

Board Meeting

August 24, 2023 Chattanooga, Tennessee



Opening Remarks

Jeff Lyash
President and CEO

August 24, 2023







Our Values



Safety



Integrity



Inclusion



Service

Opening Remarks

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President and CEO

August 24, 2023













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Board Meeting

August 24, 2023 Chattanooga, Tennessee



Operations and Nuclear Oversight Committee

Bobby Klein, Chair



Bellefonte Nuclear Site Rescission of Surplus Declaration

August 24, 2023



Purpose

 Request that the Board rescind the May 2016 declaration that portions of the Bellefonte Nuclear Plant site is surplus to TVA's needs.



Background

- In May 2016, the Board declared portions of the Bellefonte Nuclear Site as surplus property, relying on the 2015 IRP.
- Demand for electricity has exceeded the pace predicted in the 2015 IRP.
- A recently completed study has determined that the best use for the property in the near term (5 years) and long term (10 years) would be new generation and energy storage.
- Further studies are in progress including potential uses for various types of generation assets.
- While reviews are ongoing and preliminary, the increased demand and Site's attributes for new electric generation is such that the 2016 surplus determination is no longer supportable; the site should be retained for inventory to support potential future plans and projects.



Requested Action

 The Board approve the rescission of the 2016 Board Resolution declaring portions of the Bellefonte Nuclear Plant Site as surplus.



Operations and Nuclear Oversight Committee

Bobby Klein, Chair



Audit, Finance, Risk, and Cybersecurity Committee

Joe Ritch, Chair



Financial Update

John Thomas
Executive Vice President
Chief Financial & Strategy Officer
Financial Services



"Safe Harbor" Statement

This document contains forward-looking statements relating to future events and future performance. All statements other than those that are purely historical may be forward-looking statements. In certain cases, forward-looking statements can be identified by the use of words such as "may," "will," "should," "expect," "anticipate," "believe," "intend," "project," "plan," "predict," "assume," "forecast," "estimate," "objective," "possible," "probably," "likely," "potential," "speculate," the negative of such words, or other similar expressions. Although 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, and multiple future items may depend on future TVA Board actions beyond today's meeting. For a discussion of these factors, please see the annual, quarterly, and periodic reports that TVA files with the Securities and Exchange Commission. New factors emerge from time to time, and it is not possible for management to predict all such factors or to assess the extent to which any factor or combination of factors may impact TVA's business or cause results to differ materially from those contained in any forward-looking statement. TVA undertakes no obligation to update any forward-looking statement to reflect developments that occur after the statement is made.



Q3 FY23 Summary

Net Income of \$91 million was \$174 million favorable to budget

• Driven by favorable ineligible fuel expense and depreciation expense, partially offset by unfavorable base revenue

Base Revenue of \$5.6 billion was (\$130 million) unfavorable to budget

Driven by mild weather and economic conditions

Cash Flow from Operating Activities of \$1.8 billion was (\$227 million) unfavorable to budget

• Driven by lower revenue collections and payment timing of fuel costs

Total Financing Obligations (TFO) was \$278 million favorable to budget

Driven by lower capital spend; partially offset by current year operating cash flow activities



Q3 FY23 Summary Income Statement

Net Income of \$91 million was \$174 million favorable to budget

	FYTD23			FYTD22			
\$ million	Actual	Budget	Variance	Actual	'23 v '22		
Base Revenue	\$ 5,554	\$ 5,684	\$ (130)	\$ 5,649	\$ (95)		
Fuel Revenue	2,997	3,190	(193)	2,669	328		
Other Revenue	121	115	6	119	2		
Total Operating Revenue	8,672	8,989	(317)	8,437	235		
Fuel & Purchased Power	3,079	3,377	298	2,771	(308)		
Total O&M	2,546	2,563	17	2,269	(277)		
Taxes, Depreciation, Other	2,162	2,324	162	2,130	(32)		
Interest	794	808	14	791	(3)		
Net Income (Loss)	\$ 91	\$ (83)	\$ 174	\$ 476	\$ (385)		



Q3 FY23 Summary Cash Flow Statement

Cash Flow from Operating Activities was (\$227 million) unfavorable to budget

TFO was \$278 million favorable to budget

\$ million			F١	/TD23				FYT	D22)
Net Cash Provided by / (Used in)	A	ctual	В	Budget	Va	riance	A	Actual	'23	3 v '22
Operating Activities	\$	1,776	\$	2,003	\$	(227)	\$	1,834	\$	(58)
Investing Activities		(2,233)		(2,689)		456		(1,978)		(255)
Financing Activities		457		686		(229)		147		310
Net Change in Cash	\$	-	\$	-	\$	-	\$	3	\$	(3)
Beginning Debt and Financing Obligations	\$	20,336	\$	20,365	\$	29	\$	20,543	\$	207
Change in Debt and Financing Obligations		497		746		249		177		(320)
Ending Debt and Financing Obligations	\$	20,833	\$	21,111	\$	278	\$	20,720	\$	(113)



FY24 Rate Increase



Recommendation: 4.5% Base Rate Increase in FY24

Higher inflationary and interest rate environments

Higher-than-anticipated load growth creates need for new debt-funded capacity

Need for debt-funded capacity creates out-year principal and interest payments

Additional capacity builds and innovation require a workforce plan with increased operational capacity

Increasing costs require rate increases



FY24 Budget



Purpose and Background

Purpose: Action items. Seek Board approval of wholesale base rate adjustment of 4.5%, and seek Board approval of the FY24 budget and following related items:

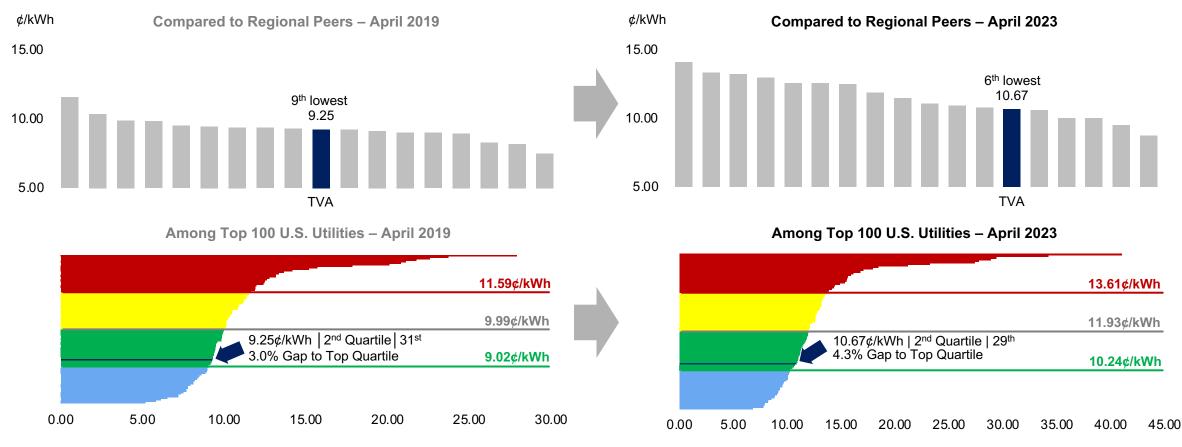
- FY24 Commercial Transactions Contracting Plan and related delegations
- Financing Shelf for up to \$4.0 billion of long-term bonds and associated resolutions
- Final FY23 tax equivalent payments
- Estimated FY24 tax equivalent payments
- Contribution to the Retirement System of \$300 million

- Projects over \$200 million
- Acquisition of Land Rights
- Regulatory Accounting
- Dodd-Frank End-user Exemption
- Retention of the entire margin of net power proceeds
- CEO delegation for construction permit application

Background: The Audit, Finance, Risk, and Cybersecurity Committee recommends the above listed items to the full Board for approval. A formal recommendation has been made by the Committee leading up to this Board meeting.



Retail Rate Competitiveness







Key Planning Assumptions

Load forecast projecting increasing growth (1.3% CAGR FY23-26, 0.6% 10-year CAGR)

Additional load growth for the foreseeable future will challenge capacity position

Programmatic spending increases are needed to support reliability of existing assets

Includes capital consistent with FY24 Budget Power Supply Plan

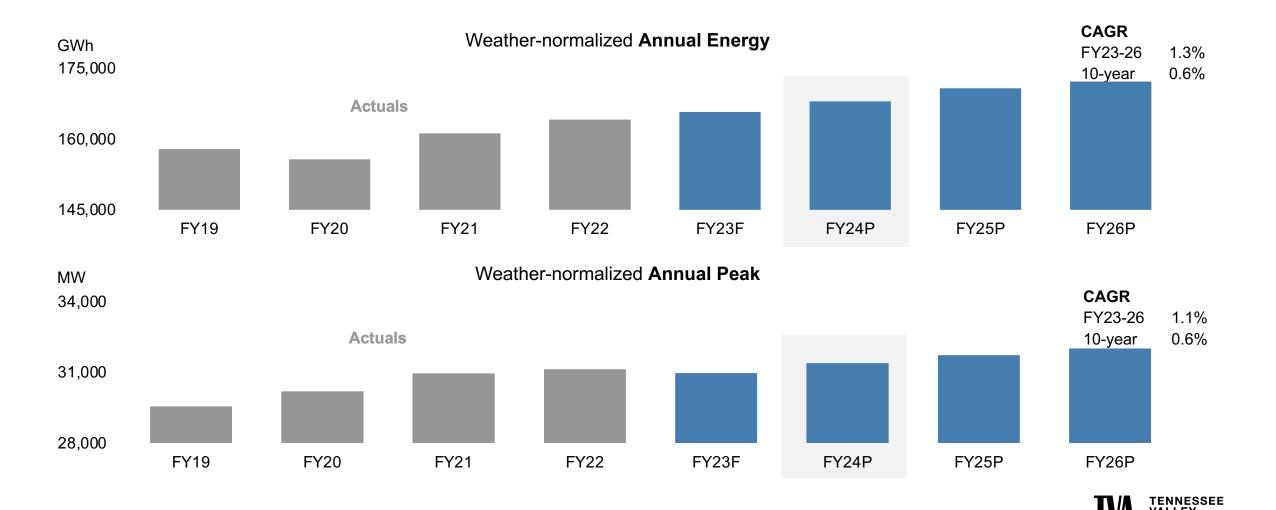
Cost Optimization Project designed to save approximately \$950 million will dampen impacts of inflation

Continue optimizing lowest variable cost dispatch and improving plant availability

Wholesale base rate adjustment of 4.5% for FY24

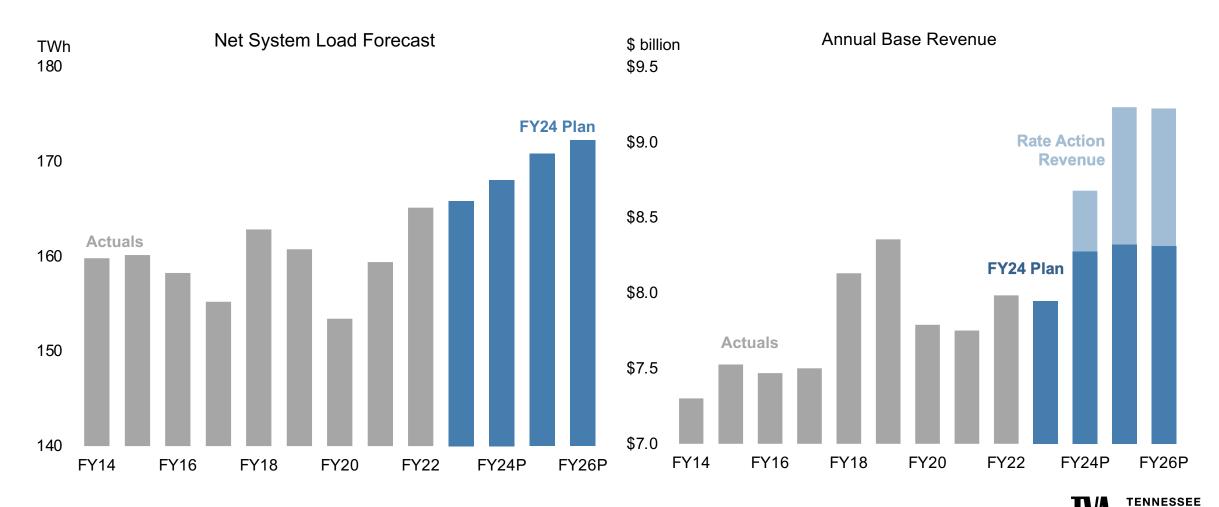


Energy Sales and Peak Demand

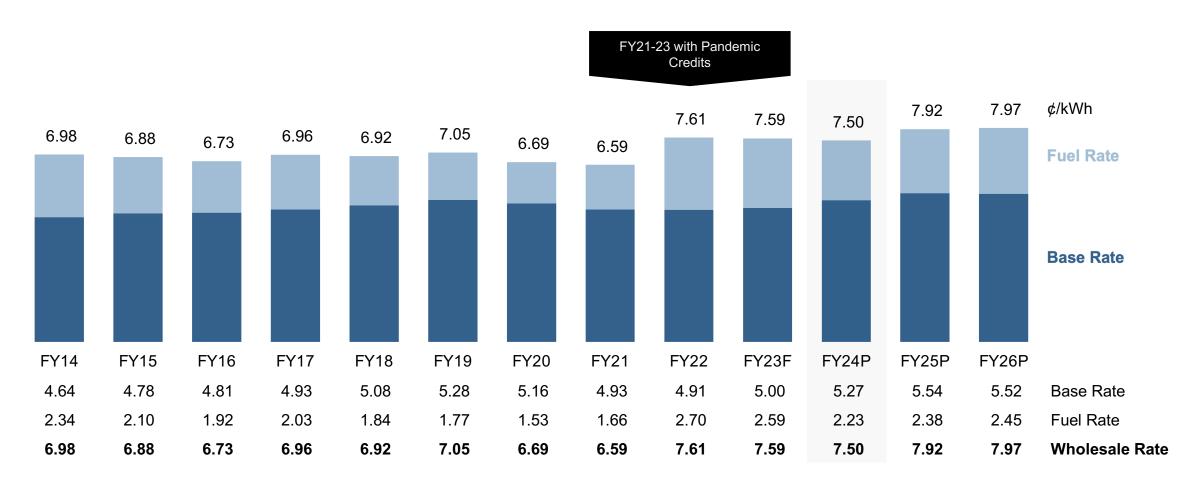


Sales Forecast Outlook

Despite continuing high load, base revenue remains relatively flat through FY26 without rate adjustments

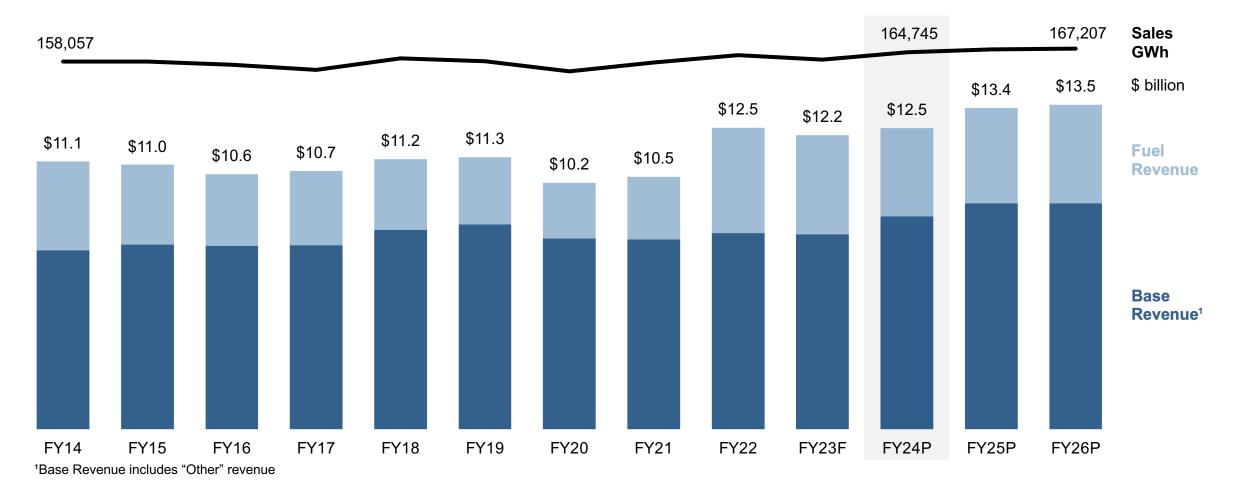


Base and Fuel Rate



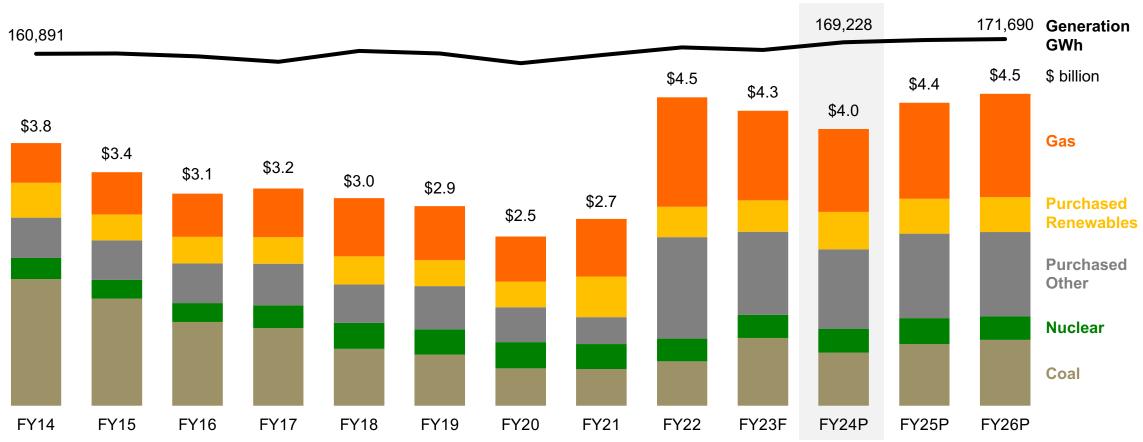


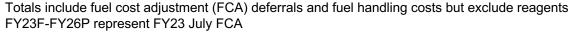
Operating Revenue





Fuel and Purchased Power







Generation Mix and Percent Hedged

Fuel cost is primarily impacted by volatility of natural gas prices

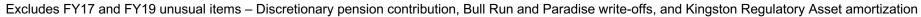
	FY24P		FY25I	P	FY26P		
Fuel	Generation Mix	Price Hedged	Generation Mix	Price Hedged	Generation Mix	Price Hedged	
Hydro	8%	100%	7%	100%	7%	100%	
Nuclear	40%	100%	39%	100%	39%	99%	
Coal	12%	75%	14%	29%	14%	13%	
Purchased Power – Other	12%	66%	10%	75%	11%	76%	
Purchased Power – TVA-sourced Fuel*	5%	49%	6%	27%	5%	16%	
Natural Gas*	23%	43%	24%	25%	24%	14%	
Total/Weighted Average	100%	77%	100%	66%	100%	59%	

Generation mix and hedged percentages subject to change based on commodity price movements and additional fixed price transactions *Purchased Power – TVA-sourced Fuel includes tolled generation. Natural Gas includes TVA-owned generation. Data pulled 05/24/2023



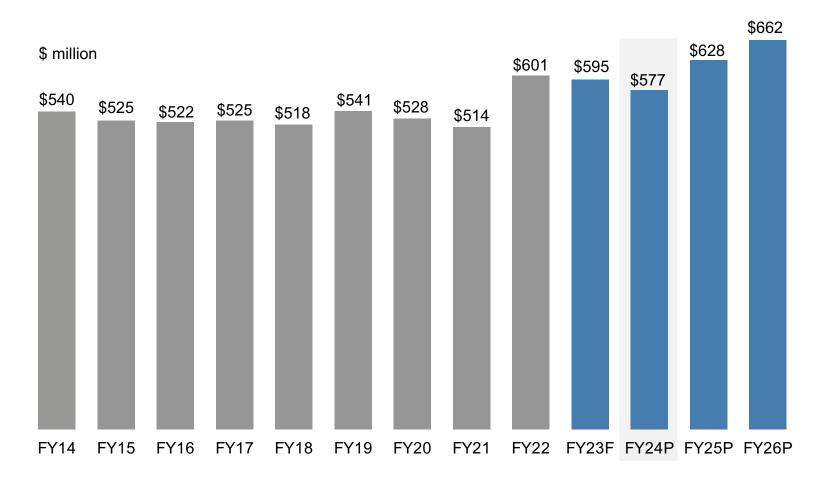
O&M Expense







Tax Equivalents

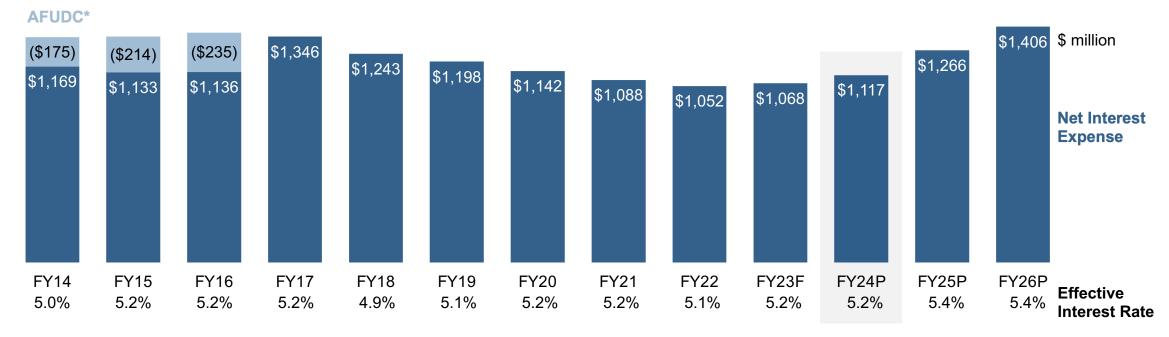


Tax Equivalent – Final Payments by State

\$ million	FY22	FY23	Delta
Tennessee	\$345	\$410	\$ 65
Alabama	83	98	15
Mississippi	39	47	8
Kentucky	32	40	8
Georgia	8	10	2
North Carolina	3	4	1
Virginia	1	1	-
Illinois	1	1	-
Final Payments	\$512	\$611	\$ 99
Fuel Cost Adjustment	89	(16)	(105)
Total Expense	\$601	\$595	\$ (6)



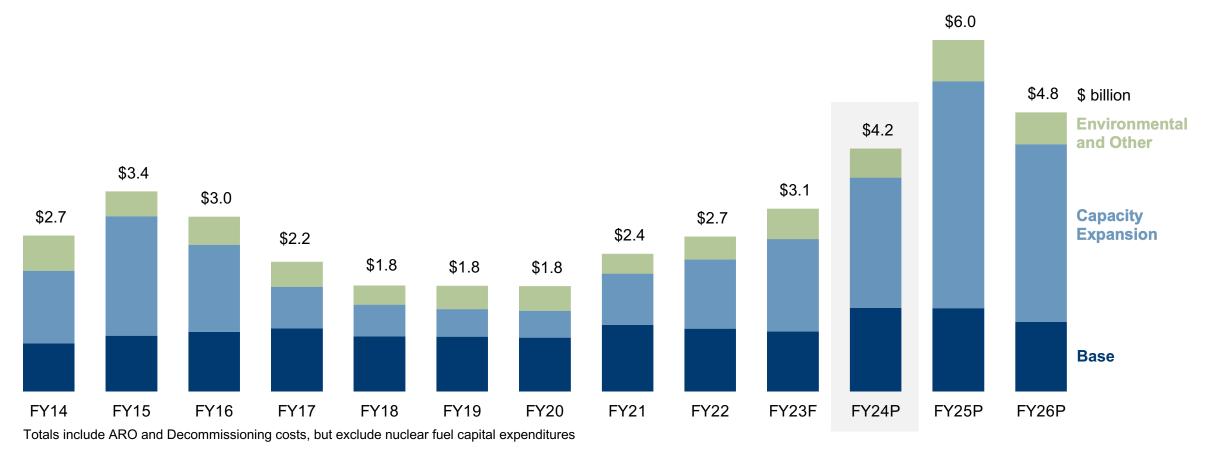
Interest Expense



^{*}AFUDC: Allowance for Funds Used During Construction - related to the cost of borrowed funds for new builds that is capitalized



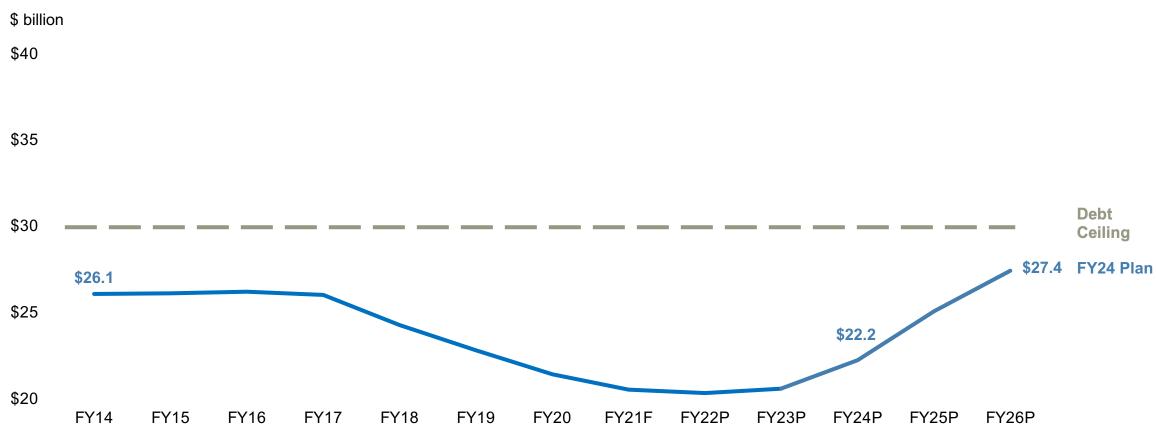
Capital Expenditures

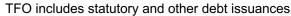




Total Financing Obligations (TFO)

Increasing system demand brings significant cost pressure

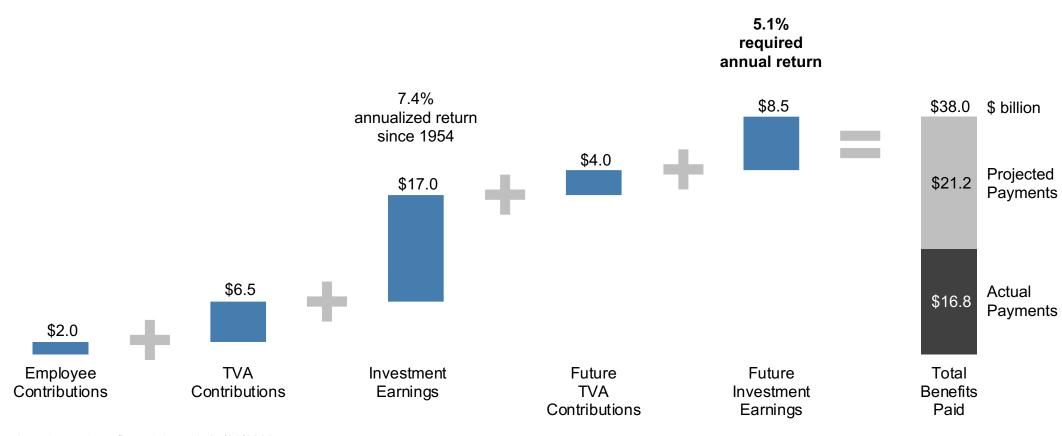






Retirement System Performance

Historical return levels are not required to meet remaining projected payments







Revenue Requirements

\$ million	FY23F	FY24P	FY25P	FY26P
Base Revenues	8,176	8,275	8,323	8,313
Fuel Revenues	4,124	3,682	3,965	4,098
Rate Action Revenues	-	405	911	913
Pandemic Relief Credit	(227)	-	-	
Total Electric Revenues	\$ 12,073	\$ 12,362	\$ 13,199	\$ 13,324
Fuel	4,285	4,028	4,411	4,540
Operating and Maintenance	3,395	3,584	3,733	3,777
Base Capital	1,031	1,434	1,431	1,197
Interest	1,068	1,117	1,266	1,406
Tax Equivalents	595	577	628	662
Other	(142)	530	(8)	509
Total Operational Spend	\$ 10,232	\$ 11,270	\$ 11,461	\$ 12,091
Funds Available for Debt Paydown	\$ 1,841	\$ 1,092	\$ 1,738	\$ 1,233
Expansion and Environmental Capital* Change in Cash	2,103	2,725	4,583	3,579
Debt Paydown	(1,841)	(1,092)	(1,738)	(1,233)
Change in TFO	\$ 262	\$ 1,633	\$ 2,845	\$ 2,346
Ending TFO Balance	20,599	22,232	25,077	27,423

^{*}Includes ARO and Decommissioning costs



Summary Income Statement

\$ million	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23F	FY24P	FY25P	FY26P
Operating Revenue	\$ 11,137	\$ 11,003	\$ 10,616	\$ 10,739	\$ 11,233	\$ 11,318	\$ 10,249	\$ 10,503	\$ 12,540	\$ 12,236	\$ 12,533	\$ 13,367	\$ 13,497
Firel and Directored Davies	2.004	2 204	2 000	2.400	2.000	0.000	0.464	0.704	4.400	4.005	4.000	4 444	4.540
Fuel and Purchased Power	3,824	3,394	3,090	3,160	3,022	2,903	2,464	2,721	4,488	4,285	4,028	4,411	4,540
Operating and Maintenance	3,341	2,838	2,842	3,362	2,854	3,090	2,720	2,890	2,986	3,395	3,584	3,733	3,777
Depreciation and Amortization	1,843	2,031	1,836	1,717	2,527	1,973	1,826	1,533	2,054	2,208	2,261	2,298	2,412
Taxes	540	525	522	525	518	541	528	514	601	595	577	628	662
Operating Expenses	9,548	8,788	8,290	8,764	8,921	8,507	7,538	7,658	10,129	10,483	10,450	11,070	11,391
Operating Income	1,589	2,215	2,326	1,975	2,312	2,811	2,711	2,845	2,411	1,753	2,083	2,297	2,106
Other Income / (Expense)	49	29	43	56	50	62	36	13	7	47	12	11	7
Other Net Periodic Benefit Cost	-	-	-	-	-	(258)	(253)	(258)	(258)	(204)	(104)	(51)	(70)
Interest Expense	1,344	1,347	1,371	1,346	1,243	1,198	1,142	1,088	1,052	1,068	1,117	1,266	1,406
AFUDC* Borrowed Funds	(175)	(214)	(235)	-	-	-	-	-	-	-	-	-	-
Net Interest Expense	1,169	1,133	1,136	1,346	1,243	1,198	1,142	1,088	1,052	1,068	1,117	1,266	1,406
Net Income	\$ 469	\$ 1,111	\$ 1,233	\$ 685	\$ 1,119	\$ 1,417	\$ 1,352	\$ 1,512	\$ 1,108	\$ 528	\$ 874	\$ 991	\$ 637

^{*}AFUDC: Allowance for Funds Used During Construction - related to the cost of borrowed funds for new builds that is capitalized



Summary Cash Flow Statement

\$ million	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23F	FY24P	FY25P	FY26P
Cash Flows from Operating Activities	\$ 2,980	\$ 3,315	\$ 3,042	\$ 2,736	\$ 3,955	\$ 3,720	\$ 3,636	\$ 3,256	\$ 2,948	\$ 2,855	\$ 2,619	\$ 2,937	\$ 2,572
Cash Flows from Investing Activities	(2,756)	(3,585)	(3,113)	(2,536)	(2,269)	(2,243)	(2,015)	(2,338)	(2,663)	(3,043)	(4,168)	(5,699)	(4,834)
Cash Flows from Financing Activities	(1,326)	70	71	(200)	(1,687)	(1,477)	(1,422)	(921)	(283)	188	1,549	2,762	2,262
Net Change in Cash	(1,102)	(200)	-	-	(1)	-	199	(3)	2	-	-	-	-
Beginning Unrestricted Cash	1,602	500	300	300	300	299	299	500	499	500	500	500	500
Ending Unrestricted Cash	500	300	300	300	299	299	500	499	500	500	500	500	500
Ending Restricted Cash	31	26	10	11	23	23	21	19	20	20	20	20	20
Ending Total Cash Balance	\$ 531	\$ 326	\$ 310	\$ 311	\$ 322	\$ 322	\$ 521	\$ 518	\$ 520	\$ 520	\$ 520	\$ 520	\$ 520

Prior to the implementation of the new accounting standard for restricted cash in 2019, restricted cash and restricted cash activity were not reported as cash flow activities



Summary Balance Sheet

\$ million	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23F	FY24P	FY25P	FY26P
Assets:													_
Current Assets	\$ 3,788	\$ 3,506	\$ 3,644	\$ 3,446	\$ 3,417	\$ 3,278	\$ 3,246	\$ 3,498	\$ 3,974	\$ 3,750	\$ 4,078	\$ 4,252	\$ 4,378
Property, Plant, and Equipment	30,350	32,407	34,043	34,947	35,414	35,133	35,579	36,464	36,860	37,465	39,094	42,418	44,464
Investments	1,981	2,011	2,257	2,603	2,862	2,968	3,198	4,053	3,671	4,208	4,496	4,775	5,080
Regulatory and Other Long-term Assets	9,477	10,821	10,550	9,021	6,974	9,088	10,802	8,441	6,683	6,176	5,641	5,742	5,637
Total Assets	45,596	48,745	50,494	50,017	48,667	50,467	52,825	52,456	51,188	51,599	53,309	57,187	59,559
Liabilities and Capitalization:													
Short-term Debt	596	1,034	1,407	1,998	1,216	922	57	780	1,172	504	1,695	1,601	1,357
Current Maturities of Long-term Debt	1,032	32	1,555	1,728	1,032	1,030	1,787	1,028	29	1,022	1,022	1,370	1,020
Other Current Liabilities	2,821	2,869	2,900	2,675	2,606	2,360	2,867	3,171	3,444	3,488	3,410	3,723	3,655
Other Liabilities	11,816	13,757	14,064	13,045	12,223	14,347	16,178	14,549	12,244	11,749	11,048	10,794	10,268
Long-term Debt	23,227	23,850	22,148	21,438	21,307	20,183	19,004	18,463	18,794	18,776	19,211	21,795	24,728
Total Liabilities	39,492	41,542	42,074	40,884	38,384	38,842	39,893	37,991	35,683	35,539	36,386	39,283	41,028
Proprietary Capital	6,104	7,203	8,420	9,133	10,283	11,625	12,932	14,465	15,505	16,060	16,923	17,904	18,531
Total Liabilities and Proprietary Capital	\$ 45,596	\$ 48,745	\$ 50,494	\$ 50,017	\$ 48,667	\$ 50,467	\$ 52,825	\$ 52,456	\$ 51,188	\$ 51,599	\$ 53,309	\$ 57,187	\$ 59,559



Recommendation: 4.5% Base Rate Increase in FY24

Higher inflationary and interest rate environments

Higher-than-anticipated load growth creates need for new debt-funded capacity

Need for debt-funded capacity creates out-year principal and interest payments

Additional capacity builds and innovation require a workforce plan with increased operational capacity

Increasing costs require rate increases



Recommendations

Recommend the Board approve a wholesale base rate adjustment of 4.5% effective October 1, 2023 Recommend the Board approve the FY24 Budget and following related items:

- FY24 Commercial Transactions Contracting Plan and related delegations
- Financing Shelf for up to \$4.0 billion of long-term bonds and associated resolutions
- Final FY23 tax equivalent payments
- Estimated FY24 tax equivalent payments
- Contribution to the Retirement System of \$300 million

- Projects over \$200 million
- Acquisition of Land Rights
- Regulatory Accounting
- Dodd-Frank End-user Exemption
- Retention of the entire margin of net power proceeds
- CEO delegation for construction permit application



Audit, Finance, Risk, and Cybersecurity Committee

Joe Ritch, Chair



People and Governance Committee

Brian Noland, Chair



External Stakeholders and Regulation Committee

Beth Harwell, Chair





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Chattanooga, Tennessee



President's Report

Jeff Lyash
President and CEO

August 24, 2023





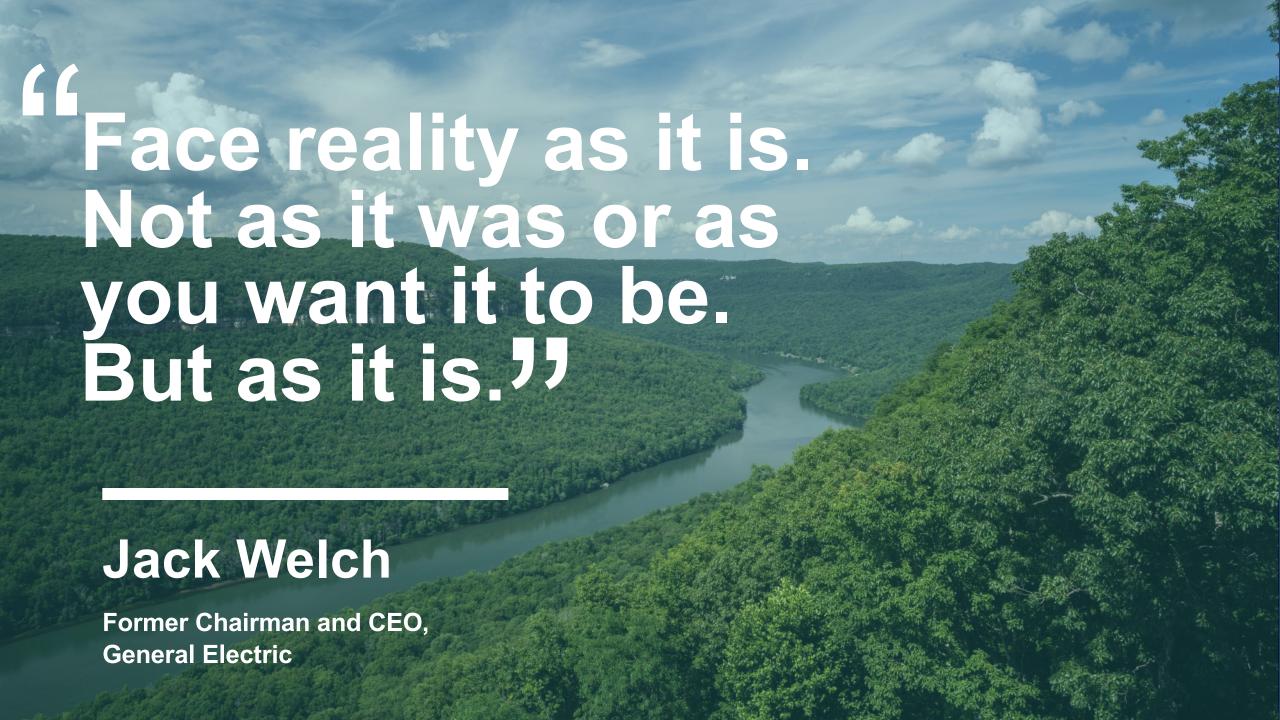














Economic Growth

TVA serves one of the fastest growing regions in the nation – the South. One of the main reasons businesses choose this region is because of cost-competitive, highly reliable and clean energy generated by TVA.





Over past five years

350,000 Jobs

Created & Retained

\$47 Billion

Capital Investment



Economic Growth

Highlights of recent companies locating in our region, thanks to partnership with local power companies and state, regional and local development agencies

Ford Motor Company/SK Battery

Stanton, TN \$5.6 Billion Investment & almost 6,000 Jobs

LG Chem

Clarksville, TN \$3.2 Billion Investment & 860 Jobs

Steel Dynamics

Lowndes County, MS **\$2.5 Billion Investment & 1,000 Jobs**

First Solar

Lawrence County, AL \$1.1 Billion Investment & 700+ Jobs

Novonix

Chattanooga, TN **300 Jobs**





President's Report

Jeff Lyash
President and CEO

August 24, 2023







Energy Demand Reduction

Consumer Bill Savings / Energy Efficiency / Peak Demand Reduction



Peak Reduction

Programs/Actions - Demand Response (Interruptible Power, Peak Power Partners, Voltage Optimization)

Projected Potential Energy Savings – 1,000 - 2,600 MWs



Efficiency Investments

Programs/Actions Equipment and Weatherization Incentives/Rebates • Home Energy Assessments

- Industrial Efficiency Audits Federal Efficiency Funding Strategic Energy Management
- Home/School/Small Business Uplifts

Projected Potential Energy Savings – 3,900 - 4,200 GWh



Everyday Efficiency

Programs/Actions - Voluntary Consumer Actions (Thermostat Adjustments, Appliance Use Delays, Using Fans) • Building Codes and Standards



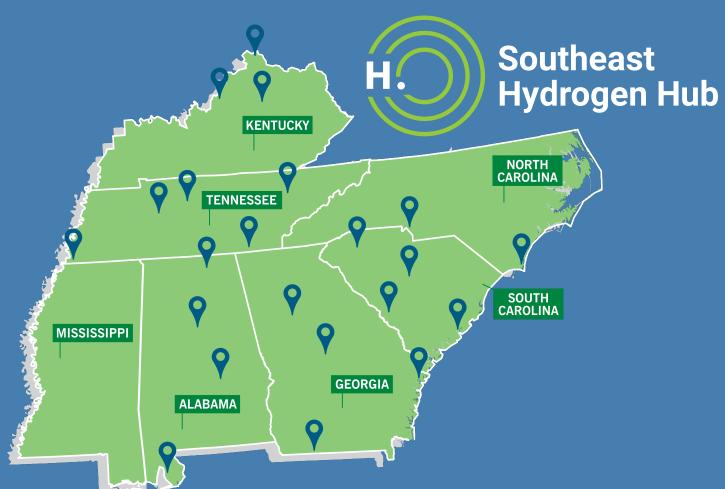








Funding Opportunities



3D Printing Application
Grid Resiliency Funding
18 Projects with LPCs
Partnerships with States
Electric School Buses



Integrated Resource Plan



What is an Integrated Resource Plan?

Developing the energy system of the future and determining the resources that make up that energy system - is a process. It includes working closely with a variety of stakeholders to understand varying viewpoints, as well as evaluating technologies, considering system requirements, studying environmental impacts, projecting demand for power, and modeling potential future scenarios.

To help TVA determine the right approach to providing power now and in the future, the agency is kicking off the next Integrated Resource Plan (IRP) to study how to best meet customer demand for electricity between now and 2050 in a way that is affordable, reliable, resilient and increasingly cleaner.



Now's the time

The TVA Board approved the current IRP in 2019. At the time, the Board directed TVA to monitor key signposts, including demand for electricity, commodity prices, and emerging technology, to inform when the IRP should be re-evaluated and refreshed. The Board also stated the next IRP should be initiated no later than 2024.

How does resource planning work?

TVA will collaborate with a wide variety of stakeholders to envision the energy resources TVA could utilize to meet future demand within a least-cost planning framework. By providing the strategic direction, the IRP serves as the foundation for the next long-range financial plan.

Key steps of the resource planning process include:

- Estimate future customer demand for electricity
- Define the supply of existing resources available to meet customer demand and how those available resources
- Calculate the gap between the existing resource supply and future customer demand
- Identify new energy supply resources to be considered for filling the gap
- Test different resource combinations to evaluate performance ■ Select the preferred combination of resources or target power supply mix

/hat will be included in e IRP?

ource planning is about optimizing the mix of future er supply resources to ensure TVA can meet the er demands of the region

ifically, the IRP will evaluate different ways to ate power, including renewable energy options, y storage, and other generating assets as well as efficiency programs. The evaluation includes ing anticipated ongoing electrification and energy d in the region, system requirements, various f generating assets, environmental impacts.

IRP and the environment

As TVA, the region and the nation, march toward net-zero carbon emissions and a clean energy economy, TVA will assess the region-wide impact of the next IRP on a variety

The IRP study includes an environmental review called an Environmental Impact Statement (EIS) to address TVA's requirements under the National Environmental Policy Act (NEPA). The EIS will assess broad region-wide impacts such as air quality and climate impacts, water resources, land requirements, and socioeconomics and



ler engagement

ement and input is a key component of both developing the IRP as well as the NEPA (National y Act) process. Public meetings – virtual and in-person – will be scheduled over the coming months on the IRP, and a stakeholder working group has been established to work closely with TVA to

eetings will be scheduled when the draft Programmatic Environmental Impact Statement

p for information about the IRP and ways to provide public comments.

om/TVA | STVAnews | STVA

- A collaborative, external stakeholder-focused effort, working with a variety of organizations.
- A risk-informed study that assesses a wide range of potential futures.
- Provides the basis for TVA's asset strategy, including a recommended target power supply mix.



President's Report

Jeff Lyash
President and CEO

August 24, 2023















Pandemic Response

2.5% Pandemic Recovery Credit \$680 Million Through FY23





Financial Response

Long-term
Partner Credits
\$760 Million
Through FY23





President's Report

Jeff Lyash
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TENNESSEE VALLEY AUTHORITY