Tennessee Valley Authority
Form 10-K
November 18, 2013
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(MARK ONE)
x ANNUAL REPORT PURSUANT TO SECTION 13, 15(d), OR 37 OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended September 30, 2013
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission file number 000-52313

TENNESSEE VALLEY AUTHORITY
(Exact name of registrant as specified in its charter)

A corporate agency of the United States created by an act of Congress (State or other jurisdiction of incorporation or organization)	62-0474417 (IRS Employer Identification No.)
400 W. Summit Hill Drive Knoxville, Tennessee (Address of principal executive offices)	37902 (Zip Code)

(865) 632-2101
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act: None
Securities registered pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13, Section 15(d), or Section 37 of the Act. Yes o No x
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13, 15(d), or 37 of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.
Yes x No o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).
Yes x No o
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer,” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer o	Accelerated filer o
Non-accelerated filer x	Smaller reporting company o
(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes o No x

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GLOSSARY OF COMMON ACRONYMS

Following are definitions of terms or acronyms frequently used in this Annual Report on Form 10-K for the fiscal year ended September 30, 2013 (the "Annual Report"):

Term or Acronym	Definition
AFUDC	Allowance for funds used during construction
ARO	Asset retirement obligation
ART	Asset Retirement Trust
ASLB	Atomic Safety and Licensing Board
BEST	Bellefonte Efficiency and Sustainability Team
BREDL	Blue Ridge Environmental Defense League
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CCOLA	Combined construction and operating license application
CCP	Coal combustion products
CCR	Coal combustion residual
CCW	Coal combustion waste
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CME	Chicago Mercantile Exchange
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COLA	Cost of living adjustment
CSAPR	Cross State Air Pollution Rule
CTs	Combustion turbine unit(s)
CVA	Credit valuation adjustment
CY	Calendar year
EPA	Environmental Protection Agency
FASB	Financial Accounting Standards Board
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
FTP	Financial Trading Program
GAAP	Accounting principles generally accepted in the United States of America
GAO	U.S. Government Accountability Office
GHG	Greenhouse gas
GWh	Gigawatt hour(s)
IRP	Integrated Resource Plan
IRUs	Indefeasible rights of use
JSCCG	John Sevier Combined Cycle Generation LLC
kWh	Kilowatt hour(s)
LIBOR	London Interbank Offered Rate
LPC	Local Power Company Customer of TVA
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
mmBtu	Million British thermal unit(s)
MtM	Mark-to-market
MW	Megawatt
NAAQS	National Ambient Air Quality Standards
NAV	Net asset values
NDT	Nuclear Decommissioning Trust

NEIL	Nuclear Electric Insurance Limited
NEPA	National Environmental Policy Act

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NERC	North American Electric Reliability Corporation
NO_x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRP	Natural Resource Plan
NSPS	New Source Performance Standards
NSR	New Source Review
OCI	Other comprehensive income (loss)
PARRS	Putable Automatic Rate Reset Securities
PM	Particulate matter
PSD	Prevention of Significant Deterioration
QTE	Qualified technological equipment and software
SACE	Southern Alliance for Clean Energy
SCCG	Southaven Combined Cycle Generation, LLC
SCRs	Selective catalytic reduction systems
SEC	Securities and Exchange Commission
SERP	Supplemental Executive Retirement Plan
Seven States	Seven States Power Corporation
SMR	Small modular reactor(s)
SO_2	Sulfur dioxide
SSSL	Seven States Southaven, LLC
TCWN	Tennessee Clean Water Network
TDEC	Tennessee Department of Environment & Conservation
TOU	Time-of-use
TVARS	Tennessee Valley Authority Retirement System
TWQCB	Tennessee Water Quality Control Board
USEC	United States Enrichment Corporation
VIE	Variable interest entity
XBRL	eXtensible Business Reporting Language
WCD	Waste Confidence Decision

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FORWARD-LOOKING INFORMATION

This Annual Report on Form 10-K ("Annual Report") contains forward-looking statements relating to future events and future performance. All statements other than those that are purely historical may be forward-looking statements. In certain cases, forward-looking statements can be identified by the use of words such as “may,” “will,” “should,” “expect,” “anticipate,” “believe,” “intend,” “project,” “plan,” “predict,” “assume,” “forecast,” “estimate,” “objective,” “probably,” “likely,” “potential,” "speculate," or other similar expressions.

Although the Tennessee Valley Authority ("TVA") believes that the assumptions underlying the forward-looking statements are reasonable, TVA does not guarantee the accuracy of these statements. Numerous factors could cause actual results to differ materially from those in the forward-looking statements. These factors include, among other things:

- New or amended laws, regulations, or administrative determinations, including those related to environmental matters, and the costs of complying with these laws, regulations, and administrative determinations;
- The requirement or decision to make additional contributions to TVA's pension or other post-retirement benefit plans or to TVA's Nuclear Decommissioning Trust ("NDT") or Asset Retirement Trust ("ART");
- Events at a TVA facility, which, among other things, could result in loss of life, damage to the environment, damage to or loss of the facility, and damage to the property of others;
- Events at a nuclear facility, whether or not operated by or licensed to TVA, which, among other things, could lead to increased regulation or restriction on the construction, operation, and decommissioning of nuclear facilities or on the storage of spent fuel, obligate TVA to pay retrospective insurance premiums, reduce the availability and affordability of insurance, increase the costs of operating TVA's existing nuclear units, negatively affect the cost and schedule for completing Watts Bar Nuclear Plant ("Watts Bar") Unit 2 and preserving Bellefonte Nuclear Plant ("Bellefonte") Unit 1 for possible completion, or cause TVA to forego future construction at these or other facilities;
- Significant delays, cost increases, or cost overruns associated with the construction of generation or transmission assets;
- Costs and liabilities that are not anticipated in TVA’s financial statements for third-party claims, natural resource damages, or fines or penalties associated with the Kingston Fossil Plant ("Kingston") ash spill;
- Inability to eliminate identified deficiencies in TVA's systems, standards, controls, and corporate culture;
- The outcome of legal and administrative proceedings;
- Significant changes in demand for electricity;
- Addition or loss of customers;
- The failure of TVA's generation, transmission, flood control, and related assets, including coal combustion residual ("CCR") facilities, to operate as anticipated, resulting in lost revenues, damages, and other costs that are not reflected in TVA’s financial statements or projections;
- The cost of complying with known, anticipated, and new emissions reduction requirements, some of which could render continued operation of many of TVA's aging coal-fired generation units not cost-effective and result in their removal from service, perhaps permanently;
- Disruption of fuel supplies, which may result from, among other things, weather conditions, production or transportation difficulties, labor challenges, or environmental laws or regulations affecting TVA's fuel suppliers or transporters;
- Purchased power price volatility and disruption of purchased power supplies;
- Events or changes involving transmission lines, dams, and other facilities not operated by TVA, including those that affect the reliability of the interstate transmission grid of which TVA's transmission system is a part and those that increase flows across TVA's transmission grid, as well as inadequacies in the supply of water to TVA's generation facilities;
- Inability to obtain regulatory approval for the construction or operation of assets;
- Weather conditions;

- Catastrophic events such as fires, earthquakes, solar events, floods, hurricanes, tornadoes, pandemics, wars, national emergencies, terrorist activities, and other similar events, especially if these events occur in or near TVA's service area;
- Restrictions on TVA's ability to use or manage real property currently under its control;
- Reliability and creditworthiness of counterparties;
- Changes in the market price of commodities such as coal, uranium, natural gas, fuel oil, crude oil, construction materials, reagents, electricity, and emission allowances;
- Changes in the market price of equity securities, debt securities, and other investments;
- Changes in interest rates, currency exchange rates, and inflation rates;
- Changes in the timing or amount of pension and health care costs;
- Increases in TVA's financial liability for decommissioning its nuclear facilities and retiring other assets;
- Limitations on TVA's ability to borrow money which may result from, among other things, TVA's approaching or substantially reaching the limit on bonds, notes, and other evidences of indebtedness specified in the TVA Act of 1933;
- An increase in TVA's cost of capital which may result from, among other things, changes in the market for TVA's debt securities, changes in the credit rating of TVA or the U.S. government, and an increased reliance by TVA on alternative financing arrangements as TVA approaches its debt ceiling;

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- Actions taken, or inaction, by the U.S. government to address the situation of approaching its debt limit;
- Changes in the economy and volatility in financial markets;
- Ineffectiveness of TVA's disclosure controls and procedures and its internal control over financial reporting;
- Problems attracting and retaining a qualified workforce;
- Changes in technology;
- Failure of TVA's assets to operate as planned;
- Failure of TVA's cyber security program to protect TVA's assets from cyber attacks;
- Differences between estimates of revenues and expenses and actual revenues earned and expenses incurred; and
- Unforeseeable events.

See also Item 1A, Risk Factors, and Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations. New factors emerge from time to time, and it is not possible for management to predict all such factors or to assess the extent to which any factor or combination of factors may impact TVA's business or cause results to differ materially from those contained in any forward-looking statement. TVA undertakes no obligation to update any forward-looking statement to reflect developments that occur after the statement is made.

GENERAL INFORMATION

Fiscal Year

References to years (2013, 2012, etc.) in this Annual Report are to TVA's fiscal years ending September 30 except for references to years in the biographical information about directors and executive officers in Item 10, Directors, Executive Officers and Corporate Governance, as well as to years that are preceded by "CY," which references are to calendar years.

Notes

References to "Notes" are to the Notes to Consolidated Financial Statements contained in Item 8, Financial Statements and Supplementary Data in this Annual Report.

Property

TVA does not own real property. TVA acquires real property in the name of the United States, and such legal title in real property is entrusted to TVA as the agent of the United States to accomplish the purpose of the Tennessee Valley Authority Act of 1933, as amended, 16 U.S.C. §§ 831-831ee (as amended, the "TVA Act"). TVA acquires personal property in the name of TVA. Accordingly, unless the context indicates the reference is to TVA's personal property, any statement in this Annual Report referring to TVA property shall be read as referring to the real property of the United States which has been entrusted to TVA as its agent.

Available Information

TVA's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all amendments to those reports are available on TVA's web site, free of charge, as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission ("SEC"). TVA's web site is www.tva.gov. Information contained on TVA's web site shall not be deemed to be incorporated into, or to be a part of, this Annual Report. TVA's SEC reports are also available to the public without charge from the web site maintained by the SEC at www.sec.gov.

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PART I

ITEM 1. BUSINESS

The Corporation

The Tennessee Valley Authority ("TVA") is a corporate agency and instrumentality of the United States ("U.S.") that was created in 1933 by legislation enacted by the U.S. Congress in response to a request by President Franklin D. Roosevelt. TVA was created to, among other things, improve navigation on the Tennessee River, reduce the damage from destructive flood waters within the Tennessee River system and downstream on the lower Ohio and Mississippi Rivers, further the economic development of TVA's service area in the southeastern United States, and sell the electricity generated at the facilities TVA operates.

Today, TVA operates the nation's largest public power system and supplies power in most of Tennessee, northern Alabama, northeastern Mississippi, and southwestern Kentucky and in portions of northern Georgia, western North Carolina, and southwestern Virginia to a population of over nine million people. In 2013, the revenues generated from TVA's electricity sales were $10.8 billion and accounted for virtually all of TVA's revenues.

TVA manages the Tennessee River, its tributaries, and certain shorelines to provide, among other things, year-round navigation, flood damage reduction, and affordable and reliable electricity. Consistent with these primary purposes, TVA also manages the river system to provide recreational opportunities, adequate water supply, improved water quality, natural resource protection, and economic development. TVA performs these management duties in cooperation with other federal and state agencies which have jurisdiction and authority over certain aspects of the river system. In addition, the TVA Board of Directors (the "TVA Board") established two councils--the Regional Resource Stewardship Council ("RRSC") and the Regional Energy Resource Council--under the Federal Advisory Council Act to advise TVA on its energy resource activities and its stewardship activities in the Tennessee Valley.

Initially, all TVA operations were funded by federal appropriations. Direct appropriations for the TVA power program ended in 1959, and appropriations for TVA's stewardship, economic development, and multipurpose activities ended in 1999. Since 1999, TVA has funded all of its operations almost entirely from the sale of electricity and power system financings. TVA's power system financings consist primarily of the sale of debt securities and secondarily of alternative forms of financing such as lease arrangements. As a wholly-owned government corporation, TVA is not authorized to issue equity securities.

Service Area

The area in which TVA sells power, its service area, is defined by the TVA Act. Under the TVA Act, subject to certain minor exceptions, TVA may not, without specific authorization from the U.S. Congress, enter into contracts that would have the effect of making it, or the local power company customer of TVA ("LPC") which distribute its power, a source of power supply outside the area for which TVA or its LPCs were the primary source of power supply on July 1, 1957. This provision is referred to as the "fence" because it bounds TVA's sales activities, essentially limiting TVA to power sales within a defined service area.

In addition, an amendment to the Federal Power Act ("FPA") includes a provision that helps protect TVA's ability to sell power within its service area. This provision, called the "anti-cherrypicking" provision, prevents the Federal Energy Regulatory Commission ("FERC") from ordering TVA to provide access to its transmission lines to others for the purpose of using TVA's transmission lines to deliver power to customers within TVA's defined service area. As a result, the anti-cherrypicking provision reduces TVA's exposure to loss of customers.

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TVA’s revenues by state for each of the last three years are detailed in the table below.

Operating Revenues By State
For the years ended September 30
(in millions)

	2013	2012	2011
Alabama	$1,551	$1,556	$1,699
Georgia	260	234	272
Kentucky	1,019	1,230	1,159
Mississippi	1,029	1,038	1,095
North Carolina	52	69	58
Tennessee	6,818	6,889	7,370
Virginia	53	49	60
Subtotal	10,782	11,065	11,713
Sale for resale and other	47	21	10
Subtotal	10,829	11,086	11,723
Other revenues	127	134	118
Operating revenues	$10,956	$11,220	$11,841

Note
See Power Supply — Coal-Fired for a discussion of idled coal-fired units.

Customers

TVA is primarily a wholesaler of power. It sells power to 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

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entities ("cooperatives"). These municipalities and cooperatives operate public power electric systems that are not doing business for profit but are operated primarily for the purpose of supplying electricity to the general public or members. TVA also sells power to directly served customers, consisting primarily of federal agencies and customers with large or unusual loads. In addition, power that exceeds the needs of the TVA system may, where consistent with the provisions of the TVA Act, be sold under exchange power arrangements with other electric systems.

Operating Revenues by Customer Type
For the years ended September 30
(in millions)

	2013	2012	2011
Sales of electricity			
Local power companies	$9,463	$9,506	$10,144
Industries directly served	1,199	1,442	1,440
Federal agencies and other	167	138	139
Total sales of electricity	10,829	11,086	11,723
Other revenues	127	134	118
Operating revenues	$10,956	$11,220	$11,841

Local Power Company Customers

Revenues from LPCs accounted for 86 percent of TVA's total operating revenues in 2013. At September 30, 2013, TVA had wholesale power contracts with 155 LPCs. Each of these contracts requires the LPCs to purchase from TVA all of its electric power and energy consumed within the TVA service area.

All LPCs purchase power under one of three basic termination notice arrangements:

- Contracts that require five years' notice to terminate;
- Contracts that require 10 years' notice to terminate; and
- Contracts that require 15 years' notice to terminate.

The number of LPCs with the contract arrangements described above, the revenues derived from such arrangements in 2013, and the percentage of TVA's 2013 total operating revenues represented by these revenues are summarized in the table below.

TVA Local Power Company Customer Contracts
At September 30, 2013

Contract Arrangements[1]	Number of LPCs	Sales to LPCs in 2013 (in millions)	Percentage of Total Operating Revenues in 2013	
15-year termination notice	6	$155	1.4	%
10-year termination notice	47	3,103	28.3	%
5-year termination notice	102	6,205	56.6	%
Total	155	$9,463	86.3	%

Note
(1) Ordinarily the LPC and TVA have the same termination notice period; however, in contracts with eight of the LPCs with five-year termination notices, TVA has a 10-year termination notice (which becomes a five-year termination notice if TVA loses its discretionary wholesale rate-setting authority). Also, under TVA's contract with Bristol Virginia Utilities, a five-year termination notice may not be given by the LPC until January 2018.

TVA’s two largest LPCs — Memphis Light, Gas and Water Division ("MLGW") and Nashville Electric Service ("NES") — have contracts with five-year and 10-year termination notice periods, respectively. Although no single customer accounted for 10 percent or more of TVA’s total operating revenues in 2013, sales to MLGW and NES accounted for nine percent and eight percent, respectively.

The power contracts between TVA and the LPC provide for purchase of power by the LPC at the wholesale rates established by the TVA Board. Under section 10 of the TVA Act, the TVA Board is authorized to regulate the LPC to carry out the purposes of the TVA Act through contract terms and conditions as well as through rules and regulations. TVA regulates LPCs primarily through the provisions of TVA’s wholesale power contracts. All of the power contracts between TVA and the LPCs require that power purchased from TVA be sold and distributed to the ultimate consumer without discrimination among consumers of the same class, and prohibit direct or indirect discriminatory rates, rebates, or other special concessions. In addition, there are a number of wholesale power contract provisions through which TVA seeks to ensure that the electric system revenues of the LPCs are used only for electric system purposes. Furthermore, almost all of these contracts specify the specific resale rates and charges at which the LPC must resell TVA power to their customers. These rates are revised from time to time,

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subject to TVA approval, to reflect changes in costs, including changes in the wholesale cost of power. The regulatory provisions in TVA's wholesale power contracts are designed to carry out the objectives of the TVA Act, including the objective of providing for an adequate supply of power at the lowest feasible rates. See Rates — Rate Methodology below.

Other Customers

Revenues from directly served industrial customers accounted for 11 percent of TVA's total operating revenues in 2013. Contracts with these customers are subject to termination by the customer or TVA upon a minimum notice period that varies according to the customer's contract demand and the period of time service has been provided.

The United States Enrichment Corporation ("USEC"), a subsidiary of USEC, Inc., was TVA's largest directly served industrial customer. On May 24, 2013, USEC announced the cessation of enrichment activities at its Paducah, Kentucky site. TVA and USEC have subsequently completed agreements to extend power sales to facilitate the cessation of enrichment activities and to support non-enrichment activities at the site at a greatly reduced level. These sales arrangements may continue to be extended. Power sales to USEC represented three percent and five percent of TVA's total operating revenues for the years ended September 30, 2013, and 2012, respectively.

Rates

Rate Authority

The TVA Act gives the TVA Board sole responsibility for establishing the rates TVA charges for power. These rates are not subject to judicial review or to review or approval by any state or federal regulatory body.

Under the TVA Act, TVA is required to charge rates for power which will produce gross revenues sufficient to provide funds for:

- Operation, maintenance, and administration of its power system;
- Payments to states and counties in lieu of taxes ("tax equivalents");
- Debt service on outstanding indebtedness;
- Payments to the U.S. Treasury in repayment of and as a return on the government's appropriation investment in TVA's power facilities (the "Power Program Appropriation Investment"); and
- Such additional margin as the TVA Board may consider desirable for investment in power system assets, retirement of outstanding bonds, notes, or other evidences of indebtedness ("Bonds") in advance of maturity, additional reduction of the Power Program Appropriation Investment, and other purposes connected with TVA's power business.

In setting TVA's rates, the TVA Board is charged by the TVA Act to have due regard for the primary objectives of the TVA Act, including the objective that power shall be sold at rates as low as are feasible.

Rate Methodology

In view of demand for electricity, the level of competition, and other relevant factors, it is reasonable to assume that rates, set at levels that will recover TVA's costs, can be charged and collected from customers. Further, the TVA Board has the discretion to determine when costs will be recovered in rates. As a result of these factors, TVA records certain assets and liabilities that result from the self-regulated ratemaking process that could not otherwise be so recorded under accounting principles generally accepted in the United States. See Note 1 — Cost-Based Regulation and Note 7.

In setting rates to cover the costs set out in the TVA Act, TVA uses a wholesale rate structure that is comprised of a base rate and a fuel rate that is automatically determined by the operation of the fuel cost adjustment formula each month. In setting the base rates, TVA uses a debt-service coverage ("DSC") methodology to derive annual revenue requirements in a manner similar to that used by other public power entities that also use the DSC rate methodology. Under the DSC methodology, rates are calculated so that an entity will be able to cover its operating costs and to satisfy its obligations to pay principal and interest on debt. This ratemaking approach is particularly suitable for use by entities financed primarily, if not entirely, by debt capital, such as TVA.

TVA's revenue requirements for costs or projected costs (other than the fuel, purchased power, and related costs covered by the fuel rate) are calculated under the DSC methodology as the sum of the following components:

- Operating and maintenance costs;
- Tax equivalents (other than the amount attributable to fuel cost-related revenues);
- Other costs in accordance with the TVA Act; and
- Debt service coverage.

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This methodology reflects the cause-and-effect relationship between TVA's costs and the corresponding rates it charges for its regulated products and services. Once the revenue requirements (or projected costs) are determined, they are compared to the projected revenues for the year in question, at existing rates, to arrive at the shortfall or surplus of revenues as compared to the projected costs. Power rates are adjusted by the TVA Board to a level deemed to be sufficient to produce revenues approximately equal to projected costs (exclusive of the costs collected through the fuel rate).

TVA's wholesale and retail rate structures include time-of-use ("TOU") and seasonal demand and energy ("SDE") rate structures. These rate structures provide price signals intended to incentivize LPCs and end-use customers to shift energy usage from high-cost generation periods to less expensive generation periods. The rates are intended to more closely align TVA's revenues with its costs.

For LPCs, the default wholesale rate structure is seasonal TOU. The wholesale rate provisions originally specified that the SDE option expired in September 2012. In April 2012, the TVA Board approved optional enhanced TOU and SDE structures which became effective in October 2012. TVA allowed LPCs to elect one of these wholesale rate structures and make retail adjustments consistent with their wholesale elections. LPC elections as of October 1, 2013, are as follows: 144 are served under the enhanced TOU structure, five remain served under the default seasonal TOU structure, and six are served under the enhanced SDE structure.

TVA's rates also include a fuel cost recovery mechanism that automatically adjusts its rates each month to recover its fuel costs, which include the costs of natural gas, fuel oil, purchased power, coal, emission allowances, nuclear fuel and other fuel-related commodities; realized gains and losses on derivatives purchased to hedge the costs of such commodities; and tax equivalents associated with the fuel cost adjustments.

On August 22, 2013, the TVA Board approved a five-year extension of the environmental adjustment (which commenced in 2004), which reflects the need to collect revenue for environmental expenditures to further TVA's environmental performance, as well as comply with new, more stringent air, water, and waste regulations. The environmental adjustment currently recovers approximately $415 million per year. See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations — Key Initiatives and Challenges — Ratemaking. In addition, the TVA Board approved a non-fuel base rate increase of 2.63 percent on wholesale rates. It is anticipated this will increase base revenues by approximately $190 million for 2014.

Power Supply

General

Power generating facilities operated by TVA at September 30, 2013, included 29 conventional hydroelectric sites, one pumped-storage hydroelectric site, 10 coal-fired sites, three nuclear sites, 14 natural gas and/or oil-fired sites, one diesel generator site, 16 solar energy sites, digester gas cofiring capacity at one coal-fired site, biomass cofiring potential (located at coal-fired sites), and one wind energy site, although certain of these facilities were out of service as of September 30, 2013. See Net Capability for a discussion of these out-of-service facilities. TVA also acquires power under power purchase agreements of varying durations as well as short-term contracts of less than 24-hours in duration.

The following table summarizes TVA’s net generation in millions of kilowatt hours ("kWh") by generating source and the percentage of all electric power generated by TVA for the years indicated:
Power Supply from TVA-Operated Generation Facilities
For the years ended September 30
(millions of kWh)

	2013			2012			2011		
Coal-fired	62,519	43	%	58,584	41	%	74,583	52	%
Nuclear	52,100	36	%	55,244	38	%	49,562	34	%
Hydroelectric	18,178	12	%	12,817	9	%	12,706	9	%
Natural gas and/or oil-fired	13,102	9	%	16,650	12	%	6,809	5	%
Renewable resources (non-hydro)	9	(1) <1%		25	(1) <1%		17	(1) <1%	
Total	145,908	100	%	143,320	100	%	143,677	100	%

Note
(1) Operation and maintenance issues reduced the available renewable generation during 2013, 2012, and 2011 from several facilities, including those utilizing methane, solar, and wind.

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Net Capability

The following table summarizes TVA's summer net capability in megawatts ("MW") at September 30, 2013:

SUMMER NET CAPABILITY[1]
At September 30, 2013

Source of Capability	Location	Number of Units	Summer Net Capability (MW)	Date First Unit Placed in Service	Date Last Unit Placed in Service
TVA-Operated Generating Facilities					
Coal-Fired[2]					
Allen[3]	Tennessee	3	741	1959	1959
Bull Run	Tennessee	1	863	1967	1967
Colbert[3],[4]	Alabama	5	1,184	1955	1965
Cumberland	Tennessee	2	2,470	1973	1973
Gallatin	Tennessee	4	976	1956	1959
Johnsonville[5]	Tennessee	8	924	1951	1959
Kingston	Tennessee	9	1,398	1954	1955
Paradise	Kentucky	3	2,201	1963	1970
Shawnee[5]	Kentucky	9	1,206	1953	1955
Widows Creek[5],[6]	Alabama	2	938	1954	1965
Total Coal-Fired		46	12,901		
Nuclear					
Browns Ferry	Alabama	3	3,309	1974	1977
Sequoyah	Tennessee	2	2,292	1981	1982
Watts Bar	Tennessee	1	1,123	1996	1996
Total Nuclear		6	6,724		
Hydroelectric					
Conventional Plants	Alabama	36	1,176	1925	1962
	Georgia	2	35	1931	1956
	Kentucky	5	223	1944	1948
	North Carolina	6	492	1940	1956
	Tennessee	60	1,891	1912	1972
Pumped-Storage[7]	Tennessee	4	1,616	1978	1979
Total Hydroelectric		113	5,433		
Natural Gas and/or Oil-Fired[8],[9]					
Simple-Cycle Combustion Turbine					
Allen[10]	Tennessee	20	456	1971	1972
Brownsville	Tennessee	4	468	1999	1999
Colbert	Alabama	8	392	1972	1972
Gallatin	Tennessee	8	600	1975	2000
Gleason[11]	Tennessee	3	465	2000	2000
Johnsonville	Tennessee	20	1,133	1975	2000
Kemper	Mississippi	4	312	2002	2002
Lagoon Creek	Tennessee	12	941	2001	2002
Marshall County	Kentucky	8	621	2002	2002
		87	5,388		

Subtotal Simple-Cycle Combustion Turbine					
Combined-Cycle Combustion Turbine					
Caledonia[12]	Mississippi	3	765	2003	2003
John Sevier[13]	Tennessee	1	870	2012	2012
Lagoon Creek[14]	Tennessee	1	525	2010	2010
Magnolia	Mississippi	3	920	2003	2003
Southaven	Mississippi	3	774	2003	2003
Subtotal Combined-Cycle Combustion Turbine		11	3,854		
Total Natural Gas and/or Oil-Fired		98	9,242		

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Diesel Generator[15]					
Meridian	Mississippi	5	9	1998	1998
Total Diesel Generators		5	9		
TVA Renewable Resources (non-hydro)[16]			< 1		
Total TVA-Operated Generating Facilities			34,309		
Contract Renewable Resources[17]			43		
Power Purchase and Other Agreements			2,242		
Total Summer Net Capability			36,594		

Notes
(1) Net capability is defined as the ability of an electric system, generating unit, or other system component to carry or generate power for a specified time period and
does not include operational limitations such as derates.
(2) John Sevier Units 1 and 2 were retired on December 31, 2012, and Units 3 and 4 were mothballed on December 31, 2012.
(3) Eight MW of cofired methane at Allen and seven MW of cofired biomass at Colbert are accounted for as coal generation as opposed to TVA Renewable Resources.
(4) Colbert Unit 5 was idled on October 1, 2013.
(5) Includes only active units. See Power Supply — Coal-Fired for a discussion of TVA's idling plans for units.
(6) Widows Creek Units 3 and 5 were retired on July 31, 2013.
(7) All four units at Raccoon Mountain Pumped-Storage Plant were temporarily out of service at September 30, 2013. All units are expected to return to service in 2014.
(8) See Item 2, Properties for a discussion of TVA-operated natural gas and/or oil-fired facilities subject to leaseback and long-term lease arrangements.
(9) Peak firing of simple-cycle combustion turbine units accounts for an additional 257 MW of short-term capability.
(10) The Allen Simple-Cycle Facility had four units (64 MW) out of service pending maintenance at September 30, 2013.
(11) The units at the Gleason Simple-Cycle Facility were derated to 360 MW as of September 30, 2013, pending maintenance.
(12) Caledonia is currently a leased facility operated by TVA.
(13) John Sevier Combined Cycle Facility is a single steam cycle unit driven by three gas turbines (3x1 configuration).
(14) Lagoon Creek Combined Cycle Facility is a single steam cycle unit driven by two gas turbines (2x1 configuration).
(15) In February 2013, TVA sold its diesel generators located in Albertville, Alabama.
(16) TVA's three wind turbines (2 MW nameplate capacity) at its Buffalo Mountain Site in Tennessee were not operational as of September 30, 2013, and do not appear to be economical for returning to operation. TVA owns 0.4 MW of solar installations at 16 sites.
(17) Contract Renewable Resources include Generation Partners, Renewable Standard Offer, and 15 wind turbine generators located on Buffalo Mountain. See Power Supply — Purchased Power and Other Agreements for information on renewable energy power purchase contracts.

Coal-Fired

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 is temporarily unavailable due to equipment failures, inspections,

or repairs. As of September 30, 2013, TVA had 10 coal-fired plants consisting of 46 active units, accounting for 12,901 MW of summer net capability. As of September 30, 2013, TVA had 14 inactive units. Inactive units may be in three categories: retired, mothballed, or inactive reserve. Retired units are unavailable for service and are not expected to return to service in the future. TVA currently has four retired units: John Sevier Fossil Plant ("John Sevier") Units 1 and 2 and Widows Creek Fossil Plant ("Widows Creek") Units 3 and 5. Mothballed units are unavailable for service but can be brought back into service after some maintenance with an appropriate amount of notification, typically weeks or months. As of September 30, 2013, TVA had nine mothballed units: Shawnee Fossil Plant ("Shawnee") Unit 10, Johnsonville Fossil Plant ("Johnsonville") Units 7 and 8, Widows Creek Units 1, 2, 4, and 6, and John Sevier Units 3 and 4. Inactive reserve units are unavailable for service but can be brought back into service after some repairs in a relatively short duration of time, typically measured in days. As of September 30, 2013, TVA had one unit in inactive reserve: Colbert Fossil Plant ("Colbert") Unit 5. On October 1, 2013, four additional units were mothballed — Johnsonville Units 5, 6, 9, and 10 — and the status of Colbert Unit 5 was changed from inactive reserve to mothballed. TVA refers to units which are in inactive reserve or mothballed status as idled.

Coal-fired plants have been subject to increasingly stringent regulatory requirements over the last few decades, including those of the Clean Air Act ("CAA") and subsequent laws and regulations. Increasing regulatory costs require consideration of whether to make the required capital investments to continue operating, or to decommission these facilities. In April 2011, TVA entered into two agreements (collectively, the "Environmental Agreements"). The first agreement is a Federal Facilities Compliance Agreement with the Environmental Protection Agency ("EPA"). The second agreement is with Alabama, Kentucky, North Carolina, Tennessee, and three environmental advocacy groups: the Sierra Club, National Parks Conservation Association, and Our Children’s Earth Foundation. Under the Environmental Agreements, TVA agreed to retire 18 of its 59 coal-fired units by the end of 2017 and was generally absolved from any liability, subject to certain limitations and exceptions, under the New Source Review ("NSR") requirements of the CAA for maintenance, repair, and component replacement projects that were commenced at TVA's coal-fired units prior to the execution of the agreements. Failure to comply with the terms of the Environmental Agreements would subject TVA to penalties stipulated in the agreements. TVA is taking the actions necessary to comply with the Environmental Agreements. TVA is confident that it has adequate capacity to meet the needs of its customers after these units are retired.

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The following table summarizes the retirement actions TVA is required to take under the Environmental Agreements, and the status of those actions.

Fossil Plant	Total Units	Existing Scrubbers and SCRs[1]	Requirements Under Environmental Agreements	Retirements Implemented or Planned to be Implemented by TVA as a Result of Environmental Agreements
John Sevier	2	None	· Retire two units no later than December 31, 2012 · Retire six units by December 31, 2015	· Retired Units 1 and 2 on December 31, 2012
Johnsonville	10	None	· Retire six units no later than December 31, 2015 · Retire four units no later than December 31, 2017	· Retire four units by December 31, 2017 · Idled Units 7 and 8 effective March 1, 2012 · Idled Units 5 and 6 and Units 9 and 10 on October 1, 2013
Widows Creek	6	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	· Idled Units 1-6 in October 2011 · Retired Units 3 and 5 on July 31, 2013

Note
(1) Selective catalytic reduction systems ("SCR").

The following table summarizes the additional 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	Units Impacted	Existing Scrubbers and SCRs	Requirements Under Environmental Agreements	Other 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	Still evaluating what actions to take
Bull Run	1	Scrubber and SCRs on unit	Continuously operate current and any new emission control equipment	Continuously operate existing emission control equipment
Colbert	5	SCR on Unit 5	· Remove from service, control[1], convert[2], or retire Units 1-4 no later than June 30, 2016 · Remove from service, control[1], 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 June 30, 2016
Cumberland	2	Scrubbers and SCRs on both units	Continuously operate existing emission control equipment	Continuously operate existing emission control equipment
Gallatin	4	None	Control[1], convert[2], 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	2	None		

			· Remove from service two units no later than December 31, 2012 and control[(1)], convert[(2)], or retire those units no later than December 31, 2015	· Idled Units 3 and 4 in December 2012 · Units 3 and 4 will be retired by December 31, 2015
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, 2013 · Continuously operate emission control equipment on Units 1-3	· Upgraded scrubbers on Units 1 and 2 in 2012 · Continuously operate emission control equipment on Units 1-3 · The Board approved the construction of a gas-fired plant at the current location of the Paradise coal-fired plant · Retire Units 1 and 2 after completion of the gas-fired plant
Shawnee	2	None	Control[(1)], retire, or convert[(2)] Units 1 and 4 no later than December 31, 2017	· Still evaluating what actions to take with respect to Units 1 and 4 · Idled Shawnee Unit 10 in October 2010
Widows Creek	2	Scrubbers and SCRs on Units 7 and 8	· Continuously operate existing emissions control equipment on Units 7 and 8	· Continuously operate existing emissions control equipment on Units 7 and 8 · Retire Unit 8 in the future

Notes
(1) If TVA decides to add emission controls to these units, TVA must continuously operate the emission controls once they are installed.
(2) Convert to renewable biomass.

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As of September 30, 2010, TVA had 14,573 MW (Summer Net Capability) of coal-fired generation. After these planned actions TVA will have 9,098 MW (Summer Net Capability) of coal-fired generation.

TVA is planning to balance its coal-fired generation with lower-cost and cleaner energy generation technologies. TVA's long-range plans will continue to attempt to balance the costs and benefits of significant environmental investments at its remaining coal-fired plants that do not have scrubbers and/or SCRs. TVA expects to decide whether to control, convert, or retire its remaining coal-fired capacity on a unit-by-unit schedule.

Transmission upgrades may be required to maintain reliability when some coal-fired units become inactive. TVA invested $130 million in such upgrades between 2011 and 2013, and estimates future expenditures for transmission upgrades to accommodate inactive coal-fired units to be approximately $350 million for 2014 to 2020. Upgrades may include enhancements to existing lines and substations or new installations as necessary to provide adequate power transmission capacity, maintain voltage support, and ensure generating plant and transmission system stability.

Nuclear

TVA has three nuclear sites consisting of six units in operation. The units at Browns Ferry Nuclear Plant ("Browns Ferry") are boiling water reactor units, and the units at Sequoyah Nuclear Plant ("Sequoyah") and Watts Bar Nuclear Plant ("Watts Bar") are pressurized water reactor units. Statistics for each of these units are included in the table below.

TVA Nuclear Power
At September 30, 2013

Nuclear Unit	Status	Nameplate Capacity (MW)	Net Capacity Factor for 2013	Date of Expiration of Operating License	Date of Expiration of Construction Permits
Sequoyah Unit 1	Operating	1,221	97.0	2020*	—
Sequoyah Unit 2	Operating	1,221	73.7	2021*	—
Browns Ferry Unit 1	Operating	1,264	82.9	2033	—
Browns Ferry Unit 2	Operating	1,190	80.6	2034	—
Browns Ferry Unit 3	Operating	1,190	93.1	2036	—
Watts Bar Unit 1	Operating	1,270	88.7	2035	—
Watts Bar Unit 2	Under construction	1,220	—	—	2013*

* An extension request has been submitted to the Nuclear Regulatory Commission. See Sequoyah License Renewal and Nuclear Reactor Licensing below.

Nuclear Regulatory Commission Safety Improvements Orders and Other Guidance. In March 2012, the Nuclear Regulatory Commission ("NRC") issued three new safety orders stemming from lessons learned from the events that occurred in 2011 at the Fukushima Daiichi Nuclear Power Plant ("Fukushima events"). The orders require (1) the development of strategies for responding to an interruption of off-site power, (2) the addition of more reliable instruments to measure water levels in cooling pools where spent nuclear fuel is stored, and (3) the installation of more robust containment venting systems to prevent containment failure due to overpressurization. The first two orders apply to every nuclear reactor in the U.S., including Watts Bar Unit 2, which will be required to comply prior to issuance of its operating license. The third order applies only to certain U.S. boiling water reactors, including Browns Ferry. These reactors are required to improve their containment venting systems to prevent over-pressurization due to the buildup of non-condensable gases such as hydrogen. TVA plans to fully implement the requirements of these three orders which were submitted to the NRC on February 28, 2013. TVA expects to complete the implementation of these orders by 2019, and the cost to comply with these orders is not expected to exceed $220

million.

In addition to these orders, the NRC issued requests for information from U.S. nuclear operators regarding earthquake and flood risks and emergency planning. Based on the information provided in response to these requests, the NRC will determine if additional regulatory requirements are needed for these subjects. At this time, TVA is not able to predict the final outcome of these potential requirements or the associated costs; however, these amounts could be significant.

Since the Fukushima events, the NRC has also issued and adopted additional detailed guidance on the expected response capability to be developed by each nuclear plant site. TVA has developed plans and schedules for the development and implementation of strategies and physical plant modifications to address the actions outlined in this guidance for all of its plants, including Watts Bar Unit 2. The initial studies, including the required plant walkdowns, are expected to be complete in the first quarter of 2014. Flooding and seismic re-evaluations to determine any further plant modifications are scheduled for completion in mid 2015. In addition to the actions described above, TVA may be required to take further actions to comply with any additional regulatory action that the NRC takes in response to the Fukushima events.

Sequoyah License Renewal. TVA submitted the license renewal applications for both Sequoyah units to the NRC on January 7, 2013. If approved, the licenses for both units would be extended by an additional 20 years to 2040 for Unit 1 and

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2041 for Unit 2. The NRC's review of the applications is expected to take up to three years after their submission. It is possible that the timing of approval of the final license renewal applications could be impacted by the NRC suspension of final decisions on nuclear reactor licensing discussed below.

Nuclear Reactor Licensing. On August 7, 2012, the NRC suspended final decisions on nuclear reactor licensing in response to a ruling by the the U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") that vacated the NRC's Waste Confidence Decision ("WCD") relating to the environmental impact of the long-term storage of nuclear waste. On September 6, 2012, in response to the ruling, the NRC directed the NRC staff to develop a generic Environmental Impact Statement ("EIS") to support an updated WCD rule, maintaining the option for the staff to conduct some analyses of waste confidence issues on a site-specific basis, if necessary. Licensing reviews and proceedings may currently continue, but final licenses will not be issued until the NRC completes its reassessment of the environmental impacts of the storage of nuclear waste. The delay of licensing decisions by the NRC could affect the unit currently under construction at Watts Bar Unit 2, the proposed construction of Bellefonte Unit 1, and the renewal of the licenses for the two units at Sequoyah. All of the procedures and inspections that happen prior to licensing will continue as usual.

Operational Challenges. See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Liquidity Challenges Related to Generation Resources, which discussion is incorporated herein by reference.

Other Nuclear Matters. See Fuel Supply — Nuclear Fuel below for a discussion of spent nuclear fuel and low-level radioactive waste, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Liquidity Challenges Related to Generation Resources for a discussion of challenges associated with the nuclear program, Note 20 — Contingencies for a discussion of TVA's nuclear decommissioning liabilities and the related trust and nuclear insurance, and Note 20 — Legal Proceedings for a discussion of legal and administrative proceedings related to TVA's nuclear program, which discussions are incorporated herein by reference.

Hydroelectric and Other Renewable Energy Resources

Conventional Hydroelectric Dams. TVA maintains 29 conventional hydroelectric dams with 109 generating units throughout the Tennessee River system and one pumped-storage facility for the production of electricity. At September 30, 2013, these units accounted for 5,433 MW of summer net capability. The amount of electricity that TVA is able to generate from its hydroelectric plants depends on a number of factors, including the amount of precipitation and runoff, initial water levels, and the need for water for competing water management objectives. The amount of electricity generated also depends on the availability of TVA's hydroelectric generation plants. When these factors are unfavorable, TVA must increase its reliance on higher cost generation plants and purchased power. In addition, four hydroelectric dams owned by a third party on the Little Tennessee River and eight U.S. Army Corps of Engineers dams on the Cumberland River contribute to the TVA power system. See Weather and Seasonality.

In 1992, TVA began a Hydro Modernization Program to address reliability issues on its conventional hydroelectric units and on Raccoon Mountain Pumped-Storage Plant ("Raccoon Mountain"). At September 30, 2013, modernization had been completed on 55 conventional hydroelectric units and four pumped-storage units. These modernization projects resulted in 422 MW of increased capacity on the conventional units, with an average efficiency gain of approximately five percent. Hydroelectric generation will continue to be an important part of TVA's energy mix. TVA, through its Hydro Modernization Program, continues to assess its remaining conventional hydroelectric units for opportunities to improve reliability and increase capacity.

Raccoon Mountain Pumped-Storage Plant. The four units at Raccoon Mountain were placed in service during 1978 and 1979. The units, with a total net summer capability of 1,616 MW, are utilized to balance the transmission system

as well as generate power.

Inspections of the turbines in the four units of Raccoon Mountain during 2012 found cracking in the rotor poles and the rotor rims. Because the same type of cracking led to the catastrophic failure of a similar unit in Europe, the Raccoon Mountain units were taken out of service. Raccoon Mountain Unit 2 returned to limited service with a partially restacked rotor in October 2012, but was taken out of service again on January 3, 2013, due to a failed rotor pole clamp. All units are undergoing a maintenance overhaul and are expected to be returned to service in 2014. TVA is dispatching generation from other TVA units and purchasing power if needed to compensate for the loss in generating capacity.

Other Renewable Energy Resources. TVA's renewable energy portfolio includes both TVA owned assets and renewable energy purchases. TVA has 16 solar sites, capability for digester gas and biomass cofiring, and three wind turbines. At September 30, 2013, the wind turbines did not provide any summer net capability because they were not operational, and they do not appear to be economical for returning to operation. The digester gas cofiring capability is accounted for as coal-fired generation summer net capability. The solar sites provide less than one MW of summer net capability. See Power Supply — Purchased Power and Other Agreements for information on renewable energy power purchase contracts.

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Natural Gas and/or Oil-Fired

At September 30, 2013, TVA operated 98 combustion turbine power blocks, 87 simple-cycle units and 11 combined-cycle power blocks. The 87 simple-cycle units provide a maximum of 5,388 MW of summer net capability. The 11 combined-cycle power blocks provide a maximum of 3,854 MW of summer net capability. Eighty of the simple-cycle units and one combined-cycle power block are fueled by either natural gas or fuel oil. The remaining seven simple-cycle units as well as the 10 combined-cycle power blocks are fueled by natural gas only. Seventy-six of the simple-cycle units are capable of quick-start response allowing full generation capability in approximately 10 minutes. TVA uses simple-cycle units as peaking or backup units. See Item 2, Properties — Generating Properties for a discussion of lease arrangements into which TVA has entered in connection with certain of the combustion turbine units. Because of TVA's strategy of portfolio diversification and reducing air emissions, TVA may decide to make further strategic investments in natural gas-fired facilities in the future by purchase, construction, and/or lease.

Diesel Generators

In February 2013, TVA sold its diesel generators located in Albertville, Alabama to the city of Albertville. At September 30, 2013, TVA had one diesel generator plant consisting of five units, and these facilities accounted for 9 MW of summer net capability.

Purchased Power and Other Agreements

TVA acquires power from a variety of power producers through long-term and short-term power purchase agreements as well as through power spot market purchases. During 2013, TVA acquired approximately 10 percent of the power that it purchased on the power spot market, approximately one percent through short-term power purchase agreements (agreements with a duration of one year or less but longer than the term of spot-market purchase), and approximately 89 percent through long-term power purchase agreements (agreements with a duration of more than one year).

A portion of TVA’s capability provided by power purchase agreements is provided under contracts that expire between 2014 and 2032, and the most significant of these contracts are described below.

Power Purchase Contracts (Excluding Wind Contracts)
At September 30, 2013

Type of Facility	Location	Summer Net Capability (MW)	Contract Termination Date
Lignite	Mississippi	440	2032
Natural gas	Alabama	720	2023

Under federal law, TVA is required to purchase energy from qualifying cogenerators and small power producers at TVA's avoided cost of self-generating or purchasing this energy from another source. As of September 30, 2013, there were six suppliers, with a combined capacity of 913 MW, whose power TVA purchases under this law.

As of September 30, 2013, TVA was a party to contracts with eight wind farms for the purchase of energy. Energy is currently provided to TVA under all contracts. The first began providing 300 MW (nameplate capacity) under a twenty-year contract from a wind farm in Illinois in May 2010. TVA currently does not purchase the renewable attributes for this energy but has the opportunity to 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. TVA may work with counterparties to renegotiate or even terminate existing arrangements based on its evaluation of the economics of the contracts given that bringing power from distant locations raises transmission issues and costs.

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Renewable Wind Contracts
As of September 30, 2013

Location of Wind Farm	Wind Farm Nameplate Capacity (in MW)	Date Delivery Began
Illinois	300*	2010
Iowa	198	2010
Iowa	101	2012
Kansas	201	2012
Kansas	165	2013
Illinois	150	2012
Illinois	200	2012
Illinois	200	2013

Note
*TVA is currently purchasing the energy output of this 300 MW of generation. The owner of the facility retains the renewable attributes, but TVA has the option to purchase the renewable attributes of this generation in the future.

In addition, TVA has contracted for 27 MW of nameplate renewable energy capacity from 15 wind turbine generators located on Buffalo Mountain near Oak Ridge, Tennessee, 4.8 MW of nameplate capacity from a landfill gas facility near Knoxville, Tennessee, and 4.5 MW of nameplate capacity from a solar farm in Haywood County, Tennessee.

Technology advancements, such as storage and smart grid, will be needed to address some of the operational issues associated with intermittent renewable energy sources in the future. Regional differences and geographic limitations play a primary role in the types and amount of renewable and clean energy developed across the country. Within the area served by TVA, the most viable renewable resources are hydroelectric, biomass (solid and methane recovery), solar, and wind. Known wind resource potential has increased recently due to studies showing reasonable wind speeds available at higher elevations in this area. If TVA is required to increase its use of renewable resources and the cost of doing so is greater than the costs of other sources of generation, TVA's costs may increase.

During the past three years, TVA supplemented its power generation through power purchases as follows:
Purchased Power*
For the years ended September 30

	2013		2012		2011	
Millions of kWh	18,848		25,294		27,168	
Percent of TVA's Total Power Supply	11.4	%	15.0	%	15.9	%

Note
* Purchased power amounts include generation from Caledonia Combined-Cycle Gas Plant, which is currently a leased facility operated by TVA. Additionally, purchased power amounts include generation from Magnolia Combined-Cycle Gas Plant for a portion of 2011. On August 31, 2011, TVA acquired Magnolia.

Cleaner Energy Initiatives

TVA intends to balance production capabilities with power supply requirements by promoting the conservation and efficient use of electricity and, when necessary, buying, building and/or leasing assets or entering into power purchase agreements. TVA also intends to employ a diverse mix of energy generating sources and is working toward obtaining greater amounts of its power supply from clean (low or zero carbon emitting) resources.

Nuclear Generation

Watts Bar Unit 2. On August 1, 2007, the TVA Board approved the completion of Watts Bar Unit 2, which is expected to be completed in CY 2015 and to provide approximately 1,180 MW of summer net capability. The work on Watts Bar Unit 2 is continuing within the schedule and budget expectations approved by the TVA Board in April 2012. The current construction permit expired in March 2013. An extension to the permit has been requested and, by regulation, work is allowed to proceed. An extended construction permit is expected to be received from the NRC in the first quarter of 2014. The unit was approximately 80 percent complete at September 30, 2013.

The primary risks for the project are activities associated with physical project completion and regulatory and licensing issues. The risks include compliance with the NRC requirements resulting from the Fukushima events and resolution of the NRC's Waste Confidence Decision relating to the potential environmental impacts of storage of spent fuel at each reactor site. See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources — Liquidity Challenges Related to Generation Resources.

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For a discussion of legal proceedings related to Watts Bar Unit 2, see Note 20 — Legal Proceedings — Case Involving the NRC Waste Confidence Decision on Spent Nuclear Fuel Storage and Administrative Proceedings Regarding Watts Bar Unit 2.

Bellefonte Unit 1. The incorporation of Watts Bar Unit 2 lessons learned into the Bellefonte Nuclear Plant ("Bellefonte") Unit 1 completion estimate has revealed some similar problems and inaccuracies. TVA finalized a new estimate to complete Bellefonte Unit 1 during the first quarter of 2014 putting the total estimated cost of completion in the range of $7.5 billion and $8.7 billion. Work at the site has been slowed to better allocate resources on nearer-term priorities as both budget and staffing levels for the project have been reduced in the 2014 budget. TVA believes that the resulting budgeting and staffing levels should be sufficient to preserve Bellefonte for potential future development. TVA plans to utilize its integrated resource planning process to help determine how Bellefonte best supports TVA's overall efforts to continue to meet customer demand with low-cost, reliable power.

Other Nuclear Initiatives. In November 2012, the Department of Energy ("DOE") announced a grant award to Babcock & Wilcox ("B&W"), in conjunction with TVA and Bechtel, for small modular reactor ("SMR") development. See Research and Development.

Extended Power Uprate. TVA is undertaking an Extended Power Uprate ("EPU") project at Browns Ferry that is expected to increase the amount of electrical generation by increasing the amount of steam produced by the reactors. Additional fuel would be added to the reactors during each refueling outage to support the increased steam production. The NRC license for each reactor must be modified to allow reactor operation at the higher power level. TVA has submitted license amendment requests and is currently in discussions with the NRC on selected technical issues affecting EPU licensing. The result of these discussions may impact the amount of power level increase realized by the EPU. Completion of the licensing process will determine the final implementation schedule.

Energy Efficiency, Demand Response, and Renewable Energy Programs

TVA, in cooperation with its customers, continues to implement a broad portfolio of energy efficiency and demand response ("EEDR") programs designed to help reduce long-term energy supply costs in the TVA service area. TVA realized 521 gigawatt hours ("GWh") and 560 GWh of energy efficiency savings in 2013 and 2012, respectively. EEDR is expected to remain a focus of TVA and to play an important role in the next Integrated Resource Plan. TVA's Green Power Switch® ("GPS") program is a voluntary program that supports the production of renewable energy by allowing consumers to purchase renewable energy. In 2000, TVA became the first utility in the Southeast to offer consumers the choice to purchase renewable energy. In 2012, GPS supported roughly 101,000 MWh of renewable energy. TVA is continuing to refine the program by testing two additional customer options. In the original Green Power Switch, consumers buy 150 KWh renewable energy blocks for $4 a month. Supply includes Green-e certified renewable energy generated from TVA-owned and purchased solar, wind, digester gas, and landfill gas generation. The two pilot options are testing customer demand for a 100 percent solar option sourced from TVA's growing Green Power Providers supply as well as a lower priced bulk option for larger commercial and industrial customers. Supply for the bulk option is sourced from TVA-contracted renewable energy credits ("RECs") in the greater Southeastern region. Specifically, the pilot supply will be from the Tapoco Hydroelectric project owned by Brookfield Renewable Energy Partners.

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

generation with over 4 MW of additional approved capacity that has yet to begin generating.

The Renewable Standard Offer ("RSO") program is a voluntary program that began in October 2010 to increase the amount of renewable energy generated in TVA's service territory. Under this program, TVA will purchase certain types of renewable energy at market rates from projects that meet the requirement of the RSO program as long as there is sufficient available capacity in the program. Solar, wind, and specific biomass projects are included in the program. Projects must be greater than 50 kilowatts ("kW"), but no greater than 20 MW in nameplate capacity. TVA accepted 97 MW of renewable capacity through calendar year 2012. This included a diverse portfolio of 13 total projects, including over 41 MW of solar, 18 MW of wind, 20 MW of biomass, and 18 MW of landfill gas or methane projects. TVA demonstrated its continued commitment to renewable energy by issuing an additional 100 MW under the RSO program in 2013. As of September 30, 2013, TVA had received applications for 22 MWs and expects to receive more before December 31, 2013.

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

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TVA has accepted applications totaling 20 MW over the past two years and is currently not accepting additional applications. TVA is reviewing the pilot program and may extend the initiative after a thorough evaluation is completed.

Fuel Supply

General

TVA's consumption of various types of fuel depends largely on the demand for electricity by TVA's customers, the availability of various generating units, and the availability and cost of fuel. The following table summarizes TVA's expenses for various fuels for the years indicated:

Fuel Expense for TVA-Owned Facilities*
For the years ended September 30
(in millions)

	2013	2012	2011
Coal	$1,890	$1,824	$2,315
Natural gas	504	527	265
Fuel oil	36	46	54
Nuclear fuel	317	319	261
Total fuel	$2,747	$2,716	$2,895

Note
* Excludes effects of the fuel cost adjustment deferrals and amortization on fuel expense in the amounts of $73 million, $(36) million, and $31 million for the years ended September 30, 2013, 2012, and 2011, respectively.

The following table indicates TVA's average fuel expense by generation type for the years indicated:

Fuel Expense Per kWh[(1)(2)]
For the years ended September 30
(cents/kWh)

	2013	2012	2011
Coal	3.07	3.18	3.17
Natural gas and fuel oil	3.89	3.19	3.96
Nuclear	0.61	0.58	0.53
Average fuel cost per kWh net thermal generation from all sources	2.15	2.08	2.21

Note
(1) Excludes effects of the fuel cost adjustment deferrals and amortization on fuel expense.
(2) In 2012, TVA began allocating 50 percent of its Financial Trading Program gains and losses to fuel expense whereas in 2011 all of the FTP gains and losses were allocated to purchased power expense. In 2013, the allocation changed to 70 percent of FTP gains and losses being allocated to fuel expense and 30 percent of FTP gains and losses being allocated to purchased power expense.

In addition to TVA-owned generating facilities, TVA operates a plant under an operating lease agreement and also has tolling agreements under which it obtains electricity from outside suppliers. Under these agreements, TVA supplies the fuel to produce electricity. The following table indicates the cost of fuel supplied by TVA and also the average fuel expense per kWh for the years indicated:

Natural Gas Purchases for Non-TVA Owned Facilities[(1)]
For the years ended September 30

	2013	2012	2011
Cost of fuel (in millions)	$138	$255	$343
Average fuel expense (cents/kWh)	2.95	2.36	2.42

Note
(1) In 2012, TVA began allocating 50 percent of its FTP gains and losses to fuel expense whereas in 2011 all of the FTP gains and losses were allocated to purchased power expense. In 2013, the allocation changed to 70 percent of FTP gains and losses being allocated to fuel expense and 30 percent of FTP gains and losses being allocated to purchased power expense.

Coal

Coal consumption at TVA’s coal-fired generating facilities during 2013 and 2012 was approximately 32 million tons and 29 million tons, respectively. At September 30, 2013, and 2012, TVA had 29 days and 28 days of system-wide coal supply at full burn rate, respectively, with net book values of $374 million and $402 million, respectively.

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TVA utilizes both short-term and long-term (longer than one year) coal contracts. During 2013, long-term contracts made up 88 percent of coal purchases and short-term contracts accounted for the remaining 12 percent. TVA plans to continue using contracts of various lengths, terms, and coal quality to meet its expected consumption and inventory requirements. During 2013, TVA purchased coal by basin as follows:

- 46 percent from the Illinois Basin;
- 39 percent from the Powder River Basin in Wyoming;
- 14 percent from the Uinta Basin of Utah and Colorado; and
- one percent from the Appalachian Basin of Kentucky, Pennsylvania, Tennessee, Virginia, and West Virginia.

Total system coal inventories were at or above target levels for most of 2013 due to lower than planned coal-fired generation. The following table indicates the delivery methods TVA utilizes for its coal supply:

Percentage of Coal Supply Delivery Methods
For the years ended September 30

	2013		2012	
Rail	6	%	7	%
Barge	21	%	20	%
Barge and rail combination	60	%	59	%
Truck	13	%	14	%

Natural Gas and Fuel Oil

During 2013, TVA purchased a significant amount of its natural gas requirements from a variety of suppliers under contracts with terms of up to two years and purchased substantially all of its fuel oil requirements on the spot market. Exposure to spot market volatility was managed through TVA’s Financial Trading Program ("FTP").

The net book value of TVA’s natural gas inventory was $7 million at September 30, 2013, and 2012. The net book value of TVA’s fuel oil inventory was $113 million and $99 million at September 30, 2013, and 2012, respectively. At September 30, 2013, all but 17 of TVA’s combustion turbine units were dual-fuel capable, and TVA has fuel oil stored on each of these sites for its dual-fuel combustion turbines as a backup to natural gas.

Nuclear Fuel

Current Fuel Supply. Converting uranium to nuclear fuel generally involves four stages: the mining and milling of uranium ore to produce uranium concentrates; the conversion of uranium concentrates to uranium hexafluoride gas; the enrichment of uranium hexafluoride; and the fabrication of the enriched uranium hexafluoride into fuel assemblies. For its forward five-year (2014-2018) requirements, TVA currently has 100 percent of its uranium mining and milling, conversion services, enrichment services, and fabrication services requirements either in inventory or under contract. TVA anticipates being able to fill its needs beyond this period by normal contracting processes as market forecasts indicate that the fuel cycle components will be readily available.

USEC was TVA’s supplier of enrichment services for uranium for fueling TVA's nuclear units. On May 24, 2013, USEC announced the cessation of enrichment activities at its Paducah, Kentucky facility. TVA has sufficient nuclear fuel inventory available to mitigate near-term supply risks, and also expects to be able to procure material at reasonable rates in the market for nuclear fuel.

TVA, the DOE, and certain nuclear fuel contractors have entered into agreements providing for surplus DOE highly enriched uranium (uranium that is too highly enriched for use in a nuclear power plant) to be blended with other uranium. The enriched uranium that results from this blending process, which is called blended low-enriched uranium ("BLEU"), is fabricated into fuel that can be used in a nuclear power plant. This blended nuclear fuel was first loaded in a Browns Ferry reactor in 2005 and is expected to continue to be used to reload the Browns Ferry reactors through at least 2016. BLEU fuel was loaded into Sequoyah Unit 2 three times but is not expected to be used in the Sequoyah reactors in the future.

Under the terms of an interagency agreement between the DOE and TVA, in exchange for supplying highly enriched uranium materials for processing into usable BLEU fuel for TVA, the DOE participates in the savings generated by TVA's use of this blended nuclear fuel. See Note 1 — Blended Low-Enriched Uranium Program for a more detailed discussion of the BLEU project.

TVA owns all nuclear fuel held for its nuclear plants. At September 30, 2013, and 2012, the net book value of this nuclear fuel was $1.3 billion and $1.2 billion, respectively.

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Mixed Oxide Nuclear Fuel. Under the DOE Surplus Plutonium Disposition ("SPD") Program, mixed oxide ("MOX") fuel would be fabricated with surplus plutonium and depleted uranium as a replacement for commercial uranium fuel. In February 2010, DOE and TVA entered into an interagency agreement to evaluate the potential use of MOX in reactors at Browns Ferry and Sequoyah. As part of the evaluation of MOX, TVA is participating as a cooperating agency in DOE's development of a supplemental EIS that addresses the potential use of MOX fuel in the TVA reactors. TVA could make a decision in 2014 on whether to continue to pursue the use of MOX fuel. At the earliest, based on the expected production rate of MOX, TVA could start using a small number of MOX fuel assemblies in TVA reactors after 2020. TVA's three criteria for implementing MOX are that it must be environmentally and operationally safe; it must be economical compared to other nuclear fuel used by TVA; and it must be licensed by the NRC for use. If TVA decides to use MOX fuel and the NRC approves its use, some changes in the operation of the reactors are expected and additional equipment may be required.

Low-Level Radioactive Waste. Low-level radioactive waste ("radwaste") results from the normal operation of nuclear electrical generation units and includes such materials as disposable protective clothing, mops, and filters. TVA sends shipments of radwaste to burial facilities in Clive, Utah and Andrews, Texas. TVA is capable of storing some radwaste at its own facilities for an extended period of time, if necessary.

Spent Nuclear Fuel. Under the Nuclear Waste Policy Act of 1982, TVA (and other domestic nuclear utility licensees) entered into a contract with the DOE for the disposal of spent nuclear fuel. Payments to the DOE are based upon TVA’s nuclear generation and charged to nuclear fuel expense. Although the contracts called for the DOE to begin accepting spent nuclear fuel from the utilities by January 31, 1998, the DOE has yet to establish a permanent disposal site for spent nuclear fuel. TVA, like other nuclear utilities, stores spent nuclear fuel at its nuclear sites. TVA would have had sufficient space to continue to store spent nuclear fuel as originally scheduled in storage pools indefinitely had the DOE begun accepting spent nuclear fuel at the agreed upon time. The DOE’s failure to do so in a timely manner required TVA to construct dry cask storage facilities at Sequoyah and Browns Ferry and to purchase special storage containers for the spent nuclear fuel. The Sequoyah and Browns Ferry dry cask storage facilities have been in use since 2004 and 2005, respectively, and are expected to provide storage capacity through 2026 at Sequoyah and 2018 at Browns Ferry. Watts Bar has sufficient storage capacity in its spent fuel pool to last until approximately 2015. In September 2010, the NRC announced its approval of final revisions to its WCD expressing the NRC’s confidence that spent nuclear fuel can be safely stored for at least 60 years beyond the licensed life of any reactor and that sufficient repository capacity will be available when necessary. On June 8, 2012, the D.C. Circuit vacated the NRC's WCD relating to the long-term storage of nuclear waste. On September 6, 2012, in response to that ruling, the NRC directed the NRC staff to develop a generic EIS to support an updated WCD rule within 24 months, maintaining the option for the staff to conduct some analyses of waste confidence issues on a site-specific basis. A draft rule and EIS addressing the decision of the D.C. Circuit were issued for public comment in September 2013. Licensing reviews and proceedings may continue, but final licenses will not be issued until the NRC completes its reassessment of the storage of nuclear waste. See Power Supply — Nuclear Reactor Licensing.

To recover the cost of providing long-term, on-site storage for spent nuclear fuel, TVA filed a breach of contract suit against the United States in the Court of Federal Claims in 2001, and as a result, TVA received approximately $35 million for costs incurred through 2004. By agreement with the United States, TVA subsequently recovered an aggregate of approximately $72 million to offset dry cask storage costs incurred from 2005 through 2010. TVA entered into a settlement agreement with the United States in July 2011 that delineates recoverable and non-recoverable costs and that sets forth a claim submittal and review process. This settlement agreement expires on December 31, 2013, but it may be extended by mutual agreement. On February 15, 2013, TVA received $12 million for its 2011 claim, and on July 30, 2013, TVA submitted a claim of nearly $18 million for 2012 costs.

Tritium-Related Services. TVA and the DOE are engaged in a long-term interagency agreement under which TVA will, at the DOE's request, irradiate tritium producing burnable absorber rods to assist the DOE in producing tritium for the Department of Defense ("DOD"). This agreement, which ends in 2035, requires the DOE to reimburse TVA for the costs that TVA incurs in connection with providing irradiation services and to pay TVA an irradiation services fee at a specified rate per tritium-producing rod over the period when irradiation has occurred.

In general, tritium-producing rods are irradiated for one operating cycle, which lasts about 18 months. At the end of the cycle, TVA removes the irradiated rods and loads them into a shipping cask. The DOE then ships them to its tritium-extraction facility. TVA loads a fresh set of tritium-producing rods into the reactor during each refueling outage. Irradiating the tritium-producing rods does not affect TVA's ability to safely operate the reactors to produce electricity.

The interagency agreement provides for irradiation services to be performed in Watts Bar Unit 1 and Sequoyah Units 1 and 2. TVA has provided irradiation services using only Watts Bar Unit 1 since 2003. TVA believes it can meet the DOE and the DOD tritium requirements using Watts Bar Unit 1 while maintaining Sequoyah reactors as backups.

Transmission

The TVA transmission system is one of the largest in North America. TVA's transmission system has 68 interconnections with 12 neighboring electric systems, and delivered nearly 165 billion kWh of electricity to TVA customers in

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2013. In carrying out its responsibility for grid reliability in the TVA service area, TVA has operated with 99.999 percent reliability over the last 14 years in delivering electricity to customers. See Item 2, Properties — Transmission Properties.

To the extent that federal law requires access to the TVA transmission system, TVA offers transmission services to others to transmit power at wholesale in a manner that is comparable to TVA's own use of the transmission system. TVA has also adopted and operates in accordance with a published Standards of Conduct for Transmission Providers and separates its transmission functions from its marketing functions.

TVA is subject to federal reliability standards that are set forth by the North American Electric Reliability Corporation ("NERC") and approved by the FERC. These standards are designed to maintain the reliability of the bulk electric system, including TVA’s generation and transmission system, and include areas such as maintenance, training, operations, planning, modeling, critical infrastructure, physical and cyber security, vegetation management, and facility ratings. TVA recognizes that reliability standards and expectations continue to become more complex and stringent for transmission systems. At present there are over 100 mandatory standards subject to enforcement containing over 1,200 requirements and sub-requirements that must be met including the NERC revisions to the Transmission Planning ("TPL") Reliability Standards that were approved by FERC on October 17, 2013. Revisions to these standards as well as other standards under consideration, if approved, will require significant resource commitments in future years.

Weather and Seasonality

Weather affects both the demand for and the market prices of electricity. TVA uses degree days to measure the impact of weather on its power operations. Degree days measure the extent to which average temperatures in the five largest cities in TVA's service area vary from 65 degrees Fahrenheit. During 2013, TVA had 735, or 28 percent, more heating degree days and 354, or 17 percent, fewer cooling degree days than in 2012.

	2013	Percent Change	2012	Percent Change	2011
Combined degree days (normal 5,223)	5,095	8.1%	4,714	(14.9)%	5,541

TVA’s power system is generally a dual-peaking system where the demand for electricity peaks during the summer and winter months to meet cooling and heating needs. TVA met an all-time summer peak demand of 33,482 MW on August 16, 2007, at 102 degrees Fahrenheit and an all-time winter peak demand of 32,572 MW on January 16, 2009, at 12 degrees Fahrenheit. As a result of a cold wave during the first week of January 2010, TVA set a number of energy demand records. A new total daily energy demand record of 701 GWh was set on January 8, 2010, and a total weekly energy demand record of 4,632 GWh was set for the seven-day period ended January 10, 2010, when TVA experienced an average demand of 27,574 MW per hour for the entire week.

After several years of dry weather and drought conditions in the TVA service area, rainfall totals improved in the Tennessee Valley during 2013 and 2012. Rainfall in the Upper Basin of the Tennessee Valley was 124 percent of normal for 2013 and 102 percent of normal in 2012. Also, runoff was 143 percent of normal in 2013 and 98 percent of normal in 2012. Runoff is the amount of rainfall that is not absorbed by vegetation or the ground and actually reaches the rivers and reservoirs that TVA manages. TVA’s conventional hydroelectric generation increased 39 percent in 2013 as compared to 2012, and decreased two percent in 2012 as compared to 2011. Conventional hydroelectric generation was approximately 126 percent of normal in 2013 and 90 percent of normal in 2012.

Competition

TVA provides electricity in a service area that is largely free of competition from other electric power providers. This service area is defined primarily by two provisions of law: the fence and the anti-cherrypicking provision. The fence limits the region in which TVA or LPCs which distribute TVA power may provide power. The anti-cherrypicking provision limits the ability of others to use the TVA transmission system for the purpose of serving customers within TVA's service area.

From time to time there have been efforts to erode the protection of the anti-cherrypicking provision, and the protection of the anti-cherrypicking provision could be limited and perhaps eliminated by Congressional legislation at some time in the future.

Research and Development

TVA makes investments in science and technological innovation to assist in meeting future challenges in key areas. These are identified as "Signature Technologies" wherein TVA is seeking to establish national leadership in research, development, and demonstration. TVA is currently focused on three Signature Technologies: SMRs, grid modernization ("smart grid") for transmission and distribution systems, and energy utilization technologies, with a particular emphasis on energy efficiency, load management, and electric transportation.

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TVA has chosen SMRs as one of three signature technologies that support TVA's technology innovation mission, and they could provide an important option for clean, base-load energy for TVA's customers. TVA is a member of the B&W Power America team, which the DOE selected in November 2012 for a grant award for the design and licensing of B&W mPower SMRs. Specifically, under a contract that TVA executed with B&W in February 2013, TVA, B&W, and Generation mPower, LLC (a B&W affiliate, minority owned by Bechtel), are preparing a license application to the NRC to license up to four B&W mPower™ SMRs at TVA's Clinch River Site in Roane County, TN. In April 2013, B&W and the DOE executed a cooperative agreement implementing the DOE award, under which TVA (through B&W) is reimbursed by the DOE for roughly half of its qualified site study and license development costs, retroactive to October 2012. Currently, TVA is performing site characterization work, including gathering meteorological data, surveying species and cultural and archeological resources, and studying site hydrology. To date, TVA has completed approximately 50 percent of the subsurface studies at the Clinch River site that are necessary to support the environmental review and NRC license application. TVA will not decide to submit the license application to the NRC until mid-2015, and would not make subsequent construction decisions regarding SMRs at the Clinch River site for several years thereafter.

TVA's grid modernization research goals are to advance the implementation of technology options identified from evolving grid modernization roadmaps which support TVA's transmission system and the LPCs' distribution systems. The focus is on developing and demonstrating technology options that help sustain reliability, lower costs, and mitigate risks for TVA and LPCs. Among the more significant efforts in this area are demonstrations of new power system sensing and control technologies that are designed to increase operator situational awareness, provide better control of power flows, and optimize asset management.

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

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

Flood Control Activities

The Tennessee River watershed has one of the highest annual rainfall totals of any watershed in the United States, averaging 51 inches per year. From October 1, 2012, through September 30, 2013, 62 inches of rain fell in the Tennessee Valley. TVA manages the Tennessee River system in an integrated manner, balancing hydroelectric generation with navigation, flood damage reduction, water quality and supply, and recreation. TVA spills or releases excess water through the tributary and main stem dams in order to reduce flood damage to the Tennessee Valley. TVA typically spills only when all available hydroelectric generating turbines are operating at full capacity and additional water still needs to be moved downstream.

During 2013, TVA estimated its reservoir operations averted approximately $750 million in flood damages.

Environmental Stewardship Activities

TVA's mission includes managing the Tennessee River, its tributaries, and public 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.

There are 49 dams that comprise TVA’s integrated reservoir system. The reservoir system provides approximately 800 miles of commercially navigable waterways and also provides significant flood reduction benefits both within the Tennessee River system and downstream on the lower Ohio and Mississippi Rivers. The reservoir system also provides a water supply for residential and industrial customers, as well as cooling water for some of TVA’s coal-fired and nuclear power plants. TVA’s Environmental Policy, which was adopted by the TVA Board in 2008, provides objectives for an integrated approach related to providing cleaner, reliable, and affordable energy, supporting sustainable economic growth, and engaging 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. TVA also manages approximately 11,000 miles of shoreline, 650,000 surface acres of reservoir water, and 293,000 acres of reservoir lands for cultural and natural resource protection, recreation, and other purposes.

Strategic guidance for carrying out many of TVA's essential stewardship responsibilities is provided in TVA's Natural Resource Plan ("NRP"). The NRP, accepted in August 2011, serves as a 20-year guide for TVA's essential stewardship efforts in managing biological resources (plants, animals, and aquatic species); cultural resources (archaeological sites, historical sites, and artifacts); recreation; water resources; reservoir lands planning; and public engagement. The plan will also guide TVA in achieving the objectives of its Environmental Policy for a more systematic and integrated approach to fulfilling its essential stewardship responsibilities. The NRP was developed with public input including participation from federal and state resource management agencies and the RRSC. Members of the RRSC, established in March 2000, represent public and private

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stakeholders who benefit from TVA’s management of the river system. They provide recommendations on stewardship activities, including reservoir operations, public-land planning and management, water supply, recreation, infrastructure operation and maintenance, and emergency preparedness. TVA intends to review and update the NRP approximately every five years.

Economic Development Activities

Since its creation in 1933, TVA has promoted the development of the Tennessee Valley. Economic development, along with energy production and environmental stewardship, is one of the integrated purposes of TVA. TVA works with its 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 industrial 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 financial assistance, technical services, industry expertise, and site-selection assistance to new and existing businesses. TVA's economic development efforts helped recruit or expand over 170 companies into the TVA service area during 2013. These companies announced capital investments of approximately $5.0 billion and the expected creation and/or retention of over 52,000 jobs.

Regulation

Congress

TVA exists pursuant to legislation enacted by Congress and carries on its operations in accordance with this legislation. Congress can enact legislation expanding or reducing TVA’s activities, change TVA’s structure, and even eliminate TVA. Congress can also enact legislation requiring the sale of some or all of the assets TVA operates or reduce the United States’s ownership in TVA. To allow TVA to operate more flexibly than a traditional government agency, Congress exempted TVA from all or parts of certain general federal laws that govern other agencies, such as federal labor relations laws and the laws related to the hiring of federal employees, the procurement of supplies and services, and the acquisition of land. Other federal laws enacted since the creation of TVA that are applicable to other agencies have been made applicable to TVA, including those related to paying employees overtime and protecting the environment, cultural resources, and civil rights.

Securities and Exchange Commission

Section 37 of the Securities Exchange Act of 1934 (the "Exchange Act") requires TVA to file with the SEC such periodic, current, and supplementary information, documents, and reports as would be required pursuant to section 13 of the Exchange Act if TVA were an issuer of a security registered pursuant to section 12 of the Exchange Act. Section 37 of the Exchange Act exempts TVA from complying with section 10A(m)(3) of the Exchange Act, which requires each member of a listed issuer’s audit committee to be an independent member of the board of directors of the issuer. Since TVA is an agency and instrumentality of the United States, securities issued or guaranteed by TVA are “exempted securities” under the Securities Act of 1933, as amended (the “Securities Act”), and may be offered and sold without registration under the Securities Act. In addition, securities issued or guaranteed by TVA are “exempted securities” and “government securities” under the Exchange Act. TVA is also exempt from sections 14(a)-(d) and 14(f)-(h) of the Exchange Act (which address proxy solicitations) insofar as those sections relate to securities issued by TVA, and transactions in TVA securities are exempt from rules governing tender offers under Regulation 14E of the Exchange Act. Also, since TVA securities are exempted securities under the Securities Act, TVA is exempt from the Trust Indenture Act of 1939 insofar as it relates to securities issued by TVA, and no independent trustee is required for these securities.

Federal Energy Regulatory Commission

Under the FPA, TVA is not a “public utility,” a term which generally includes investor-owned utilities. Therefore, TVA is not subject to the full jurisdiction that FERC exercises over public utilities under the FPA. TVA is, however, an “electric utility” and a “transmitting utility” as defined in the FPA and, thus, is directly subject to certain aspects of FERC’s jurisdiction.

Under section 210 of the FPA, TVA can be ordered to interconnect its transmission facilities with the electrical facilities of qualified generators and other electric utilities that meet certain requirements. It must be found that the requested interconnection is in the public interest and would encourage conservation of energy or capital, optimize efficiency of facilities or resources, or improve reliability. The requirements of section 212 of the FPA concerning the terms and conditions of interconnection, including reimbursement of costs, must also be met.

Under section 211 of the FPA, TVA can be ordered to transmit power at wholesale rates provided that the order (1) does not impair the reliability of the TVA or surrounding systems and (2) meets the applicable requirements of section 212 concerning terms, conditions, and rates for service. Under section 211A of the FPA, TVA is subject to FERC review of the transmission rates and the terms and conditions of service that TVA provides others to ensure comparability of treatment of such service with TVA’s own use of its transmission system and that the terms and conditions of service are not unduly discriminatory or preferential. The anti-cherrypicking provision of section 212 of the FPA precludes TVA from being ordered to wheel another supplier’s power to a customer if the power would be consumed within TVA’s defined service territory.

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Sections 221 and 222 of the FPA, applicable to all market participants, including TVA, prohibit (1) using manipulative or deceptive devices or contrivances in connection with the purchase or sale of power or transmission services subject to FERC's jurisdiction and (2) reporting false information on the price of electricity sold at wholesale or the availability of transmission capacity to a federal agency with intent to fraudulently affect the data being compiled by the agency.

Under section 215 of the FPA, TVA must comply with certain standards designed to maintain transmission system reliability. These standards are approved by FERC and enforced by the NERC.

Section 206(e) of the FPA provides FERC with authority to order refunds of excessive prices on short-term sales (transactions lasting 31 days or less) by all market participants, including TVA, in market manipulation and price gouging situations if such sales are under a FERC-approved tariff.

Section 220 of the FPA provides FERC with authority to issue regulations requiring the reporting, on a timely basis, of information about the availability and prices of wholesale power and transmission service by all market participants, including TVA.

Under sections 306 and 307 of the FPA, FERC may investigate electric industry practices, including TVA's operations previously mentioned that are subject to FERC's jurisdiction.

Under sections 316 and 316A of the FPA, FERC has authority to impose civil penalties of up to $1 million a day for each violation on entities subject to the provisions of Part II of the FPA, which includes the above provisions applicable to TVA. Criminal penalties may also result from such violations.

Finally, while not required to do so, TVA has elected to implement various FERC orders and regulations pertaining to public utilities on a voluntary basis to the extent that they are consistent with TVA's obligations under the TVA Act.

Nuclear Regulatory Commission

TVA operates its nuclear facilities in a highly regulated environment and is subject to the oversight of the NRC, an independent federal agency which sets the rules that users of radioactive materials must follow. The NRC has broad authority to impose requirements relating to the licensing, operation, and decommissioning of nuclear generating facilities. In addition, if TVA fails to comply with requirements promulgated by the NRC, the NRC has the authority to impose fines, shut down units, or modify, suspend, or revoke TVA's operating licenses.

Environmental Protection Agency

TVA is subject to regulation by the EPA in a variety of areas, including air quality control, water quality control, and management and disposal of solid and wastes. See Environmental Matters.

States

The Supremacy Clause of the U.S. Constitution prohibits states, without congressional consent, from regulating the manner in which the federal government conducts its activities. As a federal agency, TVA is exempt from regulation, control, and taxation by states except in certain areas where Congress has clearly made TVA subject to state regulation. See Environmental Matters.

Other Federal Entities

TVA’s activities and records are also subject to review to varying degrees by other federal entities, including the Government Accountability Office and the Office of Management and Budget ("OMB"). There is also an Office of the Inspector General which reviews TVA’s activities and records.

Taxation and Tax Equivalents

TVA is not subject to federal income taxation. In addition, neither TVA nor its property, franchises, or income is subject to taxation by states or their subdivisions. Section 13 of the TVA Act does, however, require TVA to make tax equivalent payments to states and counties in which TVA conducts power operations or in which TVA has acquired power-producing properties previously subject to state and local taxation. The total amount of these payments is five percent of gross revenues from the sale of power during the preceding 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. Except for certain direct payments TVA is required to make to counties, distribution of tax equivalent payments within a state is determined by individual state legislation.

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Environmental Matters

TVA's activities, particularly its power generation activities, are subject to comprehensive regulation under environmental laws and regulations relating to air pollution, water pollution, and management and disposal of solid and hazardous wastes, among other issues.

Clean Air Act

The CAA establishes a comprehensive program to protect and improve the nation's air quality and control sources of air pollution. The major CAA programs that affect TVA's power generation activities are described below.

National Ambient Air Quality Standards. The CAA requires the EPA to set National Ambient Air Quality Standards ("NAAQS") for certain air pollutants. The EPA has done this for ozone, particulate matter ("PM"), sulfur dioxide ("SO_2"), nitrogen dioxide ("NO_2"), carbon monoxide, and lead. Over the years, the EPA has made the NAAQS more stringent. Each state must develop a plan to be approved by the EPA for achieving and maintaining a NAAQS within its borders. These plans impose limits on emissions from pollution sources, including TVA fossil fuel-fired plants. Areas meeting a NAAQS are designated attainment areas. Areas not meeting a NAAQS are designated nonattainment areas, and more stringent requirements apply in those areas. This includes stricter controls on industrial facilities and more complicated permitting processes. TVA coal-fired plants can be impacted by these requirements. As NAAQS become more stringent, utilities are expected to come under increasing pressure to further reduce emissions from their existing coal-fired plants in the future.

New Source Review. The NSR provisions of the CAA require that a permit be obtained prior to constructing new major air emission sources or making major modifications to existing air pollution sources. Major modifications are non-routine physical or operational changes that increase the emissions from an air emission source above specified thresholds. The EPA and environmental groups have been actively pursuing NSR enforcement actions against electric utilities since 1999, alleging that typical plant maintenance activities require NSR permits. If violations are found to have occurred, the EPA or state enforcement authorities could require the installation of new pollution control equipment and could impose fines and penalties. The Environmental Agreements resolved most past NSR claims that TVA faced. The Environmental Agreements did not resolve possible claims based on increases in greenhouse gas ("GHG") and sulfuric acid mist, and these claims could still be pursued in the future.

Cross State Air Pollution Rule. In July 2011, the EPA announced the final Cross State Air Pollution Rule ("CSAPR"). This rule was to replace the existing Clean Air Interstate Rule ("CAIR"), effective January 1, 2012. CSAPR was to regulate SO_2 and NO_x emissions from upwind states that are negatively impacting ozone and fine particulate air quality in downwind states. The rule would have required greater SO_2 and NO_X reductions than those achieved under CAIR. However, CSAPR was vacated by the D.C. Circuit and now is before the U.S. Supreme Court. CAIR remains in place pending the outcome of this litigation. The EPA has announced that it plans to proceed with a new rulemaking to address attainment of the 8-hour ozone standard. This future CSAPR rule should not have a significant impact on TVA because of the changes that TVA has made to its generation mix and the controls that TVA is installing on coal-fired units to comply with the new Mercury and Air Toxic Standards.

Hazardous Air Pollutants from Industrial, Commercial, and Institutional Boilers. In March 2011, the EPA published a final rule to establish standards for hazardous air pollutants emitted from industrial, commercial, and institutional boilers and process heaters. The final rule will have minor impacts beginning in the second quarter of 2014 for some of TVA's startup and auxiliary boilers at its plants. While all plant startup and auxiliary boilers are expected to be exempt from the emission standards due to their limited use, most boilers will be subject to scheduled tuneups to ensure optimized combustion, and TVA will be required to follow work practice standards in order for the boilers to be exempt from emission standards.

Mercury and Air Toxic Standards for Electric Utility Units. Effective April 16, 2012, the EPA promulgated a final rule establishing standards for hazardous air pollutants emitted from steam electric utilities. The rule requires additional controls for hazardous air pollutants, including mercury, non-mercury metals, and acid gases, for some of TVA’s coal-fired units by 2015-2016. TVA may choose to idle or retire some units in lieu of investing in additional controls and may in some cases construct replacement generation. The Mercury and Air Toxic Standards are the primary drivers of additional emission controls for TVA's coal-fired plants over the next few years. The rule has been challenged in court, and the resolution of this litigation could affect the compliance dates and/or other requirements.

The Environmental Agreements. See Note 20 — Legal Proceedings — Environmental Agreements.

Acid Rain Program. Congress established the Acid Rain Program to achieve reductions in emissions of SO_2 and NO_x, the primary causes of acid rain. The program includes a cap-and-trade emission reduction program for SO_2 emissions from power plants. TVA continues to reduce SO_2 and NO_X emissions from its coal-fired plants and the SO_2 allowances allocated to TVA under the Acid Rain program are sufficient to cover the operation of its coal-fired plants. In the TVA service area, the limitations imposed on NO_x emissions by either the CAIR or CSAPR program are expected to be more stringent than the Acid Rain Program. Therefore, TVA forecasts that the Acid Rain Program will have no impact on TVA other than administrative reporting.

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Regional Haze Program. In June 2005, the EPA issued the Clean Air Visibility Rule, amending its CY 1999 regional haze rule, which had established timelines for states to improve visibility in national parks and wilderness areas throughout the United States. Under the amended rule, certain types of older existing sources are required to install best available retrofit technology. To comply with this requirement, certain utilities, including TVA, may have to install additional controls for particulate matter, SO_2, and NO_x emissions or agree to lower emission limits at plants equipped with such controls. TVA does not anticipate that this program has the potential to impact any unit other than Colbert Unit 5, which was idled in October 2013.

Opacity. Opacity, or visible emissions, measures the denseness (or color) of power plant plumes and has traditionally been used by states as a means of monitoring good maintenance and operation of particulate control equipment. Under some conditions, retrofitting a unit with additional equipment to better control SO_2 and NO_x emissions can adversely affect opacity performance, and TVA and other utilities are addressing this issue. The evaluation of a utility's compliance with opacity requirements is coming under increased scrutiny, especially compliance during periods of startup, shutdown, and malfunction. State implementation plans ("SIPs") developed under the CAA typically exclude periods of startup, shutdowns, and malfunctions, but the EPA has proposed a rule to eliminate such exclusions. The proposed rule should be final in 2014, after which the states must modify their implementation plans by 2016. These new requirements could reduce flexibility and increase operational costs for TVA's coal-fired plants.

Climate Change

Legislation. Although climate change legislation has failed to progress in the U.S. Congress in past years, there is continuing interest in legislation that could regulate GHG emissions or impose other energy-related restrictions and requirements. If legislation intended to limit GHG emission or impose other energy policies were to become law, such limitations would likely affect TVA's coal-fired plants and could affect other fossil fuel-fired plants. The costs and impacts or such regulation could be significant for TVA. There is no way to predict the likelihood or form of such legislation at this time.

Regulation. The Obama administration has promulgated a number of regulations that impose limitations upon emissions of GHGs, including CO_2 from power plants. The most important of these apply to major new sources of GHGs, including coal-fired and gas-fired power plants, and major modifications of existing plants. On October 15, 2013, the U.S. Supreme Court agreed to hear challenges to some of these rules after the D.C. Circuit upheld them.

The EPA proposed a GHG New Source Performance Standards ("NSPS") rule for new power plants on September 20, 2013. The Administration also announced on June 25, 2013, its plan to issue proposed carbon pollution standards for existing power plants by June 1, 2014, with a deadline of June 1, 2015, for finalizing the existing source standards. The form of these standards is uncertain, but is expected to build upon current efforts, include efficiency improvements, provide flexibility, and take advantage of a wide variety of energy sources and technologies. The states would then have to decide how to implement these existing source standards. The existing source standards are expected to be submitted by states to the EPA for its approval by June 30, 2016. The existing source standards could become effective by December 2016 with compliance required by affected plants possibly by 2019-2021.

Biomass CO_2 Emissions. On July 12, 2013, the D.C. Circuit vacated the EPA's biomass deferral rule, holding that the EPA did not have the authority to temporarily delay regulating biogenic CO_2 for three years pending the completion of its study to determine whether biogenic CO_2 emissions contribute to increases in CO_2 levels in the atmosphere. The EPA is expected to finalize this study by July 2014. In the interim, the regulation of biogenic CO_2 under the PSD and Title V programs of the CAA continues to remain uncertain.

Executive Orders. On June 25, 2013, the President released his Climate Action Plan, which includes a broad range of executive actions to mitigate U.S. carbon emissions, manage climate change adaptation efforts, and lead international

efforts.

Federal agencies currently have renewable energy consumption goals which originated in the Energy Policy Act of 2005 of three percent renewable energy consumption by 2007, five percent by 2010, and seven and one-half percent by 2013 and beyond. TVA's 2012 performance was nearly eight percent, exceeding the 2013 goal. The President's Climate Action Plan establishes a new goal of 20 percent of internally used electricity from renewable sources by 2020. At this time, the President's plan does not contain sufficient detail to determine how TVA may be impacted.

International Accords. International agreements and protocols have not been adopted by the United States; accordingly, they would not become binding upon TVA unless and until they are enacted into law.

Litigation. In addition to legislative activity, climate change issues have been the subject of a number of lawsuits, including lawsuits against TVA. See Note 20 — Legal Proceedings — Case Arising out of Hurricane Katrina.

Indirect Consequences of Regulation or Business Trends. Legal, technological, political, and scientific developments regarding climate change may create new opportunities and risks. The potential indirect consequences could include an increase or decrease in electricity demand, increased demand for generation from alternative energy sources, and subsequent impacts to business reputation and public opinion. See Power Supply.

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Physical Impacts of Climate Change. TVA manages the potential effects of climate change on its mission, programs, and operations within its environmental management processes. In 2011, TVA issued a Statement on Climate Change Adaptation. In 2012, in accordance with Executive Order 13514, TVA prepared a Climate Change Adaptation Action Plan. TVA publicly released the 2012 Climate Change Adaptation Action Plan on February 8, 2013, and public comments were accepted through April 8, 2013. Future adaptation guidance is expected from OMB and the Council on Environmental Quality in the first quarter of 2014 that could impact TVA’s adaptation planning processes. TVA cannot predict the content of the guidance at this time.

Actions Taken by TVA to Reduce GHG Emissions. TVA has reduced GHG emissions from both its generation stations and its operations. As discussed earlier in this Item I, Business, TVA has increased its nuclear capacity, modernized its hydroelectric generation system, increased its purchases of renewable energy, and invested in energy efficiency initiatives to reduce energy use in the Tennessee Valley. Additionally, TVA has invested to reduce energy use in its operations. The combination of more stringent environmental rules, lower natural gas prices, and lower demand for energy across the Tennessee Valley has reduced the utilization of coal-fired generation. These factors have resulted in lower CO_2 emissions.

Renewable/Clean Energy Standards

Twenty-nine states and the District of Columbia have established enforceable or mandatory requirements for electric utilities to generate a certain amount of electricity from renewable sources. One state within the TVA service area, North Carolina, has a mandatory renewable standard that, while it does not apply directly to TVA, does apply to TVA’s LPCs located in that state. Likewise, the Mississippi Public Service Commission adopted an energy efficiency rule applying to electric and natural gas providers in the state. TVA's policy is to provide compliance assistance to any distributor of TVA power, and TVA is providing assistance to the four LPCs that sell TVA power in North Carolina.

Legislation has been proposed in Congress in the past to establish a national renewable energy standard ("RES") that could require energy providers, including TVA, to rely more on renewable energy resources. Such legislation has not passed but could be reintroduced in the future.

Water Quality Control Developments

Cooling Water Intake Structures. The EPA has proposed a rule implementing Clean Water Act §316(b) to reduce the impingement of fish and the entrainment of fish eggs and larvae by cooling water intake structures at existing plants that withdraw more than two million gallons-per-day. As proposed, impingement impacts would have to be reduced by no later than 2020, and entrainment impacts would have to be reduced as soon as possible based on site-specific analyses. Issuance of the final rule was extended to allow more time for the EPA to assess cost-benefits and complete consultation under the Endangered Species Act. The consultation under the Endangered Species Act could result in more stringent requirements for plants located on waters with protected species or their designated habitats.

Based upon a notice of data availability ("NODA"), the EPA is now considering identifying “model technologies” that would be designated as compliant with the impingement numeric limits. For TVA intakes, it is probable that installation of fish-friendly traveling screens and a fish return system will be required at most, if not all, coal-fired and nuclear plants. The EPA’s NODA presented no additional discussion of entrainment requirements beyond those initially proposed; thus, the need for entrainment controls is expected to remain a site-specific determination made by the state-designated NPDES permit writer.

Hydrothermal Discharges. The EPA and many states are beginning to focus regulatory attention on potential effects of hydrothermal discharges. Many TVA plants have variances from thermal standards under § 316(a) of the Clean Water Act that may have to be re-justified through new studies. Specific data requirements in the future will be

determined based on negotiations between TVA and regulators. If plant thermal limits are made more stringent, TVA may have to install cooling towers at some of its plants and operate installed cooling towers more often. This could result in a substantial cost to TVA.

Steam-Electric Effluent Guidelines. On June 7, 2013, the EPA proposed revisions to the effluent guidelines for the steam electric power generating industry. The rule proposal focuses on stricter limitations on wastewater discharges from ash handling, air pollution control systems, and enhanced mercury air controls. Wastewater streams from air pollution control systems contain pollutants such as metals, total suspended solids, chlorides, and nutrients, which have typically been treated in settling ponds. The EPA identified four preferred alternatives which include numerical limits for each option. Depending on the stringency of the final rule, TVA likely would have to install additional wastewater treatment systems at its coal-fired plants, substantially increasing TVA’s water pollution control costs. The EPA is required to finalize the rulemaking by May 2014.

Groundwater Contamination. Environmental groups and state regulatory agencies are increasing their attention on groundwater contamination associated with coal combustion residuals ("CCRs") management activities such as ash ponds. Seven of TVA’s eleven coal-fired plants are in some level of state regulatory groundwater assessment. Three of those plants (Colbert, Gallatin Fossil Plant ("Gallatin"), and Shawnee) have investigations beyond monitoring and reporting. Four of the seven TVA coal-fired plants (Gallatin, Shawnee, Johnsonville, and Widows Creek) have either underground storage tank groundwater monitoring, or groundwater remediation monitoring with state regulatory involvement. As a result of these assessments and increased attention, TVA may have to change how it manages CCRs at some of its plants with associated

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increases in cost. In addition, TVA's Environmental Research Center facility at Muscle Shoals, Alabama has an active groundwater monitoring program as part of a Resource Conservation and Recovery Act ("RCRA") Corrective Action Permit.

General Clean Water Act Requirements. As is the case in other industrial sectors, TVA and other utilities are also facing more stringent requirements related to the protection of wetlands, reductions in storm water impacts from construction activities, new water quality criteria for nutrients and other pollutants, new wastewater analytical methods, and regulation of herbicide discharges. In addition, other new environmental regulations related to mountain top mining of coal in the Appalachian region under the Clean Water Act may increase the cost of coal that TVA purchases for its plants.

Cleanup of Solid and Hazardous Wastes

Liability for releases and cleanup of hazardous substances is imposed under the federal Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), and other federal and parallel state statutes. In a manner similar to many other industries and power systems, TVA has generated or used hazardous substances over the years.

TVA Sites. TVA operations at some of its facilities have resulted in oil spills and other contamination that TVA is addressing. At September 30, 2013, TVA's estimated liability for cleanup and similar environmental work for those sites for which sufficient information is available to develop a cost estimate is approximately $15 million and is included in Accounts payable and accrued liabilities and Other long-term liabilities on the Balance Sheet.

Non-TVA Sites. TVA is aware of alleged hazardous-substance releases at certain non-TVA areas for which it may have some liability. See Note 20 — Contingencies — Environmental Matters.

Coal Combustion Residuals. In May 2010, the EPA released the text of a proposed rule describing two possible regulatory options it is considering under RCRA for the disposal of CCRs generated from the combustion of coal by electric utilities and independent power producers. Under one option, CCRs would be regulated as a solid or special waste. Under the other option, CCRs would be regulated as a hazardous waste. Under either option, the EPA would regulate the construction of impoundments and landfills, and seek to ensure both the physical and environmental integrity of disposal facilities. CCRs include fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. If the EPA decides to regulate CCRs as hazardous, the beneficial use of CCRs now sold by TVA and other utilities likely would be impacted, and this could result in requirements to remediate existing CCR management facilities at a substantial cost. The EPA has not announced which regulatory option it will take with respect to the management and disposal of CCRs. TVA is therefore unable to determine the effects of this proposed rule at this time. In April 2012, several environmental organizations filed suit against the EPA to compel the EPA to take action on the proposed rule. TVA cannot predict the outcome of this litigation.

Kingston Ash Spill. See Note 9 for a discussion of the environmental issues associated with the Kingston ash spill.

Environmental Investments

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

SO_2 Emissions. To reduce SO_2 emissions, TVA has installed scrubbers on 17 of its coal-fired units, and switched to lower-sulfur coals at 41 coal-fired units. In August 2011, the TVA Board approved adding scrubbers to four units at

Gallatin subject to completing appropriate environmental reviews. After these reviews were completed, TVA's Chief Executive Officer authorized proceeding with the proposed projects.

NO_x Emissions. To reduce NO_x emissions, TVA installed SCRs on 21 coal-fired units, installed selective non-catalytic reduction systems on two coal-fired units (although TVA is no longer operating one of these systems because of technical challenges), installed High Energy Reagent Technology systems on seven coal-fired units, installed low-NO_x burners or low-NO_x combustion systems on 46 coal-fired units, optimized combustion on 12 coal-fired units, and began operating NO_x control equipment year round when units are operating (except during startup, shutdown, and maintenance periods) starting in October 2008. In addition, in August 2011, the TVA Board approved adding SCRs to four units at Gallatin subject to completing appropriate environmental reviews. After these reviews were completed, TVA's Chief Executive Officer authorized proceeding with the proposed projects.

Particulate Emissions. 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 SO_2 on the TVA system have been reduced by 90 percent below peak 1995 levels and by 94 percent below 1977 levels, respectively. These controls also have provided a co-benefit of reducing hazardous air pollutants, including mercury, at some units. For CY 2012, TVA's emission of CO_2 from its sources was 81 million tons, a 23 percent reduction from 2005 levels. This includes 426 tons from units rated at less than 25

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MWs that are not required to report to the EPA. To remain consistent and provide clear information and to align with the EPA's reporting requirements, TVA will continue to report CO_2 emissions on a CY basis.

There could be additional material costs if reductions of GHGs, including CO_2, are mandated by legislative, regulatory, or judicial actions and if more stringent emission reduction requirements for conventional pollutants are established. These costs cannot reasonably be predicted at this time because of the uncertainty of these actions. A number of emerging EPA regulations establishing more stringent air, water, and waste requirements could result in significant changes in the structure of the U.S. power industry, especially in the eastern half of the country.

TVA now anticipates spending approximately $1.3 billion through 2022 to add controls to its coal-fired units, which is less than the previous projection of $2.3 billion. This results from increasing reliance on cleaner energy resources and the idling/ retirement of more coal-fired units which TVA otherwise would have had to control.

Estimated Required Environmental Expenditures

The following table contains information about TVA's current estimates on projects related to environmental laws and regulations.

Air, Water, and Waste Quality Estimated Potential Environmental Expenditures[1]
At September 30, 2013
(in millions)

	Estimated Timetable	Total Estimated Expenditures
Site environmental remediation costs[2]	2014+	$15
Coal combustion residual conversion and remediation[3]	2014-2023	1,400
Proposed clean air control projects[4]	2014-2022	1,300
Clean Water Act requirements[5]	2014-2022	700

Notes
(1) These estimates are subject to change as additional information becomes available and as regulations change.
(2) Estimated liability for cleanup and similar environmental work for those sites for which sufficient information is available to develop a cost estimate.
(3) Includes closure of impoundments, construction of lined landfills, and construction of dewatering systems.
(4) Includes air quality projects that TVA is currently planning to undertake to comply with existing and proposed air quality regulations, but does not include any
projects that may be required to comply with potential GHG regulations or transmission upgrades.
(5) Includes projects that TVA is currently planning to comply with revised rules under the Clean Water Act (i.e. Section 316(b) and effluent limitation guidelines for
steam electric power plants).

Employees

On September 30, 2013, TVA had 12,612 employees, of whom 4,613 were trades and labor employees. Under the TVA Act, TVA is required to pay trades and labor workers hired by TVA and certain of its contractors the rate of wages for work of a similar nature prevailing in the vicinity where the work is being performed. Neither the federal labor relations laws covering most private sector employers nor those covering most federal agencies apply to TVA. However, the TVA Board has a long-standing policy of acknowledging and dealing with recognized representatives of its employees, and that policy is reflected in long-term agreements to recognize the unions (or their successors) that represent TVA employees. Federal law prohibits TVA employees from engaging in strikes against TVA.

ITEM 1A. RISK FACTORS

The risk factors described below, as well as the other information included in this Annual Report, should be carefully considered. Risks and uncertainties described in these risk factors could cause future results to differ materially from historical results as well as from the results anticipated in forward-looking statements. Although the risk factors described below are the ones that TVA considers significant, additional risk factors that are not presently known to TVA or that TVA presently does not consider significant may also impact TVA's business operations. Although the TVA Board has the authority to set TVA's own rates and may thus mitigate some risks by increasing rates, there may be instances in which TVA would be unable to partially or completely eliminate one or more of these risks through rate increases over a reasonable period of time or at all. Accordingly, the occurrence of any of the following could have a material adverse effect on TVA's cash flows, results of operations, and financial condition.

New laws, regulations, or administrative orders, or Congressional action or inaction, may negatively affect TVA's cash flows, results of operations, and financial condition, as well as the way TVA conducts its business.

Because TVA is a corporate agency and instrumentality established by federal law, it may be affected by a variety of laws, regulations, and administrative orders that do not affect other electric utilities. For example, Congress may enact legislation that expands or reduces TVA's activities, changes its governance structure, requires TVA to sell some or all of the assets that it operates, reduces or eliminates the United States's ownership of TVA, or even liquidates TVA. Additionally, Congress could act, or fail to take action, on various issues which may result in impacts to TVA, including

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but not limited to action or inaction related to the sovereign debt ceiling or automatic spending cuts in government programs. Although it is difficult to predict exactly how new laws, regulations, or administrative orders or Congressional action or inaction may impact TVA, some of the possible effects are described below.

TVA may lose its protected service territory.

TVA's service area is defined by the fence and protected by the anti-cherrypicking provision. From time to time there have been efforts to erode the protection of the anti-cherrypicking provision, and the protection of the anti-cherrypicking provision could be limited and perhaps eliminated by Congressional legislation at some time in the future. If Congress were to eliminate or reduce the coverage of the anti-cherrypicking provision but retain the fence, TVA could more easily lose customers that it could not replace within its specified service area. The loss of these customers could adversely affect TVA's cash flows, results of operations, and financial condition.

The TVA Board may lose its sole authority to set rates for electricity.

Under the TVA Act, the TVA Board has the sole authority to set the rates that TVA charges for electricity, and these rates are not subject to further review. If the TVA Board loses this authority or if the rates become subject to outside review, there could be material adverse effects on TVA including, but not limited to, the following:

The TVA Board might be unable to set rates at a level sufficient to generate adequate revenues to service TVA's financial obligations, properly operate and maintain its power assets, and provide for reinvestment in its power program; and

TVA might become subject to additional regulatory oversight that could impede its ability to manage its business.

TVA may lose responsibility for managing the Tennessee River system.

TVA's management of the Tennessee River system is important to effectively operate the power system. TVA's ability to integrate management of the Tennessee River system with power system operations increases power system reliability and reduces costs. Restrictions on how TVA manages the Tennessee River system could negatively affect its operations.

TVA may lose responsibility for managing real property currently under its control.

TVA's management of real property containing power generation and transmission structures as well as certain reservoir shorelines is important for navigation, flood control, and the effective operation of the power system. Restrictions on or the loss of the authority to manage these properties could negatively affect TVA's operations, change the way it conducts such operations, or increase costs.

TVA may become subject to additional environmental regulation.

New environmental laws, regulations, and orders may become applicable to TVA or the facilities it operates, and existing environmental regulations may be revised or reinterpreted in a way that adversely affects TVA. Possible areas of future regulation include, but are not limited to, the following:

Greenhouse gases. Costs to comply with future regulation of CO_2 and other GHGs may negatively impact TVA's cash flows, financial position, and results of operations. The cost impact of legislation or regulation cannot be determined at this time.

Coal combustion residuals. The federal government has proposed stronger regulations concerning coal combustion residuals, and state governments may impose additional regulations. These regulations may require TVA to make additional capital expenditures, increase operating and maintenance costs, or even lead it to shut down certain facilities.

Renewable energy portfolio standards. TVA is not currently obligated to provide a percentage of the power it sells from renewable sources but may be required to do so in the future. Such developments could require TVA to make significant capital expenditures, increase its purchased power costs, or make changes in how it operates its facilities.

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TVA's ability to control or allocate funds could be restricted.

In certain circumstances, other federal entities may attempt to restrict TVA's ability to access or control its funds. For example, should the United States approach the national debt ceiling, the United States Treasury might, as part of an effort to control federal spending, attempt to require TVA to receive approval before TVA disburses funds. Additionally, the Office of Management and Budget might, in the event that automatic spending cuts go into effect, attempt to require TVA to reduce its budget by a specified percentage. Such attempts to restrict TVA's ability to control or allocate funds could adversely affect its cash flows, results of operations, and financial condition, its relationships with vendors and counterparties, the way it conducts its business, and its reputation.

Existing laws, regulations, and orders may negatively affect TVA's cash flows, results of operations, and financial condition, as well as the way TVA conducts its business.

TVA is required to comply with comprehensive and complex laws, regulations, and orders. The costs of complying with these laws, regulations, and orders are expected to be substantial, and costs could be significantly more than TVA anticipates, especially in the environmental area. To settle the EPA and other claims involving alleged NSR violations, TVA agreed to retire 18 coal-fired units and pay a civil penalty. The cost to install the necessary equipment to comply with existing environmental laws, regulations, settlement agreements, and orders at some other facilities may render some facilities uneconomical, which may cause TVA to retire or idle additional facilities. In addition, TVA is required to obtain numerous permits and approvals from governmental agencies that regulate its business, and TVA may be unable to obtain or maintain all required regulatory approvals. If there is a delay in obtaining required regulatory approvals or if TVA fails to obtain or maintain any approvals or to comply with any law, regulation, or order, TVA may have to change how it operates certain facilities, may be unable to operate certain facilities, or may have to pay fines or penalties.

TVA may be responsible for environmental clean-up activities.

TVA may be responsible for on-site liabilities associated with the environmental condition of facilities or property that TVA has acquired or that TVA operates regardless of when the liabilities arose, whether they are known or unknown, and whether they were caused by TVA, prior owners or operators, or a third party. TVA may also be responsible for off-site liabilities associated with the off-site disposal of waste materials containing hazardous substances or hazardous wastes.

The costs associated with remediating the Kingston ash spill as well as other CCR facilities may be significantly higher than TVA anticipates.

TVA estimates that the cost of remediating the Kingston ash spill will be between $1.1 billion and $1.2 billion. Actual costs could substantially exceed expected costs. Also, certain costs that are currently either not probable or reasonably estimable are not included in this estimate, such as future lawsuits, future claims, and costs associated with new laws and regulations. In addition, TVA expects to spend between $1.5 billion and $2.0 billion to convert its wet CCR facilities to dry collection facilities. Actual costs may substantially exceed expected costs.

TVA may have to make significant contributions in the future to fund its pension plans.

At September 30, 2013, TVA's qualified pension plan had assets of $7.2 billion compared to liabilities of $11.5 billion. The qualified plan is mature with approximately 23,000 retirees or beneficiaries receiving benefits of more than $600 million per year. The costs of providing pension benefits depend upon a number of factors, including, but not limited to: provisions of the pension plans; changing employee demographics; rates of increase in compensation levels; rates of return on plan assets; discount rates used in determining future benefit obligations and required funding levels; future government regulation; and levels of contributions made to the plans.

Any of these factors or any number of these factors could keep at high levels or even increase the costs of providing pension benefits and require TVA to make significant contributions to the pension plans. Unfavorable financial market conditions may result in lower expected rates of return on plan assets, loss in value of the investments, and lower discount rates used in determining future benefit obligations. These changes would negatively impact the funded status of the plans. Additional contributions to the plans and absorption of additional costs would negatively affect TVA's cash flows, results of operations, and financial condition.

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Approaching or reaching TVA's debt ceiling could limit TVA's ability to carry out its business. Additionally, TVA's debt ceiling could be made more restrictive.

The TVA Act provides that TVA can issue Bonds in an amount not to exceed $30.0 billion outstanding at any time. At September 30, 2013, TVA had $24.8 billion of Bonds outstanding (not including noncash items of foreign currency exchange loss of $43 million and net discount on sale of Bonds of $85 million).

Approaching or reaching the debt ceiling may adversely affect TVA's business by limiting TVA's ability to access capital markets and increasing the amount of debt TVA must service. Also, Congress may lower TVA's debt ceiling or broaden the types of financial instruments that are covered by the ceiling. Either of these scenarios may also restrict TVA's ability to raise capital to maintain power program assets, to construct additional generation facilities, to purchase power under long-term power purchase agreements, or to meet regulatory requirements. In addition, approaching or reaching the debt ceiling may lead to increased legislative or regulatory oversight of TVA's activities and could lead to negative credit rating actions.

Demand for electricity may be significantly reduced, negatively affecting TVA's cash flows, results of operations, and financial condition.

Some of the factors that could reduce the demand for electricity include, but are not limited to, the following:

Economic downturns. Renewed economic downturns in TVA's service area or other parts of the United States could reduce overall demand for power and thus reduce TVA's power sales and cash flows, especially if TVA's industrial customers reduce their operations and thus their consumption of power.

Loss of customers. The loss of customers could have a material adverse effect on TVA's cash flows, results of operations, or financial condition, and could result in higher rates.

Change in technology. Research and development activities are ongoing to improve existing and alternative technologies to produce electricity, including gas turbines, wind turbines, fuel cells, microturbines, solar cells, and distributed generation devices. It is possible that advances in these or other alternative technologies could reduce the costs of electricity production from alternative technologies to a level that will enable these technologies to compete effectively with traditional power plants like TVA's. To the extent these technologies become a more cost-effective option for certain customers, TVA's sales to these customers could be reduced, negatively affecting TVA's cash flows, results of operations, and financial condition.

Increased Energy Efficiency and Conservation. Increasingly efficient use of energy as well as conservation efforts may reduce the demand for power. Such a reduction could have a significant impact on TVA, especially if it occurs during an economic downturn or a period of slow economic growth, and could negatively affect TVA's cash flows, results of operations, and financial condition, and could result in higher rates and changes to how TVA operates.

Catastrophic events may negatively affect TVA's cash flows, results of operations, and financial condition.

TVA's cash flows, results of operations, and financial condition may be adversely affected, either directly or indirectly, by catastrophic events such as fires, earthquakes, explosions, solar events, droughts, floods, tornadoes, wars, national emergencies, terrorist activities, pandemics, and other similar destructive events. These events, the frequency and severity of which are unpredictable, may, among other things, lead to legislative or regulatory changes that affect the construction, operation, and decommissioning of nuclear units and the storage of spent fuel; limit or disrupt TVA's ability to generate and transmit power; reduce the demand for power; disrupt fuel or other supplies; require TVA to produce additional tritium; lead to an economic downturn; require TVA to make substantial capital

investments for repairs, improvements, or modifications; and create instability in the financial markets. If costs to construct nuclear units significantly increase or the public determines that nuclear power is less desirable as a result of any of these events, TVA may be forced to forego any future construction at its nuclear facilities or shut them down. This would make it substantially more difficult for TVA to obtain greater amounts of its power supply from low or zero carbon emitting resources and to replace its generation capacity when faced with retiring or idling certain coal-fired units. Additionally, some studies have predicted that climate change may cause certain catastrophic events, such as droughts and floods, to occur more frequently in the Tennessee Valley region, which could adversely impact TVA.

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Weather conditions may influence TVA's ability to supply power and its customers' demands for power.

Extreme temperatures may increase the demand for power and require TVA to purchase power at high prices to meet the demand from customers, while unusually mild weather may result in decreased demand for power and lead to reduced electricity sales. Also, in periods of below normal rainfall or drought, TVA's low-cost hydroelectric generation may be reduced, requiring TVA to purchase power or use more costly means of producing power. Additionally, periods of either high or low levels of rainfall may reduce river levels and impede river traffic, impacting barge deliveries of critical items such as coal and equipment for power facilities. Furthermore, high river water temperatures in the summer may limit TVA's ability to use water from the Tennessee or Cumberland River systems for cooling at certain of TVA's generating facilities, thereby limiting its ability to operate these generating facilities.

TVA may incur delays and additional costs in power plant construction and may be unable to obtain necessary regulatory approval.

TVA is completing the construction of Watts Bar Unit 2, evaluating the completion of Bellefonte Unit 1, scheduling major upgrades to and modernization of current generating plants, and evaluating construction of more generating facilities in the future. These activities involve risks of overruns in the cost of labor and materials as well as risks of schedule delays, which may result from, among other things, changes in regulations, lack of productivity, human error, and the failure to schedule activities properly. In addition, if TVA does not obtain the necessary regulatory approvals or licenses, is otherwise unable to complete the development or construction of a facility, decides to cancel construction of a facility, or incurs delays or cost overruns in connection with constructing a facility, TVA's cash flows, financial condition, and results of operations could be negatively affected. Further, if construction projects are not completed according to specifications, TVA may suffer, among other things, delays in receiving licenses, reduced plant efficiency, reduced transmission system integrity and reliability, and higher operating costs.

TVA is largely restricted to a defined service area.

If demand for power in TVA's service area decreases, TVA's ability to expand its customer base would be constrained by its inability to pursue new customers outside its service area. Accordingly, the reduction in demand would have to be offset by such actions as reducing TVA's internal costs or increasing rates. Any failure of such measures to fully offset the reduced demand for power may negatively affect TVA's cash flows, results of operations, and financial condition.

TVA's assumptions about the future may be inaccurate.

TVA uses certain assumptions in order to develop its plans for the future. Such assumptions include economic forecasts, anticipated commodity prices, cost estimates, construction schedules, power demand forecasts, the appropriate generation mix to meet demand, and potential regulatory environments. Should these assumptions be inaccurate, or be superseded by subsequent events, TVA's plans may not be effective in achieving the intended results, which could negatively affect cash flows, results of operations, and financial condition, as well as TVA's ability to meet electricity demand and the way TVA conduct its business.

Operating nuclear units subjects TVA to nuclear risks and may result in significant costs that adversely affect its cash flows, results of operations, and financial condition.

TVA has six operating nuclear units, and has resumed construction of Watts Bar Unit 2, which TVA anticipates will be placed in service in CY 2015. Risks associated with these units include the following:

Nuclear Risks. A nuclear incident at one of TVA's facilities could have significant consequences including loss of life, damage to the environment, damage to or loss of the facility, and damage to non-TVA property. Although TVA carries certain types of nuclear insurance, the amount that TVA is required to pay in connection with a nuclear incident could significantly exceed the amount of coverage provided by insurance. Any nuclear incident in the United States, even at a facility that is not operated by or licensed to TVA, has the potential to impact TVA adversely by obligating TVA to pay up to $114 million per year and a total of $764 million per nuclear incident under the Price-Anderson Act and otherwise negatively affect TVA by, among other things, obligating TVA to pay retrospective insurance premiums, reducing the availability and affordability of insurance, increasing the costs of operating nuclear units, or leading to increased regulation or restriction on the construction, operation, and decommissioning of nuclear facilities. Moreover, Congress could impose revenue-raising measures on the nuclear industry to pay claims exceeding the limit for a single incident under the Price-Anderson Act. Further, the availability of insurance may be impacted by TVA's acts or omissions, such as a failure to properly maintain a facility, or events outside of TVA's control, such as an equipment manufacturer's inability to meet a guideline, specification, or requirement.

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Decommissioning Costs. TVA maintains a Nuclear Decommissioning Trust ("NDT") for the purpose of providing funds to decommission its nuclear facilities. The NDT is invested in securities generally designed to achieve a return in line with overall equity market performance. TVA might have to make unplanned contributions to the NDT if, among other things:

The value of the investments in the NDT declines significantly, as it did during the 2008-2009 recession, or the investments fail to achieve the assumed real rate of return;

The decommissioning funding requirements are changed by law or regulation;

The assumed real rate of return on plan assets, which is currently five percent, is lowered by the TVA Board or is overly optimistic;

The actual costs of decommissioning are more than planned;

Changes in technology and experience related to decommissioning cause decommissioning cost estimates to increase significantly;

TVA is required to decommission a nuclear plant sooner than it anticipates; or

The NRC guidelines for calculating the minimum amount of funds necessary for decommissioning activities are significantly changed.

If TVA makes additional contributions to the NDT, the contributions may negatively affect TVA's cash flows, results of operations, and financial condition.

Increased Regulation. The NRC has broad authority to adopt requirements related to the licensing, operation, and decommissioning of nuclear generation facilities that can result in significant restrictions or requirements on TVA. If the NRC modifies existing requirements or adopts new requirements, TVA may be required to make substantial capital expenditures at its nuclear plants or make substantial contributions to the NDT. In addition, if TVA fails to comply with requirements promulgated by the NRC, the NRC has the authority to impose fines, shut down units, or modify, suspend, or revoke TVA's operating licenses.

TVA may not be able to operate one or more of its nuclear power units.

TVA has been experiencing issues with certain of its nuclear power units, including some issues that the NRC has considered to be of high significance. If these issues continue or if TVA is unable to correct the problems, TVA might voluntarily shut down one or more units or be ordered to do so by the NRC. In either case, placing the unit(s) back into operation could be a lengthy and expensive process, and TVA's cash flows, results of operations, financial condition, and reputation may be negatively affected.

Additional NRC requirements may negatively affect TVA's cash flows, results of operations, and financial condition or impact TVA's ability to operate its nuclear facilities.

In response to concerns raised by the Fukushima events, the NRC has required TVA, along with other utilities that operate nuclear facilities, to make substantial modifications at its nuclear facilities. Additionally, the NRC is requiring TVA to modify certain of its hydro and nuclear facilities to prevent damage to the nuclear facilities in the event of a catastrophic flood event. Complying with these requirements will require significant capital expenditures and may negatively affect TVA's cash flows, results of operations, financial condition, and reputation. Should TVA be unable

to comply with the requirements, TVA may not be able to operate its nuclear facilities as currently contemplated by TVA's generation plans.

TVA's generation and transmission assets or their supporting infrastructure may not operate as planned.

Many of TVA's generation and transmission assets and their supporting infrastructure have been operated more often, or for more prolonged periods, than originally intended. Many of TVA's coal-fired units, for example, have been operating since the 1950s and have been in nearly constant service since they were completed. Additionally, certain of TVA's newer assets have experienced manufacturing defects in essential equipment. If TVA's generation and transmission assets or their supporting infrastructure fail to operate as planned or if necessary repairs or upgrades are delayed or cannot be completed as quickly as anticipated, or if necessary spare parts are unavailable, TVA, among other things:

May have to invest a significant amount of resources to repair or replace the assets or the supporting infrastructure;

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May be unable to operate the assets for a significant period of time;

May have to operate less economical sources of power;

May have to purchase replacement power on the open market at prices greater than its generation costs;

May not be able to meet its contractual obligations to deliver power;

May not be able to maintain the integrity or reliability of the transmission system at normal levels;

May have to remediate collateral damage caused by a failure of the assets or the supporting infrastructure;

May have to increase its efforts to reduce encroachments by vegetation onto transmission lines to comply with applicable regulations;

May be required to invest substantially to meet more stringent reliability standards; and

May be unable to maintain insurance on affected facilities, or be required to pay higher premiums for coverage, unless necessary repairs or upgrades are made.

In addition, the failure of TVA's generation and transmission assets or their supporting infrastructure to perform as planned may cause health, safety, or environmental problems and may even result in events such as the failure of a dam, the failure of a containment pond, or an incident at a coal-fired, gas-fired, or nuclear facility. Any of these potential outcomes may negatively affect TVA's cash flows, results of operations, and financial condition.

TVA's information technology assets may not operate as planned.

All technology systems, no matter how robust, are potentially vulnerable to failures or breaches on account of, among other things, defects in the systems, human error, or physical or cyber attacks. Because of TVA's status as a governmental corporation and TVA's role as predominately the sole power provider for its service territory, TVA may be targeted by individuals, groups, or nation states for cyber attacks. Cyber attacks may target, among other things, TVA's generation facilities, transmission infrastructure, information technology systems, and network infrastructure. TVA's operations are extensively computerized, so a failure or breach of its information technology assets, whether caused by a cyber attack or otherwise, may significantly disrupt operations, including the generation and transmission of electricity, negatively affect TVA's cash flows, results of operations, and financial condition, pose health and safety risks, and result in the compromise of sensitive data. The theft, damage, or improper disclosure of sensitive data may also subject TVA to penalties and claims from third parties.

TVA's organizational transformation efforts may fail.

TVA has been working to improve its control systems, operating standards, and corporate culture. The failure to achieve or maintain improvements in these areas may contribute to the likelihood of incidents such as significant environmental events, delays in construction projects, or other operational or financial challenges that could adversely affect TVA's cash flows, results of operations, and financial condition.

TVA's reputation may be negatively impacted.

As with any company, TVA's reputation is a vital element of its ability to effectively conduct its business. TVA's reputation could be harmed by a variety of factors, including the failure of a generating asset or supporting infrastructure, significant delays in construction projects, acts or omissions of TVA management, or the perception of such acts or omissions, or a significant dispute with one of TVA's customers. Any deterioration in TVA's reputation may harm TVA's relationships with its customers and stakeholders, may increase TVA's cost of doing business, and may potentially lead to the imposition of additional laws and regulations that negatively affect the way TVA conducts its business.

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TVA's service reliability could be affected by problems at other utilities or at TVA facilities, or by the increase in intermittent sources of power.

TVA's transmission facilities are directly interconnected with the transmission facilities of neighboring utilities and are thus part of the larger interstate power transmission grid. Certain of TVA's generation and transmission assets are critical to maintaining reliability of the transmission system. Additionally, TVA uses certain assets that belong to third parties to transmit power and maintain reliability. Accordingly, problems at other utilities as well as at TVA's facilities may cause interruptions in TVA's service to TVA's customers, increase congestion on the transmission grid, or reduce service reliability. In addition, the increasing contribution of intermittent sources of power such as wind and solar may place additional strain on TVA's system as well as on surrounding systems. If TVA suffers a service interruption, increased congestion, or reduced service reliability, TVA's cash flows, results of operations, financial condition, and reputation may be negatively affected.

TVA's determination of the appropriate mix of generation assets may change.

TVA has determined that its power generation assets should consist of a mixture of nuclear, coal-fired, natural gas-fired, and renewable power sources, including hydroelectric. In making this determination, TVA took various factors into consideration, including the anticipated availability of its nuclear units, the availability of non-nuclear facilities, the forecasted cost of natural gas, the forecasted demand for electricity, and the expense of adding additional air pollution controls to its coal-fired units. If any of these assumptions materially change or are overtaken by subsequent events, then TVA's generation mix may not adequately address its operational needs. Resolving such a situation may require capital expenditures or additional power purchases, and TVA's cash flows, results of operations, financial condition, and reputation may be negatively affected. Additionally, TVA is taking measures to maintain flexibility by keeping certain facilities and sites available as generation options. There are costs associated with maintaining these options that could impact TVA's flows, results of operation, financial condition, and reputation.

Events which affect the supply of water in the Tennessee River system and Cumberland River system may interfere with TVA's ability to generate power.

An inadequate supply of water in the Tennessee River system and Cumberland River system could negatively impact TVA's cash flows, results of operations, and financial condition by reducing generation not only at TVA's hydroelectric plants but also at its coal-fired and nuclear plants, which depend on water from the river systems near which they are located for cooling and for use in boilers where water is converted into steam to drive turbines. An inadequate supply of water could result, among other things, from periods of low rainfall or drought, the withdrawal of water from the river systems by governmental entities or others, and incidents affecting bodies of water not managed by TVA. While TVA manages the Tennessee River and a large portion of its tributary system in order to provide much of the water necessary for the operation of its power plants, the U.S. Army Corps of Engineers operates and manages other bodies of water upon which some of TVA's facilities rely. Events at these bodies of water or their associated hydroelectric facilities may interfere with the flow of water and may result in TVA's having insufficient water to meet the needs of its plants. If TVA has insufficient water to meet the needs of its plants, TVA may be required to reduce generation at its affected facilities to levels compatible with the available supply of water.

TVA's supplies of fuel, purchased power, or other critical items may be disrupted.

TVA purchases coal, uranium, natural gas, fuel oil, and electricity from a number of suppliers. Additionally, TVA purchases other items, such as anhydrous ammonia, liquid oxygen, or replacement parts that are critical to the operation of certain generation assets. Disruption in the acquisition or delivery of fuel, purchased power, or other critical supplies may result from a variety of physical and commercial events, political developments, legal actions, or environmental regulations affecting TVA's suppliers as well as from transportation or transmission constraints. If one

of TVA's suppliers fails to perform under the terms of its contract with TVA, TVA might have to purchase replacement fuel, power, or other critical supplies, perhaps at a significantly higher price than TVA is entitled to pay under the contract. In some circumstances, TVA may not be able to recover this difference from the supplier. In addition, any disruption of TVA's supplies could require TVA to operate higher cost generation assets, thereby adversely affecting TVA's cash flows, results of operations, and financial condition. Moreover, if TVA is unable to acquire enough replacement fuel, power, or supplies, or does not have sufficient reserves to offset the loss, TVA may not be able to operate certain assets or provide enough power to meet demand, resulting in power curtailments, brownouts, or even blackouts.

Failure to attract and retain an appropriately qualified workforce may negatively affect TVA's results of operations.

TVA's business depends on its ability to recruit and retain key executive officers as well as skilled professional and technical employees. The inability to attract and retain an appropriately qualified workforce could adversely affect TVA's ability to, among other things, operate and maintain generation and transmission facilities, complete large construction projects such as Watts Bar Unit 2, and successfully implement its organizational transformation efforts. An extension of the salary freeze for federal employees may aggravate this issue.

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TVA is involved in various legal and administrative proceedings whose outcomes may affect TVA's finances and operations.

TVA is involved in various legal and administrative proceedings and is likely to become involved in other legal proceedings in the future in the ordinary course of business, as a result of catastrophic events or otherwise. Although TVA cannot predict the outcome of the individual matters in which TVA is involved or will become involved, the resolution of these matters could require TVA to make expenditures in excess of established reserves and in amounts that could have a material adverse effect on TVA's cash flows, results of operations, and financial condition. Similarly, resolution of any such proceedings may require TVA to change its business practices or procedures and may require TVA to reduce emissions from its coal-fired units, including emissions of GHGs, to a greater extent than TVA had planned.

TVA is subject to a variety of market risks that may negatively affect TVA's cash flows, results of operations, and financial condition.

TVA is subject to a variety of market risks, including, but not limited to, commodity price risk, investment price risk, interest rate risk, counterparty credit and performance risk, and currency exchange rate risk.

Commodity Price Risk. Prices of commodities critical to TVA's operations, including coal, uranium, natural gas, fuel oil, crude oil, construction materials, emission allowances, and electricity, have been extremely volatile in recent years. If prices of these commodities increase, TVA's rates may increase.

Investment Price Risk. TVA is exposed to investment price risk in the NDT, its Asset Retirement Trust ("ART"), and its pension plan. If the value of the investments held in the NDT or the pension fund either decreases or fails to increase in accordance with assumed rates of return, TVA may be required to make substantial contributions to these funds.

Interest Rate Risk. Changes in interest rates may increase the amount of interest that TVA pays on new Bonds that it issues, decrease the return that TVA receives on short-term investments, decrease the value of the investments in the NDT, the ART, and TVA's pension fund, increase the amount of collateral that TVA is required to post in connection with certain of its derivative transactions, and increase the losses on the mark-to-market valuation of certain derivative transactions into which TVA has entered.

Counterparty Credit and Performance Risk. TVA is exposed to the risk that its counterparties will not be able to perform their contractual obligations. If TVA's counterparties fail to perform their obligations, TVA's cash flows, results of operations, and financial condition may be adversely affected. In addition, the failure of a counterparty to perform may make it difficult for TVA to perform its obligations, particularly if the counterparty is a supplier of electricity or fuel.

Currency Exchange Rate Risk. Over the next several years, TVA plans to spend a significant amount of capital on clean air projects, capacity expansion, and other projects. A portion of this amount may be spent on contracts that are denominated in one or more foreign currencies. The value of the U.S. dollar compared with other currencies has fluctuated widely in recent years, and, if not effectively managed, foreign currency exposure could negatively impact TVA's cash flows, results of operations, and financial condition.

TVA's ability to use derivatives to hedge certain risks may be limited.

On account of the Dodd-Frank Wall Street Reform and Consumer Protection Act and its implementing regulations, TVA has become subject to recordkeeping, reporting, and reconciliation requirements related to its derivative transactions. In addition, depending on how regulatory agencies interpret and implement the provisions of this act, TVA's hedging costs may increase, and TVA may have to post additional collateral and margin in connection with its derivative transactions. These occurrences may, among other things, negatively affect TVA's cash flows and cause TVA to reduce or modify its hedging activities, which could increase the risks to which TVA is exposed.

TVA may be unable to meet its current cash requirements if TVA's access to the debt markets is limited.

TVA uses cash provided by operations together with proceeds from power program financings and alternative financing arrangements to fund its current cash requirements. It is critical that TVA continues to have access to the debt markets in order to meet its cash requirements. The importance of having access to the debt markets is underscored by the fact that TVA, unlike many utilities, relies almost entirely on debt capital since TVA is not authorized to issue equity securities.

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TVA's credit ratings may be impacted by Congressional actions or by a downgrade of the United States's sovereign credit ratings.

TVA's current credit ratings are not based solely on its underlying business or financial condition but are based to a large extent on the legislation that defines TVA's business structure. Key characteristics of TVA's business defined by legislation include (1) the TVA Board's ratemaking authority, (2) the current competitive environment, which is defined by the fence and the anti-cherrypicking provision, and (3) TVA's status as a corporate agency and instrumentality of the United States. Accordingly, if Congress takes any action that effectively alters any of these characteristics, TVA's credit ratings could be downgraded.

Although TVA Bonds are not obligations of the United States, TVA, as a corporate agency and instrumentality of the United States government, may be impacted if the sovereign credit ratings of the United States are downgraded. This occurred in August 2011, when one rating agency lowered its long-term rating on the United States and then lowered TVA's rating based on the application of the rating agency's government-related entities criteria. Among other things, an additional or further downgrade of the United States's sovereign credit ratings could have the following effects:

TVA's own credit ratings could be downgraded as a result of a downgrade of the United States's credit ratings.

The economy could be negatively impacted, resulting in reduced demand for electricity, increased expenses for borrowings, and increased cost of fuels, supplies, and other material required for TVA's operations.

TVA, together with owners of TVA securities, may be impacted by additional or further downgrades of TVA's credit ratings.

Additional or further downgrades of TVA's credit ratings may have material adverse effects on TVA's cash flows, results of operations, and financial condition as well as on investors in TVA securities. Among other things, a downgrade may have the following effects:

A downgrade could increase TVA's interest expense by increasing the interest rates that TVA pays on new Bonds that it issues. An increase in TVA's interest expense may reduce the amount of cash available for other purposes, which may result in the need to increase borrowings, to reduce other expenses or capital investments, or to increase power rates.

A downgrade may result in TVA's having to post collateral under certain physical and financial contracts that contain rating triggers.

A downgrade below a contractual threshold may prevent TVA from borrowing under three credit facilities totaling $2.5 billion or posting letters of credit as collateral under these facilities. At September 30, 2013, there were $0.8 billion of letters of credit outstanding under these facilities. If TVA were no longer able to post letters of credit as collateral, TVA's liquidity would be negatively affected, for TVA would likely have to post cash as collateral in lieu of letters of credit.

A downgrade may lower the price of TVA securities in the secondary market, thereby hurting investors who sell TVA securities after the downgrade and diminishing the attractiveness and marketability of TVA securities.

TVA's financial control system cannot guarantee that all control issues and instances of fraud or errors will be detected.

No financial control system, no matter how well designed and operated, can provide absolute assurance that the objectives of the control system are met, and no evaluation of financial controls can provide absolute assurance that all control issues and instances of fraud or errors can be detected. The design of any system of financial controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

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Loss of a quorum of the TVA Board could limit TVA's ability to adapt to meet changing business conditions.

Under the TVA Act, a quorum of the TVA Board is five members. Appointment of a member of the TVA Board requires confirmation by the U.S. Senate following appointment by the President. Further, TVA Board members may not continue in office indefinitely until a successor is appointed. The TVA Board is responsible for, among other things, establishing the rates TVA charges for power as well as TVA's long-term objectives, policies, and plans. Accordingly, loss of a quorum for an extended period of time would impair TVA's ability to change rates and to modify these objectives, policies, and plans. Such an impairment would likely have a negative impact on TVA's ability to respond to significant changes in technology, the regulatory environment, or the industry overall and, in turn, negatively affect TVA's cash flows, results of operations, and financial condition.

Payment of principal and interest on TVA securities is not guaranteed by the United States.

Although TVA is a corporate agency and instrumentality of the United States government, TVA securities are not backed by the full faith and credit of the United States. If TVA were to experience extreme financial difficulty and were unable to make payments of principal or interest on its Bonds, the federal government would not be legally obligated to prevent TVA from defaulting on its obligations. Principal and interest on TVA securities are payable solely from TVA's net power proceeds. Net power proceeds are the remainder of TVA's gross power revenues after deducting the costs of operating, maintaining, and administering its power properties and payments to states and counties in lieu of taxes, but before deducting depreciation accruals or other charges representing the amortization of capital expenditures, plus the net proceeds from the sale or other disposition of any power facility or interest therein.

The market for TVA securities might be limited.

Although many TVA Bonds are listed on stock exchanges, there can be no assurances that any market will develop or continue to exist for any Bonds. Additionally, no assurances can be made as to the ability of the holders to sell their Bonds or as to the price at which holders will be able to sell their Bonds. Future trading prices of Bonds will depend on many factors, including prevailing interest rates, the then-current ratings assigned to the Bonds, the amount of Bonds outstanding, the time remaining until the maturity of the Bonds, the redemption features of the Bonds, the market for similar securities, and the level, direction, and volatility of interest rates generally, as well as the liquidity of the markets for those securities.

If a particular series of Bonds is offered through underwriters, those underwriters may attempt to make a market in the Bonds. Dealers other than underwriters may also make a market in TVA securities. However, the underwriters and dealers are not obligated to make a market in any TVA securities and may terminate any market-making activities at any time without notice.

In addition, legal limitations may affect the ability of banks and others to invest in Bonds. For example, national banks may purchase TVA Bonds for their own accounts in an amount not to exceed 10 percent of unimpaired capital and surplus. Also, TVA Bonds are “obligations of a corporation which is an instrumentality of the United States” within the meaning of section 7701(a)(19)(C)(ii) of the Internal Revenue Code for purposes of the 60 percent of assets limitation applicable to U.S. building and loan associations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

TVA holds personal property in its own name but holds real property as agent for the United States of America. TVA may acquire real property as an agent of the United States by negotiated purchase or by eminent domain.

Generating Properties

At September 30, 2013, TVA-operated generating assets consisted of 46 active coal-fired units and 14 inactive coal-fired units, 6 nuclear units, 109 conventional hydroelectric units, four pumped-storage units (all out of service at September 30, 2013, although they are expected to be returned to service later in 2014), 11 combined-cycle power blocks, 87 simple-cycle units (with four units out of service), 5 diesel generator units, one wind energy site (out of service), and 16 solar sites. In addition, TVA has biomass cofiring potential at its coal-fired sites. See Item 1, Business — Power Supply — Net Capability for a chart that indicates the location, capability, and in-service dates for certain of these properties, which chart is incorporated by reference into this Item 2, Properties. As of September 30, 2013, 24 of the simple-cycle combustion turbine units were leased to private entities and leased back to TVA under long-term leases. In addition, TVA is leasing the three Caledonia combined-cycle power blocks under a long-term lease. TVA is in the process of constructing additional generating assets. For a discussion of these assets, see Item 1, Business — Cleaner Energy Initiatives.

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Transmission Properties

TVA's transmission system interconnects with systems of surrounding utilities and consists primarily of the following assets:

- Approximately 2,500 circuit miles of 500 kilovolt, 11,400 circuit miles of 161 kilovolt, and 2,200 circuit miles of other voltage transmission lines;
- 513 transmission substations, power switchyards, and switching stations; and
- 1,278 customer connection points (customer, generation, and interconnection).

At September 30, 2013, certain qualified technological equipment and other software related to TVA's transmission system were leased to private entities and leased back to TVA under long-term leases.

Natural Resource Stewardship Properties

TVA operates and maintains 49 dams and manages the following natural resource stewardship properties:

- Approximately 11,000 miles of reservoir shoreline;
- Approximately 293,000 acres of reservoir land;
- Approximately 650,000 surface acres of reservoir water; and
- Approximately 80 public recreation areas throughout the Tennessee Valley, including campgrounds, day-use areas, and boat launching ramps.

Additionally, TVA manages over 170 agreements for commercial recreation (such as campgrounds and marinas).

As part of its stewardship responsibilities, TVA approval is required to be obtained before any obstruction affecting navigation, flood control, or public lands can be constructed in or along the Tennessee River and its tributaries.

Buildings

TVA has a variety of buildings throughout its service area in addition to the buildings located at its generation and transmission facilities, including office buildings, customer service centers, power service centers, warehouses, visitor centers, and crew quarters. The most significant of these buildings are the Knoxville Office Complex and the Chattanooga Office Complex. TVA also has a significant number of buildings in Muscle Shoals, Alabama, and is implementing strategies to further reduce its Muscle Shoals real property holdings.

Disposal of Property

Under the TVA Act, TVA has broad authority to dispose of personal property but only limited authority to dispose of real property. The primary, but not exclusive, sources of TVA's authority to dispose of real property are briefly described below:

- Under section 31 of the TVA Act, TVA has authority to dispose of surplus real property at a public auction.
- Under section 4(k) of the TVA Act, TVA can dispose of real property for certain specified purposes, including providing replacement lands for certain entities whose lands were flooded or destroyed by dam or reservoir construction and to grant easements and rights-of-way upon which are located transmission or distribution lines.
- Under section 15d(g) of the TVA Act, TVA can dispose of real property in connection with the construction of generating plants or other facilities under certain circumstances.

- Under 40 U.S.C. § 1314, TVA has authority to grant easements for rights-of-way and other purposes.

In addition, the Basic Tennessee Valley Authority Power Bond Resolution adopted by the TVA Board on October 6, 1960, as amended on September 28, 1976, October 17, 1989, and March 25, 1992 (the "Basic Resolution"), prohibits TVA from mortgaging any part of its power properties and from disposing of all or any substantial portion of these properties unless TVA provides for a continuance of the interest, principal, and sinking fund payments due and to become due on all outstanding Bonds, or for the retirement of such Bonds.

ITEM 3. LEGAL PROCEEDINGS

From time to time, TVA is party to or otherwise involved in lawsuits, claims, proceedings, investigations, and other legal matters ("Legal Proceedings") that have arisen in the ordinary course of conducting TVA’s activities, as a result of catastrophic events or otherwise. While the outcome of the Legal Proceedings to which TVA is a party cannot be predicted with certainty, any adverse outcome to a Legal Proceeding involving TVA may have a material adverse effect on TVA’s cash flows, results of operations, and financial condition.

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For a discussion of Legal Proceedings involving TVA, see Note 20 — Legal Proceedings, which discussion is incorporated by reference into this Item 3.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Not applicable.

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ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data for the years 2009 through 2013 should be read in conjunction with the audited financial statements and notes thereto (collectively, the "Consolidated Financial Statements") presented in Item 8, Financial Statements and Supplementary Data. Certain reclassifications have been made to the 2009, 2010, and 2011 financial statement presentations to conform to the 2012 and 2013 presentations.

Selected Financial Data[1][2]
For the years ended, or at, September 30
(dollars in millions)

	2013	2012	2011	2010	2009
Sales (millions of kWh)	161,925	165,255	167,730	173,662	163,804
Peak load (MW)	28,726	31,098	31,434	31,778	32,572
Operating revenues	$10,956	$11,220	$11,841	$10,874	$11,255
Fuel expense	$2,820	$2,680	$2,926	$2,092	$3,114
Purchased power expense	$1,027	$1,189	$1,427	$1,127	$1,631
Operating and maintenance expense	$3,428	$3,510	$3,617	$3,232	$2,395
Net interest expense	$1,226	$1,273	$1,305	$1,294	$1,272
Net income	$271	$60	$162	$972	$726
Construction expenditures	$2,051	$2,119	$2,417	$2,015	$1,793
Total assets	$46,106	$47,334	$46,393	$42,753	$40,017
Financial obligations					
Long-term debt, net[3]					
Long-term power bonds, net	$22,315	$20,269	$22,412	$22,389	$21,788
Long-term debt of variable interest entities	$1,311	$981	$—	$—	$—
Total long-term debt, net	$23,626	$21,250	$22,412	$22,389	$21,788
Current debt, net[3]					
Short-term debt, net	$2,432	$1,507	$482	$27	$844
Current maturities of power bonds	$32	$2,308	$1,537	$1,008	$8
Current maturities of long-term debt of variable interest entities	$30	$13	$—	$—	$—
Total short-term debt, net	$2,494	$3,828	$2,019	$1,035	$852
Total debt[3]	$26,120	$25,078	$24,431	$23,424	$22,640
Capital leases[4]	$43	$35	$5	$47	$77
	$40	$—	$—	$—	$—

Membership interests of variable interest entity subject to mandatory redemption[4]					
Leaseback obligations	$761	$1,203	$1,282	$1,353	$1,403
Energy prepayment obligations	$510	$612	$717	$822	$927

Notes
(1) See Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations for a description of special items in 2013, 2012, and 2011 affecting results in those years.
(2) See Item 1A, Risk Factors and Note 20 for a discussion of risks and contingencies that could affect TVA's future financial results.
(3) See Note 8, Note 10 — Membership Interests of VIE Subject to Mandatory Redemption and Note 12 — Debt Outstanding.
(4) Included in Accounts payable and accrued liabilities and Other long-term liabilities on the balance sheets.

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS
(Dollars in millions except where noted)

The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is intended to help the reader understand the Tennessee Valley Authority ("TVA"), its operations, and its present business environment. The MD&A is provided as a supplement to — and should be read in conjunction with — TVA's consolidated financial statements and the accompanying notes thereto contained in Item 8, Financial Statements and Supplementary Data of this Annual Report on Form 10-K for the fiscal year ended September 30, 2013 (the "Annual Report"). The MD&A includes the following sections:

- Business and Vision - a general description of its business, its objectives, its strategic priorities, and its core capabilities;
- Executive Overview - a general overview of TVA's activities and results of operations for 2013;
- Results of Operations - an analysis of TVA's consolidated results of operations for the three years presented in its consolidated financial statements;
- Liquidity and Capital Resources - an analysis of cash flows; a description of aggregate contractual obligations; and overview of financial position;
- Key Initiatives and Challenges - an overview of current and future challenges facing TVA;
- Critical Accounting Policies and Estimates - a summary of accounting policies that require critical judgments and estimates;
- Fair Value Measurements - a description of TVA's investments and derivative instruments and valuation considerations;
- Legislative and Regulatory Matters - a summary of laws and regulations that may impact TVA; and
- Risk Management Activities - a description of TVA's risk governance and exposure to various market risks.

Business and Vision

Business

TVA operates the nation's largest public power system. At September 30, 2013, TVA provided electricity to approximately 50 large industrial customers, six federal agency customers, and 155 local power company customers of TVA ("LPCs") that serve over nine million people in parts of seven southeastern states. TVA generates virtually all of its revenues from the sale of electricity, and in 2013 revenues from the sale of electricity totaled $10.8 billion. As a wholly-owned agency and instrumentality of the United States, however, TVA differs from other electric utilities in a number of ways:

1. TVA is a government corporation.

2. The area in which TVA sells power is limited by the Tennessee Valley Authority Act of 1933, as amended (as amended, the "TVA Act"), under a provision known as the "fence"; however, another provision of federal law known as

the “anti-cherrypicking” provision generally protects TVA from being forced to provide access to its transmission lines to others for the purpose of delivering power to customers within substantially all of TVA's defined service area.

3. The rates TVA charges for power are set solely by the TVA Board of Directors (the "TVA Board") and are not set or reviewed by another entity, such as a public utility commission. In setting rates, however, the TVA Board is charged by the TVA Act to have due regard for the primary objectives of the TVA Act, including the objective that power be sold at rates as low as feasible.

4. TVA is not authorized to raise capital by issuing equity securities. TVA relies primarily on cash from operations and proceeds from power program borrowings to fund its operations and is authorized by the TVA Act to issue bonds, notes, or other evidences of indebtedness ("Bonds") in an amount not to exceed $30.0 billion outstanding at any given time. Although TVA's operations were originally funded primarily with appropriations from Congress, TVA has not received any appropriations from Congress for any activities since 1999 and, as directed by Congress, has funded essential stewardship activities primarily with power revenues.

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TVA's Renewed Vision

While TVA's mission has not changed since it was established in 1933, the environment in which TVA operates continues to evolve. The business and economic environment has become more challenging due to economic conditions, tougher new environmental standards, the need to modernize its generating fleet, and changing customer needs. In 2010, the TVA Board adopted a renewed vision to help TVA lead the Tennessee Valley region and the nation toward a cleaner and more secure energy future, relying more on nuclear power and energy efficiency and less on coal. With this renewed vision, TVA intends to be:

- The nation's leader in improving air quality;

- The nation's leader in increased nuclear production; and

- The Southeast's leader in increased energy efficiency.

In 2011, TVA completed an Integrated Resource Plan ("IRP") which recommended a planning direction consistent with TVA's Environmental Policy and fully supports TVA's renewed vision. The IRP guides TVA in meeting its customers' power needs while addressing the substantial challenges facing the electric utility industry. The recommended planning direction provides flexibility to make sound choices as economic and regulatory changes occur. Resource recommendations in the plan balance costs, energy efficiency, system reliability, and environmental responsibility for TVA's stakeholders. TVA is currently undertaking a refresh of the 2011 IRP with the new report expected to be published in 2015.

TVA's vision sets the stage for its strategic planning process that includes strategic objectives, initiatives, and scorecards for performance designed to provide clear direction for improving TVA's core business.

Linking the Vision to Performance

During 2013, TVA set measures and evaluated its operational performance by focusing on seven key indicators. The 2013 results compared with targets for these key indicators are reflected in the following chart.

Corporate Measure	Results Achieved	Threshold	Target	Stretch
Corporate total spend ($ millions)	$766	$809	$792	$774
Total financing obligations over productive assets	75.3%	75.6%	75.2%	74.8%
Nuclear operating availability factor	96.8%	96.1%	97.2%	98.1%
Critical coal seasonal equivalent forced outage rate	5.3%	7.1%	4.6%	2.5%
Combined cycle seasonal equivalent forced outage rate	7.6%	3.6%	2.7%	1.6%
Clean energy percentage	49%	41%	43%	45%
Safe workplace (recordable injuries/hours worked)	.46	1.01	.86	.71

TVA added the clean energy percentage measure in 2013. The measure reflects TVA's commitment to be a leader in cleaner energy as stated in its vision. Nuclear generation, energy efficiency and renewable energy (wind, biomass, solar and hydro) purchases/generation are expressed as a percentage of all purchased power and TVA-operated

generation.

Executive Overview

Demand for electricity is contingent on a variety of factors including the economy, weather patterns, and customer usage. The continuing weak economy, loss of a major customer, and growing adoption of energy conservation by customers has resulted in lower demand for TVA power. Although weather patterns were closer to normal for the year ended September 30, 2013 as compared to the same period of 2012, sales were two percent lower primarily due to TVA's largest directly served customer ceasing operations in May 2013 and to a lesser extent from the slow economic recovery in the Tennessee Valley. This decrease in demand from customers contributed to an increase in off-system sales as a result of having excess generation available for resale during 2013.

TVA’s net income for the years ended September 30, 2013 and 2012, was $271 million and $60 million, respectively. Base revenue decreased $230 million for the year ended September 30, 2013, as compared to the same period of 2012. Revenue from the recovery of fuel costs decreased $55 million for the year ended September 30, 2013, as compared to the

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same period of 2012 due in part to higher hydroelectric generation. TVA’s 29 hydroelectric dams produced more electricity in 2013 than any year in the agency’s 80-year history.

Fuel and purchased power costs decreased for the year ended September 30, 2013, as compared to the same period of 2012 primarily due to increased hydroelectric generation resulting from increased rainfall and runoff during 2013 as compared to 2012. The increase in hydroelectric generation helped to mitigate the increase in fuel costs and lessen the need to purchase power to meet demand. Operating and maintenance costs decreased for the year ended September 30, 2013, as compared to the same period of 2012 primarily due to costs related to post-employment benefits and the timing and duration of outage and maintenance work on nuclear and fossil units. Depreciation expense was also lower during 2013 than 2012 primarily due to the effects of accelerated depreciation of coal-fired units which were idled prior to or early in 2013.

TVA's nuclear program continues to focus on resolving several regulatory items including implementing the orders and guidance stemming from the lessons learned from the events that occurred in 2011 at the Fukushima Daiichi Nuclear Power Plant ("Fukushima events"), implementing fire protection program changes at Browns Ferry Nuclear Plant ("Browns Ferry"), resolving the Nuclear Regulatory Commission ("NRC") finding of "high safety significance" and other findings at Browns Ferry, and resolving NRC findings around Sequoyah Nuclear Plant ("Sequoyah") and Watts Bar Nuclear Plant ("Watts Bar") hydrology. TVA's nuclear program is also focused on ensuring a seamless integration of Watts Bar Unit 2, which is under construction, into the existing nuclear fleet.

Near-term, TVA is initiating a series of actions to mitigate the effects of lower demand, uncertain weather patterns and operational and environmental challenges resulting in rate pressures. Projecting slower to no growth in the near future, TVA is making operational changes to its generating fleet, continuing cost reduction initiatives across all business units, including staffing reduction recommendations resulting from a recently-conducted organizational study, and other initiatives with a goal of keeping its rates competitive. TVA’s priorities for 2014 and beyond include bringing operating and maintenance expenses in line with revenues, completing Watts Bar Unit 2, evaluating the remainder of its coal-fired fleet, preserving Bellefonte Nuclear Plant ("Bellefonte") as an option for future generation, continuing to explore small modular reactor technology, updating its Integrated Resource Plan, and focusing on attracting and retaining jobs for the Tennessee Valley region. The TVA Board approved a non-fuel base rate increase on wholesale rates for 2014 at its August 2013 board meeting which is intended to generate $190 million in additional revenues.

Longer-term, TVA faces challenges related to fluctuating fuel prices and compliance with current and emerging environmental laws and regulations. In order to comply with these laws and regulations, TVA may install clean air equipment on coal-fired units and replace generating capacity of idled/retired coal-fired units with cleaner-emissions nuclear and gas-fired units. Meeting these needs will require significant capital expenditures on TVA's part. TVA plans to meet these needs through a combination of Bonds, alternative financing arrangements, operating efficiency initiatives, and rates. Although TVA is constrained by the TVA Act, which authorizes TVA to issues Bonds in an amount not to exceed $30.0 billion outstanding at any one time, TVA management believes that the challenges described above can be met without this limit becoming an issue.

Results of Operations

Sales of Electricity

Sales of electricity accounted for virtually all of TVA's operating revenues in 2013, 2012, and 2011. TVA sells power at wholesale rates to LPCs that resell the power to their customers at retail rates. TVA also sells power to directly served customers, consisting primarily of federal agencies and customers with large or nonstandard loads. In addition, power that exceeds the needs of the TVA system is sold under exchange power arrangements with certain other power systems.

The following table compares TVA’s energy sales statistics for the years ended September 30, 2013, 2012, and 2011:

Sales of Electricity
For the years ended September 30
(millions of kWh)

	2013	Percent Change	2012	Percent Change	2011
Local power companies	132,154	0.2 %	131,885	(3.8)%	137,042
Industries directly served	26,016	(14.6)%	30,446	6.6 %	28,563
Federal agencies and other	3,755	28.4 %	2,924	37.6 %	2,125
Total sales of electricity	161,925	(2.0)%	165,255	(1.5)%	167,730

Weather affects both the demand for TVA power and the price for that power. TVA uses degree days to measure the impact of weather on its power operations. Degree days measure the extent to which average temperatures in the five largest cities in TVA's service area vary from 65 degrees Fahrenheit.

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2013 Compared to 2012
Degree Days

	2013	Normal[1]	Percent Variation	2012	Normal[1]	Percent Variation	2013	2012	Percent Change
Heating Degree Days	3,333	3,360	(0.8)%	2,598	3,381	(23.2)%	3,333	2,598	28.3 %
Cooling Degree Days	1,762	1,863	(5.4)%	2,116	1,863	13.6 %	1,762	2,116	(16.7)%
Total Degree Days	5,095	5,223	(2.5)%	4,714	5,244	(10.1)%	5,095	4,714	8.1 %

Note
(1) This calculation is updated every five years in order to incorporate the then most recent 30 years. It was last updated in 2011. The 2013 Normal Heating Degree days differ from 2012 due to the occurrence of a leap year in 2012.

Sales of electricity decreased 3.3 billion kilowatt hours ("kWh") for the year ended September 30, 2013, compared to the year ended September 30, 2012, primarily due to a decrease in demand from industries directly served. The reduced demand was largely the result of a decrease in demand by TVA's largest directly served industrial customer, which began ceasing operations during the third quarter of 2013 (see 2013 Key Initiatives and Challenges — Customers/Counterparties Risk). Offsetting the decrease from industries directly served was an increase in sales to federal agencies and other due to an increase in off-system sales as TVA had excess generation available for resale.

2012 Compared to 2011
Degree Days

	2012	Normal[1]	Percent Variation	2011	Normal[1]	Percent Variation	2012	2011	Percent Change
Heating Degree Days	2,598	3,381	(23.2)%	3,418	3,360	1.7 %	2,598	3,418	(24.0)%
Cooling Degree Days	2,116	1,863	13.6 %	2,123	1,863	14.0 %	2,116	2,123	(0.3)%
Total Degree Days	4,714	5,244	(10.1)%	5,541	5,223	6.1 %	4,714	5,541	(14.9)%

Note
(1) This calculation is updated every five years in order to incorporate the then most recent 30 years. It was last updated in 2011. The 2012 Normal Heating Degree days differ from 2011 due to the occurrence of a leap year in 2012.

Sales of electricity decreased 2.5 billion kWh for the year ended September 30, 2012, compared to the year ended September 30, 2011, primarily due to a decrease in demand by LPCs. The reduced demand was largely the result of the milder than normal winter during 2012, as compared to the relatively normal winter during 2011. Heating degree days were 23.2 percent below normal during 2012, compared to 1.7 percent above normal during 2011. The customers of LPCs are largely residential and commercial customers whose usage of electricity is typically more temperature-sensitive than that of industrial customers. The decrease in sales of electricity to LPCs during this same period was partially offset by increased demand from industries directly served, primarily by TVA's largest directly

served industrial customer, and increased sales to off-system customers.

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Financial Results

The following table compares operating results for 2013, 2012, and 2011:

Summary Consolidated Statements of Operations

	2013	2012	2011
Operating revenues	$10,956	$11,220	$11,841
Operating expenses	9,503	9,920	10,404
Operating income	1,453	1,300	1,437
Other income, net	44	33	30
Net interest expense	1,226	1,273	1,305
Net income	$271	$60	$162

Operating Revenues. Operating revenues for 2013, 2012, and 2011 consisted of the following:

Operating Revenues

	2013	Percent Change	2012	Percent Change	2011
Electricity sales					
Local power companies	$9,463	(0.5)%	$9,506	(6.3)%	$10,144
Industries directly served	1,199	(16.9)%	1,442	0.1 %	1,440
Federal agencies and other	167	21.0 %	138	(0.7)%	139
Electricity sales	10,829	(2.3)%	11,086	(5.4)%	11,723
Other revenue	127	(5.2)%	134	13.6 %	118
Total operating revenues	$10,956	(2.4)%	$11,220	(5.2)%	$11,841

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

The changes in revenue components are summarized below:

	Variance 2013 vs. 2012	Variance 2012 vs. 2011
Fuel cost recovery	$(55)	$(355)
Base revenue	(230)	(294)
Other	21	28
Total	$(264)	$(621)

2013 Compared to 2012

Operating revenues decreased $264 million for the year ended September 30, 2013, compared to the year ended September 30, 2012. The change was primarily due to a $230 million decrease in base revenue and a $55 million decrease in fuel cost recovery. The decrease in base revenue was attributable to a decrease in the effective base rate and lower sales of electricity. Partially offsetting these decreases was a slight increase in other revenue sources.

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2012 Compared to 2011

Operating revenues decreased $621 million for the year ended September 30, 2012, compared to the year ended September 30, 2011. The change was primarily due to a $355 million decrease in fuel cost recovery and a $294 million decrease in base revenue. Partially offsetting these decreases was a slight increase in other revenue sources. Of the $355 million decrease in fuel cost recovery, $269 million was due to lower fuel rates and $86 million was due to lower sales of electricity. Lower demand as a result of milder weather conditions was the primary driver of the decrease in base revenues and accounted for $209 million of the change.

See Sales of Electricity above for further discussion of the change in the volume of sales of electricity and Operating Expenses below for further discussion of the change in fuel expense.

Operating Expenses. Operating expenses for 2013, 2012, and 2011 consisted of the following:

Operating Expenses
For the years ended September 30

	2013	Percent Change	2012	Percent Change	2011
Fuel	$2,820	5.2 %	$2,680	(8.4)%	$2,926
Purchased power	1,027	(13.6)%	1,189	(16.7)%	1,427
Operating and maintenance	3,428	(2.3)%	3,510	(3.0)%	3,617
Depreciation and amortization	1,680	(12.5)%	1,919	8.3 %	1,772
Tax equivalents	548	(11.9)%	622	(6.0)%	662
Total operating expenses	$9,503	(4.2)%	$9,920	(4.7)%	$10,404

The following table summarizes TVA's net generation and purchased power in millions of kWh by generating source and the percentage of all electric power generated and purchased for the periods indicated:
Power Supply from TVA-Operated Generation Facilities and Purchased Power
For the years ended September 30
(millions of kWh)

	2013		2012		2011	
Coal-fired	62,519	38 %	58,584	34 %	74,583	44 %
Nuclear	52,100	32 %	55,244	33 %	49,562	29 %
Hydroelectric	18,178	11 %	12,817	8 %	12,706	7 %
Natural gas and/or oil-fired	13,102	8 %	16,650	10 %	6,809	4 %
Renewable resources (non-hydro)	9	— %	25	— %	17	— %
Total TVA-operated generation facilities	145,908	89 %	143,320	85 %	143,677	84 %
Purchased power	18,848	11 %	25,294	15 %	27,168	16 %
Total power supply	164,756	100 %	168,614	100 %	170,845	100 %

2013 Compared to 2012

Fuel expense increased $140 million for the year ended September 30, 2013, as compared to the prior year, primarily due to the utilization of more expensive generation resources. During 2013, TVA completed four nuclear refueling outages on units at Watts Bar, Browns Ferry, and Sequoyah, which included a steam generator replacement project, compared to two nuclear refueling outages on units at Browns Ferry and Sequoyah during the prior year. This contributed to a six percent decrease in nuclear generation. A seven percent increase in coal-fired generation helped offset the decrease in nuclear generation and contributed to a $197 million increase in fuel expense due to the higher price of coal as compared to nuclear fuel. While coal-fired generation contributed to the pricing variance, this was partially offset by a 39 percent increase in conventional hydroelectric generation, as a result of a 22 percent increase in

rainfall and a 45 percent increase in runoff within the Upper Basin of the Tennessee Valley, and by a reduction in volume from lower sales of electricity of two percent, which decreased fuel expense by $57 million.

Purchased power expense decreased $162 million during the year ended September 30, 2013, as compared to the prior year, primarily due to a 25 percent decrease in the volume of power purchased. Higher market prices for natural gas contributed to the volume decrease, as TVA's primary source of purchased power is natural gas-fired generation. In addition, higher market prices for natural gas resulted in lower realized losses from TVA's financial trading program. Hydroelectric

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generation also helped to mitigate the need to purchase power to meet demand. Lower volume reduced purchased power expense by $303 million, but the higher market prices for the power that was purchased offset this reduction by $141 million.

Operating and maintenance expense decreased $82 million in 2013 as compared with 2012. The decrease was primarily attributable to a $66 million decrease in coal-fired operations due to approximately 560 fewer outage days for coal-fired units compared with prior year. In addition, scheduled maintenance expense decreased $58 million in 2013 as compared with 2012 in part due to the retirement or idling of less efficient units during 2012 and the first quarter of 2013. The decrease was also due to a $60 million decrease in costs related to post-employment benefits primarily due to the increase in the discount rate assumption used in the actuarial valuation of the liability related to workers' compensation claims. These decreases were partially offset by a $99 million increase in nuclear expense related to an increase in the number of planned nuclear refueling outages and projects in 2013 as compared with prior year.

Depreciation and amortization expense decreased $239 million in 2013 as compared with 2012, primarily due to a decrease in the amount of accelerated depreciation recognized for certain coal-fired units to be idled. Incremental depreciation associated with the idling of coal-fired units was $49 million for the year ended September 30, 2013, compared with $308 million for the year ended September 30, 2012.

Tax equivalents expense decreased $74 million in 2013, compared to the same period of the prior year. This change primarily reflects a decrease in gross revenues from the sale of power (excluding sales or deliveries to other federal agencies and off-system sales with other utilities) during 2012 compared to 2011, as tax equivalent payments are calculated based on the previous year's results.

2012 Compared to 2011

Fuel expense decreased $246 million for the year ended September 30, 2012, as compared to the prior year. Overall favorable fuel rates, as a result of the change in the mix of generation resources, accounted for $235 million of the decrease. Coal-fired generation decreased 21 percent while natural gas-fired generation was 145 percent higher as compared to the prior year. This increase was primarily due to greater capacity as a result of the acquisition of the Magnolia Combined-Cycle Gas Plant ("Magnolia") and the completion of the John Sevier Combined Cycle Facility ("John Sevier CCF") and was also due to the increased use of natural gas-fired generation as a result of lower gas prices. The average Henry Hub natural gas spot price in 2012 was $2.73 per mmBtu, which was 34 percent lower than the average price for the prior year. Nuclear generation also helped offset the reduction in coal-fired generation as it increased 11 percent compared to the prior year due to fewer refueling outages. Lower sales of electricity led to a decrease in overall generation, which accounted for the remaining $11 million of the decrease in fuel expense.

Purchased power expense decreased $238 million in 2012 from 2011 primarily due to a decrease in the average price of purchased power of 11 percent, which was largely the result of favorable natural gas prices. Lower natural gas prices reduced purchased power expense by $140 million. In addition, purchased power volume decreased by seven percent, primarily as a result of TVA using its own sources of generation as opposed to purchasing power. This reduced purchased power expense by $98 million in 2012 as compared to the prior year.

Operating and maintenance expense decreased $107 million in 2012 from 2011. The primary drivers of this decrease were a reduction of $53 million in nuclear operation expenses due to fewer nuclear refueling outages in 2012, as compared to the prior year, and a decrease in contractor and consultant expense of $37 million. The decrease in contractor and consultant expense was primarily the result of cost savings initiatives undertaken in 2012 in order to offset lower sales and revenues. Other cost saving initiatives undertaken during 2012 included the identification of productivity enhancements to improve the overall cost effectiveness of existing programs and projects as well as

project prioritization and reductions in discretionary spending.

Depreciation and amortization expense increased $147 million in 2012 over 2011 primarily due to additional depreciation of $308 million on certain idled coal-fired units and due to depreciation expense on net plant additions. These increases were partially offset by a $155 million decrease in amortization expense due to the treatment of certain regulatory assets as a result of the approval of Bellefonte Unit 1 in August 2011. See Note 1 — Property, Plant, and Equipment, and Depreciation.

Tax equivalents expense decreased $40 million in 2012 as compared to 2011. This change is primarily attributable to the increase in the fuel cost-related tax equivalent regulatory liability in 2011 as compared to 2010. The fuel cost-related tax equivalent regulatory liability, which is equal to five percent of the fuel-cost related revenues, increased in 2011 due to the wholesale rate structure implemented on April 1, 2011. Tax equivalent expenses related to fuel cost-related revenues are recognized in the same period the revenues are recognized. Tax equivalent expenses related to all other revenues are recognized in the year paid.

TVA calculates tax equivalent expense by subtracting the prior year fuel cost-related tax equivalent regulatory liability from the tax equivalent payments made to the states and counties and then adding back the current year fuel cost-related tax equivalent liability.

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Interest Expense. Interest expense and interest rates for 2013, 2012, and 2011 were as follows:

Interest Expense
For the years ended September 30

	2013	Percent Change	2012	Percent Change	2011
Interest expense[1]					
Interest expense	$1,394	(3.5)%	$1,444	0.9 %	$1,431
Allowance for funds used during construction and nuclear fuel expenditures	(168)	(1.8)%	(171)	35.7 %	(126)
Net interest expense	$1,226	(3.7)%	$1,273	(2.5)%	$1,305