Tennessee Valley Authority
Form 10-Q
January 31, 2017
Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(MARK ONE)
x QUARTERLY REPORT PURSUANT TO SECTION 13, 15(d), OR 37 OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended December 31, 2016
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)

None
(Former name, former address and former fiscal year, if changed since last report)

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 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. (Check one):

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 Exchange Act).
Yes o No x

1

Table of Contents

Table of Contents

Table of Contents

GLOSSARY OF COMMON ACRONYMS

Following are definitions of terms or acronyms that may be used in this Quarterly Report on Form 10-Q for the quarter ended December 31, 2016 (the "Quarterly Report"):

Term or Acronym	Definition
AFUDC	Allowance for funds used during construction
AOCI	Accumulated other comprehensive income (loss)
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
CCP	Coal combustion products
CCR	Coal combustion residuals
CME	Chicago Mercantile Exchange
CO_2	Carbon dioxide
COL	Combined construction and operating license
COLA	Cost-of-living adjustment
CSAPR	Cross-State Air Pollution Rule
CT	Combustion turbine unit
CVA	Credit valuation adjustment
CY	Calendar year
DCP	Deferred Compensation Plan
DOE	Department of Energy
EPA	Environmental Protection Agency
ESPA	Early Site Permit Application
FASB	Financial Accounting Standards Board
FCM	Futures Commission Merchant
FERC	Federal Energy Regulatory Commission
FTP	Financial Trading Program
GAAP	Accounting principles generally accepted in the United States of America
GAO	Government Accountability Office
GHG	Greenhouse gas
GWh	Gigawatt hour(s)
IRP	Integrated Resource Plan
JSCCG	John Sevier Combined Cycle Generation LLC
kWh	Kilowatt hour(s)
LIBOR	London Interbank Offered Rate
LPC	Local power company customer of TVA
LTDCP	Long-Term Deferred Compensation Plan
MATS	Mercury and Air Toxics Standards
MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
MISO	Midcontinent Independent System Operator, Inc.
mmBtu	Million British thermal unit(s)
MtM	Mark-to-market
MW	Megawatt
NAAQS	National Ambient Air Quality Standards

NAV	Net asset value

3

Table of Contents

NDT	Nuclear Decommissioning Trust
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NO_x	Nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
OCI	Other comprehensive income (loss)
PM	Particulate matter
QER	Quadrennial Energy Review
QTE	Qualified technological equipment and software
REIT	Real Estate Investment Trust
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
SHLLC	Southaven Holdco LLC
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
U.S. Treasury	United States Department of the Treasury
VIE	Variable interest entity
XBRL	eXtensible Business Reporting Language

Table of Contents

FORWARD-LOOKING INFORMATION

This Quarterly 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,” “beli “intend,” “project,” “plan,” “predict,” “assume,” “forecast,” “estimate,” “objective,” “possible,” “probably,” “likely,” “potentia 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, amended, or existing laws, regulations, or administrative orders, including those related to environmental matters, and the costs of complying with these laws, regulations, and administrative orders;
- 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;
- Actions taken, or inaction, by the U.S. government relating to the national debt ceiling or automatic spending cuts in government programs;
- 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 unexpected events such as failures of a facility or infrastructure as well as for environmental clean-up activities;
- Addition or loss of customers by TVA or the local power company customers of TVA ("LPCs");
- Significant reductions in demand for electricity produced through non-renewable or centrally located generation sources which may result from, among other things, economic downturns, increased energy efficiency and conservation, increased utilization of distributed generation, and improvements in alternative generation and energy storage technologies;
- Changes in customer preferences for energy produced from cleaner generation sources;
- Significant delays, cost increases, or cost overruns associated with the construction and maintenance of generation or transmission assets;
- Changes in the timing or amount of pension and health care obligations and related funding;
- Increases in TVA's financial liabilities for decommissioning its nuclear facilities or retiring other assets;
- Physical or cyber attacks on TVA's assets;
- The outcome of legal or administrative proceedings;
- The failure of TVA's generation, transmission, flood control, and related assets, including coal combustion residuals ("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;
- Differences between estimates of revenues and expenses and actual revenues earned and expenses incurred;
- Weather conditions;
- Catastrophic events such as fires, earthquakes, explosions, solar events, electromagnetic pulses, geomagnetic disturbances, droughts, 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;
- 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 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;

- Disruption of fuel supplies, which may result from, among other things, economic conditions, 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 which affect the supply of water for TVA's generation facilities;
- Changes in TVA's determinations of the appropriate mix of generation assets;
- Ineffectiveness of TVA's efforts at adapting its organization to an evolving marketplace and remaining cost competitive;
- Inability to obtain, or loss of, regulatory approval for the construction or operation of assets;
- 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");
- 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 Tennessee Valley Authority Act of 1933, as amended, 16 U.S.C. §§ 831-831ee (the “TVA Act”);
- 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, or, potentially, an increased reliance by TVA on alternative financing should TVA approach its debt limit;
- Changes in the economy and volatility in financial markets;
- Changes in technology;

Table of Contents

- 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;
- Ineffectiveness of TVA's disclosure controls and procedures or its internal control over financial reporting;
- Inability to eliminate identified deficiencies in TVA's systems, standards, controls, or corporate culture;
- Inability to attract or retain a skilled workforce;
- 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, ownership, 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, and cause TVA to forego future construction at these or other facilities;
- Loss of quorum of the TVA Board of Directors; and
- Other unforeseeable events.

See also Item 1A, Risk Factors, and Item 7, Management’s Discussion and Analysis of Financial Condition and Results of Operations in TVA’s Annual Report on Form 10-K for the year ended September 30, 2016 (the “Annual Report”), and
Part I, Item 2, Management’s Discussion and Analysis of Financial Condition and Results of Operations in this Quarterly Report for a discussion of factors that could cause actual results to differ materially from those in a forward-looking statement. New factors emerge from time to time, and it is not possible for TVA 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 (2017, 2016, etc.) in this Quarterly Report are to TVA’s fiscal years ending September 30. Years that are preceded by “CY” are references to calendar years.

Notes

References to “Notes” are to the Notes to Consolidated Financial Statements contained in Part I, Item 1, Financial Statements in this Quarterly Report.

Available Information

TVA's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as well as all amendments to those reports, are available on TVA's web site, free of charge, as soon as reasonably practicable after such reports are 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 Quarterly Report. All TVA SEC reports are available to the public without charge from the web site maintained by the SEC at www.sec.gov.

Table of Contents

PART I - FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)
Three Months Ended December 31
(in millions)

	2016	2015
Operating revenues		
Revenue from sales of electricity	$2,508	$2,246
Other revenue	38	34
Total operating revenues	2,546	2,280
Operating expenses		
Fuel	568	480
Purchased power	242	247
Operating and maintenance	741	740
Depreciation and amortization	437	461
Tax equivalents	129	124
Total operating expenses	2,117	2,052
Operating income	429	228
Other income (expense), net	12	12
Interest expense		
Interest expense	339	335
Allowance for funds used during construction	—	(58)
Net interest expense	339	277
Net income (loss)	$102	$(37)

The accompanying notes are an integral part of these consolidated financial statements.

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS) (Unaudited)
Three Months Ended December 31
(in millions)

	2016	2015
Net income (loss)	$102	$(37)
Other comprehensive income (loss)		
Net unrealized gain (loss) on cash flow hedges	(8)	(27)
Reclassification to earnings from cash flow hedges	38	24
Total other comprehensive income (loss)	$30	$(3)
Total comprehensive income (loss)	$132	$(40)

The accompanying notes are an integral part of these consolidated financial statements.

Table of Contents

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED BALANCE SHEETS
(in millions)
ASSETS

	December 31, 2016	September 30, 2016
Current assets	(Unaudited)	
Cash and cash equivalents	$ 300	$ 300
Accounts receivable, net	1,451	1,747
Inventories, net	1,120	993
Regulatory assets	454	536
Other current assets	101	68
Total current assets	3,426	3,644
Property, plant, and equipment		
Completed plant	56,815	51,564
Less accumulated depreciation	(27,634)	(27,592)
Net completed plant	29,181	23,972
Construction in progress	3,278	8,458
Nuclear fuel	1,409	1,450
Capital leases	160	163
Total property, plant, and equipment, net	34,028	34,043
Investment funds	2,293	2,257
Regulatory and other long-term assets		
Regulatory assets	9,728	10,164
Other long-term assets	389	386
Total regulatory and other long-term assets	10,117	10,550
Total assets	$ 49,864	$ 50,494

The accompanying notes are an integral part of these consolidated financial statements.

Table of Contents

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED BALANCE SHEETS
(in millions)
LIABILITIES AND PROPRIETARY CAPITAL

	December 31, 2016	September 30, 2016
Current liabilities	(Unaudited)	
Accounts payable and accrued liabilities	$ 1,785	$ 2,163
Accrued interest	339	363
Current portion of leaseback obligations	58	58
Current portion of energy prepayment obligations	100	100
Regulatory liabilities	173	154
Short-term debt, net	2,027	1,407
Current maturities of power bonds	1,681	1,555
Current maturities of long-term debt of variable interest entities	35	35
Current maturities of notes payable	27	27
Total current liabilities	6,225	5,862
Other liabilities		
Post-retirement and post-employment benefit obligations	6,827	6,929
Asset retirement obligations	3,881	3,840
Other long-term liabilities	2,424	2,776
Leaseback obligations	408	409
Energy prepayment obligations	85	110
Total other liabilities	13,625	14,064
Long-term debt, net		
Long-term power bonds, net	20,215	20,901
Long-term debt of variable interest entities, net	1,200	1,199
Long-term notes payable	48	48
Total long-term debt, net	21,463	22,148
Total liabilities	41,313	42,074
Commitments and contingencies		
Proprietary capital		
Power program appropriation investment	258	258
Power program retained earnings	7,697	7,594
Total power program proprietary capital	7,955	7,852
Nonpower programs appropriation investment, net	578	580
Accumulated other comprehensive income (loss)	18	(12)
Total proprietary capital	8,551	8,420
Total liabilities and proprietary capital	$ 49,864	$ 50,494

The accompanying notes are an integral part of these consolidated financial statements.

Table of Contents

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)
For the Three Months Ended December 31
(in millions)

	2016	2015
Cash flows from operating activities		
Net income (loss)	$102	$(37)
Adjustments to reconcile net income (loss) to net cash provided by operating activities		
Depreciation and amortization (including amortization of debt issuance costs and premiums/discounts)	449	472
Amortization of nuclear fuel cost	85	63
Non-cash retirement benefit expense	84	82
Prepayment credits applied to revenue	(25)	(25)
Fuel cost adjustment deferral	57	37
Fuel cost tax equivalents	2	(7)
Changes in current assets and liabilities		
Accounts receivable, net	299	375
Inventories and other current assets, net	(61)	(104)
Accounts payable and accrued liabilities	(209)	(246)
Accrued interest	(24)	(22)
Regulatory assets costs	(16)	(11)
Pension contributions	(75)	—
Other, net	(51)	(61)
Net cash provided by operating activities	617	516
Cash flows from investing activities		
Construction expenditures	(625)	(866)
Nuclear fuel expenditures	(100)	(101)
Loans and other receivables		
Advances	(3)	(2)
Repayments	1	1
Other, net	20	—
Net cash used in investing activities	(707)	(968)
Cash flows from financing activities		
Long-term debt		
Redemptions and repurchases of power bonds	(527)	(4)
Short-term debt issues (redemptions), net	619	470
Payments on leases and leasebacks	(1)	(2)
Payments to U.S. Treasury	(1)	(2)
Other, net	—	1
Net cash provided by (used in) financing activities	90	463
Net change in cash and cash equivalents	—	11
Cash and cash equivalents at beginning of period	300	300
Cash and cash equivalents at end of period	$300	$311
Supplemental disclosures		
Significant non-cash transactions		
Accrued capital and nuclear fuel expenditures	$336	$372
Capital lease obligations incurred	—	9

The accompanying notes are an integral part of these consolidated financial statements.

10

Table of Contents

TENNESSEE VALLEY AUTHORITY
CONSOLIDATED STATEMENTS OF CHANGES IN PROPRIETARY CAPITAL (Unaudited)
For the Three Months Ended December 31, 2016 and 2015
(in millions)

	Power Program Appropriation Investment	Power Program Retained Earnings	Nonpower Programs Appropriation Investment, Net	Accumulated Other Comprehensive Income (Loss) from Net Gains (Losses) on Cash Flow Hedges	Total
Balance at September 30, 2015	$ 258	$ 6,357	$ 590	$ (2)	$ 7,203
Net income (loss)	—	(34)	(3)	—	(37)
Total other comprehensive income (loss)	—	—	—	(3)	(3)
Return on power program appropriation investment	—	(2)	—	—	(2)
Balance at December 31, 2015 (unaudited)	$ 258	$ 6,321	$ 587	$ (5)	$ 7,161
Balance at September 30, 2016	$ 258	$ 7,594	$ 580	$ (12)	$ 8,420
Net income (loss)	—	104	(2)	—	102
Total other comprehensive income (loss)	—	—	—	30	30
Return on power program appropriation investment	—	(1)	—	—	(1)
Balance at December 31, 2016 (unaudited)	$ 258	$ 7,697	$ 578	$ 18	$ 8,551

The accompanying notes are an integral part of these consolidated financial statements.

Table of Contents

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)
(Dollars in millions except where noted)

1. Nature of Operations and Summary of Significant Accounting Policies

General

The Tennessee Valley Authority ("TVA") is a corporate agency and instrumentality of the United States that was created in 1933 by legislation enacted by the United States ("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.

TVA also 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 and public lands to provide recreational opportunities, adequate water supply, improved water quality, cultural and natural resource protection, and economic development.

The power program has historically been separate and distinct from the stewardship programs. It is required to be self-supporting from power revenues and proceeds from power financings, such as proceeds from the issuance of bonds, notes, or other evidences of indebtedness ("Bonds"). Although TVA does not currently receive congressional appropriations, it is required to make annual payments to the United States Department of the Treasury ("U.S. Treasury") as a return on the government's appropriation investment in TVA's power facilities (the "Power Program Appropriation Investment"). In the 1998 Energy and Water Development Appropriations Act, Congress directed TVA to fund essential stewardship activities related to its management of the Tennessee River system and nonpower or stewardship properties with power revenues in the event that there were insufficient appropriations or other available funds to pay for such activities in any fiscal year. Congress has not provided any appropriations to TVA to fund such activities since 1999. Consequently, during 2000, TVA began paying for essential stewardship activities primarily with power revenues, with the remainder funded with user fees and other forms of revenues derived in connection with those activities. The activities related to stewardship properties do not meet the criteria of an operating segment under accounting principles generally accepted in the United States of America ("GAAP"). Accordingly, these assets and properties are included as part of the power program, TVA's only operating segment.

Power rates are established by the TVA Board of Directors (the "TVA Board") as authorized by the Tennessee Valley Authority Act of 1933, as amended, 16 U.S.C. §§ 831-831ee (the “TVA Act”). The TVA Act requires TVA to charge rates for power that will produce gross revenues sufficient to provide funds for operation, maintenance, and administration of its power system; payments to states and counties in lieu of taxes ("tax equivalents"); debt service on outstanding indebtedness;

Table of Contents

payments to the U.S. Treasury in repayment of and as a return on 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 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. Rates set by the TVA Board are not subject to review or approval by any state or other federal regulatory body.

Fiscal Year

TVA's fiscal year ends September 30. Years (2017, 2016, etc.) refer to TVA's fiscal years unless they are preceded by "CY," in which case the references are to calendar years.

Cost-Based Regulation

Since the TVA Board is authorized by the TVA Act to set rates for power sold to its customers, TVA is self-regulated. Additionally, TVA's regulated rates are designed to recover its costs. Based on current projections, TVA believes that rates, set at levels that will recover TVA's costs, can be charged and collected. As a result of these factors, TVA records certain assets and liabilities that result from the regulated ratemaking process that would not be recorded under GAAP for non-regulated entities. Regulatory assets generally represent incurred costs that have been deferred because such costs are probable of future recovery in customer rates. Regulatory liabilities generally represent obligations to make refunds to customers for previous collections for costs that are not likely to be incurred or deferral of gains that will be credited to customers in future periods. TVA assesses whether the regulatory assets are probable of future recovery by considering factors such as applicable regulatory changes, potential legislation, and changes in technology. Based on these assessments, TVA believes the existing regulatory assets are probable of future recovery. This determination reflects the current regulatory and political environment and is subject to change in the future. If future recovery of regulatory assets ceases to be probable, or any of the other factors described above cease to be applicable, TVA would no longer be considered to be a regulated entity and would be required to write off these costs. All regulatory asset write offs would be required to be recognized in earnings in the period in which future recovery ceases to be probable.

Basis of Presentation

TVA prepares its consolidated interim financial statements in conformity with GAAP for consolidated interim financial information. Accordingly, TVA's consolidated interim financial statements do not include all of the information and notes required by GAAP for annual financial statements. As such, they should be read in conjunction with the audited financial statements for the year ended September 30, 2016, and the notes thereto, which are contained in TVA's Annual Report on Form 10-K for the year ended September 30, 2016 (the "Annual Report"). In the opinion of management, all adjustments (consisting of items of a normal recurring nature) considered necessary for fair presentation are included in the consolidated interim financial statements.

The accompanying consolidated interim financial statements, which have been prepared in accordance with GAAP, include the accounts of TVA, two wholly-owned direct subsidiaries, and three variable interest entities ("VIE") of which TVA is the primary beneficiary. See Note 7. Intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements requires TVA to estimate the effects of various matters that are inherently uncertain as of the date of the consolidated financial statements. Although the consolidated financial statements are prepared in conformity with GAAP, TVA is required to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities, and the amounts of revenues and expenses reported during the reporting period. Each of these estimates varies in regard to the level of judgment involved and its potential impact on TVA's financial results. Estimates are considered critical either when a different estimate could have reasonably been used, or where changes in the estimate are reasonably likely to occur from period to period, and such use or change would materially impact TVA's financial condition, results of operations, or cash flows.

Allowance for Uncollectible Accounts

The allowance for uncollectible accounts reflects TVA's estimate of probable losses inherent in its accounts and loans receivable balances. TVA determines the allowance based on known accounts, historical experience, and other currently available information including events such as customer bankruptcy and/or a customer failing to fulfill payment arrangements. It also reflects TVA's corporate credit department's assessment of the financial condition of customers and the credit quality of the receivables.

The allowance for uncollectible accounts was $1 million at both December 31, 2016, and September 30, 2016, for accounts receivable. Additionally, loans receivable of $152 million and $141 million at December 31, 2016, and September 30, 2016, respectively, are included in Accounts receivable, net and Other long-term assets, for the current and long-term portions,

Table of Contents

respectively, and reported net of allowances for uncollectible accounts of $8 million at both December 31, 2016, and September 30, 2016.

Pre-Commercial Plant Operations

As part of the process of completing the construction of a generating unit, the electricity produced is used to serve the demands of the electric system. TVA estimates revenue from such pre-commercial generation based on the guidance provided by Federal Energy Regulatory Commission ("FERC") regulations. Watts Bar Nuclear Plant ("Watts Bar") Unit 2 commenced pre-commercial plant operations on June 3, 2016, and commercial operations of Watts Bar Unit 2 began on October 19, 2016. TVA is constructing a natural gas-fired generation facility at its Paradise Fossil Plant site and commenced pre-commercial plant operations on October 10, 2016. As of December 31, 2016, the Paradise natural gas-fired facility was still in pre-commercial operations. Estimated revenue of $14 million, primarily related to Watts Bar Unit 2, was capitalized to offset project costs and is included in Revenue from sales of electricity as a contra-revenue amount on the consolidated statement of operations for the three months ended December 31, 2016. During this same period, TVA capitalized related fuel costs for these two construction projects of approximately $5 million.

Depreciation

Depreciation expense was $336 million and $364 million for the three months ended December 31, 2016 and 2015, respectively. Depreciation rates are determined based on an external depreciation study. TVA concluded and implemented the results of a new study during the three months ended December 31, 2016. Implementation of the new depreciation rates resulted in an estimated decrease of approximately $56 million in depreciation and amortization expense during the three months ended December 31, 2016, as compared to the same period of the prior year. This estimate represents the impact of implementing the new depreciation rates only and does not include any potential impact of other possible changes, including additions to or retirements of net completed plant that occurred during the same period. The decrease in depreciation expense as a result of the new depreciation rates is primarily attributable to the use of TVA's current generation plans, which resulted in changes in retirement date assumptions for coal-fired plants, and changes in the estimated service lives for transmission assets.

Allowance for Funds Used During Construction

TVA may capitalize interest on eligible projects as allowance for funds used during construction ("AFUDC"), based on the average interest rate of TVA’s outstanding debt. The allowance is applicable to construction in progress related to eligible projects with (1) an expected total project cost of $1.0 billion or more, and (2) an estimated construction period of at least three years in duration. There was no AFUDC capitalized during the three months ended December 31, 2016, as compared to $58 million capitalized during the three months ended December 31, 2015. The capitalized AFUDC was related to the Watts Bar Unit 2 project, which was completed in October 2016.

Blended Low-Enriched Uranium Program

Under the blended low-enriched uranium ("BLEU") program, TVA, the U.S. Department of Energy ("DOE"), and certain nuclear fuel contractors have entered into agreements providing for the DOE's surplus of enriched uranium to be blended with other uranium down to a level that allows the blended uranium to be fabricated into fuel that can be used in nuclear power plants. Under the terms of an interagency agreement between TVA and the DOE, in exchange for supplying highly enriched uranium materials to the appropriate third-party fuel processors for processing into usable BLEU fuel for TVA, the DOE participates to a degree in the savings generated by TVA’s use of this blended nuclear fuel. Over the life of the program, TVA projects that the DOE’s share of savings generated by TVA’s use of this blended nuclear fuel could result in payments to the DOE of as much as $165 million. TVA accrues an obligation with each BLEU reload batch related to the portion of the ultimate future payments estimated to be attributable to the BLEU fuel currently in use. At December 31, 2016, TVA had paid out approximately $151 million for this program, and the obligation recorded was $14 million.

Table of Contents

2. Impact of New Accounting Standards and Interpretations

The following are accounting standard updates issued by the Financial Accounting Standards Board ("FASB") that TVA adopted during the first quarter of 2017.

Standard	Description	Effective Date for TVA	Effect on the Financial Statements or Other Significant Matters
Consolidation	This guidance amends the consolidation analysis for VIEs as well as voting interest entities. The standard reduces the number of consolidation models through the elimination of the indefinite deferral for certain entities that was previously allowed and places more emphasis on risk of loss when determining a controlling financial interest. This guidance allows for either a full retrospective or a modified retrospective application.	October 1, 2016	The adoption of the standard did not materially impact TVA's financial condition, results of operations, or cash flows.

The following accounting standards have been issued, but as of December 31, 2016, were not effective and had not been adopted by TVA.

Standard	Description	Effective Date for TVA	Effect on the Financial Statements or Other Significant Matters
Revenue Recognition	This guidance applies to revenue from contracts with customers. The standard requires that an entity recognize revenue to depict the transfer of goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In August 2015, the FASB issued a one-year deferral of the effective date. The new effective date allows for either a full retrospective or a modified retrospective application. Early adoption is permitted.	October 1, 2018	TVA is currently evaluating the potential impact of these changes on its consolidated financial statements and related disclosures and the application method to be used.
Inventory Valuation	This guidance changes the model used for the subsequent measurement of inventory from the previous lower of cost or market model to the lower of cost or net realizable value. The guidance applies only to inventory valued using methods other than last-in, first out or the retail inventory method (for example, first-in, first-out or average cost). This amendment is intended to simplify the subsequent measurement of inventory. When the standard becomes effective, it includes interim periods within the fiscal year that begins on that date, and is required to be applied prospectively. Early adoption is permitted.	October 1, 2017	TVA is currently evaluating the potential impact of these changes on its consolidated financial statements.
Lease Accounting	This guidance changes the provisions of recognition in both the lessee and lessor accounting models. The standard requires entities that lease assets — referred to as “lessees” — to recognize on the balance sheet the assets and liabilities for the rights and obligations created by leases with terms of more than 12 months. The recognition, measurement, and presentation of expenses and cash flows arising from a lease by a lessee primarily will depend on its classification as a finance (similar to	October 1, 2019	TVA is currently evaluating the potential impact of these changes on its consolidated financial statements and related

current capital leases) or operating lease. However, unlike current lease accounting rules — which require only capital leases to be recognized on the balance sheet — the new standard will require both types of leases to be recognized on the balance sheet. Operating leases will result in straight-line expense, while finance leases will result in recognition of interest on the lease liability separate from amortization expense. The accounting for the owner of the assets leased by the lessee — also known as lessor accounting — will remain largely unchanged from current lease accounting rules. When the standard becomes effective, it will include interim periods within that fiscal year, and will be required to be applied using a modified retrospective transition. Early adoption is permitted.	disclosures.

15

Table of Contents

Financial Instruments	This guidance applies to the recognition and measurement of financial assets and liabilities. The standard requires all equity investments to be measured at fair value with changes in the fair value recognized through net income (other than those accounted for under the equity method of accounting or those that result in consolidation of the investee). The standard also amends presentation requirements related to certain changes in the fair value of a liability and eliminates certain disclosure requirements of significant assumptions for financial instruments measured at amortized cost on the balance sheet. Public entities must apply the amendments by means of a cumulative-effect adjustment to the balance sheet as of the beginning of the fiscal year of adoption. Early adoption is not permitted unless specific early adoption guidance is applied.	October 1, 2018	TVA is currently evaluating the potential impact of these changes on its consolidated financial statements.
Derivatives and Hedging	This guidance clarifies the requirements for assessing whether contingent call or put options that can accelerate the payment of principal on debt instruments are clearly and closely related to their debt hosts. An entity performing the assessment under the amendments in this update is required to assess the embedded call or put options solely in accordance with a four-step decision sequence. When the standard becomes effective, it will include interim periods within that fiscal year, and will be required to be applied using a modified retrospective transition. Early adoption is permitted.	October 1, 2017	TVA is currently evaluating the potential impact of these changes on its consolidated financial statements.

3. Accounts Receivable, Net

Accounts receivable primarily consist of amounts due from customers for power sales. The table below summarizes the types and amounts of TVA's accounts receivable:

Accounts Receivable, Net

	At December 31, 2016	At September 30, 2016
Power receivables	$ 1,377	$ 1,637
Other receivables	75	111
Allowance for uncollectible accounts	(1)	(1)
Accounts receivable, net	$ 1,451	$ 1,747

4. Inventories, Net

The table below summarizes the types and amounts of TVA's inventories:

Inventories, Net

	At December 31, 2016	At September 30, 2016
Materials and supplies inventory	$ 728	$ 673
Fuel inventory	410	345
Emission allowance inventory, net	15	14
Allowance for inventory obsolescence	(33)	(39)
Inventories, net	$ 1,120	$ 993

16

Table of Contents

5. Other Long-Term Assets

The table below summarizes the types and amounts of TVA’s other long-term assets:
Other Long-Term Assets

	At December 31, 2016	At September 30, 2016
EnergyRight® receivables	$ 111	$ 112
Loans and other long-term receivables, net	148	136
Prepaid capacity payments	40	42
Commodity contract derivative assets	6	3
Other	84	93
Other long-term assets	$ 389	$ 386

In association with the EnergyRight® Solutions program, local power company customers of TVA ("LPCs") offer financing to end-use customers for the purchase of energy-efficient equipment. Depending on the nature of the energy-efficiency project, loans may have a maximum term of five years or ten years. TVA purchases the resulting loans receivable from its LPCs. The loans receivable are then transferred to a third-party bank with which TVA has agreed to repay in full any loan receivable that has been in default for 180 days or more or that TVA has determined is uncollectible. Given this continuing involvement, TVA accounts for the transfer of the loans receivable as secured borrowings. The current and long-term portions of the loans receivable are reported in Accounts receivable, net and Other long-term assets, respectively, on TVA’s consolidated balance sheets. As of December 31, 2016, and September 30, 2016, the carrying amount of the loans receivable, net of discount, reported in Accounts receivable, net was approximately $28 million and $29 million, respectively. See Note 8 for information regarding the associated financing obligation.

Table of Contents

6. Regulatory Assets and Liabilities

Regulatory assets generally represent incurred costs that have been deferred because such costs are probable of future recovery in customer rates. Regulatory liabilities generally represent obligations to make refunds to customers for previous collections for costs that are not likely to be incurred or deferrals of gains that will be credited to customers in future periods. Components of regulatory assets and regulatory liabilities are summarized in the table below:
Regulatory Assets and Liabilities

	At December 31, 2016	At September 30, 2016
Current regulatory assets		
Deferred nuclear generating units	$ 237	$ 237
Unrealized losses on commodity derivatives	104	122
Fuel cost adjustment receivable	41	98
Environmental agreements	27	34
Environmental cleanup costs - Kingston ash spill	42	42
Other current regulatory assets	3	3
Total current regulatory assets	454	536
Non-current regulatory assets		
Deferred pension costs and other post-retirement benefits costs	5,330	5,385
Unrealized losses on interest rate derivatives	1,106	1,547
Nuclear decommissioning costs	935	938
Deferred nuclear generating units	915	850
Non-nuclear decommissioning costs	863	819
Environmental cleanup costs - Kingston ash spill	288	299
Unrealized losses on commodity derivatives	32	56
Environmental agreements	15	18
Other non-current regulatory assets	244	252
Total non-current regulatory assets	9,728	10,164
Total regulatory assets	$ 10,182	$ 10,700
Current regulatory liabilities		
Fuel cost adjustment tax equivalents	$ 151	$ 148
Unrealized gains on commodity derivatives	22	6
Total current regulatory liabilities	173	154
Non-current regulatory liabilities		
Unrealized gains on commodity derivatives	6	3
Total non-current regulatory liabilities	6	3
Total regulatory liabilities	$ 179	$ 157

Deferred Nuclear Generation Units. On November 14, 2016, following a public auction, TVA entered into a contract to sell substantially all of the Bellefonte Nuclear Plant ("Bellefonte") site for $111 million. The net book value of the Bellefonte assets to be sold and the related asset retirement costs are collectively $121 million and are included in Regulatory asset-Deferred nuclear generating units on TVA’s Consolidated Balance Sheet at December 31, 2016, as approved by the TVA Board. TVA received $22 million on November 14, 2016, which is recorded as a long-term liability on TVA’s Consolidated Balance Sheet at December 31, 2016, with the remaining $89 million due at closing. The buyer has up to two years to close on the property. Proceeds received from the sale will be recorded as a reduction to the regulatory asset upon closing and will reduce amounts collected in future rates. Any subsequent losses resulting from the disposition or impairment of Bellefonte will be recovered in future rates until fully recovered based upon the TVA Board-approved recovery of the Regulatory asset-Deferred nuclear generating units in future rates at an amount of $237 million per year until fully recovered.

7. Variable Interest Entities

A VIE is an entity that either (i) has insufficient equity to permit the entity to finance its activities without additional subordinated financial support or (ii) has equity investors who lack the characteristics of owning a controlling financial interest. When TVA determines that it has a variable interest in a variable interest entity, a qualitative evaluation is performed to assess which interest holders have the power to direct the activities that most significantly impact the economic performance of the entity and have the obligation to absorb losses or receive benefits that could be significant to the entity. The evaluation considers the purpose and design of the business, the risks that the business was designed to create and pass along to other entities, the activities of the business that can be directed and which party can direct them, and the expected relative impact of those activities on the economic performance of the business through its life. TVA has the power to direct the activities of an entity when it has the ability to make key operating and financing decisions, including, but not limited to, capital investment and the issuance of debt. Based on the evaluation of these criteria, TVA has determined it is the primary beneficiary of three entities and as such is required to account for the VIEs on a consolidated basis.

John Sevier VIE

In 2012, TVA entered into a $1.0 billion construction management agreement and lease financing arrangement with John Sevier Combined Cycle Generation LLC ("JSCCG") for the completion and lease by TVA of the John Sevier Combined Cycle Facility ("John Sevier CCF"). JSCCG is a special single-purpose limited liability company formed in January 2012 to finance the John Sevier CCF through a $900 million secured note issuance (the “JSCCG notes”) and the issuance of $100 million of membership interests subject to mandatory redemption. The membership interests were purchased by John Sevier Holdco LLC ("Holdco"). Holdco is a special single-purpose entity, also formed in January 2012, established to acquire and hold the membership interests in JSCCG. A non-controlling interest in Holdco is held by a third party through nominal membership interests, to which none of the income, expenses, and cash flows is allocated.

The membership interests held by Holdco in JSCCG were purchased with proceeds from the issuance of $100 million of secured notes (the “Holdco notes") and are subject to mandatory redemption pursuant to scheduled amortizing, semi-annual payments due each January 15 and July 15, with a final payment due in January 2042. The payment dates for the mandatorily redeemable membership interests are the same as those of the Holdco notes. The sale of the JSCCG notes, the membership interests in JSCCG, and the Holdco notes closed in January 2012. The JSCCG notes are secured by TVA’s lease payments, and the Holdco notes are secured by Holdco's investment in, and amounts receivable from, JSCCG. TVA’s lease payments to JSCCG are equal to and payable on the same dates as JSCCG’s and Holdco’s semi-annual debt service payments. In addition to the lease payments, TVA pays administrative and miscellaneous expenses incurred by JSCCG and Holdco. Certain agreements related to this transaction contain default and acceleration provisions.

Southaven VIE

In 2013, TVA entered into a lease financing arrangement with Southaven Combined Cycle Generation LLC ("SCCG") for the lease by TVA of the Southaven Combined Cycle Facility ("Southaven CCF"). SCCG is a special single-purpose limited liability company formed in June 2013 to finance the Southaven CCF through a $360 million secured notes issuance (the “SCCG notes”) and the issuance of $40 million of membership interests subject to mandatory redemption. The membership interests were purchased by Southaven Holdco LLC ("SHLLC"). SHLLC is a special single-purpose entity, also formed in June 2013, established to acquire and hold the membership interests of SCCG. A non-controlling interest in SHLLC is held by a third party through nominal membership interests, to which none of the income, expenses, and cash flows of SHLLC are allocated.

The membership interests held by SHLLC were purchased with proceeds from the issuance of $40 million of secured notes (the "SHLLC notes"), and are subject to mandatory redemption pursuant to a schedule of amortizing, semi-annual payments due each February 15 and August 15, with a final payment due on August 15, 2033. The payment dates for the mandatorily redeemable membership interests are the same as those of the SHLLC notes and the payment amounts are sufficient to provide returns on, as well as returns of, capital until the investment has been repaid to SHLLC in full. The rate of return on investment to SHLLC is 7.0 percent, which is reflected as interest expense in the consolidated statements of operations. SHLLC is required to pay a pre-determined portion of the return on investment to Seven States Southaven, LLC ("SSSL") on each lease payment date as agreed in SHLLC's formation documents (the "Seven States Return"). The current and long-term portions of the Membership interests of VIE subject to mandatory redemption are included in Accounts payable and accrued liabilities and Other long-term liabilities, respectively.

The payment dates for the mandatorily redeemable membership interests are the same as those of the SHLLC notes. The SCCG notes are secured by TVA’s lease payments, and the SHLLC notes are secured by SHLLC’s investment in, and amounts receivable from, SCCG. TVA’s lease payments to SCCG are payable on the same dates as SCCG’s and SHLLC’s semi-annual debt service payments and are equal to the sum of (i) the amount of SCCG’s semi-annual debt service payments, (ii) the amount of SHLLC’s semi-annual debt service payments, and (iii) the amount of the Seven States Return. In addition to the lease payments, TVA pays administrative and miscellaneous expenses incurred by SCCG and SHLLC. Certain agreements related to this transaction contain default and acceleration provisions.

In the event that TVA were to choose to exercise an early buy out feature of the Southaven Facility Lease, in part or in whole, TVA must pay to SCCG amounts sufficient for SCCG to repay or partially repay on a pro rata basis the membership interests held by SHLLC, including any outstanding investment amount plus accrued but unpaid return. TVA also has the right, at any time and without any early redemption of the other portions of the Southaven Facility Lease payments due to SCCG, to fully repay SHLLC's investment, upon which repayment SHLLC will transfer the membership interests to a designee of TVA.

Table of Contents

Impact on Consolidated Financial Statements

The financial statement items attributable to carrying amounts and classifications of JSCCG, Holdco, and SCCG as of December 31, 2016, and September 30, 2016, as reflected in the consolidated balance sheets are as follows:

Summary of Impact of VIEs on Consolidated Balance Sheets

	At December 31, 2016	At September 30, 2016
Current liabilities		
Accrued interest	$ 26	$ 11
Accounts payable and accrued liabilities	2	2
Current maturities of long-term debt of variable interest entities	35	35
Total current liabilities	63	48
Other liabilities		
Other long-term liabilities	33	33
Long-term debt, net		
Long-term debt of variable interest entities, net	1,200	1,199
Total liabilities	$ 1,296	$ 1,280

Interest expense of $15 million related to debt of variable interest entities and membership interests of variable interest entity subject to mandatory redemption is included in the Consolidated Statements of Operations for the three months ended December 31, 2016 and 2015.

Creditors of the VIEs do not have any recourse to the general credit of TVA. TVA does not have any obligations to provide financial support to the VIEs other than as prescribed in the terms of the agreements related to these transactions.

8. Other Long-Term Liabilities

Other long-term liabilities consist primarily of liabilities related to certain derivative instruments as well as liabilities under agreements related to compliance with certain environmental regulations (see Note 16 — Legal Proceedings — Environmental Agreements). The table below summarizes the types and amounts of Other long-term liabilities:

Other Long-Term Liabilities

	At December 31, 2016	At September 30, 2016
Interest rate swap liabilities	$ 1,497	$ 1,938
Capital lease obligations	176	177
EnergyRight® financing obligation	129	130
Environmental agreements liability	15	18
Currency swap liabilities	170	162
Membership interests of VIE subject to mandatory redemption	33	33
Commodity contract derivative liabilities	32	49
Regulatory liabilities	6	3
Commodity swap derivative liabilities	—	2
Other	366	264
Total other long-term liabilities	$ 2,424	$ 2,776

EnergyRight® Financing Obligation. TVA purchases certain loans receivable from its LPCs in association with the EnergyRight® Solutions program. The current and long-term portions of the resulting financing obligation are reported in Accounts payable and accrued liabilities and Other long-term liabilities, respectively, on TVA's consolidated balance sheets. As of December 31, 2016, and September 30, 2016, the carrying amount of the financing obligation reported in Accounts payable and accrued liabilities was approximately $32 million and $33 million, respectively. See Note 5 for information regarding the associated loans receivable and for details regarding the EnergyRight® Solutions program.

Table of Contents

9. Asset Retirement Obligations

During the three months ended December 31, 2016, TVA's total ARO liability increased $29 million. During the three months ended December 31, 2016, the ARO liability increased as a result of changes in estimates and periodic accretion, partially offset by settlement projects that were conducted during these periods. The nuclear and non-nuclear accretion expense was deferred as regulatory assets. During the three months ended December 31, 2016, $36 million of the related regulatory assets were amortized into expense as these amounts were collected in rates. See Note 6. TVA maintains investment trusts to help fund its decommissioning obligations. See Note 13 and Note 16 — Contingencies — Decommissioning Costs for a discussion of the trusts' objectives and the current balances of the trusts.

Asset Retirement Obligation Activity

	Nuclear	Non-Nuclear	Total
Balance at September 30, 2016	$ 2,492	$ 1,560	$ 4,052
Settlements	—	(28)	(28)
Change in estimate	—	20	20
Accretion (recorded as regulatory asset)	29	8	37
Balance at December 31, 2016	$ 2,521	$ 1,560	$ 4,081 (1)

Note

(1) The current portion of ARO in the amount of $200 million and $212 million is included in Accounts payable and accrued liabilities at December 31, 2016, and September 30, 2016, respectively.

10. Debt and Other Obligations

Debt Outstanding

Total debt outstanding at December 31, 2016, and September 30, 2016, consisted of the following:

Debt Outstanding

	At December 31, 2016	At September 30, 2016
Short-term debt		
Short-term debt, net	$ 2,027	$ 1,407
Current maturities of power bonds	1,681	1,555
Current maturities of long-term debt of variable interest entities	35	35
Current maturities of notes payable	27	27
Total current debt outstanding, net	3,770	3,024
Long-term debt		
Long-term power bonds(1)	20,373	21,063
Long-term debt of variable interest entities	1,211	1,211
Long-term notes payable	48	48
Unamortized discounts, premiums, issue costs, and other	(169)	(174)
Total long-term debt, net	21,463	22,148
Total outstanding debt	$ 25,233	$ 25,172

Note

(1) Includes net exchange gain from currency transactions of $188 million at December 31, 2016, and $150 million at September 30, 2016.

Table of Contents

Debt Securities Activity

The table below summarizes the long-term debt securities activity for the period from October 1, 2016, to December 31, 2016:

Debt Securities Activity

	Date	Amount[1]	Interest Rate
Redemptions/Maturities			
electronotes®	First Quarter 2017	$ 1	2.65 %
2009 Series B	December 2016	1	3.77 %
2001 Series D	December 2016	525	4.88 %
Total redemptions/maturities of debt		$ 527	

Note

(1) All redemptions were at 100 percent of par.

Credit Facility Agreements

TVA and the U.S. Treasury, pursuant to the TVA Act, have entered into a memorandum of understanding under which the U.S. Treasury provides TVA with a $150 million credit facility. This credit facility was renewed for 2017 with a maturity date of September 30, 2017. Access to this credit facility or other similar financing arrangements with the U.S. Treasury has been available to TVA since the 1960s. TVA can borrow under the U.S. Treasury credit facility only if it cannot issue Bonds in the market on reasonable terms, and TVA considers the U.S. Treasury credit facility a secondary source of liquidity. The interest rate on any borrowing under this facility is based on the average rate on outstanding marketable obligations of the United States with maturities from date of issue of one year or less. There were no outstanding borrowings under the facility at December 31, 2016. The availability of this credit facility may be impacted by how the U.S. government addresses the situation of approaching its debt limit.

TVA also has funding available in the form of four long-term revolving credit facilities totaling $2.7 billion. One $150 million credit facility matures on December 12, 2019, one $500 million credit facility matures on February 1, 2020, one $1.0 billion credit facility matures on June 2, 2020, and another $1.0 billion credit facility matures on September 30, 2020. The interest rate on any borrowing under these facilities varies based on market factors and the rating of TVA's senior unsecured, long-term, non-credit-enhanced debt. TVA is required to pay an unused facility fee on the portion of the total $2.7 billion that TVA has not borrowed or committed under letters of credit. This fee, along with letter of credit fees, may fluctuate depending on the rating of TVA's senior unsecured, long-term, non-credit-enhanced debt. At December 31, 2016, and September 30, 2016, there were approximately $1.1 billion and $1.4 billion, respectively, of letters of credit outstanding under the facilities. See Note 12 — Other Derivative Instruments — Collateral.

The following table provides additional information regarding TVA's funding available under the four long-term credit facilities:

Summary of Long-Term Credit Facilities

At December 31, 2016

Maturity Date	Facility Limit	Letters of Credit Outstanding	Cash Borrowings	Availability
December 2019	$ 150	$ —	$ —	$ 150
February 2020	500	500	—	—
June 2020	1,000	262	—	738

September 2020	1,000	373	—	627
Total	$ 2,650	$ 1,135	$ —	$ 1,515

Table of Contents

Lease/Leaseback Obligations

TVA previously entered into leasing transactions to obtain third-party financing for 24 peaking combustion turbine units (“CTs”) as well as certain qualified technological equipment and software (collectively, “QTE”). Due to TVA’s continuing involvement with the combustion turbine facilities and the QTE during the leaseback term, TVA accounted for the lease proceeds as financing obligations. In 2016, TVA acquired 100 percent of the equity interests in two special purpose entities ("SPEs") created for the purpose of facilitating a portion of the leaseback arrangements. As a result of the acquisition, TVA effectively settled its leaseback obligations related to eight CTs. At December 31, 2016, and September 30, 2016, the outstanding leaseback obligations related to CTs and QTE were $466 million and $467 million, respectively.

11. Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) ("AOCI") represents market valuation adjustments related to TVA’s currency swaps. The currency swaps are cash flow hedges and are the only derivatives in TVA’s portfolio that have been designated and qualify for hedge accounting treatment. TVA records exchange rate gains and losses on its foreign currency-denominated debt in net income and marks its currency swap assets and liabilities to market through other comprehensive income (loss) ("OCI"). TVA then reclassifies an amount out of AOCI into net income, offsetting the exchange gain/loss recorded on the debt. During the three months ended December 31, 2016 and 2015, TVA reclassified $38 million and $24 million of losses, respectively, related to its cash flow hedges from AOCI to Interest expense.

TVA records certain assets and liabilities that result from the regulated ratemaking process that would not be recorded under GAAP for non-regulated entities. As such, certain items that would generally be reported in AOCI or that would impact the statements of operations are recorded as regulatory assets or regulatory liabilities.

See Note 6 for a schedule of regulatory assets and liabilities. See Note 12 for a discussion of the recognition in AOCI of gains and losses associated with certain derivative contracts. See Note 13 for a discussion of the recognition of certain investment fund gains and losses as regulatory assets and liabilities. See Note 15 for a discussion of the regulatory accounting related to components of TVA’s benefit plans.

12. Risk Management Activities and Derivative Transactions

TVA is exposed to various risks. These include risks related to commodity prices, investment prices, interest rates, currency exchange rates, and inflation as well as counterparty credit and performance risks. To help manage certain of these risks, TVA has entered into various derivative transactions, principally commodity option contracts, forward contracts, swaps, swaptions, futures, and options on futures. Other than certain derivative instruments in its trust investment funds, it is TVA’s policy to enter into these derivative transactions solely for hedging purposes and not for speculative purposes. TVA has suspended its Financial Trading Program ("FTP") and no longer uses financial instruments to hedge risks related to commodity prices; however, TVA plans to continue to manage fuel price volatility through other methods and to periodically reevaluate its suspended FTP program for future use of financial instruments.

Overview of Accounting Treatment

TVA recognizes certain of its derivative instruments as either assets or liabilities on its consolidated balance sheets at fair value. The accounting for changes in the fair value of these instruments depends on (1) whether TVA uses regulatory accounting to defer the derivative gains and losses, (2) whether the derivative instrument has been designated and qualifies for hedge accounting treatment, and (3) if so, the type of hedge relationship (for example, cash flow hedge).

Table of Contents

The following tables summarize the accounting treatment that certain of TVA's financial derivative transactions receive:

Summary of Derivative Instruments That Receive Hedge Accounting Treatment (part 1)
Amount of Mark-to-Market Gain (Loss) Recognized in OCI

Derivatives in Cash Flow Hedging Relationship	Objective of Hedge Transaction	Accounting for Derivative Hedging Instrument	Three Months Ended December 31 2016	2015
Currency swaps	To protect against changes in cash flows caused by changes in foreign currency exchange rates (exchange rate risk)	Unrealized gains and losses are recorded in AOCI and reclassified to interest expense to the extent they are offset by gains and losses on the hedged transaction	$(8)	$(27)

Summary of Derivative Instruments That Receive Hedge Accounting Treatment (part 2)[1]
Amount of Gain (Loss) Reclassified from OCI to Interest Expense

Derivatives in Cash Flow Hedging Relationship	Three Months Ended December 31 2016	2015
Currency swaps	$(38)	$(24)

Note
(1) There were no ineffective portions or amounts excluded from effectiveness testing for any of the periods presented. Based on forecasted foreign currency exchange rates, TVA expects to reclassify approximately $15 million of gains from AOCI to interest expense within the next twelve months to offset amounts anticipated to be recorded in interest expense related to net exchange gain on the debt.

Summary of Derivative Instruments That Do Not Receive Hedge Accounting Treatment
Amount of Gain (Loss) Recognized in Income on Derivatives

Derivative Type	Objective of Derivative	Accounting for Derivative Instrument	Three Months Ended December 31[1] 2016	2015
Interest rate swaps	To fix short-term debt variable rate to a fixed rate (interest rate risk)	Mark-to-market gains and losses are recorded as regulatory assets or liabilities. Realized gains and losses are recognized in interest expense when payments are made or received on the swap settlement dates.	$(26)	$(28)
			(2)	—

Commodity contract derivatives	To protect against fluctuations in market prices of purchased coal or natural gas (price risk)	Mark-to-market gains and losses are recorded as regulatory assets or liabilities. Realized gains and losses due to contract settlements are recognized in fuel expense as incurred.		
Commodity derivatives under FTP	To protect against fluctuations in market prices of purchased commodities (price risk)	Mark-to-market gains and losses are recorded as regulatory assets or liabilities. Realized gains and losses are recognized in fuel expense or purchased power expense when the related commodity is used in production.	(14)	(36)

Note
(1) All of TVA's derivative instruments that do not receive hedge accounting treatment have unrealized gains (losses) that would otherwise be recognized in income
but instead are deferred as regulatory assets and liabilities. As such, there was no related gain (loss) recognized in income for these unrealized gains (losses) for the three months ended December 31, 2016 and 2015.

24

Table of Contents

Fair Values of TVA Derivatives

Derivatives That Receive Hedge Accounting Treatment	At December 31, 2016		At September 30, 2016	
	Balance	Balance Sheet Presentation	Balance	Balance Sheet Presentation
Currency swaps				
£200 million Sterling	$(88)	Other long-term liabilities	$(82)	Other long-term liabilities
£250 million Sterling	(47)	Other long-term liabilities	(41)	Other long-term liabilities
£150 million Sterling	(35)	Other long-term liabilities	(39)	Other long-term liabilities

Derivatives That Do Not Receive Hedge Accounting Treatment	At December 31, 2016		At September 30, 2016	
	Balance	Balance Sheet Presentation	Balance	Balance Sheet Presentation
Interest rate swaps				
$1.0 billion notional	(1,084)	Other long-term liabilities	(1,387)	Other long-term liabilities
$476 million notional	(404)	Other long-term liabilities	(539)	Other long-term liabilities
$42 million notional	(9)	Other long-term liabilities	(12)	Other long-term liabilities
Commodity contract derivatives	(87)	Other current assets $22; Other long-term assets $6; Other long-term liabilities $(32); Accounts payable and accrued liabilities $(83)	(125)	Other current assets $6; Other long-term assets $3; Other long-term liabilities $(49); Accounts payable and accrued liabilities $(85)
FTP				
Derivatives under FTP[(1)]	(20)	Other current assets $(15); Accounts payable and accrued liabilities $(5)	(39)	Other current assets $(30); Other long-term liabilities $(2); Accounts payable and accrued liabilities $(7)

Note
(1) Fair values of certain derivatives under the FTP that were in net liability positions totaling $15 million and $30 million at December 31, 2016, and September 30, 2016, respectively, are recorded in TVA's margin cash accounts in Other current assets. These derivatives are transacted with futures commission merchants, and cash deposits have been posted to the margin cash accounts held with each futures commission merchant to offset the net liability positions in full.

Cash Flow Hedging Strategy for Currency Swaps

To protect against exchange rate risk related to three British pound sterling denominated Bond transactions, TVA entered into foreign currency hedges at the time the Bond transactions occurred. TVA had three currency swaps outstanding as of December 31, 2016, with total currency exposure of £600 million and expiration dates ranging from 2021 to 2043.

When the dollar strengthens against the British pound sterling, the exchange gain on the Bond liability is offset by an exchange loss on the swap contract. Conversely, when the dollar weakens against the British pound sterling, the exchange loss on the Bond liability is offset by an exchange gain on the swap contract. All such exchange gains or losses on the Bond liability are included in Long-term debt, net. The offsetting exchange losses or gains on the swap contracts are recognized in AOCI. If any gain (loss) were to be incurred as a result of the early termination of the foreign currency swap contract, the resulting income (expense) would be amortized over the remaining life of the associated bond as a component of Interest expense.

Derivatives Not Receiving Hedge Accounting Treatment

Interest Rate Derivatives. Generally TVA uses interest rate swaps to fix variable short-term debt to a fixed rate, and TVA uses regulatory accounting treatment to defer the mark-to-market ("MtM") gains and losses on its interest rate swaps. The net deferred unrealized gains and losses are classified as regulatory assets or liabilities on TVA's consolidated balance sheets and are included in the ratemaking formula when the transactions settle. The values of these derivatives are included in Other long-term assets or Other long-term liabilities on the consolidated balance sheets, and realized gains and losses, if any, are included in TVA's consolidated statements of operations. For the three months ended December 31, 2016 and 2015, the changes in fair market value of the interest rate swaps resulted in deferred unrealized gains of $441 million and $89 million, respectively.

Commodity Derivatives. TVA enters into certain derivative contracts for coal and natural gas that require physical delivery of the contracted quantity of the commodity. TVA marks to market all such contracts and defers the fair market values as regulatory assets or liabilities on a gross basis. At December 31, 2016, TVA's coal contract derivatives had terms of up to two years and natural gas contract derivatives had terms of up to four years.

Table of Contents

Commodity Contract Derivatives

	At December 31, 2016			At September 30, 2016		
	Number of Contracts	Notional Amount	Fair Value (MtM)	Number of Contracts	Notional Amount	Fair Value (MtM)
Coal contract derivatives	20	25 million tons	$(104)	20	20 million tons	$ (127)
Natural gas contract derivatives	34	198 million mmBtu	$17	39	148 million mmBtu	$ 2

Derivatives Under FTP. While TVA has suspended its FTP and no longer uses financial instruments to hedge risks related to commodity prices, certain natural gas swaps with a maturity of one year or less remain as part of the suspended FTP.

Derivatives Under Financial Trading Program(1)

	At December 31, 2016		At September 30, 2016	
	Notional Amount	Fair Value (MtM) (in millions)	Notional Amount	Fair Value (MtM) (in millions)
Natural gas (in mmBtu)				
Swap contracts	15,400,000	$ (20)	21,052,500	$ (39)

Note
(1) Fair value amounts presented are based on the net commodity position with the counterparty. Notional amounts disclosed represent the net value of contractual amounts.

TVA defers all FTP unrealized gains (losses) as regulatory liabilities (assets) and records only realized gains or losses to match the delivery period of the underlying commodity. In addition to the open commodity derivatives disclosed above, TVA had closed derivative contracts with market values of $(1) million at December 31, 2016, and $(5) million at September 30, 2016. TVA experienced the following unrealized and realized gains and losses related to the FTP at the dates and during the periods, as applicable, set forth in the tables below:

Financial Trading Program Unrealized Gains (Losses)

	At December 31 2016	At September 30 2016
FTP unrealized gains (losses) deferred as regulatory liabilities (assets)		
Natural gas	$ (20)	$ (39)

Financial Trading Program Realized Gains (Losses)

	Three Months Ended December 31	
	2016	2015
Decrease (increase) in fuel expense		
Natural gas	$(11)	$(29)

Financial Trading Program Realized Gains (Losses)

	Three Months Ended December 31	
	2016	2015
Decrease (increase) in purchased power expense		
Natural gas	$ (3)	$ (7)

26

Table of Contents

Offsetting of Derivative Assets and Liabilities

The amounts of TVA's derivative instruments as reported in the consolidated balance sheets as of December 31, 2016, and September 30, 2016, are shown in the table below:

Derivative Assets and Liabilities

	As of December 31, 2016		
	Gross Amounts of Recognized Assets/Liabilities	Gross Amounts Offset in the Balance Sheet [1]	Net Amounts of Assets/Liabilities Presented in the Balance Sheet [2]
Assets			
Commodity derivatives not subject to master netting or similar arrangement	$ 28	$ —	$ 28
Liabilities			
Currency swap(s) [3]	$ 170	$ —	$ 170
Interest rate swaps [3]	1,497	—	1,497
Commodity derivatives under FTP	20	(15)	5
Total derivatives subject to master netting or similar arrangement	1,687	(15)	1,672
Commodity derivatives not subject to master netting or similar arrangement	115	—	115
Total	$ 1,802	$ (15)	$ 1,787

	As of September 30, 2016		
	Gross Amounts of Recognized Assets/Liabilities	Gross Amounts Offset in the Balance Sheet [1]	Net Amounts of Assets/Liabilities Presented in the Balance Sheet [2]
Assets			
Commodity derivatives under FTP subject to master netting or similar arrangement	$ 6	$ (6)	$ —
	9	—	9

Commodity derivatives not subject to master netting or similar arrangement			
Total	$ 15	$ (6)	$ 9
Liabilities			
Currency swap(s) (3)	$ 162	$ —	$ 162
Interest rate swaps (3)	1,938	—	1,938
Commodity derivatives under FTP	45	(36)	9
Total derivatives subject to master netting or similar arrangement	2,145	(36)	2,109
Commodity derivatives not subject to master netting or similar arrangement	134	—	134
Total	$ 2,279	$ (36)	$ 2,243

Notes

(1) Amounts primarily include counterparty netting of derivative contracts, margin account deposits for futures commission merchants transactions, and cash collateral received or paid in accordance with the accounting guidance for derivatives and hedging transactions.

(2) There are no derivative contracts subject to a master netting arrangement or similar agreement that are not offset in the consolidated balance sheets.

(3) Letters of credit of approximately $1.1 billion and $1.4 billion were posted as collateral at December 31, 2016, and September 30, 2016, respectively, to partially secure the liability positions of one of the currency swaps and one of the interest rate swaps in accordance with the collateral requirements for these derivatives.

Other Derivative Instruments

Investment Fund Derivatives. Investment funds consist primarily of funds held in the Nuclear Decommissioning Trust ("NDT"), the Asset Retirement Trust ("ART"), the Supplemental Executive Retirement Plan ("SERP"), and the Long-Term Deferred Compensation Plan ("LTDCP"). All securities in the trusts are classified as trading. See Note 13 — Investment Funds for a discussion of the trusts' objectives and the types of investments included in the various trusts. These trusts may invest in derivative instruments which may include swaps, futures, options, forwards, and other instruments. The fair values of these derivatives were in asset positions totaling $14 million and $15 million at December 31, 2016 and September 30, 2016, respectively. At December 31, 2016, and September 30, 2016, the fair value of other derivative instruments in these trusts was not material to TVA's consolidated financial statements.

Table of Contents

Collateral. TVA's interest rate swaps and currency swaps contain contract provisions that require a party to post collateral (in a form such as cash or a letter of credit) when the party's liability balance under the agreement exceeds a certain threshold. At December 31, 2016, the aggregate fair value of all derivative instruments with credit-risk related contingent features that were in a liability position was $1.7 billion. TVA's collateral obligations at December 31, 2016, under these arrangements were approximately $1.1 billion, for which TVA had posted approximately $1.1 billion in letters of credit. These letters of credit reduce the available balance under the related credit facilities. TVA's assessment of the risk of its nonperformance includes a reduction in its exposure under the contract as a result of this posted collateral.

For all of its derivative instruments with credit-risk related contingent features:

- If TVA remains a majority-owned U.S. government entity but Standard & Poor's Financial Services, LLC ("S&P") or Moody's Investors Service, Inc. ("Moody's") downgrades TVA's credit rating to AA or Aa2, respectively, TVA's collateral obligations would likely increase by $22 million, and

- If TVA ceases to be majority-owned by the U.S. government, TVA's credit rating would likely be downgraded and TVA would be required to post additional collateral.

Counterparty Risk

TVA may be exposed to certain risks when a counterparty has the potential to fail to meet its obligations in accordance with agreed terms. These risks may be related to credit, operational, or nonperformance matters. To mitigate certain counterparty risk, TVA analyzes the counterparty's financial condition prior to entering into an agreement, establishes credit limits, monitors the appropriateness of those limits, as well as any changes in the creditworthiness of the counterparty, on an ongoing basis, and when required, employs credit mitigation measures, such as collateral or prepayment arrangements and master purchase and sale agreements, to mitigate credit risk. TVA believes its policies and procedures for counterparty performance risk reviews have generally protected TVA against significant exposure related to market and economic conditions.

Customers. TVA is exposed to counterparty credit risk associated with trade accounts receivable from delivered power sales to LPCs, and from industries and federal agencies directly served, all located in the Tennessee Valley region. TVA is also exposed to risk from exchange power arrangements with a small number of investor-owned regional utilities related to either delivered power or the replacement of open positions of longer-term purchased power or fuel agreements. See Note 1 — Allowance for Uncollectible Accounts and Note 3.

Suppliers. If one of TVA's fuel or purchased power suppliers fails to perform under the terms of its contract with TVA, TVA might lose the money that it paid to the supplier under the contract and have to purchase replacement fuel or power on the spot market, perhaps at a significantly higher price than TVA was entitled to pay under the contract. In addition, TVA might not be able to acquire replacement fuel or power in a timely manner and thus might be unable to satisfy its own obligations to deliver power. Nuclear fuel requirements, including uranium mining and milling, conversion services, enrichment services, and fabrication services, are met from various suppliers, depending on the type of service. TVA purchases the majority of its natural gas requirements from a variety of suppliers under short-term contracts.

To help ensure a reliable supply of coal, TVA had coal contracts with multiple suppliers at December 31, 2016. The contracted supply of coal is sourced from multiple geographic regions of the United States and is to be delivered via various transportation methods (i.e., barge, rail, and truck). Emerging technologies, environmental regulations, and low natural gas prices have contributed to weak demand for coal. As a result, coal suppliers are facing increased financial pressure, which has led to relatively poor credit ratings and bankruptcies. Continued difficulties by coal suppliers could result in consolidations, additional bankruptcies, restructurings, contract renegotiations, or other scenarios. Under these scenarios and TVA's potential available responses, TVA does not anticipate a significant financial impact in obtaining continued fuel supply for its coal-fired generation.

TVA has a power purchase agreement that expires on March 31, 2032, with a supplier of electricity for 440 megawatts ("MW") of summer net capability from a lignite-fired generating plant. TVA has determined that the supplier has the equivalent of a non-investment grade credit rating; therefore, the supplier has provided credit assurance to TVA under the terms of the agreement.

Derivative Counterparties. TVA has entered into physical and financial contracts that qualify as derivatives for hedging purposes, and TVA's NDT fund and qualified defined benefit pension plan have entered into derivative contracts for investment purposes. If a counterparty to one of TVA's hedging transactions defaults, TVA might incur substantial costs in connection with entering into a replacement hedging transaction. If a counterparty to the derivative contracts into which the NDT fund and the qualified pension plan have entered for investment purposes defaults, the value of the investment could decline significantly or perhaps become worthless. TVA has concentrations of credit risk from the banking and coal industries because multiple companies in these industries serve as counterparties to TVA in various derivative transactions. At December 31, 2016, all of TVA's commodity derivatives under the FTP, currency swaps, and interest rate swaps were with banking counterparties whose Moody's credit ratings were A3 or higher.

Table of Contents

TVA classifies qualified forward coal and natural gas contracts as derivatives. See Derivatives Not Receiving Hedge Accounting Treatment above. At December 31, 2016, the coal contracts were with counterparties whose Moody's credit rating, or TVA's internal analysis when such information was unavailable, ranged from Ca or D, respectively, to Ba3. At December 31, 2016, the natural gas contracts were with counterparties whose ratings ranged from B1 to A3. See Suppliers above for discussion of challenges facing the coal industry. TVA's total value for derivative contracts with coal counterparties in an asset position as of December 31, 2016, was approximately $9 million. TVA currently utilizes two futures commission merchants ("FCMs") to clear commodity contracts, including futures, options, and similar financial derivatives. These transactions are executed under the FTP by the FCMs on exchanges on behalf of TVA. TVA maintains margin cash accounts with the FCMs. TVA makes deposits to the margin cash accounts to adequately cover any net liability positions on its derivatives transacted with the FCMs. See the note to the Fair Values of TVA Derivatives table above.

13. Fair Value Measurements

Fair value is determined based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the asset or liability's principal market, or in the absence of a principal market, the most advantageous market for the asset or liability in an orderly transaction between market participants. TVA uses market or observable inputs as the preferred source of values, followed by assumptions based on hypothetical transactions in the absence of market inputs.

Valuation Techniques

The measurement of fair value results in classification into a hierarchy by the inputs used to determine the fair value as follows:

Level 1 —	Unadjusted quoted prices in active markets accessible by the reporting entity for identical assets or liabilities. Active markets are those in which transactions for the asset or liability occur with sufficient frequency and volume to provide pricing.
Level 2 —	Pricing inputs other than quoted market prices included in Level 1 that are based on observable market data and that are directly or indirectly observable for substantially the full term of the asset or liability. These include quoted market prices for similar assets or liabilities, quoted market prices for identical or similar assets in markets that are not active, adjusted quoted market prices, inputs from observable data such as interest rate and yield curves, volatilities and default rates observable at commonly quoted intervals, and inputs derived from observable market data by correlation or other means.
Level 3 —	Pricing inputs that are unobservable, or less observable, from objective sources. Unobservable inputs are only to be used to the extent observable inputs are not available. These inputs maintain the concept of an exit price from the perspective of a market participant and should reflect assumptions of other market participants. An entity should consider all market participant assumptions that are available without unreasonable cost and effort. These are given the lowest priority and are generally used in internally developed methodologies to generate management's best estimate of the fair value when no observable market data is available.

A financial instrument's level within the fair value hierarchy (where Level 1 is the highest and Level 3 is the lowest) is based on the lowest level of input significant to the fair value measurement.

The following sections describe the valuation methodologies TVA uses to measure different financial instruments at fair value. Except for gains and losses on SERP and LTDCP assets, all changes in fair value of these assets and liabilities have been recorded as changes in regulatory assets, regulatory liabilities, or AOCI on TVA's consolidated balance sheets and consolidated statements of comprehensive income (loss). Except for gains and losses on SERP and LTDCP assets, there has been no impact to the consolidated statements of operations or the consolidated statements of cash flows related to these fair value measurements.

Investment Funds

At December 31, 2016, Investment funds were composed of $2.3 billion of securities classified as trading and measured at fair value. Trading securities are held in the NDT, ART, SERP, and LTDCP. The NDT holds funds for the ultimate decommissioning of TVA's nuclear power plants. The ART holds funds primarily for the costs related to the future closure and retirement of TVA's other long-lived assets. The balances in the NDT and ART were $1.7 billion and $525 million, respectively, at December 31, 2016.

TVA established a SERP for certain executives in critical positions to provide supplemental pension benefits tied to compensation that exceeds limits set by Internal Revenue Service rules applicable to the qualified defined benefit pension plan. The LTDCP is designed to provide long-term incentives to executives to encourage them to stay with TVA and to provide competitive levels of total compensation to such executives. NDT and SERP funds are invested in portfolios of securities generally designed to achieve a return in line with overall equity market performance, and ART and LTDCP funds are invested in portfolios of securities generally designed to achieve a return in line with overall debt and equity market performance.

Table of Contents

The NDT, ART, SERP, and LTDCP are composed of multiple types of investments and are managed by external institutional managers. Most U.S. and international equities, Treasury inflation-protected securities, real estate investment trust securities, and cash securities and certain derivative instruments are measured based on quoted exchange prices in active markets and are classified as Level 1 valuations. Fixed-income investments, high-yield fixed-income investments, currencies, and most derivative instruments are non-exchange traded and are classified as Level 2 valuations. These measurements are based on market and income approaches with observable market inputs.

Private equity limited partnerships and private real estate investments may include holdings of investments in private real estate, venture capital, buyout, mezzanine or subordinated debt, restructuring or distressed debt, and special situations through funds managed by third-party investment managers. These investments generally involve a three-to-four-year period where the investor contributes capital, followed by a period of distribution, typically over several years. The investment period is generally, at a minimum, ten years or longer. The NDT had unfunded commitments related to private equity limited partnerships of $60 million and unfunded commitments related to private real estate of $5 million at December 31, 2016. These investments have no redemption or limited redemption options and may also impose restrictions on the NDT’s ability to liquidate its investments. There are no readily available quoted exchange prices for these investments. The fair value of the investments is based on TVA’s ownership percentage of the fair value of the underlying investments as provided by the investment managers. These investments are typically valued on a quarterly basis. TVA’s private equity limited partnerships and private real estate investments are valued at net asset values ("NAV") as a practical expedient for fair value. TVA classifies its interest in these types of investments as investments measured at net asset value in the fair value hierarchy.

Commingled funds represent investment funds comprising multiple individual financial instruments. The commingled funds held by the NDT, ART, SERP, and LTDCP consist of either a single class of securities, such as equity, debt, or foreign currency securities, or multiple classes of securities. All underlying positions in these commingled funds are either exchange traded or measured using observable inputs for similar instruments. The fair value of commingled funds is based on NAV per fund share (the unit of account), derived from the prices of the underlying securities in the funds. These commingled funds can be redeemed at the measurement date NAV and are classified as Commingled funds measured at net asset value in the fair value hierarchy.

Realized and unrealized gains and losses on trading securities are recognized in current earnings and are based on average cost. The gains and losses of the NDT and ART are subsequently reclassified to a regulatory asset or liability account in accordance with TVA's regulatory accounting policy. See Note 1 — Cost-Based Regulation. TVA recorded unrealized gains and losses related to its trading securities held as of the end of each period as follows:

Unrealized Investment Gains (Losses)

		Three Months Ended December 31	
Fund	Financial Statement Presentation	2016	2015
NDT	Regulatory asset	$ (7)	$ 39
ART	Regulatory asset	3	12

Currency and Interest Rate Derivatives

See Note 12 — Cash Flow Hedging Strategy for Currency Swaps and Derivatives Not Receiving Hedge Accounting Treatment for a discussion of the nature, purpose, and contingent features of TVA's currency swaps and interest rate swaps. These swaps are classified as Level 2 valuations and are valued based on income approaches using observable market inputs for similar instruments.

Commodity Contract Derivatives and Commodity Derivatives Under FTP

Commodity Contract Derivatives. Most of these contracts are valued based on market approaches which utilize short- and mid-term market-quoted prices from an external industry brokerage service. A small number of these contracts are valued based on a pricing model using long-term price estimates from TVA's coal price forecast. To value the volume option component of applicable coal contracts, TVA uses a Black-Scholes pricing model which includes inputs from the forecast, contract-specific terms, and other market inputs. These contracts are classified as Level 3 valuations.

Commodity Derivatives Under FTP. These contracts are valued based on market approaches which utilize Chicago Mercantile Exchange ("CME") quoted prices and other observable inputs. Swap contracts are valued using a pricing model based on CME inputs and are subject to nonperformance risk outside of the exit price. These contracts are classified as Level 2 valuations.

See Note 12 — Derivatives Not Receiving Hedge Accounting Treatment — Commodity Derivatives and — Derivatives Under FTP for a discussion of the nature and purpose of coal contracts and derivatives under TVA's FTP.

Table of Contents

Nonperformance Risk

The assessment of nonperformance risk, which includes credit risk, considers changes in current market conditions, readily available information on nonperformance risk, letters of credit, collateral, other arrangements available, and the nature of master netting arrangements. TVA is a counterparty to currency swaps, interest rate swaps, commodity contracts, and other derivatives which subject TVA to nonperformance risk. Nonperformance risk on the majority of investments and certain exchange-traded instruments held by TVA is incorporated into the exit price that is derived from quoted market data that is used to mark the investment to market.

Nonperformance risk for most of TVA's derivative instruments is an adjustment to the initial asset/liability fair value. TVA adjusts for nonperformance risk, both of TVA (for liabilities) and the counterparty (for assets), by applying credit valuation adjustments ("CVAs"). TVA determines an appropriate CVA for each applicable financial instrument based on the term of the instrument and TVA's or the counterparty's credit rating as obtained from Moody's. For companies that do not have an observable credit rating, TVA uses internal analysis to assign a comparable rating to the counterparty. TVA discounts each financial instrument using the historical default rate (as reported by Moody's for CY 1983 to CY 2016) for companies with a similar credit rating over a time period consistent with the remaining term of the contract. The application of CVAs resulted in a $3 million decrease in the fair value of assets and a $1 million decrease in the fair value of liabilities at December 31, 2016.

Table of Contents

Fair Value Measurements

The following tables set forth by level, within the fair value hierarchy, TVA's financial assets and liabilities that were measured at fair value on a recurring basis as of December 31, 2016, and September 30, 2016. Financial assets and liabilities have been classified in their entirety based on the lowest level of input that is significant to the fair value measurement. TVA's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the determination of the fair value of the assets and liabilities and their classification in the fair value hierarchy levels.

Fair Value Measurements
At December 31, 2016

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets				
Investments				
Equity securities	$ 196	$ —	$ —	$196
Government debt securities	74	52	—	126
Corporate debt securities	—	382	—	382
Mortgage and asset-backed securities	—	44	—	44
Institutional mutual funds	91	—	—	91
Forward debt securities contracts	—	14	—	14
Private equity funds measured at net asset value(1)	—	—	—	136
Private real estate funds measured at net asset value(1)	—	—	—	111
Commingled funds measured at net asset value(1)	—	—	—	1,193
Total investments	361	492	—	2,293
Commodity contract derivatives	—	19	9	28
Total	$ 361	$ 511	$ 9	$2,321

	Quoted Prices in Active Markets for Identical Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Liabilities				
Currency swap(s) (2)	$ —	$ 170	$ —	$170
Interest rate swaps	—	1,497	—	1,497
Commodity contract derivatives	—	2	113	115
Commodity derivatives under FTP(2)				
Swap contracts	—	5	—	5

Total	$ —	$ 1,674	$ 113	$1,787

Notes

(1) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheets.

(2) Due to the right of setoff and method of settlement, TVA elects to record commodity derivatives under the FTP based on its net commodity position with the counterparty or FCM. Deposits are made to TVA's margin cash accounts held with each FCM to offset any net liability positions in full for derivatives that are transacted with FCMs. TVA records currency swaps net of cash collateral received from or paid to the counterparty, to the extent such amount is not recorded in Accounts payable and accrued liabilities. See Note 12 — Offsetting of Derivative Assets and Liabilities.

Table of Contents

Fair Value Measurements
At September 30, 2016

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Assets				
Investments				
Equity securities	$ 196	$ —	$ —	$196
Government debt securities	88	36	—	124
Corporate debt securities	—	393	—	393
Mortgage and asset-backed securities	—	50	—	50
Institutional mutual funds	92	—	—	92
Forward debt securities contracts	—	15	—	15
Private equity funds measured at net asset value[(1)]	—	—	—	132
Private real estate funds measured at net asset value[(1)]	—	—	—	113
Commingled funds measured at net asset value[(1)]	—	—	—	1,142
Total investments	376	494	—	2,257
Commodity contract derivatives	—	5	4	9
Total	$ 376	$ 499	$ 4	$2,266

	Quoted Prices in Active Markets for Identical Liabilities (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Liabilities				
Currency swap(s) [(2)]	$ —	$ 162	$ —	$162
Interest rate swaps	—	1,938	—	1,938
Commodity contract derivatives	—	3	131	134
Commodity derivatives under FTP[(2)]				
Swap contracts	—	9	—	9
Total	$ —	$ 2,112	$ 131	$2,243

Notes
(1) Certain investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated balance sheets.

(2) Due to the right of setoff and method of settlement, TVA elects to record commodity derivatives under the FTP based on its net commodity position with the counterparty or FCM. Deposits are made to TVA's margin cash accounts held with each FCM to offset any net liability positions in full for derivatives that are transacted with FCMs. TVA records currency swaps net of cash collateral received from or paid to the counterparty, to the extent such amount is not recorded in Accounts payable and accrued liabilities. See Note 12 — Offsetting of Derivative Assets and Liabilities.

Table of Contents

TVA uses internal valuation specialists for the calculation of its commodity contract derivatives fair value measurements classified as Level 3. Analytical testing is performed on the change in fair value measurements each period to ensure the valuation is reasonable based on changes in general market assumptions. Significant changes to the estimated data used for unobservable inputs, in isolation or combination, may result in significant variations to the fair value measurement reported.

The following table presents a reconciliation of all commodity contract derivatives measured at fair value on a recurring basis using significant unobservable inputs (Level 3):

Fair Value Measurements Using Significant Unobservable Inputs

	Commodity Contract Derivatives
Balance at September 30, 2015	$ (98)
Net unrealized gains (losses) deferred as regulatory assets and liabilities	(25)
Balance at December 31, 2015	$ (123)
Balance at September 30, 2016	$ (127)
Net unrealized gains (losses) deferred as regulatory assets and liabilities	23
Balance at December 31, 2016	$ (104)

The following table presents quantitative information related to the significant unobservable inputs used in the measurement of fair value of TVA's assets and liabilities classified as Level 3 in the fair value hierarchy:

Quantitative Information about Level 3 Fair Value Measurements

	Fair Value at December 31 2016	Valuation Technique(s)	Unobservable Inputs	Range
Assets				
Commodity contract derivatives	$ 9	Pricing model	Coal supply and demand	0.7 - 0.8 billion tons/year
			Long-term market prices	$11.65 - $85.02/ton
Liabilities				
Commodity contract derivatives	$ 113	Pricing model	Coal supply and demand	0.7 - 0.8 billion tons/year
			Long-term market prices	$11.65 - $85.02/ton

Quantitative Information about Level 3 Fair Value Measurements

	Fair Value at September 30 2016	Valuation Technique(s)	Unobservable Inputs	Range
Assets				
	$ 4	Pricing model		

Commodity contract derivatives			Coal supply and demand	0.7 - 0.8 billion tons/year
			Long-term market prices	$11.80 - $85.02/ton
Liabilities				
Commodity contract derivatives	$ 131	Pricing model	Coal supply and demand	0.7 - 0.8 billion tons/year
			Long-term market prices	$11.80 - $85.02/ton

Table of Contents

Other Financial Instruments Not Recorded at Fair Value

TVA uses the methods and assumptions described below to estimate the fair value of each significant class of financial instrument. The fair values of the financial instruments held at December 31, 2016, and September 30, 2016, may not be representative of the actual gains or losses that will be recorded when these instruments mature or are called or presented for early redemption. The estimated values of TVA's financial instruments not recorded at fair value at December 31, 2016, and September 30, 2016, were as follows:

Estimated Values of Financial Instruments Not Recorded at Fair Value

		At December 31, 2016		At September 30, 2016	
	Valuation Classification	Carrying Amount	Fair Value	Carrying Amount	Fair Value
EnergyRight® receivables (including current portion)	Level 2	$ 139	$ 142	$ 141	$ 144
Loans and other long-term receivables, net (including current portion)	Level 2	$ 152	$ 142	$ 141	$ 130
EnergyRight® financing obligation (including current portion)	Level 2	$ 161	$ 180	$ 163	$ 183
Unfunded loan commitments	Level 2	$—	$ 8	$—	$ 17