while ensuring TVA's green power programs remain sustainable and cost effective. TVA is offering a total of 126 MW of renewable capacity in FY 2014 through a variety of power-purchasing programs for homes, businesses and commercial installations, marking a 7 percent increase over FY 2013. TVA will be adding capacity and reducing pricing incentives to reflect lower technology costs for generators and to support lower electric rates for the Tennessee Valley's 9 million residents. TVA currently has

128 MW of operating or committed solar projects under contract at more than 2,000 locations across the region. TVA's renewables portfolio also includes 1,500 MW from wind and 60 MW from biomass.

The Solar Solution Initiative ("SSI") is a pilot program that began in February 2012 and provides incentive payments for mid-sized (greater than 50 kW up to 1 MW) solar projects in TVA's RSO program if the projects use local certified installers in the Tennessee Valley region. SSI is a targeted incentive that aims to support the existing local solar industry, while also serving as a recruitment tool for new industry in the Tennessee Valley region, adding investment and jobs.

TVA's Green Power Switch® ("GPS") program is a voluntary program that supports the production of renewable energy by allowing consumers to purchase renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In 2012, GPS supported roughly 101,000 MWh of renewable energy. TVA is continuing to refine the program by testing two additional customer options. In the original GPS, consumers buy 150 KWh renewable energy blocks for \$4 per month. Supply includes Green-e certified renewable energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two pilot options are testing customer demand for a 100 percent solar option sourced from TVA's growing GPP supply as well as a lower priced bulk option for larger commercial and industrial customers. Supply for the bulk option is sourced from TVA-contracted renewable energy credits ("RECs") in the greater Southeastern region. Specifically, the pilot supply will be from the Tapoco Hydroelectric project owned by Brookfield Renewable Energy Partners.

Payments in Lieu of Taxes

TVA provided \$547 million in tax equivalent payments in FY 2013 to state and local governments where it sells electricity or has power properties. TVA pays tax equivalent payments annually in the eight states where it sells electricity or owns generating plants, transmission lines, substations and other power assets and directly to 146 county governments where TVA owns power properties that were previously owned and operated by another utility company.

The TVA Act requires TVA to return 5 percent of gross power sales revenues from the previous year (excluding sales or deliveries to other federal agencies and off-system sales with other utilities, with a provision for minimum payments under certain circumstances) in the form of tax equivalent payments. The payments compensate state and local governments that cannot levy property or sales tax on TVA as a federal entity, and makes TVA one of the largest "taxpayers" in Tennessee and Alabama.

State and local governments distribute the funds according to their own formulas and discretion to support a variety of initiatives, including schools, fire departments and other emergency response agencies, tourism and recreation, and human service organizations.

Since 1941, TVA has made more than \$10.9 billion in tax equivalent payments, with payments in the past 10 years totaling \$4.6 billion.

Federal Salary Freeze

TVA reviewed the freeze on federal employees' base rates of pay that was proposed by President Obama and approved by Congress in December 2010. After considering the language and intent of the freeze, TVA applied the principles to its executives, managers, specialists, and excluded employees. This freeze was in effect for calendar years 2011 and 2012 and included TVA senior executives.

Legislation was subsequently passed to extend the federal salary freeze through the end of calendar year 2013. Based on the intent and language of the legislation, and consistent with TVA's implementation of the salary freeze for calendar years 2011 and 2012, TVA extended the salary freeze to December 31, 2013, for its executives, managers, specialists, and excluded employees, and lifted the freeze at that time consistent with direction from the administration. The freeze did not affect positions represented by collective bargaining units.

Management Initiatives

Rates

As a result of diminished power demand, TVA experienced a 2 percent decrease in revenues in FY 2013 as compared to the prior year. The lower revenue in FY 2013 was primarily due to mild weather variations and continued sluggish economic conditions in the Tennessee Valley region. Similar to FY 2012, TVA undertook cost savings initiatives in FY 2013 in response to lower sales and revenues. Continued actions included reductions in discretionary spending, deferral of program spending, and identification of productivity enhancements to improve the overall cost effectiveness of existing programs and projects. In addition, TVA continued to eliminate certain layers of management and reduced contractor and consultant services. TVA is seeking to reduce costs to maintain financial health in the near-term, while improving competitiveness over the longer-term. TVA recorded a net income of \$271 million for FY 2013.

Reliability: Balanced Portfolio

TVA is focusing on delivering more energy efficiency as part of its balanced portfolio approach. TVA uses a variety of programs that reduce the use of energy (“energy efficiency”) and also decrease peak demand (“demand response”). TVA collaborates with its customers, such as LPCs, directly served customers and governmental agencies, to establish and implement effective programs across the Tennessee Valley. TVA is also working with industry experts to tailor these programs to produce the best results.

TVA continues to expand the EnergyRight® Solutions program to include residential, commercial, industrial and power systems initiatives.

- **EnergyRight® Solutions for the Home** - Allows residential customers to play an active role in saving energy in their homes through improvements to weatherization, HVAC systems and water heating.
- **EnergyRight® Solutions for Business** - Offers energy information and assistance to help businesses save energy with rebates and other financial incentives available to help offset project expenses.
- **EnergyRight® Solutions for Industry** – Provides customized technical evaluations to assess plant-wide energy efficiency opportunities, along with financial incentives for qualified projects.
- **EnergyRight® Solutions for Power Systems**– Works to optimize power delivery systems by shifting or reducing consumer demand at peak times of the day to avoid supplying high-priced peak power and improve reliability through physical (e.g., direct cycling of residential and commercial equipment), contractual (e.g., voluntary reductions for payment) and voltage optimization (e.g., regulating voltage to the lower region of the prescribed range) means.

A key aspect of TVA’s vision is to increase TVA nuclear power generation. The 2011 IRP provides a summary of TVA’s last analysis of diversified energy resources, including more energy efficiency and demand reduction programs, renewable energy resources, energy storage resources and natural gas and nuclear capacity. TVA is currently undertaking a refresh of the 2011 IRP with the new report expected to be published in 2015.

Completion of Watts Bar Unit 2 is an integral part of TVA’s vision. Watts Bar Unit 2 is expected to be completed in December 2015 and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule and budget expectations approved by the TVA Board in April 2012. The unit was approximately 80 percent complete at September 30, 2013

Responsibility

Cyber Security

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

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

Governance for the program is provided by TVA's Chief Information Officer. The program objectives are aligned with business strategy and support the goals of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to and recover from threats against its systems. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change. TVA plans to spend approximately \$40 million to \$50 million for cyber security updates between FY 2014 and FY 2016.

Environmental Stewardship and River Management

TVA manages the Tennessee River system to provide public benefits including navigation, flood risk reduction, power production, water supply, and recreation. TVA routinely involves the public in its environmental decision-making. Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level environmental policy. The current Environmental Policy was initially approved by the TVA Board in 2008 and is reviewed on a biennial basis. The overarching environmental objective is to provide clean, reliable, and affordable energy, support sustainable economic growth, and engage in proactive environmental stewardship in a balanced and ecologically sound manner. In August 2012, TVA conducted its most recent review of the 2008 Environmental Policy. The review found that progress has been made on the Environmental Objectives for all six guiding principles of the Environmental Policy and policy revisions were not needed. The Environmental Policy remains consistent with stated TVA Board strategy and policy.

On June 28, 2013, TVA submitted its fourth Strategic Sustainability Performance Plan ("SSPP"). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions, reduce solid waste generation and disposal, improve water use efficiency, improve building and energy efficiency, promote electronic stewardship, and encourage the purchase of sustainable products and services. Implementation is expected to reduce TVA's operational costs and risks over the long term.

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

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

In August 2011, the TVA Board accepted the Natural Resource Plan ("NRP"), a companion document to TVA's IRP, which focused on the agency's power supply assets portfolio. The NRP provides strategic guidance to integrate TVA's management and protection of the natural and cultural resources on TVA managed lands and waterways within the Tennessee River Watershed. The NRP includes programs that address biological resources (plants, animals and aquatic species), cultural resources (archaeological sites, historical sites, and artifacts), recreation, water resources, reservoir lands planning, and public engagement. TVA's investment will help it sustain the cultural and natural resources and recreational opportunities for the region's stakeholders and visitors in an efficient and effective manner.

The NRP was developed with public input including participation from federal and state resource management agencies and TVA's Regional Resource Stewardship Council, which was established under the guidelines of the Federal Advisory Committee Act. The NRP, which is TVA's first long-term natural resource management plan, provides a model for other agencies involved in similar stewardship activities. Implementation of NRP programs will be staged over a 20-year period with reviews and updates occurring approximately every 5 years.

River System

TVA has federal jurisdiction for managing the Tennessee River and its tributaries to deliver multiple benefits, including year-round navigation, reduced flood damage, affordable and reliable electricity, recreation opportunities, adequate water supply, improved water quality, and economic growth.

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

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

TVA has installed and is upgrading equipment at several dams to help provide the flows and oxygen levels needed for a healthy aquatic community in tailwaters (the areas immediately downstream from dams). In managing the watershed, TVA balances water quality protection with other demands for water use. As part of the NRP, TVA implements several programs including Tennessee Valley Clean Marinas, Nutrient Source-Watershed Identification and Improvement, Climate Change Sentinel Monitoring and Aquatic Ecological Management and a Strategic Partnership Initiative. Under the Stream and Tailwater Monitoring Program in the NRP, TVA performs annual monitoring and analysis of streams and rivers within the Tennessee River Watershed. Upon request, TVA provides the monitoring data to other agencies, educational institutions, non-government organizations, and stakeholders.

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the EPA shows air quality in the nation has steadily improved with significant declines in collective emissions of the six principal pollutants: sulfur dioxide, nitrogen dioxide, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance and is making further improvements in air quality by recent controls at Bull Run and Kingston Fossil Plants.

The Environmental Agreements also require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which become more stringent year-to-year as more units are required to be retired.

Economic Development

TVA works to be a source for economic development leadership, information, and services across the seven-state Tennessee Valley region. TVA's investments in newer, cleaner power supply resources create new jobs, retain local industries, and support the national economy with purchases for fuel, materials, and services. The Watts Bar Nuclear Plant Unit 2 project which is currently under construction and the John Sevier Combined Cycle Plant which was recently completed combined to create more than 4,000 construction jobs and provide economic benefits for surrounding communities.

TVA's partnerships with its customers and communities have helped create quality jobs and attract significant capital investments by new and existing companies. Economic development efforts are done in partnership with private and public organizations, including local, regional, and state agencies. TVA helps meet the needs of its stakeholders for regional economic development which contributes to a better quality of life for Tennessee Valley residents. TVA's innovative programs and services combine to create effective tools for sustainable economic development. These programs and services include, but are not limited to, the following:

Global Business

Industrial Recruiting Services

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

Regional Development

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

Community Preparedness

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

Community Development Training

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

Rural Initiative Strategy

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

Retail Development

Retail Development is a program that links communities with retail business opportunities, expansions, and retentions.

Research

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

Business and Technical Resources*Existing Industry Support*

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

Economic Development Loan Fund

The fund is designed to stimulate job creation and leverage capital investment in the TVA power service region. Loans are available to primary manufacturing companies and other institutions, including TVA customers, communities, and nonprofit economic development corporations.

Special Opportunities Counties Loan Fund

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

Business Incubation Network

Business incubators provide support that many companies need to survive the challenging early stages of business start-up. TVA provides technical and research assistance to incubators where clients can share services, equipment, and building space.

Diversity Alliance

TVA helps the region's high-growth sectors of woman-owned and minority-owned businesses increase their job creation and capital investment opportunities by partnering with local organizations that provide business tools and opportunities that help grow and sustain these targeted businesses.

Valley Investment Initiative for Existing and New Customers

The Valley Investment Initiative offers financial incentives to existing companies and new companies that contribute to the economic development of the region and complement TVA's power system.

Appalachian Regional Commission Project Administration

TVA is the lead agency for administering grants from the Appalachian Regional Commission in the Tennessee Valley region.

Technical Services

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

Here are the results of some of TVA's innovative economic development programs and offerings:

- The TVA Board approved a new industrial rate program and enhanced an existing economic development program to preserve and grow Valley industry and the benefits that come from that growth.
- For the eighth consecutive year, TVA made *Site Selection* magazine's list of the top 10 utilities in North America for economic development activity, one of only three utilities to earn this distinction.
- TVA won a Gold Excellence Award for its Megasites program from the International Economic Development Council for excellence in economic development. Megasites teams TVA with local partners to market large industrial tracts to manufacturers. It remains one of TVA's most successful economic development efforts.
- TVA continues to market two Megasites --I-24 Megasite in Hopkinsville, Kentucky and the Memphis Regional Megasite in Tennessee -- after successfully selling Megasites to companies such as Volkswagen, Toyota, PACCAR, and Severstal since 2004.
- TVA Economic Development recruits new companies and investments to the region in these primary targeted industry sectors: Transportation-Related Manufacturing, Food Processing and Packaging, Advanced Manufacturing and Data Centers.
- There are a total of 23 available, ready-for-development data center sites across the TVA Region.
- TVA staff provided ongoing economic development assistance through the Valley Investment Initiative, technical services, economic research, proposal writing, training and other services.
- The Valley Investment Initiative, offered by TVA and LPCs, continues to be very successful in helping new and existing companies which locate or expand and make a commitment to enhance economic development in the region.
- Assisting communities to be prepared for economic growth opportunities continued to be a focus and more than 150 communities were directly assisted.
- The Valley Sustainable Communities Program was launched in 2013. It is a community preparedness offering to assist communities in cataloging their sustainable assets and improve their competitiveness when companies are looking to invest in new or expanded locations in the Valley. To date, there are 13 communities which are going through this program to highlight and increase their sustainability efforts to differentiate their communities.
- TVA's Rural Development strategy focuses on supporting economic development efforts in rural and economically distressed areas.
- TVA's Retail Development program helps foster business growth for commercial businesses.
- TVA offers two award-winning Economic Development websites, TVAed.com and TVAsites.com, containing demographics, a searchable building and land database, and other key information about the benefits of the Tennessee Valley region.
- 2013 announcements include:
 - Alabama: 8,100 jobs and \$768 million
 - Kentucky: 6,400 jobs and \$605 million
 - Middle Tennessee: 12,500 jobs and \$1.04 billion
 - Mississippi: 3,900 jobs and \$593 million
 - Northeast Tennessee and Virginia: 6,400 jobs and \$796 million
 - Southeast Tennessee, Georgia and North Carolina: 5,100 jobs and \$373 million
 - West Tennessee: 9,600 jobs and \$824 million

Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a national leader in technological innovation. A key element in TVA achieving its vision is technology innovation. TVA strives to be at the forefront of innovation in the utility industry.

TVA is committed to the advancement of knowledge and innovation in the electric utility industry by working in partnership with others to promote the goals of low cost power and clean energy. Three signature technologies have been identified for special emphasis. These are SMRs, grid modernization for transmission and distribution systems, and energy utilization technologies, with a particular emphasis on energy efficiency, load management, and electric transportation and infrastructure. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future. Technology Innovation works collaboratively with line organizations to develop technology roadmaps for these signature technologies. These roadmaps will include technology gaps in an integrated plan for advancing the technologies over the next 3 to 5 years.

In addition to signature technologies, TVA's research activities include several issue areas where TVA is pursuing technology innovation critical to the transition to a cleaner energy economy, including air and water quality, clean

energy and integration, and long-term operations of generating assets. TVA's research portfolio selection enables TVA to focus resources on new technologies in these issue areas. Each year TVA's annual research portfolio and research strategic plan is updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development operations.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with the EPRI, DOE, national labs, federal agencies, academic institutions, the Center for Energy Advancements through Technological Innovation, the National Rural Electric Cooperative Association, and other research consortiums. Technology evaluations are most often accomplished through applied field scale research to document performance, needs and requirements. TVA delivers or transfers results to the operational units or other stakeholders through reporting, technology transfer events, and educational outreach. TVA also serves as a technology advisor for TVA's LPCs and directly served customers.

Signature Technologies

Small Modular Reactors

TVA has chosen SMRs as one of three signature technologies that support TVA's technology innovation mission, and they could provide an important option for clean, reliable energy for TVA's customers. TVA is a member of the B&W mPower™ America team, which DOE selected in November 2012 for a grant award for the design and licensing of B&W mPower SMRs. Specifically, under a contract that TVA executed with B&W in February 2013, TVA, B&W, and Generation mPower, LLC (a B&W affiliate, minority owned by Bechtel Power), are preparing a license application to the Nuclear Regulatory Commission ("NRC") to license up to four B&W mPower SMRs at TVA's Clinch River Site in Oak Ridge, TN. In April 2013, B&W and DOE executed a cooperative agreement implementing the DOE award, under which TVA (through B&W) is reimbursed by DOE for roughly half of its qualified costs, retroactive to October 2012. Currently, TVA is performing site characterization work, including gathering meteorological data, surveying species and cultural and archeological resources, and studying site hydrology. TVA is gathering environmental information that will support an Environmental Impact Statement and a license application to the NRC. A decision by TVA to submit the license application to the NRC is not expected until mid-2015, and a subsequent construction decision would not be expected before 2-3 years after that.

Energy Utilization

In the area of energy utilization, TVA's near-term concentration is on the development and maintenance of a pipeline of emerging energy efficiency and load management technologies for market and program readiness. TVA's efforts are directed towards demonstrating and validating the performance and reliability of new efficiency technology as well as the value of energy efficiency and load management technologies for both the consumer and the utility.

TVA coordinates investment and activities with EPRI and industry stakeholders related to transportation electrification to support operational fleet requirements and the needs of regional distributors of TVA power to provide guidance on matters of plug-in electric vehicle grid integration and readiness for on-road and non-road transportation electrification technologies. TVA is conducting demonstrations to support the development of an electric transportation and infrastructure business plan.

Current initiatives include:

- TVA utilizes three residential test houses in the Knoxville area to further its residential research efforts. These projects evaluate residential building techniques, energy efficiency, demand response technologies, and consumer smart grid concepts in a controlled, simulated occupancy research environment. Test results are being used to educate builders, developers, consumers, and TVA program designers to develop the best, most cost-effective residential energy efficiency and demand reduction projects. Test results can apply to both new home and retrofit markets. Revisions to the original test house configurations include installation of a carbon dioxide ("CO₂") based heat pump water heater, variable capacity air-source heat pumps, integrated (space conditioning and water heating) geothermal heat pumps, and load managed heat pump water heaters.
- In 2012, TVA began conducting a comparative field test to evaluate the energy and demand savings potential of grid-enabled residential appliances. The project will also evaluate and test consumer behavior using a suite of smart grid demand responsive Energy Star appliances, a home energy management system, and other GE home energy management devices in the 20 residential test sites. Baseline data collection has been completed for the existing appliances and the new energy star appliances. Testing of the demand response signals and the associated consumer behavior is underway.
- TVA is in the process of planning and implementing three transportation-related projects to support the Environmental Agreements. These include the bucket /pickup truck and charging infrastructure project,

solar assisted charging, and non-road electrification and infrastructure development. The bucket truck project received EPA approval in March 2012 and DOE approval of EPRI's revised project plan in January 2013. TVA received EPA approval on the remaining two projects in January 2013.

- The TVA Melton Hill Dam Sustainable Recreation Area showcases and models retrofit integrations of renewable energy technologies, energy efficiency and water conservation improvements, storm water management, recycling, electric vehicle charging infrastructure, and coal combustion product reuse. Within this recreation environment arrays of solar photovoltaic panels and a wind turbine generate clean and renewable energy, and solar and grid connected LED lighting and solar thermal water heating reduce energy use across the site. This sustainable recreation area serves as a model of technology transfer for TVA, state and local agencies, as well as general public education. Please visit www.tva.com/meltonhill to access the fact sheet and performance data dashboard.

Grid Modernization

TVA's grid modernization research focuses on technology development and demonstration activities that help sustain reliability, lower costs, and mitigate risks for TVA and LPCs. TVA's initiatives not only include technologies that encompass the bulk power system but also technologies that potentially impact the distributor network as well.

In cooperation with the Tennessee Valley Public Power Association, LPCs, and EPRI, TVA has developed a vision and roadmap for coordinated grid modernization in the Tennessee Valley. Guided by overarching principles of sustaining reliability, increasing energy efficiency, and integrating clean energy sources, the roadmap identifies: industry and regulatory drivers that necessitate modernization; barriers and interdependencies that must be addressed for successful implementation; critical gaps in technology deployment; key opportunities for investment guided by overall benefits; system planning requirements; pricing and product objectives; and system operational needs.

EPRI and TVA are engaged in the development of an advanced and intelligent transformer that applies solid-state technology for voltage conversion while providing additional functionality to regulate voltage, compensate for reactive power, and facilitate distribution automation. When combined with communications technology, the solid-state transformer can become a smart node in TVA's smart grid architecture.

Another significant effort includes demonstrations of new power system sensing and control technologies that will increase operator situational awareness, provide better control of power flows, and optimize asset management.

Current initiatives include:

- TVA has developed and is evaluating a number of low-cost, multi-purpose sensors that enable the capability to monitor, maintain, optimize, and extend the life of critical power system equipment assets. Specific monitoring applications of interest include: temperatures, pressures, vibration, currents, acoustic emission, sag/displacement, geo-magnetically induced currents, voltages, and gas-in-oil. Successful sensor applications are anticipated to become part of TVA's smart grid deployments.
- TVA is working with EPRI to develop a standardized approach to field data integration for both asset management and for grid operations. This collaboration will take advantage of TVA's joint sensor work, Phasor Measurement Unit ("PMU") involvement, standardization involvement, and asset management focus to push towards a standardized method for data integration and application.
- TVA has partnered with DOE, Smart Wire Grid, and National Electric Energy Testing Research & Applications Center to develop and demonstrate a hardware solution that will enable TVA to better manage underutilized transmission line assets. The Smartwire device clamps onto existing transmission lines and provides more consistent control of power flow on the grid in real-time. The Smartwire device functions to improve transmission line congestion scenarios.
- TVA has partnered with DOE and EPRI to demonstrate a Synchrophasor-based Situational Awareness System that provides system operators with real-time information about disturbances that could affect operations. The Wide Area Situational Awareness Tool uses real-time PMU data to support both power system visualization and early warning detection.
- TVA is partnering with EPRI and other utilities, through participation in the SunBurst Network; to deploy sensors for monitoring Geomagnetically Induced Current ("GIC") on select transformers within the TVA service territory. The sensors will support the evaluation of potential effects of GIC and solar storm related activity to electrical grids.

Other Technologies

The following are areas of additional technology innovation that have potential for helping TVA achieve its mission and vision.

Air and Water Quality

The following projects are in collaboration with EPRI:

- Quantifying risk of exposure to air pollutants and levels of acceptable risk to advise development of air standards and communicate risks based on sound science to stakeholders.
- Addressing knowledge gaps in the linkage between acid/nutrient deposition, water quality, and aquatic ecosystem health. Data will inform regulation development regarding potential secondary SO_x/NO_x standards proposed by the EPA.
- Assessing the air quality impacts of introducing electric vehicles into the U.S. transportation fleet.
- Conducting fugitive emissions studies to sample airborne particles resulting from material handling operations at fossil plants. Results will be used to support air permits issued under more stringent Particulate Matter 2.5 regulations.
- Collaborating with EPRI, Oak Ridge National Laboratory, and Tennessee Tech University on a thermal plume study at Cumberland Fossil Plant to monitor the behavior of fish residing in and near a heated discharge to determine impacts of thermal discharges on the fish community in situ.
- Comparing alternative cooling water intake screens to the conventional Ristroph traveling screen to provide cost effective technology options to reduce fish impingement mortality while managing high levels of debris.
- Addressing challenges regarding closure of ponds containing coal combustion products in a cost-effective, timely, and safe manner in accordance with anticipated EPA regulations and developing monitoring strategies and long-term land use options.
- Conducting long-term acidic deposition monitoring across five southern states since 1986 in support of the National Atmospheric Deposition Program. The purpose is to determine the magnitude of acid deposition across North America.
- Conducting rural background air quality monitoring at Look Rock in the Great Smoky Mountains National Park and also testing a new aerosol monitoring technology that may provide information about the organic compounds that comprise the airborne particles contributing to the total particle mass smaller than 2.5 micrometers. This could have possible future regulatory applications (i.e. the PM_{2.5} standard).
- TVA has patented a process to remove CO₂ from gasification and Integrated Gasification Combined Cycle ("IGCC") units. The Cryogenic Acid Gas Removal ("CAGR") technology uses a multi-stage, auto-refrigeration process to separate CO₂ and sulfur-bearing acid gases (like hydrogen sulfide) from the hydrogen-rich syngas. TVA's analysis of the CAGR process using process simulation software predicts it will use 60 percent to 75 percent less energy than current CO₂ capture technologies for IGCC units. TVA has obtained U.S. and Canadian patents on this technology.
- The Ohio River Basin Water Quality Trading Program to develop a cost effective and mutually beneficial mechanism to improve nutrient levels and water quality in regional watersheds. The project has initiated the first interstate water quality trading program for nutrients in the U.S.

Long-Term Operations of Generating Assets

To support long-term operations of generation assets, TVA is participating in the following developmental projects:

- Continuing flexible operation research for lower load operation, ramp rate procedures, and fuel flexibility alternatives supporting load dispatch requirements with increased reliability and mitigating the effects of cycling on the coal fleet.
- Conducting fossil plant material degradation research to reduce the impacts to high-temperature materials used in boiler and heat recovery steam generator components caused by fast ramping and increased load-following.
- Conducting coal plant assessments for environmental control integration strategies and long-term impacts related to SCR and bag house operation and maintenance.

Sustainability

Sustainability relates to everything TVA does to remain healthy and thriving long into the future for the benefit of the environment, economy and stakeholders. Sustainability is incorporated into the work performed at TVA to protect the miles of reservoir shoreline, to preserve reasonable electricity rates, to reinforce TVA's commitment to a safe

employee workplace environment and public safety, and to support TVA's economic development efforts throughout the region. In short, it is TVA's commitment to keeping the Tennessee Valley a vibrant place to live, work and play.

Sustainability is embedded in TVA's Vision for 2020, TVA's Environmental Policy and Presidential Executive Order ("EO") 13514, "Federal Leadership in Environmental, Energy, and Economic Performance." In June 2010, TVA issued its first SSPP under Executive Order 13514. The EO challenges TVA and other federal agencies to develop, implement and annually update sustainability plans to help "create a clean-energy economy." This plan captures and enhances TVA's ongoing sustainability focus given TVA's unique mission to sustain the people, economic culture and natural resources in the region. TVA submitted its fourth SSPP to OMB on June 28, 2013.

Oversight and Governance

In December 2004, Congress passed legislation to make TVA's governance structure more like other large corporations. The TVA Board changed from 3 full-time members to 9 part-time members who are responsible for providing strategic direction, governance, and oversight. In addition, a full-time Chief Executive Officer ("CEO") position was established to supervise day-to-day activities. The CEO is appointed by and reports directly to the TVA Board. The December 2004 legislation also amended the Securities Exchange Act of 1934 by adding Section 37. This section requires TVA, as a non-accelerated filer under Securities and Exchange Commission ("SEC") rules, to file financial reports with the SEC. In December 2006, TVA filed its first Annual Report on Form 10-K with the SEC and now files Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K with the SEC. As an SEC filer:

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

TVA Oversight

TVA is a government-owned corporation and federal agency, and its mission is fundamentally different than that of publicly traded companies. TVA has oversight similar to other utilities such as a board of directors, SEC requirements, credit rating agencies, and Sarbanes-Oxley requirements. In addition, TVA has oversight from Congress, the Government Accountability Office ("GAO"), the Office of Management and Budget ("OMB"), the U.S. Treasury, and an independent inspector general.

TVA is governed by the TVA Board. The TVA Board has 9 part-time members, at least 7 of whom shall be legal residents of the TVA service area. The TVA Board members are appointed by the President of the United States with the advice and consent of the U.S. Senate. The TVA Board's responsibilities include formulating broad goals, objectives, and policies for TVA. Also, the TVA Board's responsibilities include approving plans for their implementation, reviewing and approving annual budgets, setting and overseeing rates, and establishing a compensation plan for employees.

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

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

Independent Inspector General – An independent Office of Inspector General ("OIG") conducts ongoing audits of TVA's operational and financial matters in accordance with Government Auditing Standards, which incorporate the American Institute of Certified Public Accountants Generally Accepted Auditing Standards. The OIG has about 108 employees, including more than 50 auditors. TVA's Inspector General is appointed by the President of the United States and confirmed by the U.S. Senate. The OIG provides semi-annual reports to Congress on the results of its audit and investigative work.

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$23 million for FY 2015, which includes amounts for OIG training and support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2015 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

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

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

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

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

Auditor Independence – Providing Assurance to Stakeholders

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

Accounting and Financial Reporting

On an annual basis, TVA submits a closing package, which is a set of special purpose financial statements and notes that represent TVA’s comparative, consolidated, department-level financial statements, to the U.S. Department of Treasury to comply with the requirements of the U.S. Department of Treasury Financial Manual, for the purpose of providing financial information to the U.S. Department of Treasury and the U.S. Government Accountability Office to use in preparing the Financial Report of the U.S. Government. TVA’s independent auditor also provides an opinion on whether the closing package is prepared in accordance with accounting standards and other pronouncements issued by the Federal Accounting Standards Advisory Board. TVA’s financial transactions are subject to audit by the Comptroller General under various statutes.

TVA also submits financial information to the OMB, SEC, NRC, U.S. Treasury, Energy Information Agency, and others, in accordance with applicable regulatory and statutory requirements. As required by the TVA Act, TVA maintains its accounting records in accordance with the FERC’s Uniform System of Accounts for Public Utilities. In addition, TVA presents its financial statements and related disclosures in conformity with GAAP promulgated by the Financial Accounting Standards Board. These financial statements are annually audited by an independent financial auditor.

Monthly Reporting Process

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

Enterprise Risk Management

TVA has a designated Enterprise Risk Management (“ERM”) organization within its Financial Services organization, responsible for coordinating risk assessment efforts at TVA organizations. ERM facilitates enterprise risk discussions at all levels of the organization, develops and improves risk governance structure and risk assessment processes and methodologies, and supports risk-based decision making.

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

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

Annual Performance Report - Government Performance and Results Act (GPRA)

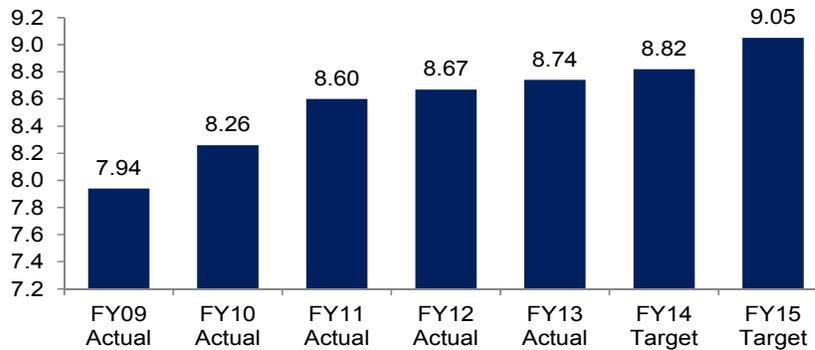
Rates

Retail Rates (¢ / kWh Sales) - 12-month rolling average

Definition: The average of the previous twelve months' LPCs reported retail power revenue and directly served power revenue divided by sum of LPCs reported retail power sales and directly served power sales

Calculation: (LPCs reported power revenue + Direct Served power revenue) / (LPCs reported sales + Direct Served power sales)

Retail Rates (cents/kWh) - 12 Month Rolling Avg

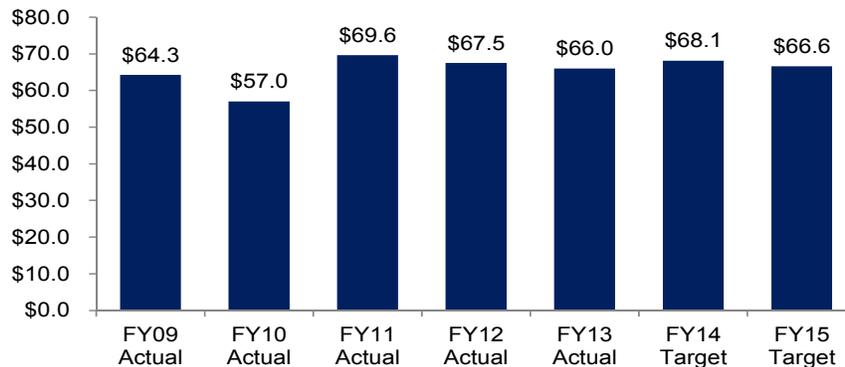


Delivered Cost of Power (\$ / MWh Sales)

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

Calculation: (Total Income Statement Expenses +/- Other Income) / Total Sales Volume (MWh)

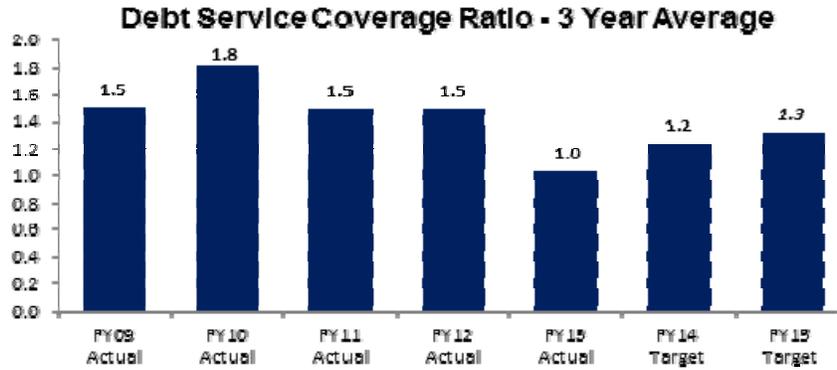
Delivered Cost of Power (\$/MWh)



Debt Service Coverage - 3 year rolling average

Definition: The Debt Service Coverage Ratio (“DSCR”), calculated on a 3-year average, demonstrates TVA’s ability to cover interest payments and current maturities of long-term debt and leaseback obligations. TVA has elected this as the measure due to the fact that TVA’s annual DSCR varies significantly due to the use of mostly bullet maturity bonds. See Appendix A for a calculation of DSCR, which is a non-GAAP measure, utilizing financial statement line items reported in accordance with GAAP.

Calculation: (Operating Income + Depreciation, Amortization, and Accretion) / (Current Maturities of Long-Term Debt* + Gross Interest Expense)



Note: For calculation, current maturities of long term debt (“LTD”) includes prior year current portion LTD + prior year current portion LTD Variable Interest Entity + current maturity of leases

Reliability

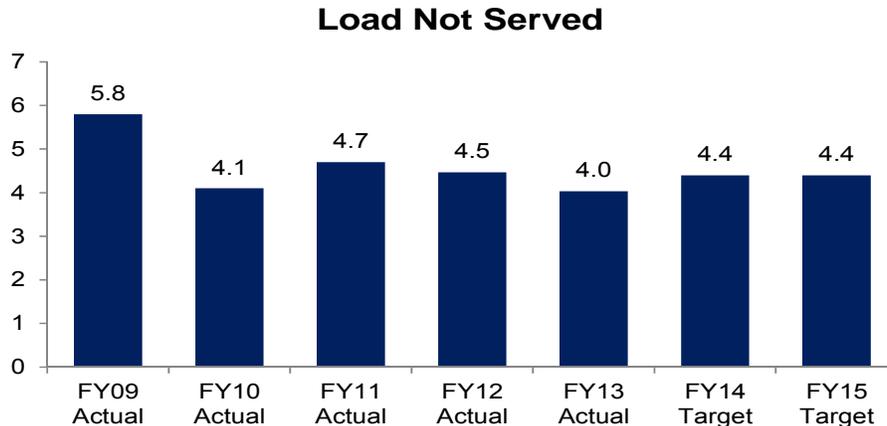
TVA Transmission Highlights

The TVA transmission system, one of the largest in North America, maintained 99.999 percent reliability for delivering electricity to its LPCs and directly served large industrial and government customers. The TVA transmission organization offers services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate transmission functions from TVA’s marketing functions.

Load Not Served

Definition: Load Not Served (“LNS”) measures the magnitude and duration of transmission system outages that affect TVA customers expressed in system minutes.

Calculation: Percent of total load not served x number of minutes in period



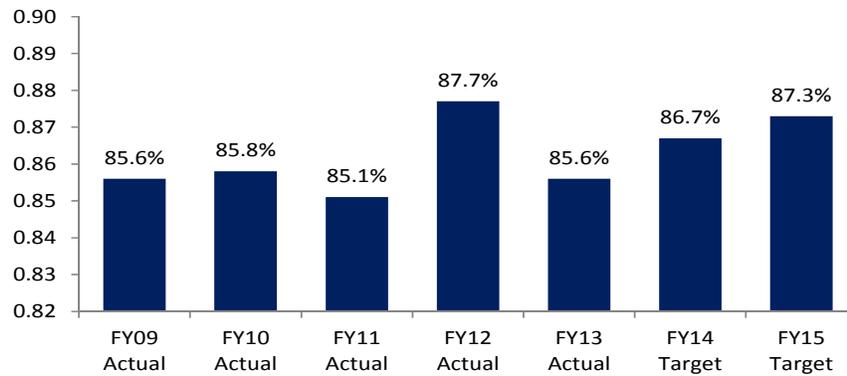
Equivalent Availability Factor

Definition: Equivalent Availability Factor is a ratio of actual available generation from all TVA Coal, Combined-Cycle & Nuclear generating assets in a given period compared to maximum availability. Equivalent Availability Factor reflects the percentage of hours within the period that the asset was available to operate.

Calculation: $EAF = \frac{\sum \text{of all Coal, Combined Cycle \& Nuclear units } ((AVH * NMC))}{\sum \text{of all Coal, Combined Cycle \& Nuclear units } (PH * NMC)} * 100$

AVH = Available Hours (Includes Economic Load Reduction and Not in Demand Hours)
 PH = Period Hours
 NMC = Net Maximum Capacity = Winter NDC for Thermal Units
 MWhL = MWh Losses due to forced outage or derating
 SchMWhL = MWh Losses due to scheduled outages (planned or maintenance) or derating

Equivalent Availability Factor



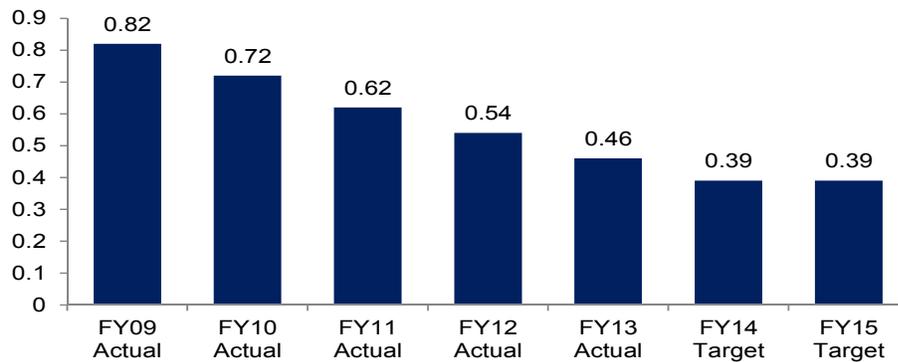
Responsibility

Recordable Injury Rate

Definition: This metric is a rate-based measure of employee safety as measured by the number of OSHA recordable injuries resulting in either a fatality, days away from work/lost time, restricted duty/job transfer, medical treatment, loss of consciousness, other significant work-related injury/illness diagnosed by a physician or other licensed health care professional per 200,000 employee-hours worked by both TVA employees and staff augmentation contractors.

Calculation: Safe Workplace (RIR) Rate = (number of recordable injuries x 200,000) / (number of employee-hours worked)

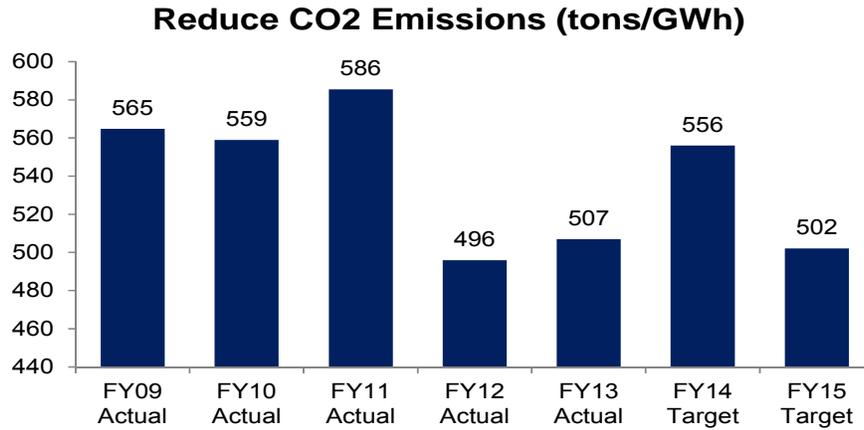
Recordable Incident Rate (Safe Workplace)



Reduce CO₂ Emissions (Emissions Tons/GWh)

Definition: Measure of TVA’s commitment to manage greenhouse gas emissions through efficient operation of its diverse generation mix

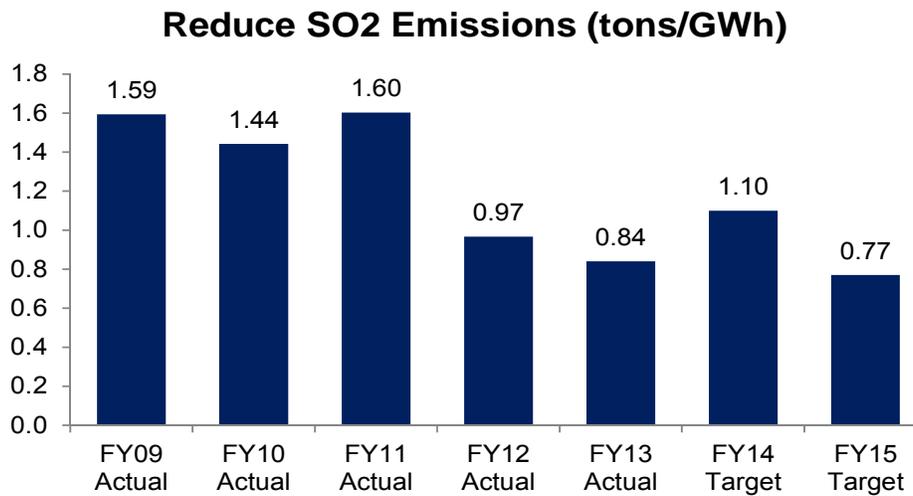
Calculation: Annual reduction of CO₂ Emissions = ktons



Reduce SO₂ Emissions (Emissions Tons/GWh)

Definition: Measure of TVA’s commitment to reduce SO₂ emissions to improve air quality in the Tennessee Valley and to reduce acid deposition in sensitive areas such as the Great Smoky Mountains

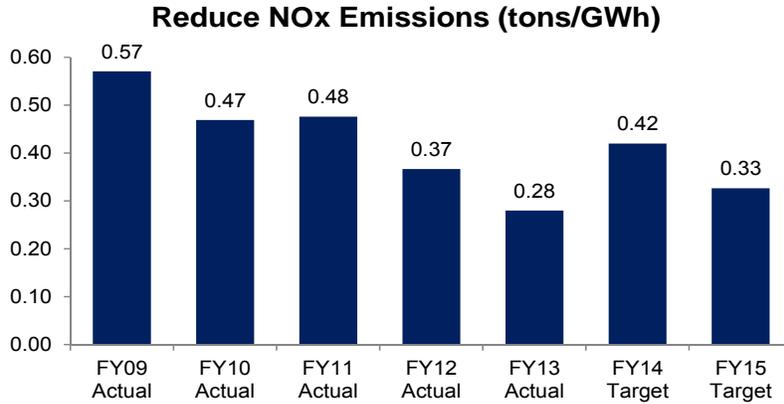
Calculation: Annual reduction of SO₂ Emissions = ktons



Reduce NO_x Emissions (Emissions Tons/GWh)

Definition: This metric directs emissions of NO_x from the combustion of carbon-based fuels for energy generation and excludes purchased power

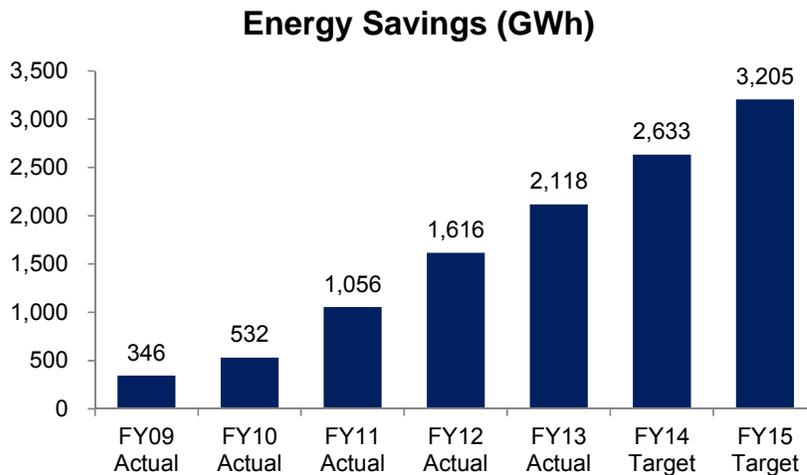
Calculation: Annual reduction of NO_x Emissions = ktons



Energy Savings (GWh)

Definition: Energy efficiency (“EE”) savings measured in GWh from internally and externally focused programs, demonstrations, pricing products and structures supported or funded by TVA which promote the efficient use of electricity

Calculation: FY Incremental Energy Efficiency Savings = [(Individual EnergyRight Solutions product kWh impacts) * (FY individual EnergyRight Solutions installations)/1,000,000] + [FY kWh energy efficiency achieved by Industrial and Commercial projects + FY kWh energy efficiency impacts from Demand Response programs + FY kWh energy efficiency impacts achieved through information/outreach programs + FY kWh energy efficiency impacts achieved by wholesale & retail pricing products + FY kWh energy efficiency impacts from TVA facilities improvements +....+ FY kWh energy efficiency impacts from TVA-supported loan funds administered by others + FY kWh energy efficiency impacts from state programs receiving TVA support]/1,000,000

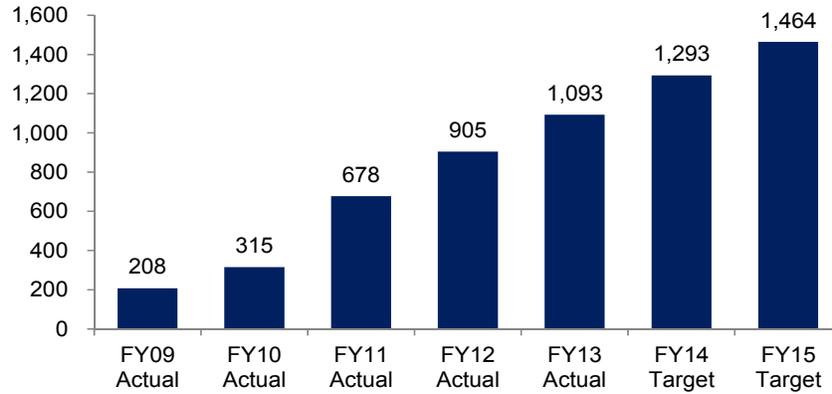


Peak Demand Reduction (MW)

Definition: Incremental summer peak demand reduction potential measured in gross MW from internally and externally focused programs; demonstrations; pricing products and partnerships supported or funded by TVA which promote the efficient use of electricity and demand reduction

Calculation: FY Energy Efficiency MW + FY Demand Response MW + FY Green Power Providers MW + ... + FY Demonstration MW + FY State Efficiency Programs Supported by TVA MW

Peak Demand Reduction (MW)



Nuclear Capacity Additions (MW)

Definition: The addition of nuclear capacity in the generation mix

Calculation: Sum additional MW from nuclear capacity additions

Note: The estimated completion date for Watts Bar Unit 2 is currently expected to be December 2015. The unit is expected to add 1,180 megawatts (MW) of capacity to TVA's generating portfolio when it begins commercial operation.

Other Financial and Operational Measures

Financial Metrics

TVA's financial information includes estimates that have significant uncertainty relative to the weather, the economy, fuel prices, and other matters that are subject to changing conditions. TVA is self-funded primarily from the sale of electricity and financings that provide capital for the power program. Unlike investor-owned utilities that issue stock, TVA's sources of capital are more limited. However, TVA's liquidity is enhanced by several factors. The fundamentals of TVA's business and high credit rating allow ready access to capital markets when needed, while TVA's Discount Notes (short-term debt) program provides TVA access to short-term financing needed to maintain liquidity and to fund daily operations.

Under a memorandum of understanding, pursuant to the TVA Act, the U.S. Treasury provides TVA a credit facility for up to \$150 million. TVA also has three multi-year, staggered maturity credit facilities with commercial banks which allow TVA to borrow up to \$2.5 billion. The facilities are generally treated as a backup source of liquidity rather than a tool to manage daily cash operations or a primary funding source. Any outstanding borrowings under any of the facilities would count as debt subject to TVA's \$30.0 billion statutory limit on bonds, notes and other evidences of indebtedness. As of September 30, 2013 the commercial credit facilities accommodated the issuance of letters of credit up to \$2.5 billion and there were approximately \$822 million of letters of credit outstanding, with no borrowings under any of the lines. From time to time, TVA provides letters of credit in lieu of cash or other assets to meet collateral requirements under certain agreements.

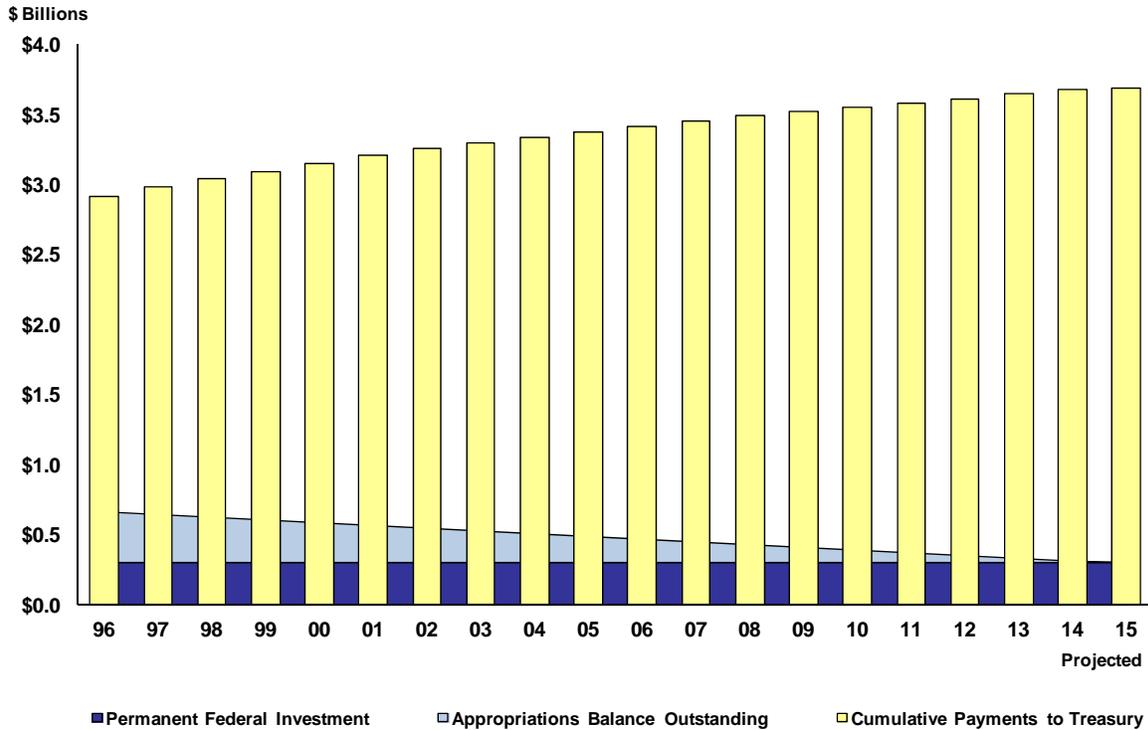
The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide, among other things, funds for operation, maintenance and administration of its power system and additional margin as the TVA Board may consider desirable for investment in power system assets, retirement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

TVA is focused on several strategic imperatives, which include maintaining low power rates, living within its means, optimizing the value of its asset portfolio, and being responsible stewards of the Tennessee Valley's resources. TVA's financial objectives are aligned with these strategic imperatives. Key financial objectives include aligning operating and maintenance expenses with revenues, effectively managing cash and debt levels, and making investments to support the power generating portfolio, while realizing the benefits of hydroelectric generation.

Power Program Appropriation Repayment

For more than forty years, TVA's power program has provided a positive cash flow to taxpayers by repaying the government's appropriation investment in the TVA power program along with a yearly return on the outstanding appropriation investment. Through FY 2014, these payments are expected to total an estimated \$3.7 billion on the federal government's investment of \$1.4 billion. Under the TVA Act, the government will retain permanent equity in TVA. The government has the benefit of an equity position in TVA, but neither the government nor taxpayers are liable for TVA's debt, as stated in the TVA Act.

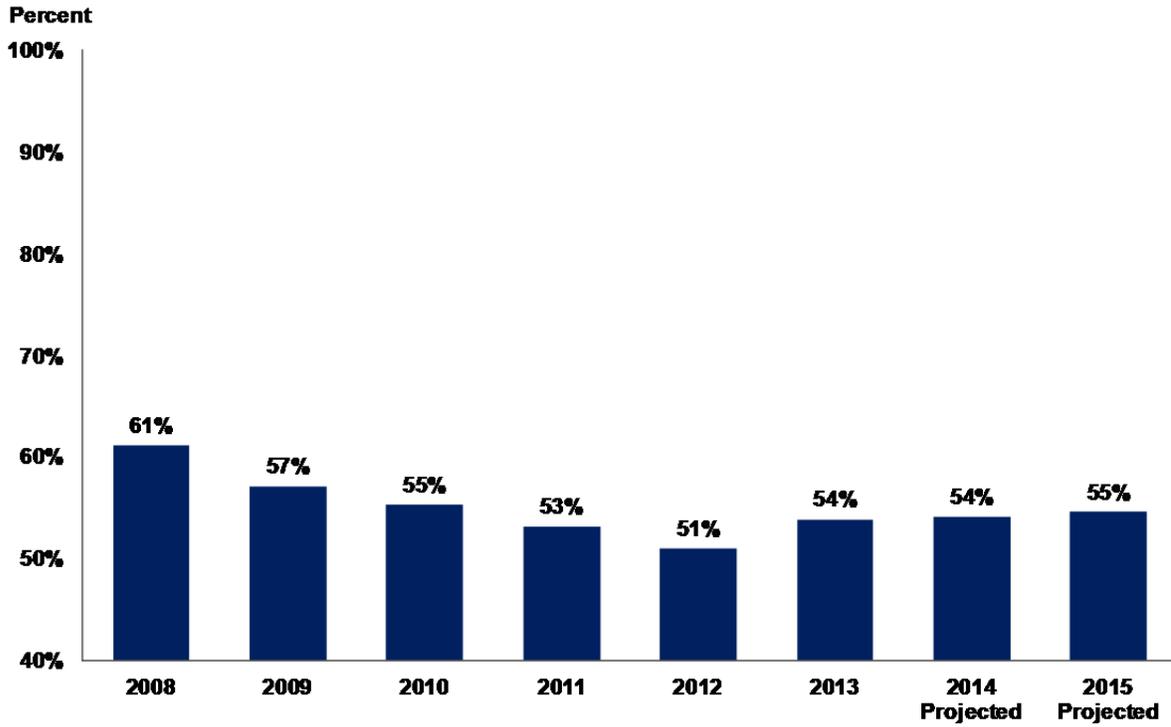
Power Program Appropriation Repayment



Total Statutory Debt as a Percent of Total Assets

TVA maintains a balance of financing obligations that is manageable and commensurate with its level of assets. Along with the debt service coverage ratio, TVA will track its financial health by measuring total statutory debt (defined for purposes of this document as bonds and notes) as a percent of total assets.

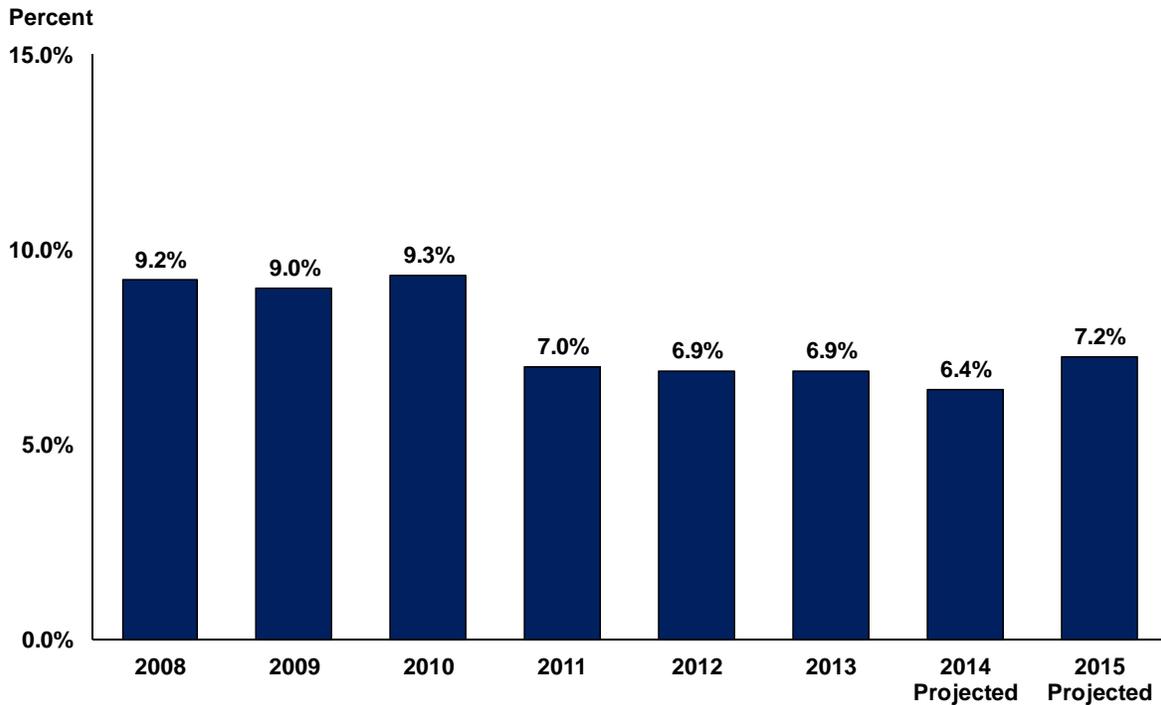
Total Statutory Debt / Total Assets %



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

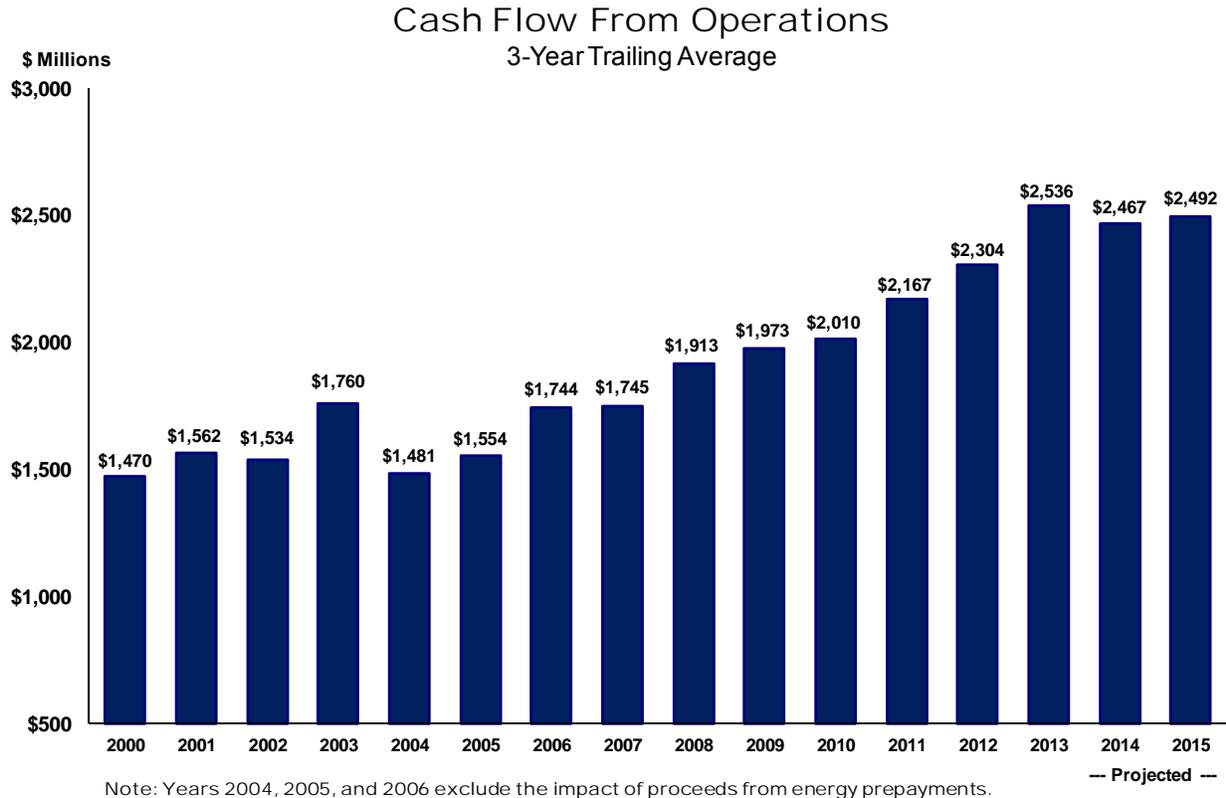
In addition to sound criteria for new investments, improving non-fuel operating and maintenance expenses is a central component of TVA's operations strategy and a key aspect of achieving cash return on assets. The measure of this goal will be a ratio of EBITDA to Total Assets. See Appendix B for a reconciliation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

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



Cash Flow from Operations (3-Year Trailing Average)

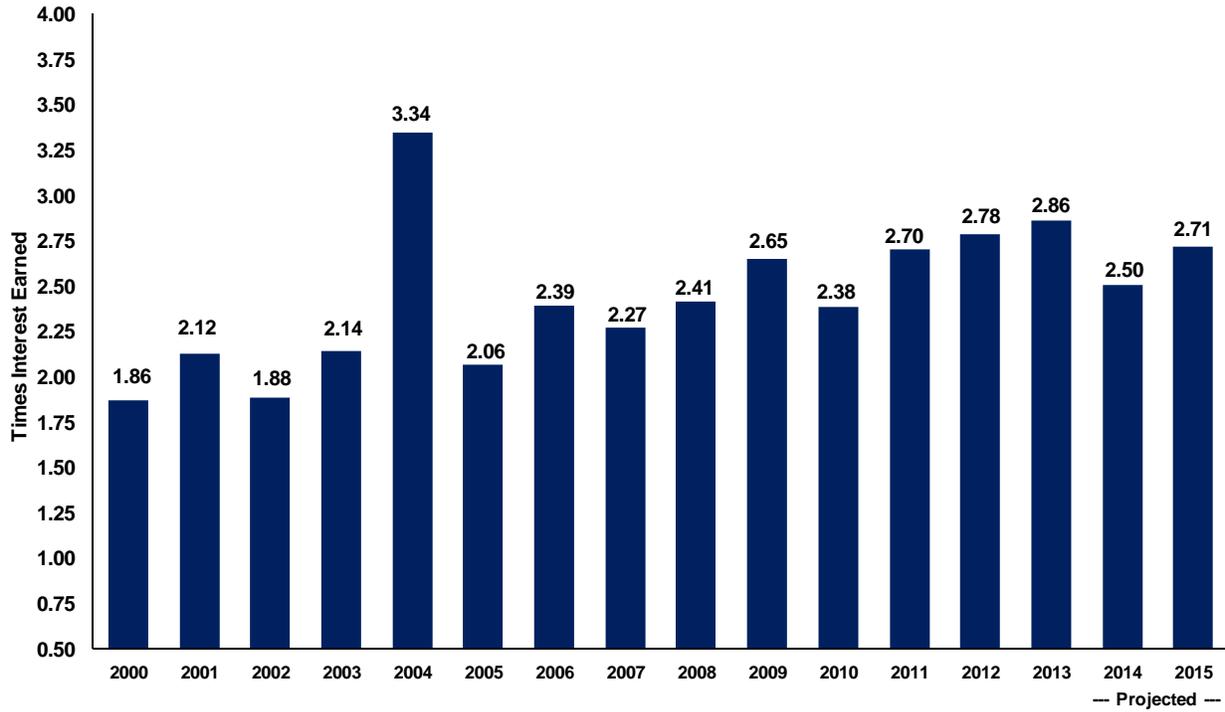
The amount of cash that TVA generates from its operations during the year – operating cash flow – is one of the best ways to measure TVA’s ability to meet its short-term obligations. Because power revenues and cash flow are greatly affected from year to year by weather and economic conditions, TVA uses a 3-year trailing average cash flow to provide a measure of its financial health.



Interest Coverage Ratio

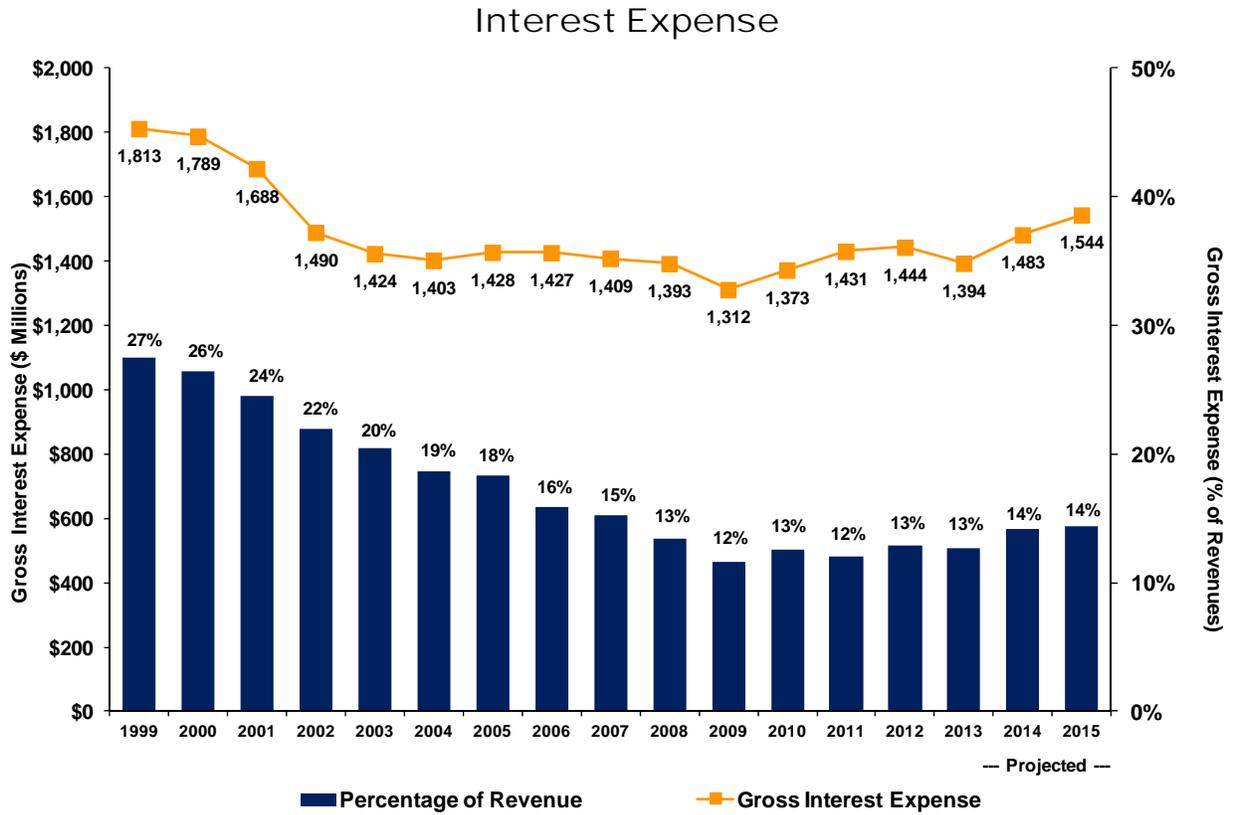
TVA's ability to pay the interest on its bonds and notes, measured by the degree to which cash flows from operations cover interest obligations, has also improved over the past several years. Interest Coverage Ratio, which is a non-GAAP measure, utilizes financial statement line items reported in accordance with GAAP. See Appendix C for a calculation of the Interest Coverage Ratio using financial statement line items reported in accordance with GAAP.

Interest Coverage Ratio



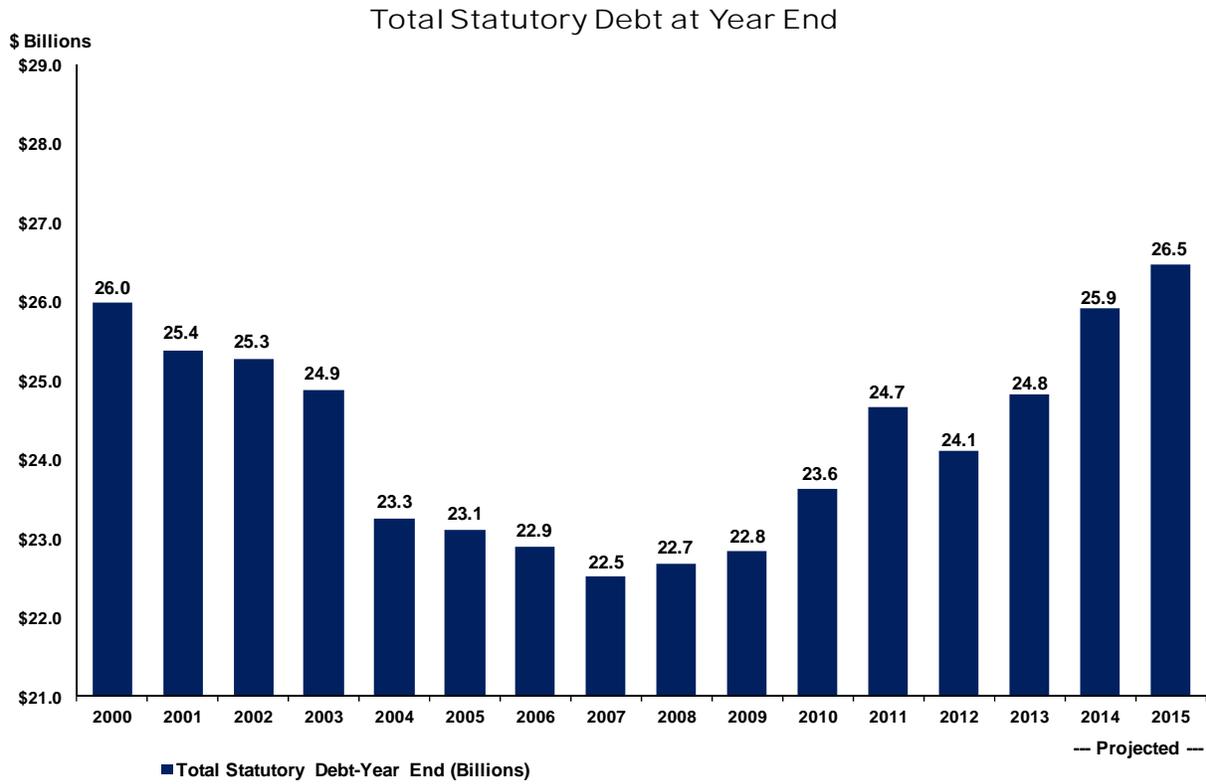
Interest Expense

TVA manages its fixed costs including interest expense. Annual interest expense was more than \$2.0 billion at its peak in FY 1998. This amount declined 28 percent to \$1.4 billion in FY 2013. In FY 1998, annual interest expense as a percentage of total revenues was 30 percent. That figure is expected to be 14 percent in FY 2016.



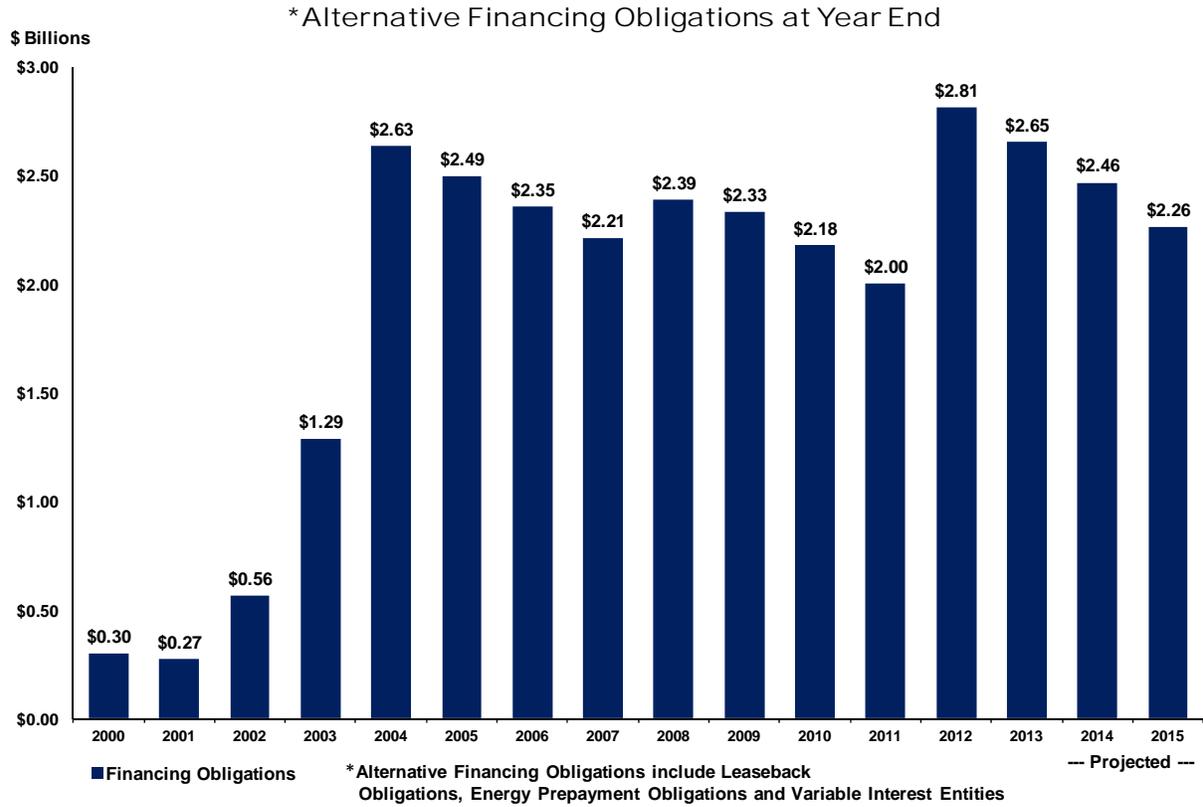
Total Financing Balance

From FY 2000 to FY 2013, TVA increased its Total Debt and Debt-Like Obligations, which include both statutory debt and alternative financing mechanisms such as certain lease obligations and prepaid energy obligations, by \$1.2 billion. TVA's debt and alternative financing obligations are expected to increase approximately \$898 million in FY 2014 and \$394 million in FY15 to fund capacity expansion.



Alternative Financing Obligations

TVA uses alternative sources of financing from time to time to provide cost-savings, flexibility or other benefits. TVA's alternative financings include lease-leaseback, lease-purchase, and energy prepayment obligations. On January 17, 2012, TVA entered into a \$1.0 billion lease-purchase transaction for the John Sevier Combined Cycle facility located in Hawkins County, Tennessee. TVA will lease the facility through January 17, 2042, after which the facility will remain TVA's property. In addition, on August 9, 2013, TVA entered into a \$400 million lease-purchase transaction involving the Southaven Combined Cycle facility located in DeSoto County, Mississippi. TVA will lease the facility through August 15, 2033.



Operational Metrics

Power Sales and Revenue

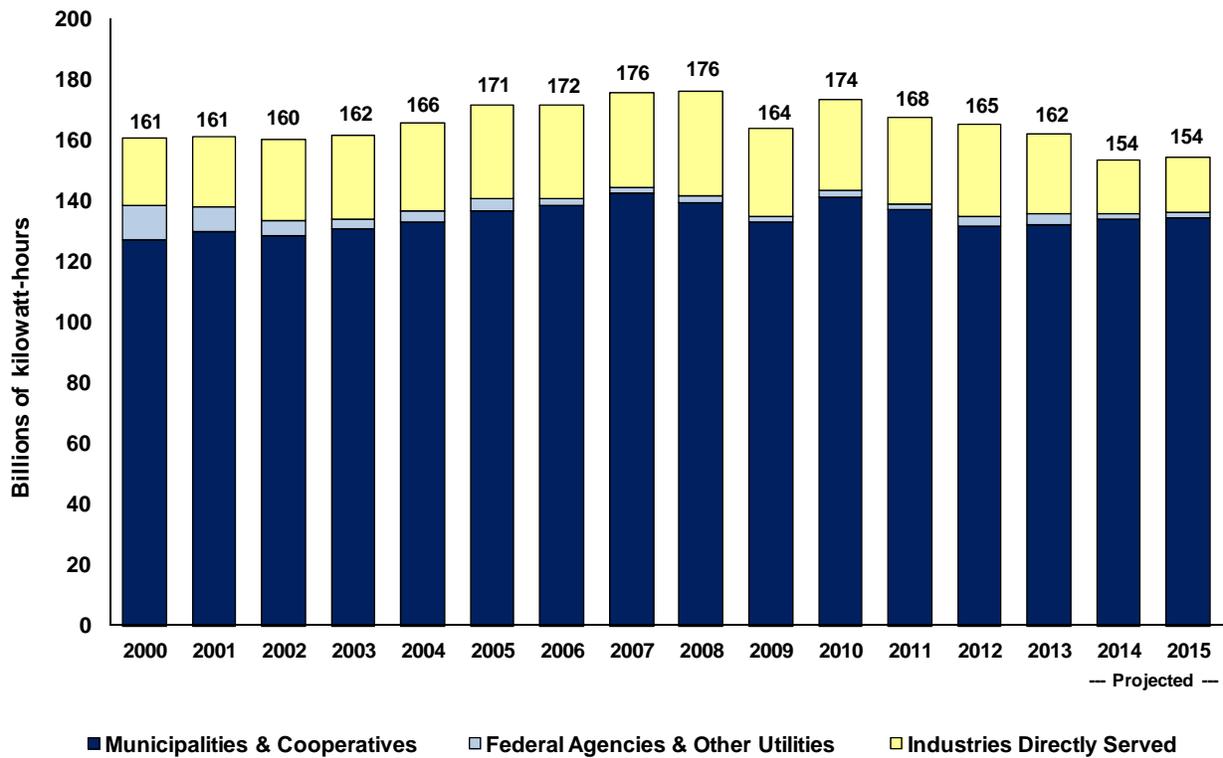
TVA sells electricity to three main customer groups:

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

Industrial Directly Served Customers: TVA also sells power directly to industrial customers with large or unusual loads. FY 2014 projections include reduced demand in this segment from large customers.

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

TVA Total Sales



Demand in the TVA Service Territory

In FY 2013, TVA sold 162 billion kilowatt-hours of electricity, and TVA estimates that it will sell 160 billion kilowatt-hours in FY 2014. Demand for electricity in the TVA region grew approximately one percent annually from FY 1995 through FY 2013. While economic conditions have reduced power demand in recent years, TVA plans to meet demand by making capital investments in the current year, as well as future years.

TVA System Capability

Summer net capability (MW) at September 30, 2013

Coal-Fired ⁽¹⁾	12,901	35%
Nuclear	6,724	19%
Hydroelectric ⁽²⁾	5,433	15%
Combustion Turbine (owned or leased)	9,242	25%
Power Purchase Agreements	2,242	6%
Other ⁽³⁾	<u>52</u>	<u><1%</u>
Capacity ⁽⁴⁾	36,594	100%

(1) Since September 30, 2012, TVA has retired John Sevier Fossil Plant Units 1 and 2, idled John Sevier Fossil Plant Units 3 and 4, retired Widows Creek Fossil Plant Units 3 and 5, idled Johnsonville Fossil Plant Units 5-6 and Units 9-10, and idled Colbert Fossil Plant Unit 5. In addition, TVA has announced plans to retire John Sevier Fossil Plant Units 3 and 4 effective December 31, 2015, to retire Colbert Fossil Plant Units 1-5 no later than June 30, 2016, to retire Paradise Fossil Plant Units 1 and 2 after completion of a gas-fired plant at the current location of Paradise Fossil Plant, and to retire Widows Creek Fossil Plant Unit 8 in the future.

(2) Hydroelectric capacity includes pumped-storage.

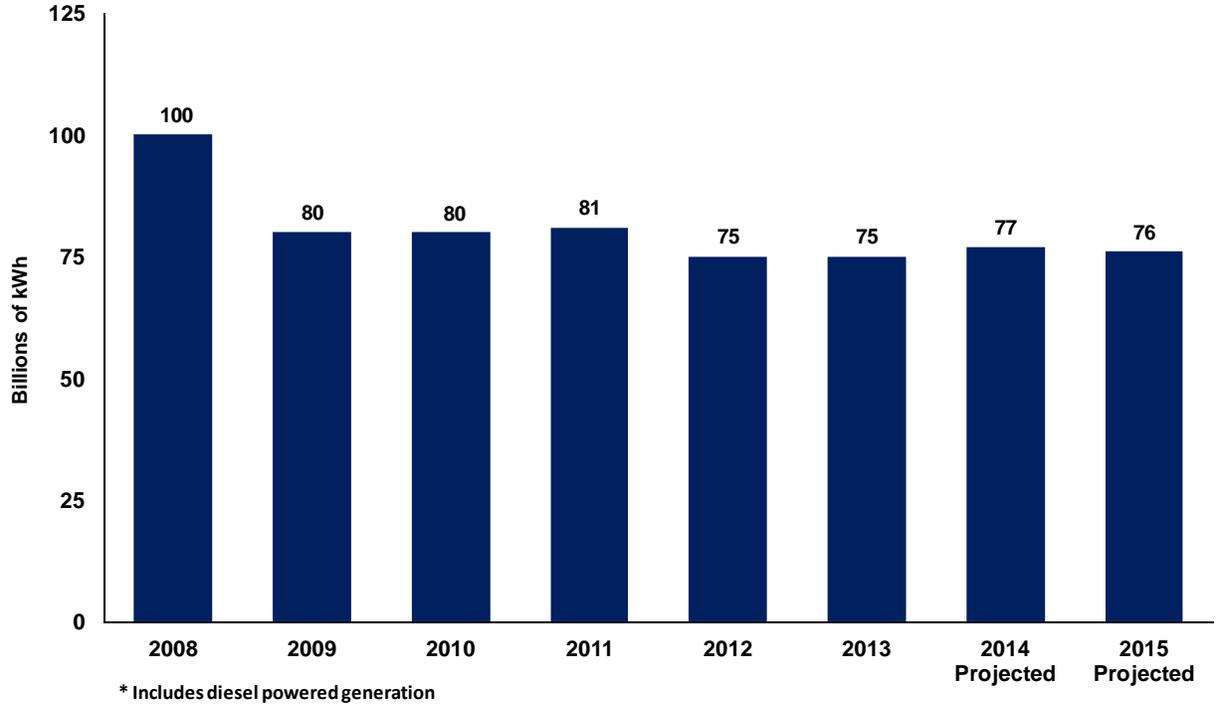
(3) Other includes 43 MW of Contract Renewable Resources (non-hydro) and 9 MW of Diesel Generator capacity.

(4) Includes 440 MW of capacity contracted by TVA from the two-unit Red Hills Generation Plant owned by Choctaw Generation, LP

Coal and Gas Power Generation

Coal and gas generation for FY 2013 was slightly higher than FY 2012, but the mix between coal and gas production changed due to rising gas prices in FY 2013. Coal generation as a percentage of total TVA generation increased from 41% in FY 2012 to 43% in FY 2013, and gas generation decreased to 9% from 12% for FY 2013 and FY 2012, respectively. For FY 2014 and FY 2015, coal generation is expected to decrease as new nuclear and gas generation come on line, and coal generating units are idled.

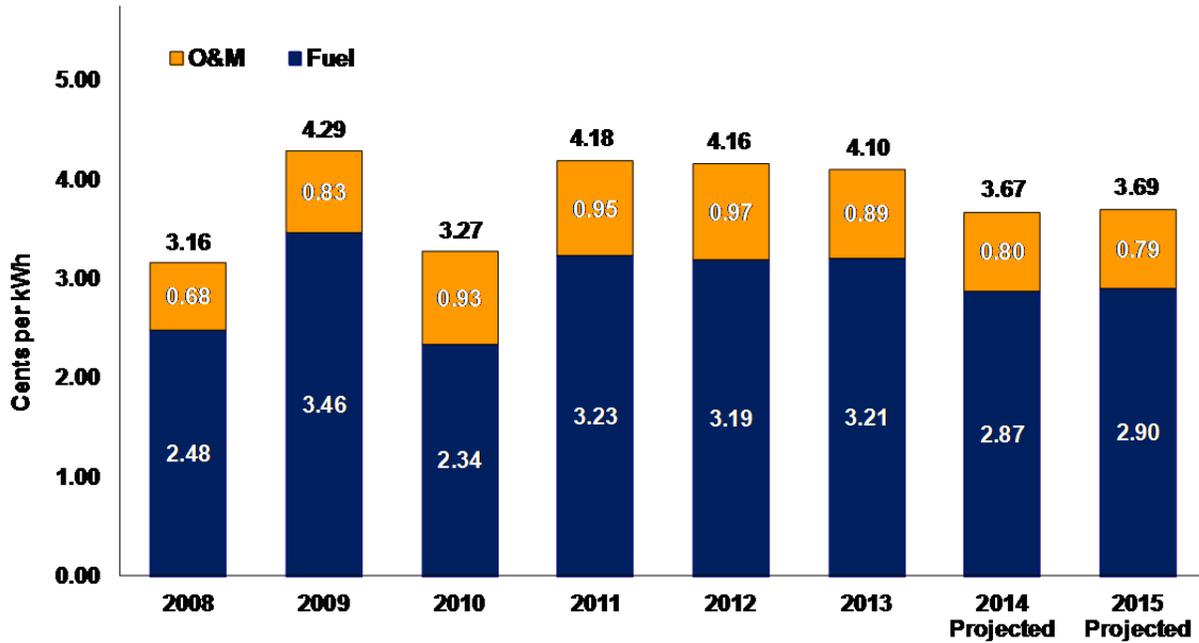
TVA Coal and Gas Power Generation*



Coal and Gas Production Expense

Production expense per kilowatt-hour is expected to decrease from FY 2013 to FY 2014 due primarily to more favorable fuel costs and the continued savings initiatives implemented in FY 2013. Operating and maintenance (“O&M”) expenses for the gas fleet are expected to increase as production increases, partially offset by less O&M expenses for the coal fleet as units are idled or retired. In FY 2015, production cost per kilowatt-hour is expected to increase slightly as compared to FY 2014 due primarily to less favorable fuel costs.

Coal and Gas Power Production Expense*

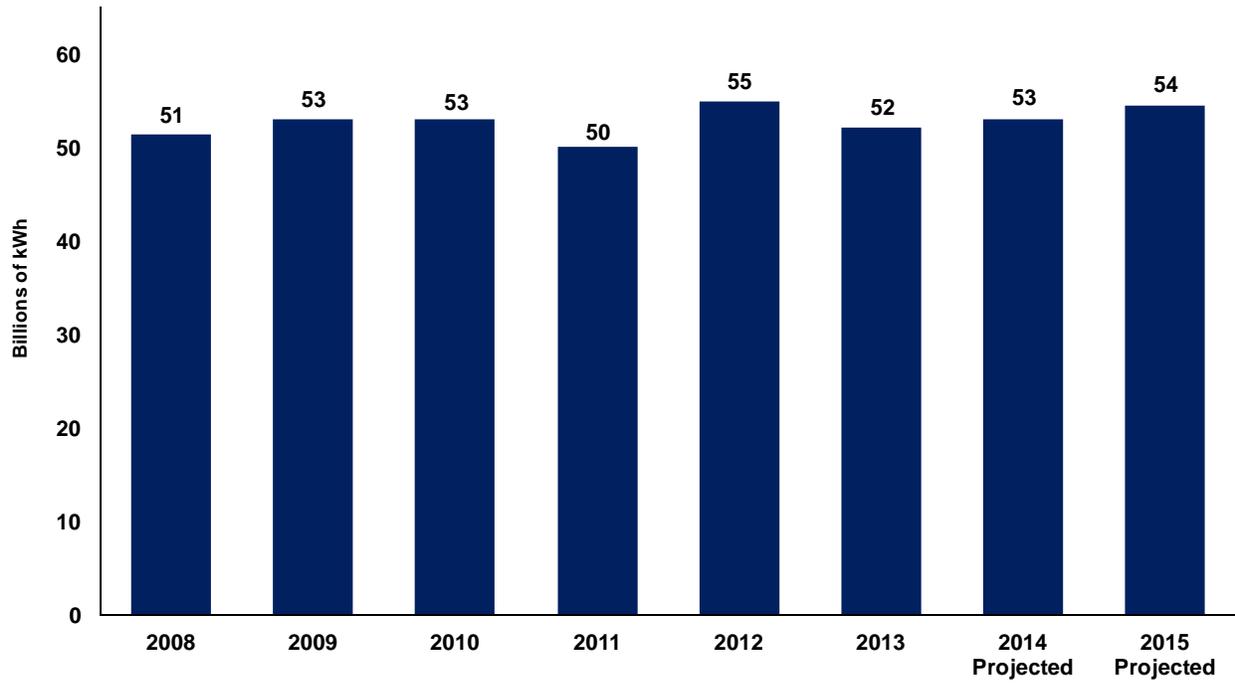


* Production includes diesel power

Nuclear Power Generation

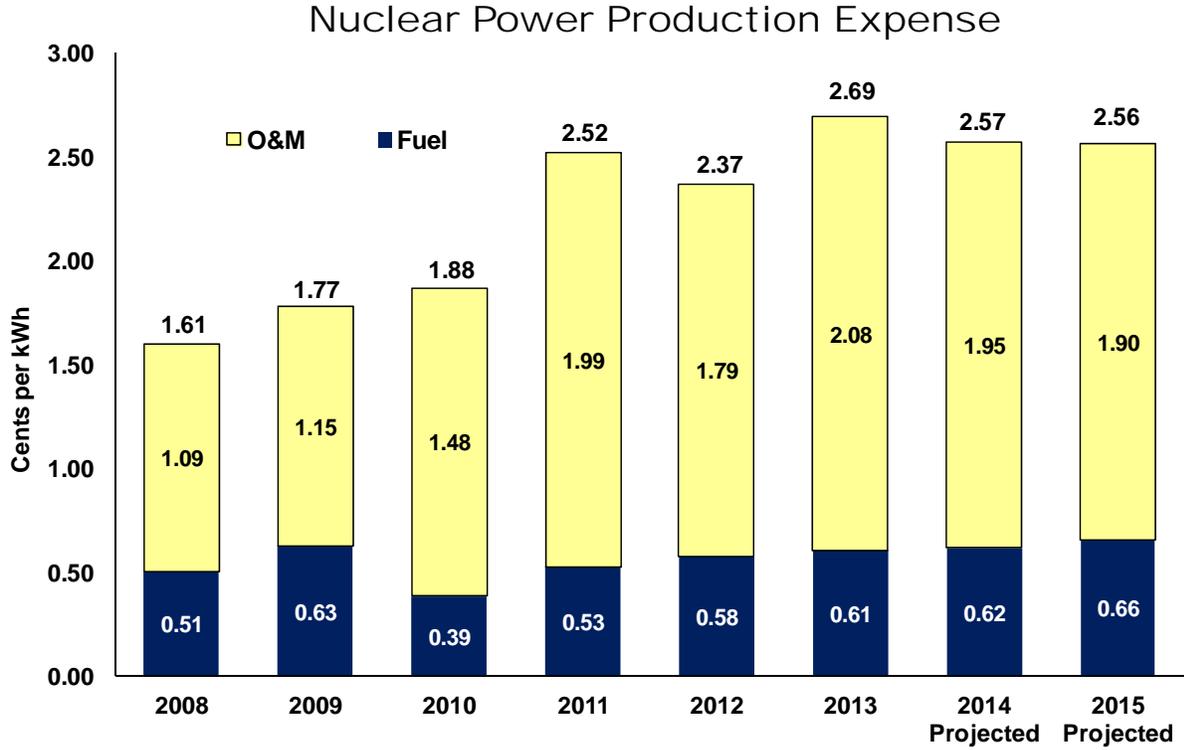
TVA's nuclear operations are critical to meet the region's power needs. In FY 2015, TVA's nuclear units are expected to generate 54 billion kilowatt-hours of electricity, which should represent approximately 33 percent of TVA's total net generation.

TVA Nuclear Generation



Nuclear Power Production Expense

TVA's total nuclear production expense on a per-kilowatt-hour basis increased in FY 2013 due to higher regulatory spending. Initiatives to improve efficiencies and reduce O&M expense are expected to decrease production costs in FY 2014 and FY 2015.



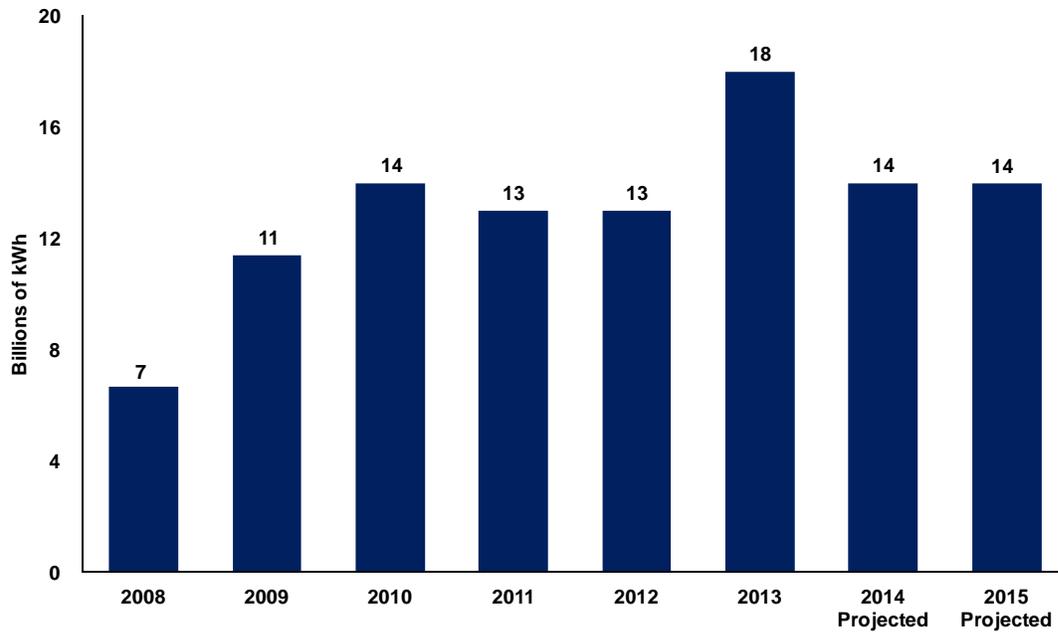
Hydroelectric Power Generation

In FY 2013, hydro generation was 18 billion kilowatt-hours, which is above normal due to the above normal rainfall and runoff observed in the Tennessee Valley watershed. For FY 2014 and FY 2015, TVA's integrated hydroelectric power system of dams and pumped-storage units are expected to generate at a normal level, which represents 14 billion kilowatt-hours of electricity. This would represent approximately between 8 to 11 percent of TVA's owned generation. While hydroelectric power represents a smaller amount of total net generation than other sources, hydroelectric power is an important element in TVA's total portfolios.

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

In the second quarter of 2012, all four of TVA's Raccoon Mountain pumped-storage units, which total 1,616 MW, were withdrawn from service after cracks were found in their rotors. In a limited capacity, one unit was returned to service in October 2012, but was later taken out of service due to vibration concerns. New rotors have been purchased for all four units and maintenance overhauls are proceeding in anticipation of the delivery and installation of the new rotors in the 2014 timeframe. TVA is dispatching generation from other TVA units and purchasing power if needed to compensate for the loss in generating capacity.

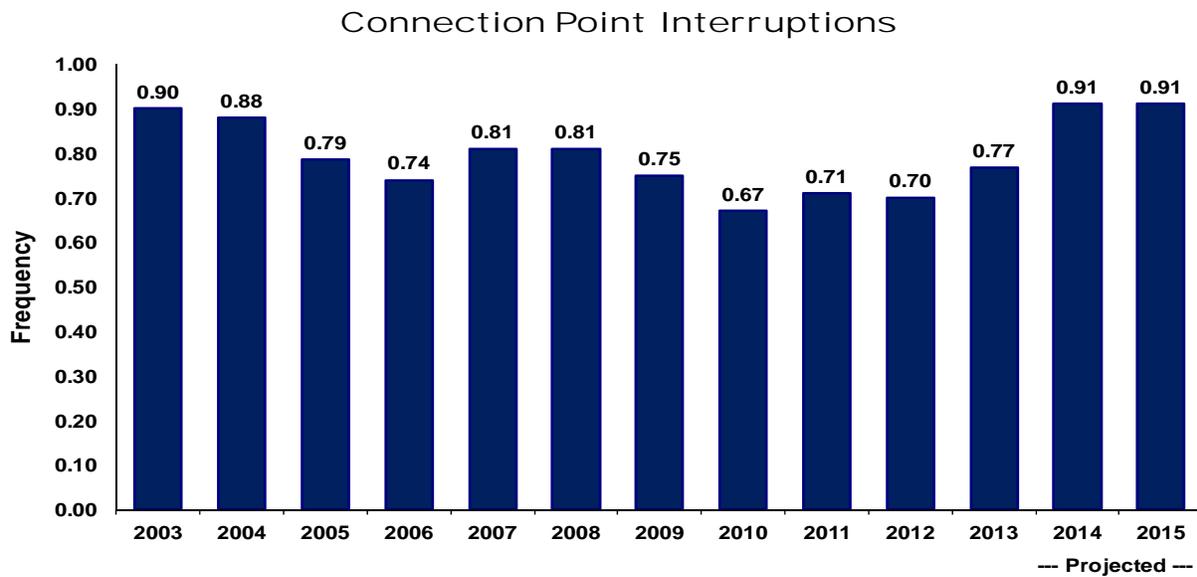
TVA Hydro-System Net Power Generation



TVA Transmission System

The TVA transmission system, one of the largest in North America, maintained 99.999 percent reliability for delivering electricity to its LPCs and directly served large industrial and government customers. The TVA transmission organization offers services, similar to those offered by other transmission operators, in accordance with standards of conduct that separate transmission functions from TVA’s marketing functions.

Connection point interruptions (“CPI”) measure reliability from our customers’ perspective. It is calculated as the number of momentary interruptions caused by the transmission system but excluding interruptions caused by declared major storms. CPI is lightning normalized. CPI is driven primarily by weather, and can be particularly difficult to reduce across large transmission systems such as TVA’s, which has thousands of miles of lines crossing rural areas. However, the impact of lightning strikes on TVA’s transmission system, the single-largest cause of transmission interruptions in the TVA region, has been reduced by 53 percent since FY 1995 by investing annually in lightning mitigation projects. In the graph below projected values shown for future years are based on industry benchmarks; TVA’s targets may be lower.



Appendix A

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

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

	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Net Income	\$ 817	\$ 726	\$ 972	\$ 162	\$ 60	\$ 271	\$ 1	\$ 470
Add back:								
Interest Expense	1,376	1,272	1,294	1,305	\$ 1,273	\$ 1,226	\$ 1,269	\$ 1,292
Depreciation & Amortization	1,224	1,598	1,724	1,772	1,919	1,680	1,791	1,749
Total EBITDA	\$ 3,417	\$ 3,596	\$ 3,990	\$ 3,239	\$ 3,252	\$ 3,177	\$ 3,061	\$ 3,511

Appendix B

Debt Service Coverage Ratio (DSCR) calculated on a three year average is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Annual DSCR coverage is measured by dividing Operating Income and Depreciation and Amortization by Interest Expense and the previous year's Current Maturities of Long-Term Debt and Current Portion of Leaseback Obligations. Then to compute the three year average you average the current year annual ratio and previous two years annual ratios. A calculation of DSCR calculated on a three year average utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Debt Service Coverage
(in millions)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Operating Income	1,337	1,423	1,543	2,184	1,973	2,242	1,437	1,301	1,453	1,229	1,726
Depreciation and Amortization	1,154	1,500	1,473	1,224	1,598	1,724	1,772	1,919	1,680	1,791	1,749
Net Operating Income	2,491	2,923	3,016	3,408	3,571	3,966	3,209	3,219	3,134	3,020	3,475
Gross Interest Expense	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,394	1,428	1,544
Current Maturities of Long-Term Debt	2,693	985	90	2,030	8	1,008	1,537	2,308	32	1,034	34
Current Portion of Leaseback Obligations	35	37	43	54	463	74	80	443	70	83	79
	4,105	2,449	1,542	3,477	1,783	2,455	3,048	4,195	1,496	2,545	1,657
3-Year Average DSCR	1.1	0.7	0.9	1.4	1.5	1.8	1.5	1.5	1.0	1.3	1.3

Appendix C

Interest Coverage is a financial measure that, although commonly used, is not calculated and presented in accordance with GAAP. Interest Coverage is measured by dividing Net Cash Provided by Operating Activities and Interest Expense by Interest Expense. TVA presents Interest Coverage because it describes TVA's ability to pay the interest on its bonds and notes. A calculation of Interest Coverage utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY
Unaudited Calculation of Interest Coverage
(in millions)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014 Projected	2015 Projected
Net Cash Provided from Operating Activities	1,462	1,985	1,788	1,967	2,163	1,901	2,437	2,574	2,597	2,230	2,648
Gross Interest Expense	1,377	1,427	1,409	1,393	1,312	1,373	1,431	1,444	1,394	1,428	1,544
Interest Coverage	2.06	2.39	2.27	2.41	2.65	2.38	2.70	2.78	2.86	2.56	2.71