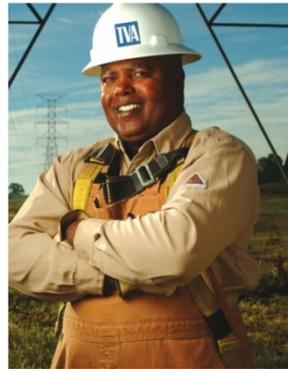
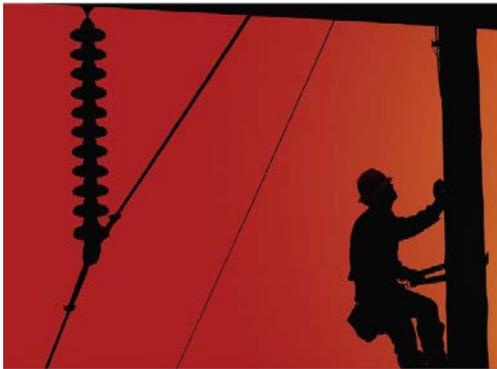


Tennessee Valley Authority

Budget Proposal and Management Agenda (Performance Report)



For the Fiscal Year Ending
September 30, 2017

Submitted to Congress
February 2016



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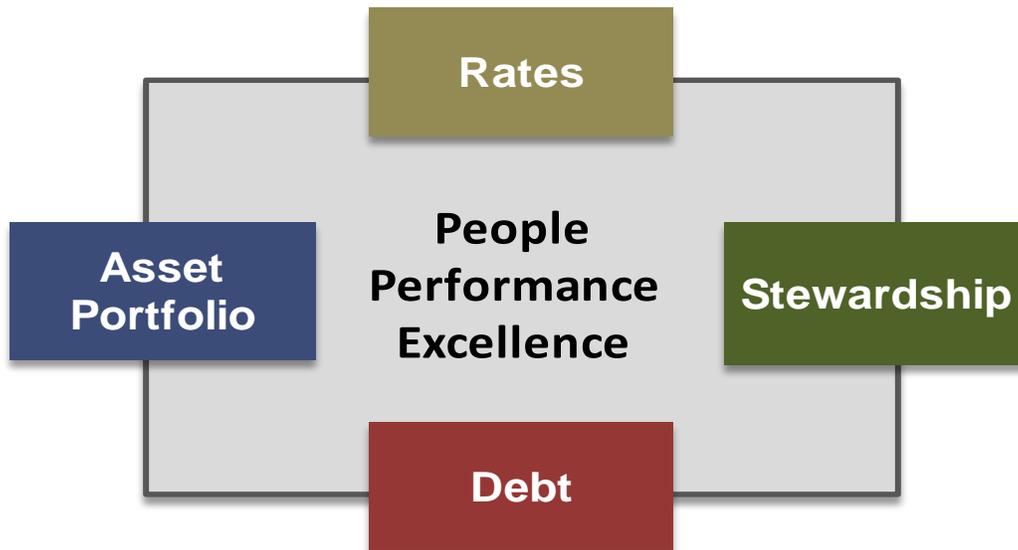
Introduction

TVA's Mission

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

Strategic Imperatives

In order to continue TVA's mission of service to the region, TVA must address four strategic imperatives: (1) rates: maintain rates as low as feasible, (2) debt: live within its means, (3) assets: manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) stewardship: be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to improve in these areas and become safer, better, faster, and leaner.



Rates

TVA is committed to providing its customers power at the lowest feasible rates. This customer focus requires scrutiny of all projects and use of resources so that the organization operates as efficiently and responsibly as possible.

Debt

TVA is committed to long-term debt management through employing a conservative approach as it relates to capital projects. While financing continues to be an important tool for funding TVA's long-term power system investments, the organization is committed to managing its debt under the ceiling established by Congress.

Asset Portfolio

Balancing TVA's assets with a diverse portfolio is vital to serving its customers reliably and at the lowest cost. In 2015, the TVA Board of Directors ("Board" or "TVA Board") approved the Integrated Resource Plan ("IRP"), which provides strategic guidance on the resource mix to respond to changing market conditions while maintaining a reliable, low-cost supply for customers. The diverse portfolio identified in this study includes additional commitments to energy efficiency, renewables, and natural gas-fired generation as part of the least-cost plan.

Stewardship

TVA's responsibility for stewardship of the waters and public lands of the Tennessee Valley was established in the Tennessee Valley Authority Act of 1933, as amended ("TVA Act"). These responsibilities include flood control, improved navigation of the Tennessee River, and land and shoreline management as well as agricultural and industrial development. TVA is committed to increasing its role in many of these areas as activities are planned for dam safety and reservoir operation enhancements, stabilization of eroding shorelines, and the redevelopment of Muscle Shoals properties. This redevelopment is expected to improve public relations, enhance marketability, and reduce the maintenance cost of ownership.

Since the 1970's, TVA has spent approximately \$6.2 billion on controls to reduce emissions from its coal-fired power plants. In addition, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas, nuclear, and hydro generation.

To reduce sulfur dioxide ("SO₂") emissions, TVA installed scrubbers on 17 coal-fired units, with scrubbers planned on six more units, and switched to lower-sulfur coal at 24 coal-fired units. To reduce nitrogen oxides ("NO_x") emissions, TVA installed selective catalytic reduction systems ("SCRs") on 20 coal-fired units with SCRs planned on six more units, operates selective non-catalytic reduction systems on four units, installed low-NO_x burners or low-NO_x combustion systems on 25 units, optimized combustion on five units, and operates NO_x control equipment year-round when units are operating (except during start-up, shutdown, and maintenance periods). TVA has also retired or announced plans to retire 33 of 59 coal-fired units, and the remaining coal-fired units will either have scrubbers and SCRs, be repowered to renewable biomass, or be retired.

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

Primarily due to the actions described above, emissions of NO_x and SO₂ on the TVA system have been reduced by 90 percent below peak 1995 levels and by 94 percent below 1977 levels through calendar year ("CY") 2014, respectively. For CY 2014, TVA's emission of carbon dioxide ("CO₂") from its sources was 77.5 million tons, a 27 percent reduction from 2005 levels. To remain consistent, provide clear information and align with the Environmental Protection Agency's ("EPA") reporting requirements, TVA will continue to report CO₂ emissions on a CY basis.

There may be additional material costs if reductions of greenhouse gases, including CO₂, are mandated by legislative, regulatory, or judicial actions and/or if more stringent emission reduction requirements for conventional pollutants are established. These costs cannot reasonably be predicted at this time because of the uncertainty of these actions. A number of emerging EPA regulations establishing more stringent air, water, and waste requirements could result in significant changes in the structure of the U.S. power industry, especially in the eastern half of the country. One such regulation is the EPA's Clean Power Plan.

On August 3, 2015, the EPA issued the Clean Power Plan ("CPP"), a rule under section 111(d) of the Clean Air Act ("CAA"), to reduce carbon emissions from existing power plants burning fossil fuels. The CPP, which is part of President Obama's Climate Action Plan strategy, establishes state-specific emission goals to lower CO₂ emissions from power plants, targeting a 32 percent nationwide reduction in CO₂ emissions from 2005 levels by 2030. The EPA established an "interim goal" that states must meet on average over the eight-year period from 2022-2029 and a "final goal" that states must meet in 2030 and thereafter based on a two-year average. States must submit to the EPA final plans, or "initial plans" with a request for an extension, by September 6, 2016. States that receive an extension must submit final plans by September 6, 2018. The impact of these rules on TVA and the states in TVA's service territory cannot be determined until the state plans are developed and approved by the EPA, but the impact on TVA could be significant.

Additionally, on August 3, 2015, the EPA finalized New Source Performance Standards for carbon emissions from new, modified, and reconstructed power plants. These standards apply to two types of fossil-fuel fired sources: (1) stationary combustion turbines, generally firing natural gas, and (2) electric utility steam generating units, generally firing coal. These standards reflect the degree of emission limitation achievable through the application of the best system of emission reduction that the EPA has determined to be adequately demonstrated for each type of source. These standards will apply to the new combined-cycle plants that TVA is constructing at its Allen and Paradise facilities, and TVA believes that its current plans for those plants will enable it to comply with the new standards.

TVA currently anticipates making significant investments in environmental projects through 2025 including new clean energy generation such as natural gas, nuclear, and renewables to reduce TVA's overall environmental footprint. Based on options for certain coal-fired units under two environmental agreements TVA entered into in 2011, and the recommended resource ranges approved in the 2015 IRP, the amount and timing of expenditures could change.

Power Program

TVA operates the nation's largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of more than nine million people. In 1959, Congress passed an amendment to the TVA Act that required TVA's power program to be self-financing from power revenues and proceeds from power program financings. While TVA's power program did not directly receive appropriated funds after it became self-financing, TVA continued to receive appropriations for certain multipurpose and other nonpower mission-related activities as well as for its stewardship activities. TVA has not received any appropriations from Congress for any activities since 1999, and since that time, TVA has funded stewardship program activities primarily with power revenues, with the remainder funded with user fees and other forms of revenues derived in connection with those activities.

The 1959 amendment to the TVA Act also required TVA, beginning in 1961, to make annual payments to the U.S. Treasury from net power proceeds as a repayment of and as a return on the Power Program Appropriation Investment. With the 2014 payment, TVA fulfilled its requirement to repay \$1.0 billion of the Power Program Appropriation Investment. The TVA Act requires TVA to continue making payments to the U.S. Treasury as a return on the remaining \$258 million of the Power Program Appropriation Investment. The amount of the return on the Power Program Appropriation Investment is based on the Power Program Appropriation Investment balance at the beginning of that year and the computed average interest rate payable by the U.S. Treasury on its total marketable public obligations at the same date.

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

TVA is primarily a wholesaler of power. It sells power to local power company customers ("LPCs") which then resell power to their customers at retail rates. TVA's LPCs consist of: (1) municipalities and other local government entities ("municipalities"), and (2) customer-owned entities ("cooperatives"). These municipalities and cooperatives operate public power electric systems whose primary purpose is not to make a profit but to supply electricity to the general public or its members. TVA also sells power to directly served customers, primarily customers with very large loads and federal agencies with loads larger than 5,000 kilowatts ("kW"). In addition, power in excess of the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with certain electric systems. In fiscal year ("FY") 2017, TVA expects sales of about 161 billion kilowatt-hours ("kWh") of electricity.

Power generating facilities operated by TVA at September 30, 2015, included 29 conventional hydroelectric sites, a pumped-storage hydroelectric site, nine coal-fired sites, three nuclear sites, 15 natural gas and/or oil-fired sites, and a diesel generator site. TVA's renewable energy program, Green Power Switch®, includes 14 solar energy sites, digester gas co-firing capacity at a coal-fired site, biomass co-firing potential (located at coal-fired sites), and a wind energy site (out of service). At September 30, 2015, certain of TVA's power generating facilities were out of service. On April 14, 2015, TVA added to its natural gas-fired fleet by acquiring a 700-megawatt ("MW") combined-cycle gas plant located in Ackerman, Mississippi, included above.

As of September 30, 2015, TVA's coal-fired units had 10,995 MW of net summer capability. The nine coal-fired plants generated about 38 percent of the power from TVA-operated facilities during FY 2015. TVA's system also includes 99 generators powered by natural gas and/or oil with a total net summer capability of 9,947 MW. These generators can be quickly started and are vital for meeting peak electricity demands. These generators provided 14 percent of the power from TVA-operated facilities in FY 2015.

TVA's six nuclear units have a combined net summer capability of 6,736 MW and generated 37 percent of the power from TVA-operated facilities in FY 2015.

TVA-owned hydroelectric units have a combined net summer capability of 5,412 MW and generated about nine percent of the power from TVA-operated facilities in FY 2015.

Additionally, TVA realized 412 GWh of savings through energy efficiency programs.

Integrated Resource Plan

TVA's mission sets the stage for its strategic planning process that includes strategic objectives, priorities, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business. An important element of the planning process is the IRP study. The power supply plans evaluated in this study identify the most

likely new resources needed to satisfy expected energy demand in the region during a 20-year planning horizon under various scenarios of the future.

The IRP guides TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The target power supply mix provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the IRP seek to balance cost, risk, system reliability, and environmental responsibility in providing power for TVA's customers.

In the fall of 2013, TVA started a refresh of the 2011 IRP. This effort was in response to changes in the industry and in the TVA service area. In addition to realigning certain planning assumptions for this current effort, TVA created an innovative method to model energy efficiency and renewable energy in a manner similar to more traditional energy resources based on least-cost planning principles while maintaining the comprehensive treatment of uncertainty used in the prior study. The recommendation in this IRP provides strategic guidance on the resource mix to successfully respond to changing market conditions while maintaining a reliable, low-cost supply for customers. The diverse portfolio identified in this study includes additional commitments to energy efficiency, renewables, and natural gas-fired generation as part of the least-cost plan. The IRP was developed with input from the public and contributions from a working group of stakeholders from LPCs, environmental organizations and other public and private entities, including an extensive public outreach that included a series of open meetings around the Tennessee Valley. The IRP report, along with a supplemental Environmental Impact Statement, was published in July 2015, and the Board approved the IRP in August 2015.

Transmission System

TVA's transmission system is a critical link in moving electricity throughout the eastern United States. TVA continues to invest in transmission assets to strengthen system reliability and incorporate new technology which provides a clearer picture of grid conditions over a wider area at any given time.

The TVA transmission system is one of the largest in North America. TVA's transmission system has 70 interconnections with 12 neighboring electric systems and delivered over 158 billion kWh of electricity to TVA customers in FY 2015. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 16 years in delivering electricity to customers.

TVA's transmission system interconnects with systems of surrounding utilities and consisted primarily of the following assets at September 30, 2015:

- Approximately 2,500 circuit miles of 500 kilovolt, 11,500 circuit miles of 161 kilovolt, and 2,200 circuit miles of other voltage transmission lines
- 512 transmission substations, power switchyards, and switching stations
- 1,293 customer connection points (customer, generation, and interconnection)

Natural Resource Stewardship

TVA has stewardship responsibility for about 11,000 miles of reservoir shoreline, approximately 293,000 acres of reservoir land, and 49 reservoirs encompassing approximately 650,000 surface acres of reservoir water used for recreation, aquatic and wildlife habitat, water supply, and industrial access. In addition, TVA manages over 170 agreements with private entities for commercial recreation (such as commercial campgrounds and marinas), manages 130 agreements with public agencies for public recreation (such as public parks, day use areas, boat launches, and swimming areas), and is responsible for over 80 public recreation areas throughout the Tennessee Valley. In accordance with its 2008 Environmental Policy, the TVA Board accepted the Natural Resource Plan ("NRP") in 2011 to guide TVA's cultural and natural resource stewardship efforts for the next 20 years. Programs within the NRP enhance TVA's stewardship of recreation and water resources, as well as biological and cultural resources on TVA lands and reservoirs, land planning, and public engagement. The NRP will be reviewed and updated approximately every 5 years.

Tennessee River System

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

Economic Development

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development is a component of the core mission of TVA, along with energy production and environmental stewardship. TVA works with LPCs, regional, state, and local agencies, and communities to showcase the advantages available to businesses locating or expanding in TVA's service area. TVA's primary economic development goals are to recruit major business operations to locate in the Tennessee Valley, encourage the location and expansion of companies that provide quality jobs, prepare communities in the Tennessee Valley for economic growth, and offer support to help grow and sustain small businesses. TVA seeks to meet these goals through a combination of initiatives and partnerships designed to provide program support, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 224 companies into the TVA service area during FY 2015. These companies announced capital investments of over \$7.8 billion and the expected creation and/or retention of over 76,200 jobs.

Technology Innovation

Consistent with the TVA Act, TVA makes investments in science and technological innovation to assist the agency in meeting future business and operational challenges in key areas and to establish national leadership in research, development, and demonstration. In addition to research that directly supports optimization of its generation and delivery assets, TVA is also focused on emerging technological advances in small modular nuclear reactors ("SMRs"), grid modernization, energy utilization technologies, and distributed energy resources ("DER"). TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

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

Commitment to the Future

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

TVA recognizes that the environment in which TVA does business continues to evolve. TVA is more flexible in its planning and more nimble in its execution. TVA is also working to respond more quickly than ever to continually changing market conditions.

TVA continues to work on improving its operating and financial performance, including controlling operating and maintenance costs and adjusting capital spending based on market and regulatory conditions. One thing will not change – TVA's commitment to provide safe, clean, reliable electricity at rates as low as are feasible.

TVA is proud to honor this commitment.

Budget Overview

Asset Portfolio

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

TVA faces significant uncertainty from external factors such as weather, the economy, and decreased demand from energy efficiency and demand response initiatives. TVA's financial information includes estimates, which are affected by these and other changing conditions. TVA projects total revenue to be \$11.1 billion in FY 2017, which includes revenues related to fuel cost recovery and an adjustment to fund investments associated with TVA's clean air program. The fuel cost recovery mechanism adjusts power rates monthly to reflect the changing costs of fuel, purchased power, and emission allowances.

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

In November 2013, the TVA Board approved the completion of a natural gas-fired facility at the Paradise Fossil Plant ("Paradise") site and the subsequent retirement of Paradise coal-fired Units 1 and 2. Paradise Unit 3, a coal-fired unit, will continue to be operated. At its August 21, 2014, meeting, the TVA Board approved the completion of a natural gas-fired facility at the Allen Fossil Plant ("Allen") site. TVA plans to retire the Allen coal-fired units no later than December 31, 2018. On December 30, 2014, the TVA Board also approved adding additional pollution controls on Units 1 and 4 at the Shawnee Fossil Plant ("Shawnee") site.

TVA is also converting its wet ash and gypsum facilities to dry collection facilities. The estimated cost of its coal combustion residual ("CCR") conversion program is \$2.1 billion, and the current schedule for completion is by 2022, with the exception of the new landfill at Shawnee to accommodate the addition of air pollution controls and the closure of the ponds at Gallatin. This program includes costs associated with pond closures, conversion of wet to dry handling, and landfill activities. TVA will continue to undertake CCR projects past 2022 in order to support long-term plant generation, including projects to build new landfills, expand landfills, and close landfills.

TVA's nuclear construction is an important element in a diversified portfolio for the future. On October 22, 2015, the Nuclear Regulatory Commission ("NRC") issued a forty-year operating license for Watts Bar Unit 2. Construction of Watts Bar Nuclear Unit 2 is continuing with project costs to date now exceeding the \$4.5 billion upper range previously approved by the TVA Board and commercial operations still scheduled to begin by June 30, 2016. The TVA Board approved additional funding of the project in January 2016, up to a total estimated cost of \$4.7 billion.

Although work on the Bellefonte Nuclear Unit 1 site was slowed in 2014, TVA believes that budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA's 2015 IRP does not envision any immediate needs for significant baseload plants such as Bellefonte.

In FY 2017, TVA estimates that it will invest about \$2.7 billion in capital projects for the power system. These investments are subject to approval in the FY 2017 budgeting process.

Stewardship

TVA operates and maintains one of the nation's largest systems of dams, reservoirs, and lands. Based on the provisions in the Energy and Water Development Appropriations Act, 1998, TVA funds its traditional essential water and land stewardship activities, including the NRP, with power revenues, user fees, and sources other than appropriations. No federal appropriations have been received by TVA for water and land stewardship since FY 1999, and none are requested for FY 2017.

TVA Operating Budget
(Millions of dollars)

	2015	2016	2017
	Actual	Estimate	Estimate
Revenue	\$ 11,003	\$ 10,753	\$ 11,088
Operating Expenses			
Fuel & Purchased Power	(3,394)	(3,406)	(3,467)
Operating, Maintenance, & Other	(2,838)	(2,919)	(2,875)
Depreciation & Amortization	(2,031)	(1,976)	(1,992)
Tax Equivalents	<u>(525)</u>	<u>(532)</u>	<u>(527)</u>
Total Operating Expenses	(8,788)	(8,833)	(8,861)
Operating Income	2,215	1,920	2,227
Other Income	29	37	36
Interest Expense, net	<u>(1,133)</u>	<u>(1,365)</u>	<u>(1,479)</u>
Net Income	\$ 1,111	\$ 592	\$ 784

Capital Budget & Cash Flow
(Millions of dollars)

	2015	2016	2017
	Actual	Estimate	Estimate
Cash flows from operating activities			
Net income	\$ 1,111	\$ 592	\$ 784
Items affecting operating activities*	<u>2,204</u>	<u>2,040</u>	<u>1,998</u>
Net cash provided by operating activities	3,315	2,632	2,782
Cash Used in Capital Budget			
Capital Projects			
Nuclear	(285)	(327)	(329)
Power Operations	(161)	(241)	(299)
River Operations	(82)	(116)	(117)
Transmission	(185)	(208)	(204)
Other Base Capital	<u>(247)</u>	<u>(203)</u>	<u>(212)</u>
Total Base Capital	(960)	(1,095)	(1,161)
Clean Air	(248)	(312)	(162)
Ash Remediation	(84)	(103)	(155)
Water Remediation	<u>-</u>	<u>(3)</u>	<u>(3)</u>
Total Environmental Costs	(332)	(418)	(320)
Watts Bar Unit 2	(863)	(130)	-
Paradise CC	(429)	(253)	(301)
Allen CC	(152)	(427)	(268)
Other Capacity Expansion	<u>(595)</u>	<u>(382)</u>	<u>(453)</u>
Total Capacity Expansion	(2,039)	(1,192)	(1,022)
Nuclear Fuel Capital	(350)	(370)	(325)
Other Investing Activities	<u>96</u>	<u>(100)</u>	<u>(50)</u>
Net cash used in investing activities	(3,585)	(3,175)	(2,878)
Borrowings (net of redemptions)	230	688	248
Other financing activities	<u>(160)</u>	<u>(145)</u>	<u>(152)</u>
Net cash provided by financing activities	70	543	96
Net change in cash and cash equivalents	(200)	-	-
Cash and cash equivalents at beginning of year	500	300	300
Cash and cash equivalents at end of year	300	300	300
Cash Payments to U.S. Treasury**	(5)	(8)	(8)
Reduction/(Increase) in Total Debt and Debt-Like Obligations	\$ (49)	\$ (474)	\$ (29)

*Kingston Ash Spill, Bellefonte and Ash ARO expenses are included in Operating Activities

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

Note: Included budget estimates are subject to change by TVA management and the TVA Board.

Business Plan

TVA is governed by the nine-member TVA Board of Directors, which is responsible for approving an annual budget. The information in this document is based on the FY 2016 annual budget, which was approved by the TVA Board in August 2015. The following were considered in preparing the budget.

Borrowing Limit

TVA works to fulfill its mission of supplying low cost and reliable power, providing environmental stewardship, and stimulating economic development while effectively managing debt and living within its means. In achieving its mission while following sound financial principles, TVA generally uses financing to fund capital investments for new generation capacity and environmental controls.

TVA has the authority per the TVA Act to issue bonds, notes, and other evidence of indebtedness subject to a \$30 billion limit, sometimes referred to as TVA's statutory debt limit. TVA bonds are not backed by the full faith and credit of the federal government and do not count against the United States federal debt limit. Congress last raised TVA's borrowing authority in 1979. As of September 30, 2015, TVA had \$23.9 billion of bonds and notes outstanding. Bonds and notes are generally the lowest cost form of financing available to TVA.

While the \$30 billion limit on bonds and notes has not been raised since 1979, TVA's business and operations have continued to grow along with the power needs of the Tennessee Valley. Since 1979, TVA has increased its total assets from \$13.0 billion to \$48.8 billion as of September 30, 2015. TVA's balance of financing obligations is projected to increase in FY 2016 to meet expected capital investment needs which are primarily driven by capacity expansion and environmental projects. However, TVA will continue to effectively manage its debt and remain below the statutory debt limit.

Nuclear Program

TVA is making a significant investment in safe and reliable nuclear power. The completion of Watts Bar Unit 2 is expected to cost up to \$4.7 billion.

Pension Fund

As of September 30, 2015, TVA's qualified pension plan had assets of \$6.8 billion compared with liabilities of \$12.8 billion. The plan has approximately 35,000 participants, of which approximately 23,700 are retirees or beneficiaries currently receiving benefits. Benefits of approximately \$690 million were paid to retirees and beneficiaries in 2015. TVA contributed \$275 million to the Tennessee Valley Authority Retirement System ("TVARS"), compared to a minimum required contribution under the TVARS rules of \$215 million, and incurred \$511 million in actuarial costs in 2015.

Coal-Fired Fleet Evaluation

TVA began its coal-fired plant construction program in the 1940s, and its coal-fired units were placed in service between 1951 and 1973. Coal-fired units are either active or inactive. TVA considers units to be in an active state when the unit is generating, available for service, or temporarily unavailable due to equipment failures, inspections, or repairs. As of December 31, 2015, TVA had nine coal-fired plants consisting of 39 active units, accounting for 10,995 MW of summer net capability, and 20 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. As of December 31, 2015, TVA had 19 retired units: John Sevier Fossil Plant ("John Sevier") Units 1-4, Johnsonville Fossil Plant ("Johnsonville") Units 5-10, Shawnee Unit 10, and Widows Creek Fossil Plant ("Widows Creek") Units 1-8. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of December 31, 2015, TVA had one mothballed unit: Colbert Fossil Plant ("Colbert") Unit 5. Inactive reserve units are unavailable for service but can be brought back into service after some repairs in a relatively short duration of time, typically measured in days. As of December 31, 2015, TVA had no units in inactive reserve. TVA refers to units which are in inactive reserve or mothballed status as idled. TVA continues to assess its power generating facilities.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the CAA and subsequent laws and regulations. Increasing regulatory costs require consideration of whether or not to make the required capital investments to continue operating these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements") to address a dispute under the CAA. The first agreement is a Federal Facilities Compliance Agreement with the EPA. The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children's Earth Foundation. Under the Environmental Agreements, TVA agreed

to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

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

Fossil Plant	Total Units	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Actions Taken or Planned to be Taken by TVA
Allen	3	SCRs on all three units	- Install scrubbers or retire no later than December 31, 2018	- The Board approved the construction of a gas-fired plant at the current Allen coal-fired site - Retire Units 1-3 after completion of the gas-fired plant
Bull Run	1	Scrubber and SCRs on unit	- Continuously operate current emission control equipment	- Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	- Remove from service, control, convert, or retire Units 1-4 no later than June 30, 2016 - Remove from service, control, or retire Unit 5 no later than December 31, 2015 - Control or retire removed from service units within three years	- Idled Unit 5 in October 2013 - Retire Units 1-5 no later than April 15, 2016
Cumberland	2	Scrubbers and SCRs on both units	- Continuously operate existing emission control equipment	- Continuously operate existing emission control equipment
Gallatin	4	None	- Control, convert, or retire all four units no later than December 31, 2017	- Add scrubbers and SCRs on all four units by December 31, 2017
John Sevier	4	None	- Retire two units no later than December 31, 2012 - Remove from service two units no later than December 31, 2012, and control, convert, or retire those units no later than December 31, 2015	- Retired Units 1 and 2 effective December 31, 2012 - Retired Units 3 and 4 in June 2014
Johnsonville	10	None	- Retire six units no later than December 31, 2015 - Retire four units no later than December 31, 2017	- Retired Units 5-10 effective December 31, 2015 - Retire Units 1-4 by December 31, 2017
Kingston	9	Scrubbers and SCRs on all nine units	- Continuously operate existing emission control equipment	- Continuously operate existing emission control equipment
Paradise	3	Scrubbers and SCRs on all three units	- Upgrade scrubbers on Units 1 and 2 no later than December 31, 2012 - Continuously operate emission control equipment on all three units	- The Board approved the retirement of Units 1 and 2, and replacement with gas-fired generation, with effective dates to be determined. - Continuously operate emission control equipment on Unit 3
Shawnee	10	None	- Control, retire, or convert Units 1 and 4 no later than December 31, 2017	- Retired Unit 10 in June 2014 - Add scrubbers and SCRs on Units 1 and 4 by December 31, 2017
Widows Creek	8	Scrubbers and SCRs on Units 7 and 8	- Retire two of Units 1-6 no later than July 31, 2013 - Retire two of Units 1-6 no later than July 31, 2014 - Retire two of Units 1-6 no later than July 31, 2015 - Continuously operate existing emissions control equipment on Units 7 and 8	- Retired Units 3 and 5 effective July 31, 2013 - Retired Units 1, 2, 4, and 6 on July 31, 2014 - Retired Units 7 and 8 on September 30, 2015

After TVA completes the actions described in the above table, TVA anticipates that it will have 7,884 MW of summer net capability of coal-fired generation, a reduction of 6,689 MW from TVA's coal-fired capacity as of September 30, 2010. TVA is moving towards a more balanced generation plan with greater reliance on lower-cost and cleaner energy generation technologies. TVA's long-range plans will continue to consider the costs and benefits of significant environmental investments at its remaining coal-fired plants.

Kingston Ash Spill

In December 2008, one of the dredge cells at Kingston Fossil Plant ("Kingston") failed, and over five million cubic yards of water and coal fly ash flowed out of the cell. TVA, in coordination with federal and state agencies, has completed cleanup and recovery efforts. TVA completed the removal of time-critical ash from the river during the third quarter of 2010. In November 2012, the EPA and the Tennessee Department of Environment and Conservation approved a plan to allow the Emory River's natural processes to remediate the remaining ash in the river, and to conduct a long-term monitoring program. TVA submitted a final completion report to the EPA on April 22, 2015, for review and approval. The report was approved by the EPA on September 9, 2015.

In August 2009, TVA began using regulatory accounting treatment to defer all actual costs already incurred and expected future costs related to the ash spill. The cost is being charged to expense as it is collected in rates over 15 years, beginning October 1, 2009. As of September 30, 2015, TVA had spent \$1.1 billion related to the ash spill. The remaining estimated liability at September 30, 2015, was \$6 million and is included in accounts payable and accrued liabilities.

TVA had property and excess liability insurance programs in place at the time of the Kingston ash spill. TVA pursued claims under both the property and excess liability programs and has received total insurance proceeds of \$336 million. The insurance proceeds are being recorded as reductions to the regulatory asset and will reduce costs collected in future rates.

Coal Combustion Residuals Facilities

On April 17, 2015, the EPA published a final rule related to CCRs that regulates CCRs as nonhazardous waste under Subtitle D of the Resource Conservation and Recovery Act. The rule also regulates landfill and impoundment location, design, and operations; dictates certain pond-closure conditions; and establishes groundwater monitoring and closure and post-closure standards. While not required, states may adopt the rule's requirements into their regulatory programs. The rule is effective October 19, 2015, with certain provisions having later effective dates.

TVA has committed to a programmatic approach to the elimination of wet storage of CCRs within the TVA service area. Under this program (the "CCR Conversion Program"), TVA has committed to (1) convert all operational coal plants to dry CCR storage, (2) close all wet storage facilities, and (3) meet all applicable state and federal regulations. To carry out its CCR Conversion Program, TVA is undertaking the following actions:

- Dry generation and dewatering projects: Conversion of coal plant CCR wet processes to dry generation or dewatering is complete at Bull Run Fossil Plant ("Bull Run") and is underway at Kingston, Gallatin, Cumberland Fossil Plant ("Cumberland"), Shawnee and Paradise.
- Landfills: Lined and permitted dry storage facilities have been constructed at Bull Run and Kingston, are under construction at Gallatin, and are in the planning or engineering phases at Cumberland, Paradise, and Shawnee.
- Wet CCR impoundment closures: TVA is planning to close wet CCR impoundments in accordance with federal and state requirements when (1) coal plants are converted to dry CCR processes and dry storage landfills become operational or (2) plant operations cease. Closure project schedules and costs are driven by the selected closure technology (e.g., cap and close in place or clean closure). As environmental studies are performed and closure methodologies are determined, detailed project schedules and estimates will be prepared.
- Groundwater monitoring: Compliance with the EPA's CCR rule will require additional engineering and analysis as well as implementation of a comprehensive groundwater monitoring program.

The CCR Conversion Program is scheduled to be completed by 2022 with two exceptions. First, a new landfill at Shawnee will be required to accommodate the addition of air pollution controls and is scheduled to be completed by 2026. Once the new landfill is in service, the existing bottom ash pond and dry stack will be closed in accordance with federal and state requirements. Second, the ponds at Gallatin are pending additional studies to determine the final closure methodology and schedule. Through December 31, 2015, TVA had spent approximately \$795 million on its CCR Conversion Program. TVA expects to spend an additional \$1.3 billion on the CCR Conversion Program through 2022. Once the CCR Conversion Program is completed, TVA will continue to undertake certain CCR projects to support long-term plant generation, including building new landfill sections under existing permits and closing existing sections once they reach capacity.

Variable Interest Entities

On August 9, 2013, TVA entered into a lease financing arrangement with Southaven Combined Cycle Generation, LLC ("SCCG") for the lease by TVA of the Southaven Combined Cycle Facility ("Southaven CCF"). SCCG is a special single-purpose limited liability company formed in June 2013 to finance the Southaven CCF through a \$360 million secured notes issuance (the "SCCG notes") and the issuance of \$40 million of membership interests subject to mandatory redemption. The membership interests were purchased by Seven States Southaven, LLC. Southaven Holdco, LLC ("SHLLC") is a special single-purpose entity, also formed in June 2013, established to acquire and hold the membership interests of SCCG. A non-controlling interest in SHLLC is held by a third-party through nominal membership interests, to which none of the income, expenses, and cash flows of SHLLC are allocated. The membership interests held by SHLLC were purchased with proceeds from the issuance of \$40 million of secured notes and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each August 15 and February 15, with a final payment due on August 15, 2033.

On January 17, 2012, TVA entered into a \$1.0 billion construction management agreement and lease financing arrangement with John Sevier Combined Cycle Generation LLC ("JSCCG") for the completion and lease by TVA of the John Sevier Combined Cycle Facility ("John Sevier CCF"). JSCCG is a special single-purpose limited liability company formed in January 2012 to finance the John Sevier CCF through a \$900 million secured note issuance (the "JSCCG notes") and the issuance of \$100 million of membership interests subject to mandatory redemption. The membership interests were purchased by John Sevier Holdco LLC ("Holdco"). Holdco is a special single-purpose entity, also formed in January 2012, established to acquire and hold the membership interests in JSCCG. A non-controlling interest in Holdco is held by a third-party through nominal membership interests, to which none of the income, expenses, and cash flows of Holdco are allocated. The membership interests held by Holdco in JSCCG were purchased with proceeds from the issuance of \$100 million of secured notes (the "Holdco notes") and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each January 15 and July 15, with a final payment due on January 15, 2042.

Wholesale Rate Structure Changes

Since the fall of 2013, TVA and its customers have worked collaboratively to develop and implement a long-term pricing direction. This strategic direction will guide TVA's long-term development of rates and will provide customers additional clarity to make future business decisions and evaluate technology investment. On August 21, 2015, the TVA Board approved a wholesale rate change that is consistent with this strategic direction and a further improvement to the wholesale rate structure implemented in April 2011. The rate structure provides price signals to further encourage LPCs and end-use customers to shift demand and energy consumption from high-cost periods to less expensive periods. Under the new wholesale structure, all LPCs will take service under a time of use structure. Although weather can still impact consumption and average effective rates, customers are given stronger price signals and therefore greater incentives to control their demand and energy utilization. In conjunction with the wholesale rate change, the fuel cost recovery mechanism has been revised to move from average fuel cost allocation to an actual fuel cost allocation approach. This means that the total monthly fuel cost will be allocated to two major classes of customers (small customers of the LPCs and large customers of TVA and the LPCs) based on their hourly load profiles and TVA's hourly dispatch costs. These changes will improve the alignment of rates with the cost causation. The wholesale rate change, along with a modification to the fuel cost adjustment methodology, became effective October 1, 2015.

Renewable Energy

As recommended in the 2015 IRP, TVA intends to pursue adding between 150 MW and 800 MW of cost-effective renewable resources (primarily utility-scale solar) to the power supply mix by 2023. Based on future capacity and energy supply needs, and meeting appropriate cost and performance targets, solar and wind resources additions could increase to as much as 2,000 MW.

TVA's renewable energy portfolio is made up of TVA-owned and purchased clean and renewable energy including hydro, wind, solar, and biomass. As of September 30, 2015, TVA maintained 29 conventional hydroelectric dams, accounting for 3,796 MW of summer net capability. TVA also controls 14 solar energy sites, digester gas co-firing at Allen, and three wind turbines. The wind turbines did not provide any summer net capability as of September 30, 2015, because they were not operational. EPRI is currently undertaking a research project to assess the condition of these three TVA-owned turbines to evaluate options for their future. The digester gas co-firing capacity is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability.

TVA has entered into eight contracts with Midwest wind farms for the purchase of renewable wind energy. Since December 1, 2012, energy has been provided to TVA under all eight contracts. The first wind farm, located in Illinois, began providing 300 MW (nameplate capacity) under a 20-year contract in May 2010. TVA does not purchase the renewable attributes for this energy but has the opportunity to obtain them in the future. The other seven contracts

provide TVA with an additional 1,215 MW (nameplate capacity) that include renewable attributes. These wind farms are located in Illinois, Kansas, and Iowa. In addition, TVA has contracted for 27 MW (nameplate capacity) of renewable energy generation from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee, and 4.5 MW of nameplate capacity from a solar farm in Haywood County, Tennessee.

In 2003, TVA developed a Generation Partners ("GP") pilot program to test the interest and feasibility of renewable consumer-owned generation as a source of power for TVA. In October 2012, the GP program transitioned to a long-term, sustainable program called Green Power Providers ("GPP"). As of September 30, 2015, TVA had more than 2,500 renewable installations in operation, providing close to 93 MW of solar, wind, low-impact hydro, and biomass generation. Solar installations alone total approximately 82 MW of this generation. The GPP program will continue to move forward as a viable option for small-scale renewable generation (less than 50 kW) to serve residential and small commercial market segments.

The Solar Solution Initiative ("SSI") is a pilot program that began in February 2012 and provides incentive payments for mid-sized (greater than 50 kW up to 1 MW) solar projects that utilize local certified installers in the Tennessee Valley region. SSI helps support the existing local solar industry, while also adding renewable investment and jobs to the region. As of September 30, 2015, TVA had offered 56 MW of renewable solar capacity through SSI, with nearly 44 MW operating or committed. At the beginning of CY 2016, SSI transitioned to the Distributed Solar Solutions pilot to encourage projects led by TVA's LPC customers partners that help enhance the distribution system grid or encourage creative business model development.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA purchases renewable energy at market rates from projects that meet the requirement of the RSO program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kW, but no greater than 20 MW in nameplate capacity. As of September 30, 2015, TVA had offered 400 MW of RSO renewable capacity and currently has over 300 MW of projects including 20 MW of biomass, nearly 18 MW of landfill gas and 260 MW of solar technologies operating or committed. The utility-scale renewable energy sector has matured in recent years and can now compete with traditional energy resources. As a result, starting in CY 2016, utility-scale renewable energy projects will no longer be limited by programmatic caps, but will be competitively evaluated alongside other generation sources.

TVA's Green Power Switch® ("GPS") program is a voluntary purchase program that supports and promotes the production of renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In FY 2015, GPS had approximately 195,558 megawatt-hour ("MWh") sales through three GPS program options: the original GPS program and the testing of two other customer options. In the original GPS, consumers have the option to purchase 150 kWh renewable energy blocks for \$4 per month. Supply includes certified Green-e Energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two additional pilot options test customer demand for a 100-percent solar option sourced from TVA's GPP supply as well as a lower priced bulk option for larger commercial and industrial customers. The solar pilot ended in July 2015. The bulk option continues, and as of September 30, 2015, the supply was sourced from TVA-contracted renewable energy credits in the greater Southeastern region.

Payments in Lieu of Taxes

TVA provided nearly \$542 million in tax equivalent payments in FY 2015 to state and local governments where it sells electricity or has power properties. TVA pays tax equivalent payments annually to the eight states where it sells electricity or owns generating plants, transmission lines, substations or other power assets, and directly to 146 county governments where TVA owns power properties that were previously privately owned and operated and subject to ad valorem taxes.

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

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

Since 1941, TVA has made more than \$12 billion in tax equivalent payments, with payments in the past 10 years totaling more than \$5 billion.

Management Initiatives

Rates/Debt

TVA is undertaking cost and debt reduction initiatives with the goal of keeping rates as low as feasible, keeping reliability high, maintaining a healthy financial position, and continuing to fulfill its broader mission of environmental stewardship and economic development. TVA is focused on reducing operating and maintenance costs through further efficiency gains and streamlining the organization. At the end of 2015, TVA had exceeded its \$500 million target on operating and maintenance cost savings, as compared to its 2013 budget, by over \$100 million. As part of the cost reduction initiatives, an organizational restructuring occurred in 2014, which resulted in approximately 2,000 position reductions achieved through attrition, elimination of vacant positions, and employees leaving TVA either voluntarily or involuntarily.

TVA plans to continue to evaluate its operations after reaching its 2015 cost reduction goal. In May 2015, TVA announced a limited reduction in force for selected business units. A voluntary reduction package was offered to minimize the impact of involuntary reductions on current personnel. Certain employees were eligible for severance payments as a result of these additional cost reduction initiatives, which resulted in approximately 200 position reductions.

Asset Portfolio

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

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

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

The 2015 IRP provides a summary of TVA's latest analysis of diversified energy resources and recommends a strategic direction focusing on a flexible mix of electricity generation and demand-side sources, including nuclear power, energy efficiency, renewable energy, and natural gas power, as well as traditional coal and hydroelectric power.

Completion of Watts Bar Unit 2 is an integral part of TVA's balanced portfolio approach. Watts Bar Unit 2 is expected to commence commercial operations by June 30, 2016, and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule expectations approved by the TVA Board and is expected to cost up to \$4.7 billion.

Cyber Security

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

systematic, repeatable, and effective in achieving the strategic security goals of the program. Governance for the program is provided by TVA's Chief Information Officer.

The budget of the Cyber Security Program is allocated to responsible organizations to improve accountability and provide transparency. Budgeting and planning for the program's components are integrated into the business planning process and are maintained in a three-year cyber security strategic plan covering all information security functions. The plan will be modified to upgrade TVA's capabilities as technology advances and threat vectors and business requirements change.

TVA understands that timely, accurate, and reliable information is critical to the success of the TVA mission and the role it plays as a National Critical Infrastructure Key Resource and Bulk Electric System provider. The program objectives are aligned with business strategy and support the goals of the enterprise. TVA uses a full spectrum defense security model to prevent, detect, respond to, and recover from threats against its systems. TVA plans to invest approximately \$90 million to \$110 million in its Cyber Security Program between FY 2015 and FY 2017 to ensure it meets its mission objectives. TVA invested approximately \$16.3 million in its Cyber Security Program in FY 2015 with an additional \$26.5 million in cyber security related projects. Inclusion of investment related to Critical Infrastructure Protection projects and programs has increased the investment projections.

People/Stewardship

Environmental Stewardship and River Management

TVA's mission includes managing the Tennessee River, its tributaries, and federal lands along the shoreline to provide, among other things, year-round navigation, flood damage reduction, affordable and reliable electricity, and, consistent with these primary purposes, recreational opportunities, adequate water supply, improved water quality, and natural resource protection.

Due to the increasing level and complexity of environmental requirements and expectations, TVA developed a high-level Environmental Policy. The overarching environmental objective is to provide cleaner, reliable, and affordable energy, support sustainable economic growth, and engage in proactive environmental stewardship. The Environmental Policy provides additional direction in several environmental stewardship areas, including water resource protection and improvements, sustainable land use, and natural resource management. The current Environmental Policy was initially approved by the TVA Board in 2008 and is reviewed on a biennial basis. TVA conducted its most recent review of the 2008 Environmental Policy in 2014 and concluded that the policy as discussed above continues to provide directional alignment for TVA.

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

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

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

On June 30, 2015, TVA submitted its sixth Strategic Sustainability Performance Plan ("SSPP") to the White House Council on Environmental Quality and the Office of Management and Budget ("OMB"). Implementing TVA's SSPP is expected to reduce greenhouse gas emissions, reduce solid waste generation and disposal, improve water use

efficiency, improve building and energy efficiency, promote electronic stewardship, and encourage the purchase of sustainable products and services while reducing TVA's long-term operational costs and risks. TVA anticipates future federal legislation and regulations requiring reductions in emissions of greenhouse gases and conventional air pollutants, as well as mandatory increases in power generation from renewable resources. In light of an increasing national focus on renewable and clean energy and in accordance with TVA's Environmental Policy, TVA is obtaining additional power supply from clean and renewable sources.

River System

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

Navigation on the Tennessee River is made possible by a system of dams and locks and contributes to the regional economy. TVA owns 14 lock chambers at 10 dam sites on the Tennessee River and one tributary. The U.S. Army Corps of Engineers operates and maintains these locks and dams for navigation. This provides an alternative mode of transportation for businesses in the region to ship their products. Barges can move bulk cargo on 652 miles of this river, which ends where it flows into the Ohio River near Paducah, Kentucky.

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

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

TVA and Air Quality in the Tennessee Valley

The latest annual air-quality trends report issued by the EPA shows air quality in the nation has steadily improved with significant declines in collective emissions of the six criteria pollutants: SO₂, NO_x, ozone, carbon monoxide, particulate matter, and lead. Data for the Tennessee Valley region has shown a significant improvement in air quality, and TVA continues reducing emissions from its coal-fired plants while supplying affordable, reliable electric power. Over the past several years, TVA has made notable efforts to enhance its environmental performance including improvements in air quality through controls at Bull Run and Kingston and is making further improvement in air quality through construction of new scrubbers and SCRs on all four Gallatin units by December 31, 2017. Effective November 4, 2015, the EPA designated the Tennessee portion of the Chattanooga Tennessee-Alabama-Georgia non-attainment area as attainment with respect to the fine particulate matter national ambient air quality standards. The Alabama and Georgia portions of this area were designated attainment in December 2014. Knoxville is the only remaining area in the Tennessee Valley region that is designated non-attainment for fine particulate matter. TVA expects that the EPA will designate the Knoxville area attainment in the near future.

As detailed in previous sections, TVA has reduced emissions by idling or retiring coal-fired units and relying more on cleaner energy resources including natural gas and nuclear generation. Additionally, the Environmental Agreements require that all emission control equipment be continuously operated to ensure optimum removal of air pollutants. The Environmental Agreements set yearly fleet wide emission caps for SO₂ and NO_x which become more stringent year-to-year as more units are required to be retired.

Economic Development

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

- **Recruiting Services** - TVA works with LPCs and their customers and local, state, and regional economic development organizations to recruit companies through an integrated package of economic development resources.

- **Regional Development** - TVA assigns a regional development specialist with economic development expertise to serve counties in a specific area to help create and sustain job growth.
- **Community Preparedness** - TVA helps communities increase their competitiveness in attracting investment and creating jobs by delivering resources and training to local community leaders.
- **Rural Initiative Strategy** - TVA helps rural communities develop and better market their sites and buildings to prospective companies. TVA also offers leadership development, planning, and project assistance.
- **Retail Development** - Retail Development is a program that links communities with retail business opportunities, insights, and market intelligence.
- **Research** - TVA provides economic and market research to help build the business case for the location and expansion of companies and prepare communities for future growth opportunities.
- **Business Development Support** - An array of products and services are geared to meet the needs of prospective or existing industries. These include financial support and industry consulting services. This work provides vision to businesses for locating and being successful in the Tennessee Valley.
- **Technical Services** - TVA offers general engineering design services to help industrial prospects make sound location decisions and to help communities market themselves for prospects and growth.
- **Diversity Alliance** - TVA helps the region's high-growth sectors of woman-owned and minority-owned businesses increase their job creation and capital investment opportunities by partnering with local organizations that provide business tools and opportunities that help grow and sustain these targeted businesses.

Results

The results of some of TVA's innovative economic development programs and offerings are briefly described below.

- For the tenth consecutive year, TVA made *Site Selection* magazine's list of the top 10 utilities in North America for economic development activity, one of only three utilities to earn this distinction.
- TVA Economic Development recruits new companies and investments to the region in these primary targeted industry sectors: Transportation-Related Manufacturing, Food Processing and General Manufacturing, Advanced Manufacturing, Data Centers, and Product Development.
- There are 23 available, ready-for-development data center sites across the TVA region.
- TVA staff provided ongoing economic development assistance through technical services, economic research, proposal writing, training, and other services.
- Financial support, offered by TVA and LPCs, continues to be very successful in helping new and existing companies which locate or expand and make a commitment to enhance economic development in the region.
- Assisting communities to be prepared for economic growth opportunities continued to be a focus, and more than 352 communities were directly assisted during 2015.
- The Valley Sustainable Communities Program was launched in 2013. It is a community preparedness offering to assist communities in cataloging their sustainable assets and to improve their competitiveness when companies are looking to invest in new or expanded locations in the Valley. To date, there are 28 communities which have completed this program to highlight and increase their sustainability efforts to differentiate their communities.
- TVA's Rural Development strategy focuses on supporting economic development efforts in rural and economically distressed areas.
- TVA's Retail Development program helps foster business growth for commercial businesses.
- TVA offers two Economic Development websites, TVAed.com and TVAsites.com, containing demographics, a searchable building and land database, and other key information about the benefits of the Tennessee Valley region.
- FY 2015 announcements regarding jobs created and/or retained and capital investment include:
 - Alabama: 4,500 jobs and \$994 million
 - Kentucky: 8,200 jobs and \$844 million
 - Middle Tennessee: 30,200 jobs and \$2.9 billion
 - Mississippi: 4,800 jobs and \$407 million
 - Northeast Tennessee and Virginia: 10,400 jobs and \$1.2 billion
 - Southeast Tennessee, Georgia and North Carolina: 7,800 jobs and \$627 million
 - West Tennessee: 10,300 jobs and \$856 million.

Technological Innovation

The TVA Act specifies that members of the TVA Board shall affirm support for the objectives and missions of TVA, including being a leader in technological innovation. A key element in achieving this vision is an annual investment in science and technology that enables TVA to be at the forefront of innovation in the utility industry and to help the agency meet future business and operational challenges. TVA's goal is to demonstrate how technologies can be used to improve/sustain reliability, reduce costs, lower emissions to the environment, and position TVA for a sustainable future.

Each year TVA's annual research portfolio and research strategic plan are updated based on a broad range of operational and industry drivers that help assess key technology gaps, performance issues, or other significant issues that should be addressed through research and development. Core research activities directly support optimization of TVA's generation and delivery assets, air and water quality, and clean energy integration. Of particular interest is modeling existing and expected solar power deployments in the Tennessee Valley to evaluate the full extent of system impacts of those renewable resources. Initial economic analyses have been conducted to identify the value of DER, particularly solar PV, to both TVA and the LPC system.

Additional research focus is placed on emerging generating technologies, grid modernization for transmission and distribution systems, energy utilization technologies, and DER. In the area of energy utilization, TVA evaluates emerging energy efficiency and load management technologies for market and program readiness. TVA's efforts are directed towards demonstrating and validating the performance, reliability, and consumer acceptance of new efficiency technology as well as the value of energy efficiency and load management technologies for the consumer, the LPCs, and TVA.

TVA also coordinates activities with EPRI and industry stakeholders related to transportation electrification to support operational fleet requirements and the needs of LPCs to provide guidance on matters of plug-in electric vehicle grid integration and readiness for transportation electrification technologies. TVA's distributed/clean energy research effort seeks to understand the scope and impact of integrating DER on operations and business economics and to develop strategies for adapting to the evolving electricity landscape in the Tennessee Valley.

Technology evaluations are most often accomplished through studies and field scale demonstrations to document performance, needs, and requirements. TVA delivers or transfers results to the operating organizations and other stakeholders through reporting, technology transfer events, and educational outreach. TVA also serves as a technology advisor for LPCs and directly served customers.

Investments in TVA's research portfolio are highly leveraged through partnership and collaboration with LPCs, EPRI and other research consortiums, DOE, ORNL and other national labs, federal agencies, peer utilities, universities, and vendors as well as through participation in professional societies.

Sustainability

Sustainability relates to everything TVA does to remain healthy and thriving long into the future for the benefit of the environment, economy, and stakeholders. Sustainability is incorporated into the work performed at TVA to protect the miles of reservoir shoreline, to keep electricity rates as low as feasible, to reinforce TVA's commitment to a safe employee workplace and public safety, and to support TVA's economic development efforts throughout the region. In short, it is TVA's commitment to keeping the Tennessee Valley a vibrant place to live, work, and play.

Sustainability is embedded in TVA's mission and TVA's Environmental Policy. Additionally, as directed by Presidential Executive Orders 13693 and 13514, Federal Leadership in Environmental, Energy, and Economic Performance, TVA maintains and annually updates a SSPP which captures and enhances TVA's ongoing sustainability focus, including climate. These efforts support TVA's unique mission to sustain the people, economy, and natural resources in the region. TVA submitted its sixth SSPP in June 2015.

Oversight and Governance

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

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

TVA Oversight

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

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

Audit Committee

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

Independent Auditor

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

Independent Inspector General

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

As required by the Inspector General Reform Act of 2008 (Pub. L. No. 110-409), the TVA OIG made an aggregate budget request of \$24.3 million for FY 2017, which includes amounts for OIG training and support of the Council of the Inspectors General on Integrity and Efficiency. TVA's FY 2017 budget assumes OIG activities at the level requested. TVA received no additional comments from the OIG with respect to the budget proposal.

\$ million	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 OIG Proposed	2017 OIG Proposed
OIG Spend	\$21	\$21	\$21	\$22	\$23	\$24	\$24

Congressional Oversight

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

Executive Branch

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

The TVA Act

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

Other Regulatory Oversight

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

Auditor Independence – Providing Assurance to Stakeholders

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

Accounting and Financial Reporting

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

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

Consistent with the Improper Payments Information Act of 2002, as amended by the Improper Payments Elimination and Recovery Act of 2010 and the Improper Payments Elimination and Recovery Improvement Act of 2012, TVA has determined that none of its programs or activities are susceptible to significant improper payments.

Monthly Reporting Process

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

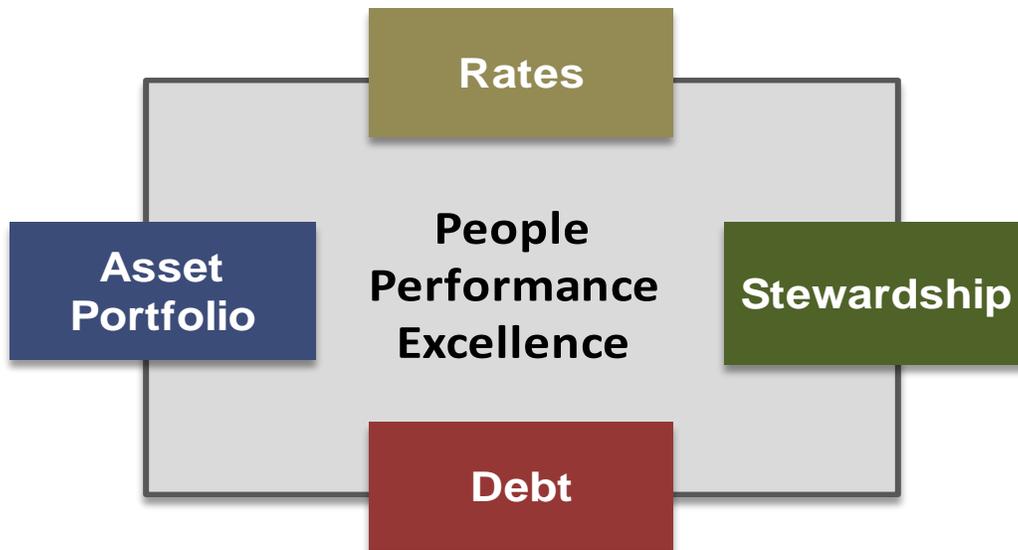
Enterprise Risk Management

Enterprise Risk Management ("ERM") is a strategic business function with its core mission to provide the business with a comprehensive risk perspective to more effectively identify and manage risks, capitalize on opportunities, and improve the risk management behaviors at TVA. ERM is specifically responsible for risk governance structure, performing risk assessments and analysis, and facilitating enterprise risk discussions to evaluate risks as an interrelated portfolio to support risk informed decisions.

Strategic Imperatives, Strategic Objectives, and Performance Goals

Strategic Imperatives

As discussed previously, TVA has established four strategic imperatives: (1) maintain rates as low as feasible, (2) live within its means, (3) manage its assets to meet reliability expectations and provide a balanced portfolio, and (4) be responsible stewards of the region's natural resources. Through people performance excellence, TVA intends to bring these goals to life and become safer, better, faster, and leaner.



Strategic Objectives

In order to help ensure that TVA accomplishes its strategic goals, TVA is focusing on the following strategic objectives:

- Maintain low rates and align O&M spending with revenues
- Effectively manage debt to ensure long-term financial health
- Work safely and effectively
- Embrace continuous improvement
- Focus on values, competencies and behaviors
- Pursue operational excellence
- Integrate Watts Bar U1 & U2 for successful commercial operation
- Balance the portfolio to provide cleaner, efficient, and affordable energy
- Stimulate economic development and investment in the Tennessee Valley
- Strengthen customer loyalty and stakeholder relationships
- Maximize potential of the Tennessee River system
- Protect and improve the natural resources and the use and enjoyment of public lands

Performance Goals

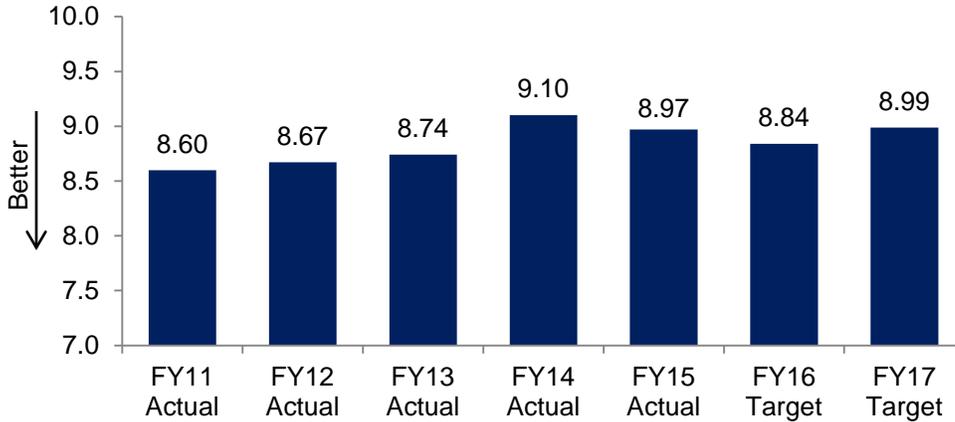
To help measure how effective TVA is in achieving its strategic objectives, TVA has established several performance goals. These performance goals include the following:

- Rates/Debt
 - Retail Rates
 - Wholesale Rate excluding Fuel
 - Operating Cash Flow
 - Net Income
 - Total Financing Obligations
- Asset Portfolio
 - Load Not Served
 - Coal Seasonal Equivalent Forced Outage Rate (“EFOR”)
 - INPO Index
 - Combined Cycle Seasonal EFOR
 - Nuclear Unit Capability Factor
 - Energy Savings
- People/Stewardship
 - Recordable Incident Rate
 - CO₂ Emissions Rate
 - Reportable Environmental Events
 - Jobs Created and Retained

Each of these performance goals is described in more detail on the following pages.

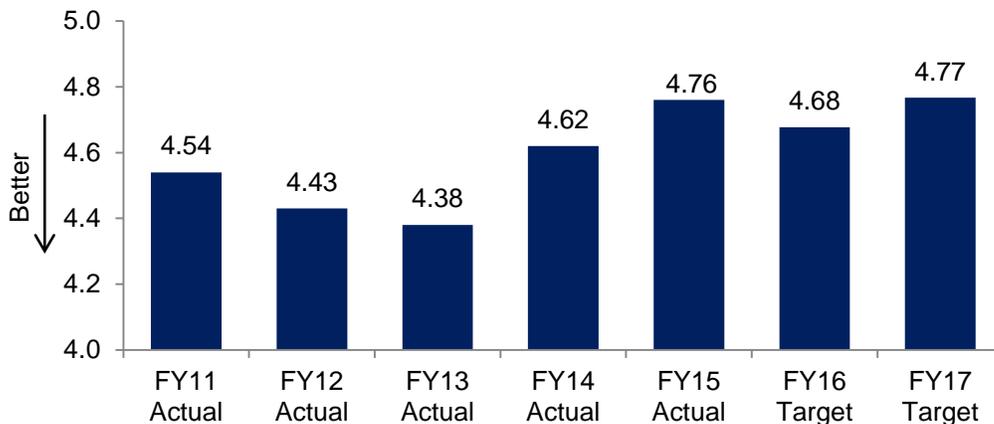
Rates/Debt

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



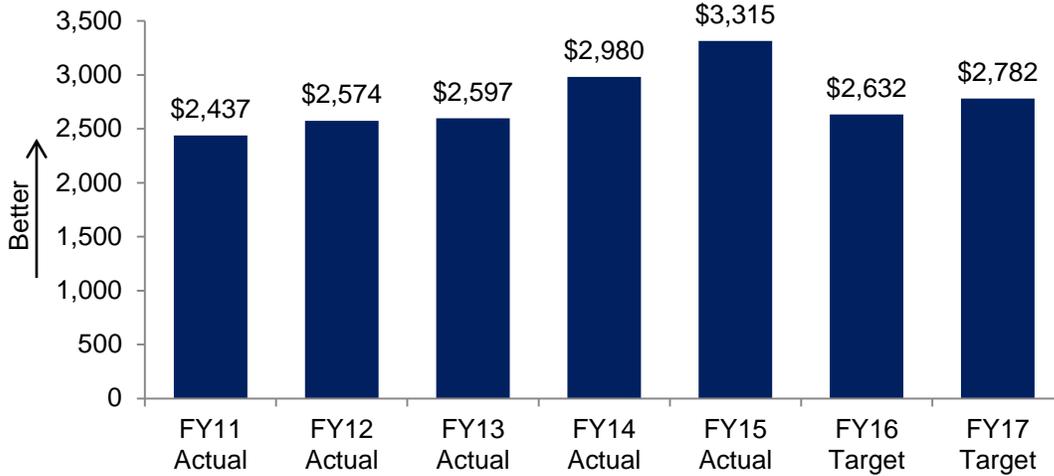
Definition	Average of the previous twelve months' LPC reported retail power revenue and directly served power revenue divided by LPC reported retail power sales and directly served power sales
Calculation	$(\text{LPC reported retail power revenue} + \text{Directly served power revenue}) / (\text{LPC reported retail power sales} + \text{Directly served power sales})$

Wholesale Rate excluding Fuel (cents/kWh)



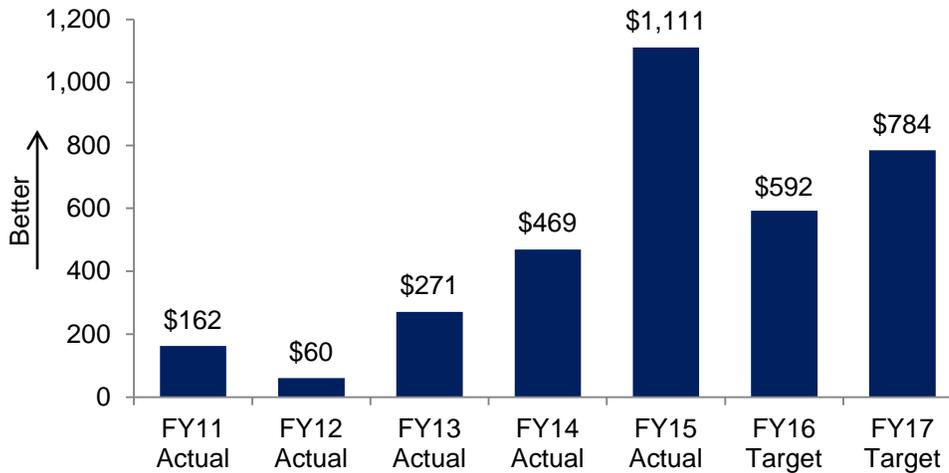
Definition	The Wholesale Rate excluding Fuel measure represents TVA's electric sales revenue excluding fuel divided by electric power sales.
Calculation	$\text{TVA's electric sales revenue excluding fuel} / \text{TVA's electric power sales}$

Operating Cash Flow (\$M)



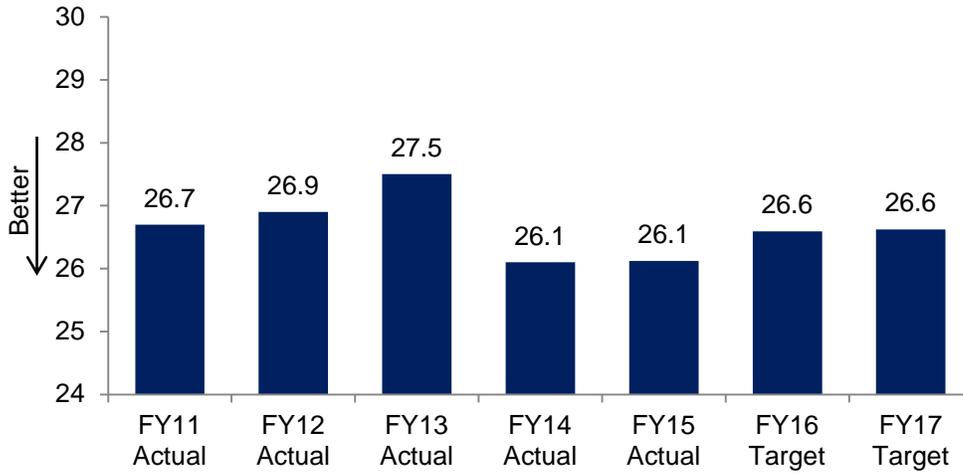
Definition	Operating Cash Flow refers to the amount of cash generated from power production and other mission-related activities and is generally defined as Operating Revenues received less cash payments made for Operating Expenses. This amount can be found on the Statement of Cash Flows under Cash Flow from Operating Activities.
Calculation	Net income +/- Non-cash items +/- Impact of changes in working capital +/- Other items

Net Income (\$M)



Definition	Net Income is an entity's net earnings derived by adjusting revenues for the cost of doing business, including cost of sales, depreciation, interest, taxes, and other expenses. This amount is shown on the bottom line of the Statement of Operations.
Calculation	Operating Revenues - Operating Expenses + Other Income/(Expense) - Net Interest Expense

Total Financing Obligations (\$B)

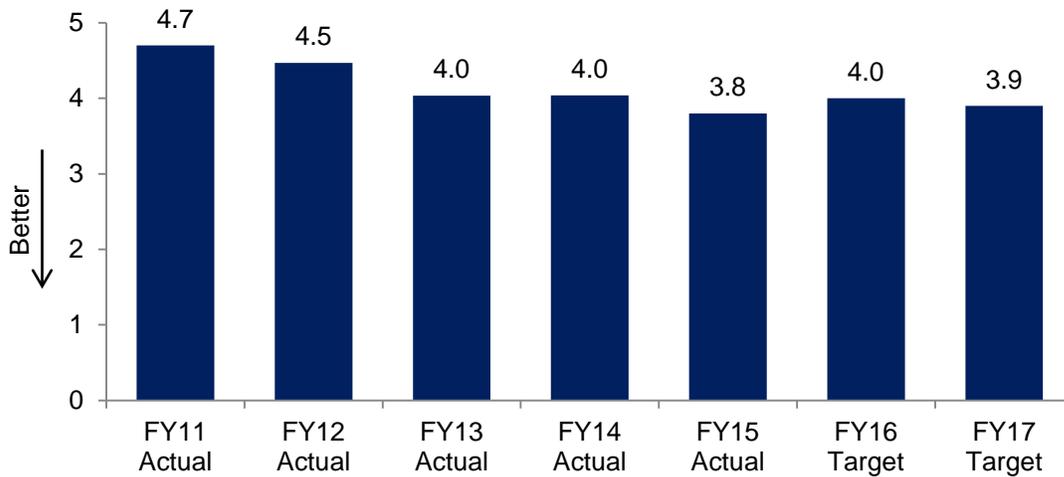


Definition	Total Financing Obligations (“TFOs”) include all statutory debt and other financing obligations, as shown on TVA’s balance sheet.
Calculation	Long-term Power Bonds + Short-Term Debt + Leaseback Obligations + Energy Prepayment Obligations + Debt of Variable Interest Entities (“VIE”) + Membership Interests of VIE Subject to Mandatory Redemption

* See Appendix A for a calculation of TFOs utilizing financial statement line items reported in accordance with Generally Accepted Accounting Principles.

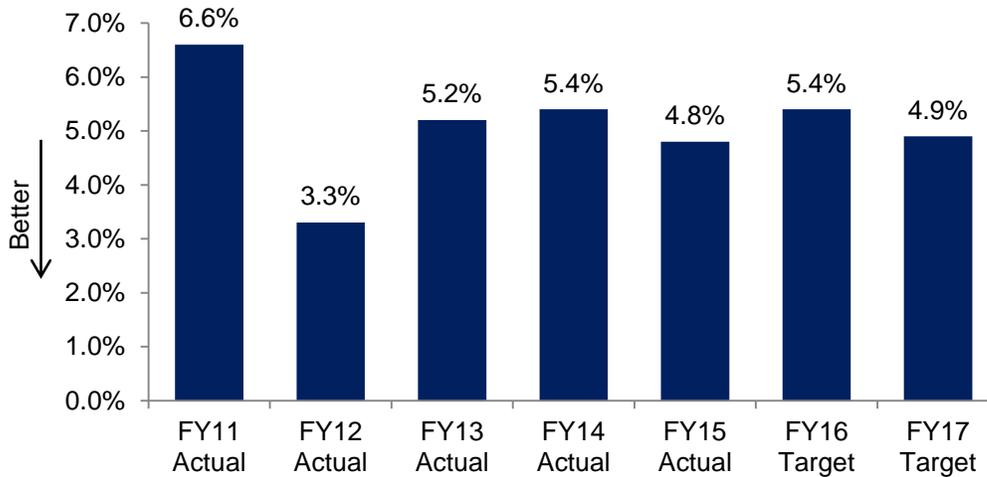
Asset Portfolio

Load Not Served (System Minutes)



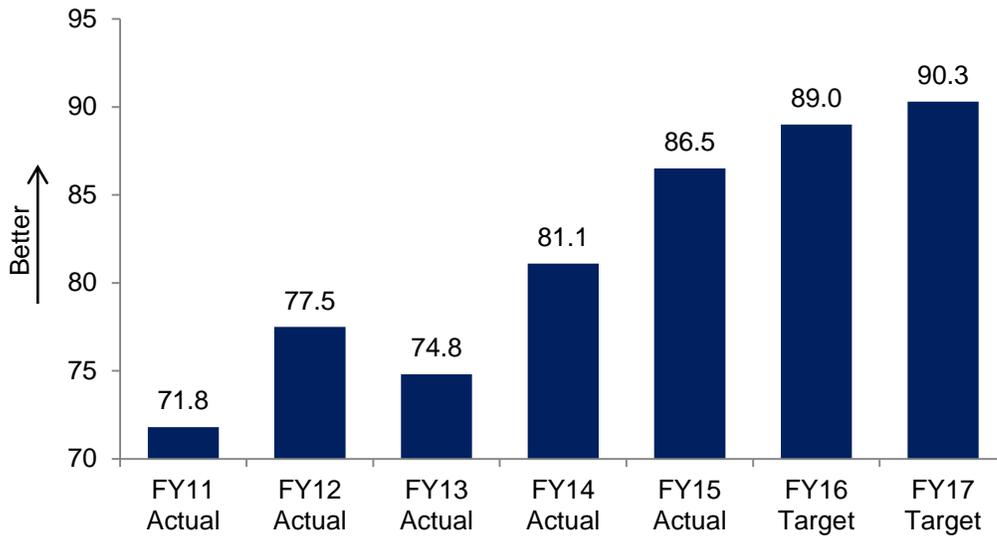
Definition	Load Not Served measures the magnitude and duration of transmission system outages that affect TVA customers. This measure is expressed in system minutes and excludes events during declared major storms.
Calculation	Percent of total load not served X Number of minutes in period

Coal Seasonal EFOR



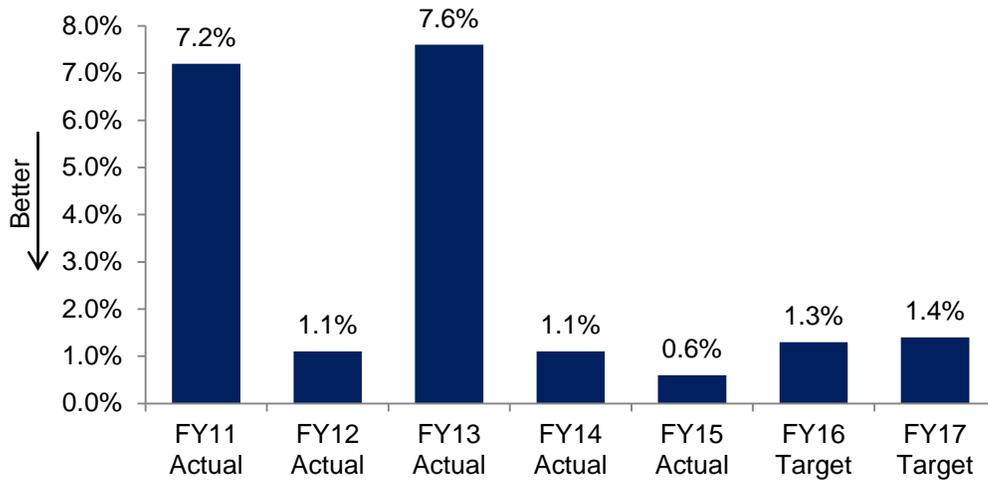
Definition	Coal Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December through March and June through September and includes the Allen, Cumberland, Gallatin, Kingston, Paradise, and Shawnee coal plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$\frac{((\text{FOH} \times \text{WNDC}) + \text{Forced MWhL})}{((\text{FOH} + \text{SH}) \times \text{WNDC})} \times 100$ <p>FOH = Forced Outage Hours SH = Service Hours WNDC = Winter Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating</p>

INPO Index



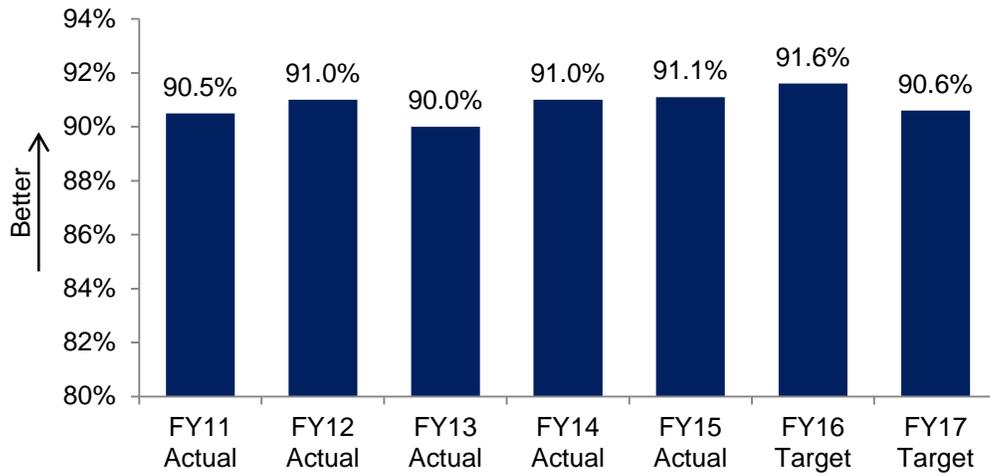
Definition	The INPO Index is a weighted combination of the Institute of Nuclear Power Operations' key performance indicators based on standard nuclear industry definitions for station performance.
Calculation	The INPO Index for each unit is calculated using a weighted combination of key performance indicators based on standard nuclear industry definitions, with the maximum obtainable being 100 points. TVA's fleet-level INPO Index is a simple average of the performance of each unit.

Combined Cycle Seasonal EFOR



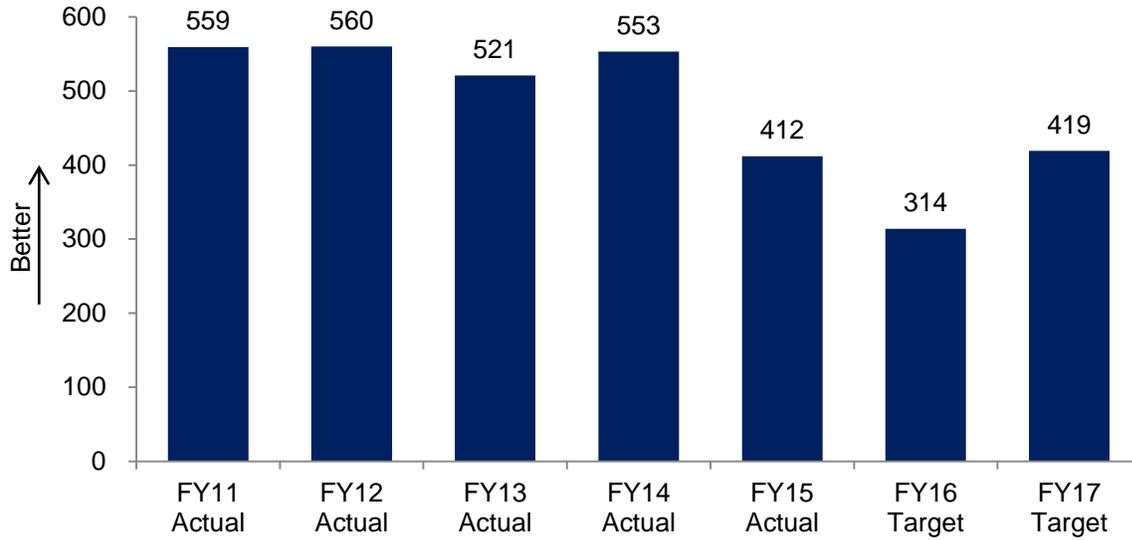
Definition	Combined Cycle Seasonal EFOR measures the generation lost due to forced events as a percentage of time the unit would have been scheduled to run. This measure runs from December to March and June to September and includes Caledonia, John Sevier, Lagoon Creek, Magnolia, and Southaven combined cycle plants. This measure excludes events that are classified as "Outside Management Control."
Calculation	$\frac{((\text{FOH} \times \text{NDC}) + \text{Forced MWhL})}{((\text{FOH} + \text{SH}) \times \text{NDC})} \times 100$ <p> FOH = Forced Outage Hours SH = Service Hours NDC = Net Dependable Capacity Forced MWhL = MWh Losses Due to Forced Derating </p>

Nuclear Unit Capability Factor



Definition	Nuclear Unit Capability Factor is the ratio of available energy generation over a given period of time to the reference energy generation over the same time period, expressed as a percentage.
Calculation	$[(REG - PEL - UEL - OEL) / REG] \times 100$ <p>REG = Reference Energy Generation PEL = Planned Losses UEL = Unplanned Losses OEL = Outage Extension Losses</p>

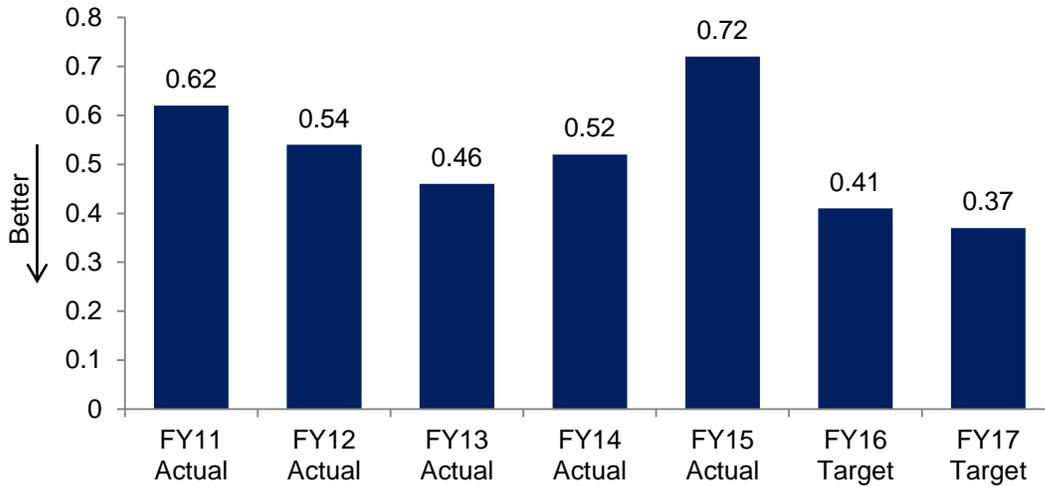
Energy Savings (GWh)



Definition	Energy efficiency savings measured in GWh from internally and externally focused programs, demonstrations, pricing products and structures supported or funded by TVA which promote the efficient use of electricity.
Calculation	$[(\text{Individual EnergyRight Solutions product kWh impacts}) \times (\text{Individual EnergyRight Solutions installations}) / 1,000,000] + [\text{kWh energy efficiency achieved by industrial and commercial projects} + \text{kWh energy efficiency impacts from demand response programs} + \text{kWh energy efficiency impacts achieved through information/outreach programs} + \text{kWh energy efficiency impacts achieved by wholesale and retail pricing products} + \text{kWh energy efficiency impacts from TVA facilities improvements} + \text{kWh energy efficiency impacts from TVA-supported loan funds administered by others} + \text{kWh energy efficiency impacts from state programs receiving TVA support} + \text{kWh energy efficiency impacts from other TVA initiatives}] / 1,000,000$

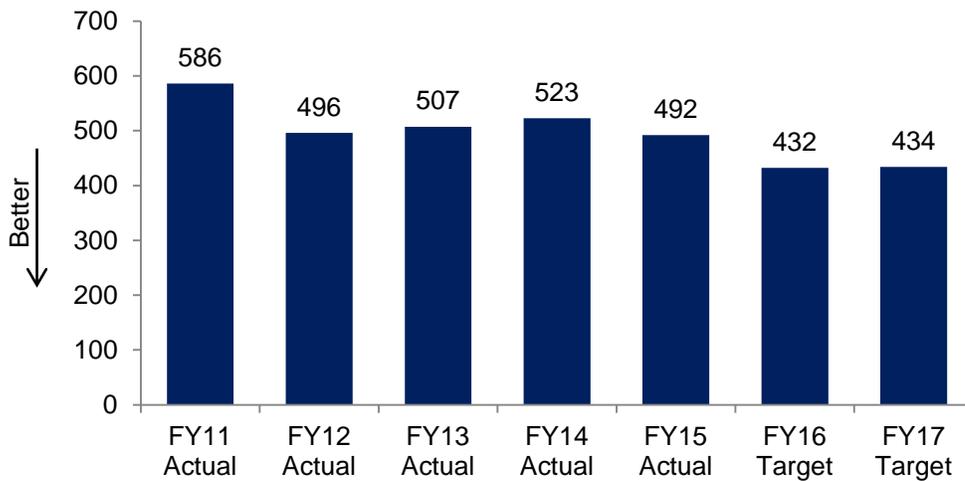
People/Stewardship

Safe Workplace (Recordable Incident Rate)



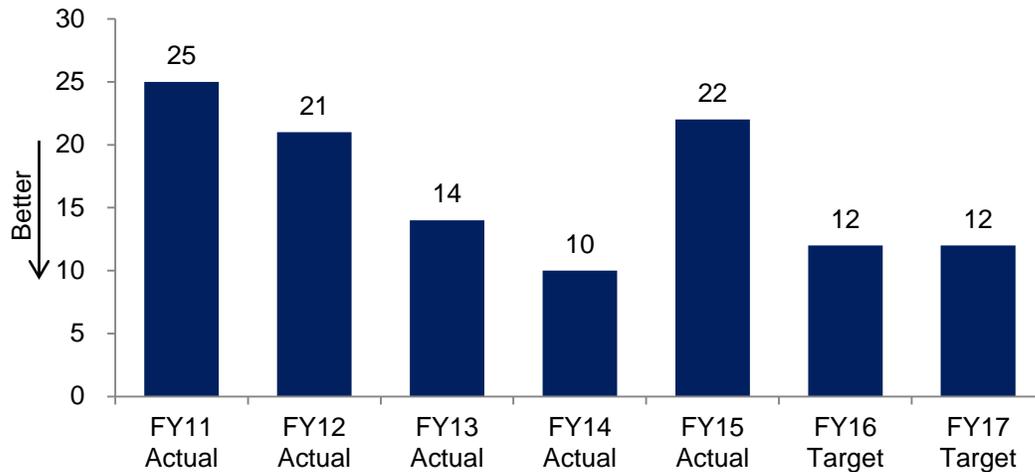
Definition	The number of recordable injuries (as defined by TVA's safety program) per 200,000 employee-hours worked by TVA employees and staff augmentation contractors
Calculation	$(\text{Number of recordable injuries} \times 200,000) / (\text{Number of employee-hours worked})$

CO₂ Emissions Rate (tons/GWh)



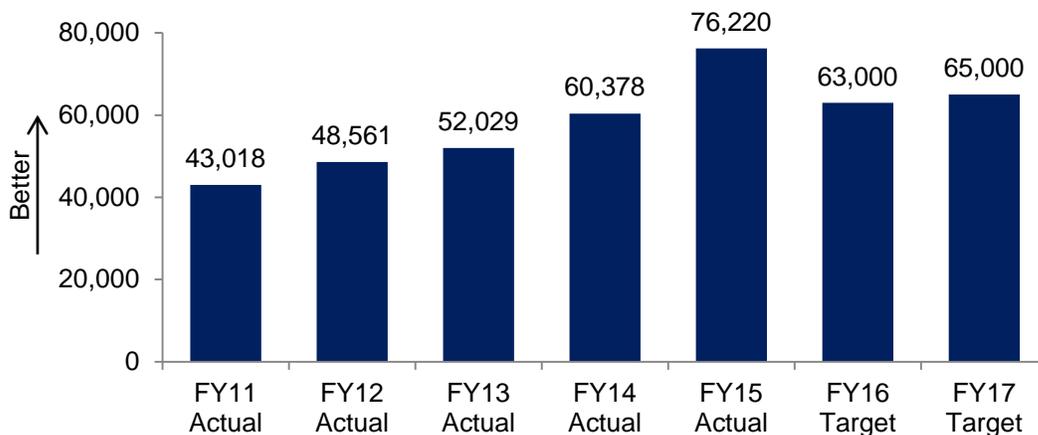
Definition	This measure reflects TVA's commitment to manage greenhouse gas emissions through efficient operation of its diverse generation mix.
Calculation	$\text{Tons of CO}_2 \text{ emissions} / \text{GWh of generation}$

Reportable Environmental Events



Definition	An environmental event at a TVA facility or elsewhere caused by TVA or TVA contractors that violates permit conditions or other regulatory requirements and triggers regulatory required oral or written notification to or enforcement action by a regulatory agency. Multiple parameters or multiple media/regulatory violations that result from the same root cause/event are counted as one reportable environmental event (“REE”). However, repeat occurrences count as separate REEs if they occur in a different reporting period. In cases where there is lag time between the event and receipt of a Notice of Violation (“NOV”), the receipt date for the NOV will be used as the date of the REE if the NOV has not previously been counted as a REE, and if the fiscal year reporting deadline for TVA-level environmental metrics has passed.
Calculation	Number of Reportable Environmental Events

Economic Development - Jobs Created & Retained



Definition	Jobs Created and Retained measures the number of new or retained jobs in the Tennessee Valley for which TVA has played a role in the recruitment or retention of the economic development project.
Calculation	Number of Jobs Created and Retained as reported through TVA channels

Other Information

Data Validation and Verification

Much of the data contained in this Performance Plan was derived from TVA's Annual Report on SEC Form 10-K for the year ended September 30, 2015 (the "Annual Report"). TVA filed the Annual Report with the SEC, and TVA's Chief Executive Officer and Chief Financial Officer certified the Annual Report in accordance with the requirements of the Sarbanes-Oxley Act. In addition, TVA's independent auditor, Ernst & Young LLP, audited the financial statements contained in the Annual Report.

TVA's management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934 and required by Section 404 of the Sarbanes-Oxley Act. TVA's internal control over financial reporting is designed to provide reasonable, but not absolute, assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. Because of the inherent limitations in all control systems, internal controls over financial reporting and systems may not prevent or detect misstatements.

TVA's management, including the Chief Executive Officer, the Chief Financial Officer, and the Controller, evaluated the design and effectiveness of TVA's internal control over financial reporting as of September 30, 2015, based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, TVA's management concluded that TVA's internal control over financial reporting was effective as of September 30, 2015.

Although management's report on the effectiveness of internal control over financial reporting was not required to be subject to attestation by TVA's registered public accounting firm, TVA has chosen to obtain such a report. Ernst & Young LLP issued an attestation report on TVA's internal control over financial reporting as of September 30, 2015.

Lower-Priority Program Activities

TVA has determined that it does not have any lower-priority program activities for purposes of 31 U.S.C. § 1115(b)(10).

Hyperlinks

Hyperlinks to documents discussed in this Performance Report are set forth below:

Document	Hyperlink
Integrated Resource Plan	https://www.tva.com/Environment/Environmental-Stewardship/Integrated-Resource-Plan
Natural Resource Plan	https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan
Annual Report	http://www.snl.com/IRWebLinkX/docs.aspx?iid=4063363

Appendix A

Total Financing Obligations (“TFO”) is a financial measure that, although commonly used, is not calculated and presented in accordance with Generally Accepted Accounting Principles (“GAAP”). TFO is measured by summing bonds and notes, gross, debt related to variable interest entities (“VIE”), leaseback obligations, energy prepayment obligations, and the membership interests issued in connection with the Southaven lease financing transaction. A calculation of TFO utilizing financial statement line items reported in accordance with GAAP follows:

TENNESSEE VALLEY AUTHORITY							
Unaudited Reconciliation of Total Financing Obligations							
(in millions)							
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016 Projected	FY 2017 Projected
Total Financing Obligations	\$ 26,659	\$ 26,912	\$ 27,473	\$ 26,071	\$ 26,120	\$ 26,594	\$ 26,623
Energy prepayment obligations	(717)	(611)	(510)	(410)	(310)	(210)	(110)
Leaseback obligations	(1,282)	(1,204)	(761)	(691)	(616)	(536)	(454)
Membership interests of VIE subject to mandatory redemption	-	-	(40)	(39)	(37)	(35)	(33)
Debt of VIE	-	(994)	(1,341)	(1,311)	(1,279)	(1,246)	(1,211)
Bonds and Notes, gross	24,660	24,103	24,821	23,620	23,878	24,567	24,815
Exchange loss (gain)	7	41	43	44	(21)	-	-
Unamortized discounts, premiums, and other	(236)	(60)	(85)	(88)	(107)	(123)	(122)
Debt of variable interest entities	-	994	1,341	1,311	1,279	1,246	1,211
Total outstanding debt	\$ 24,431	\$ 25,078	\$ 26,120	\$ 24,887	\$ 25,029	\$ 25,690	\$ 25,904

