TVA TENNESSEE VALLEY AUTHORITY

Board Meeting

August 31, 2022
Martin, Tennessee

Opening Remarks

Jeff Lyash
President and CEO

August 31, 2022

TENNESSEE VALLEY AUTHORITY


City of Martin Public Library
chargepoint
AVAILABLE
FAST CHARGE TN
TVA TENNESSEE VALLEY AUTHORITY
Environment & Conservation


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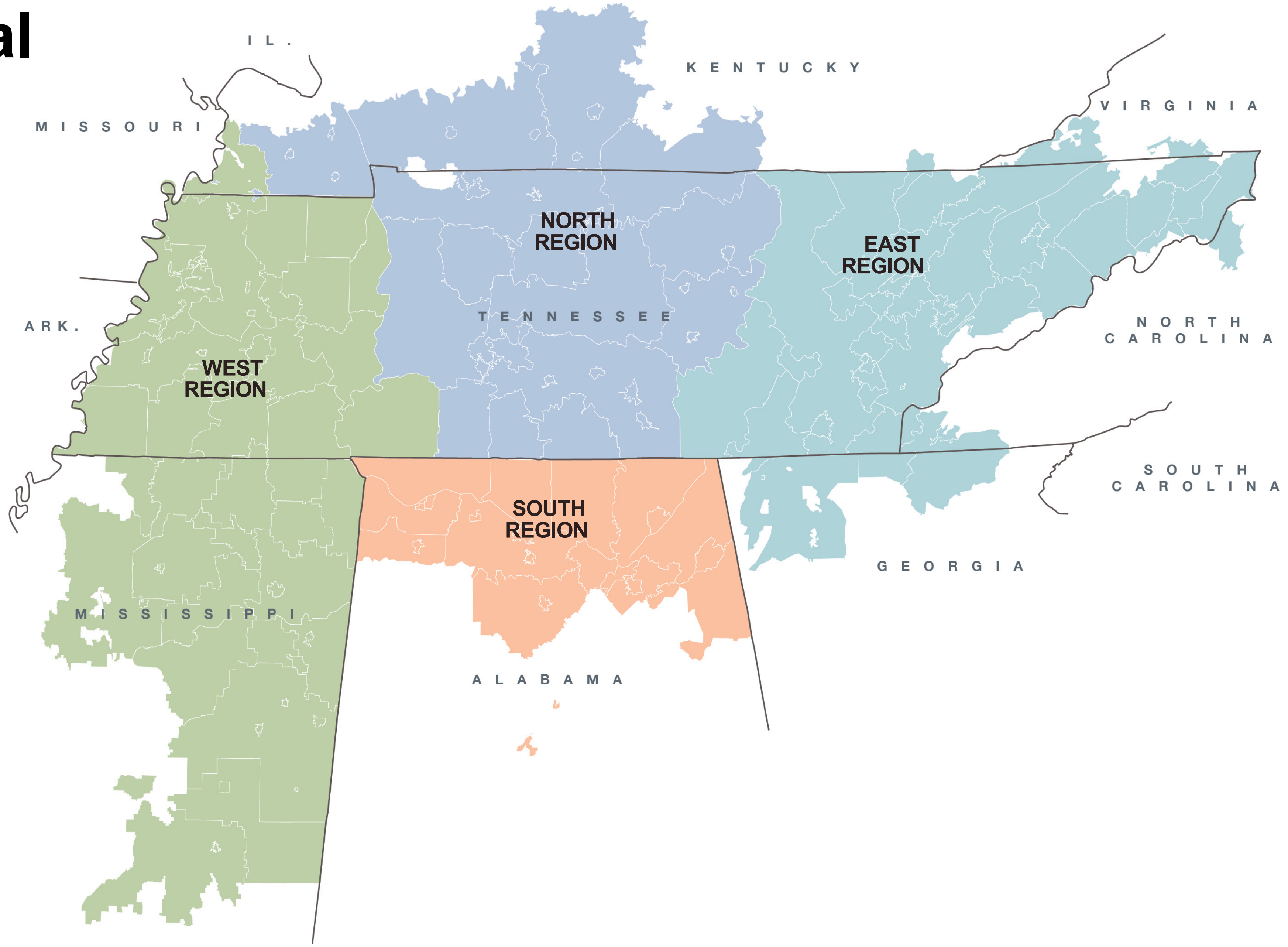
Regional Model



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Public Power

Public power exists to serve and benefit the public good at the local levels – families, communities, businesses and industries.

Opening Remarks

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Increasing Pandemic Recovery Credit

1.5% to 2.5%

On Monthly Wholesale Bills

Financial Response

Pandemic Credits
Long-term Partner Credits

$1.4 Billion

Through FY23

Pandemic Response

Community Care Fund

$11 Million

In Total Donations Since April 2020

Partnering with LPCs to support more than 600 nonprofit and community programs.

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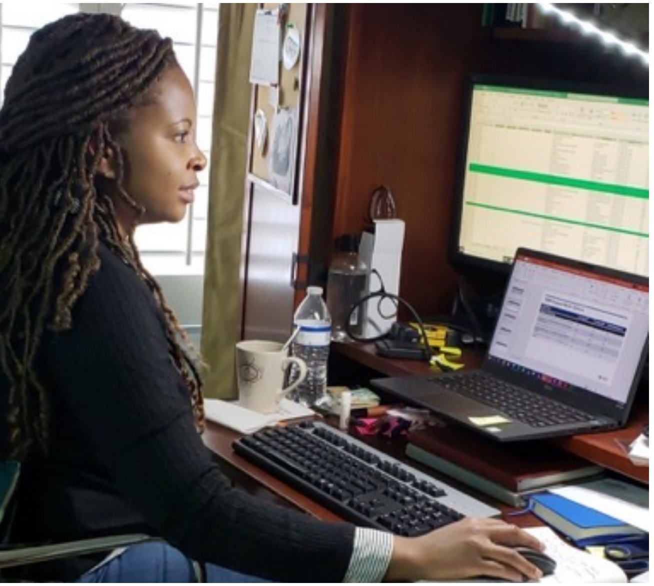

VERSALIFT




Opening Remarks

Jeff Lyash
President and CEO

August 31, 2022

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Board Meeting

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Martin, Tennessee

Operations and Nuclear Oversight Committee

Jeff Smith, Chair

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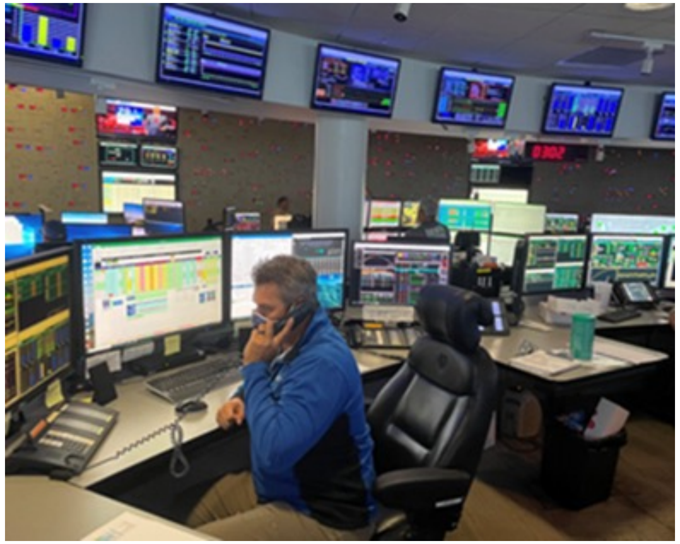
Reliable, Resilient, and Responsible

Don Moul,
Executive Vice President & Chief Operating Officer

August 31, 2022

Operational Excellence

Reliable **Resilient** **Responsible**



Delivering on the Mission and Performing Core Functions,
with Values of Safety, Integrity, Inclusion, and Service as Our Foundation

Summer Performance Overview

- **High temperatures, high humidity, and high loads**
- **Internal system alerts**
- **Record-setting performance**

12 days above 30,000 megawatts in June and July combined – the most in TVA history for June/July

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How High Demands Were Met

- Dedicated, skilled workforce
- Strong generation fleet performance
- Robust transmission system performance
- Optimized river management
- Strong partnerships
- Continuous improvement mindset

Managing the Transition

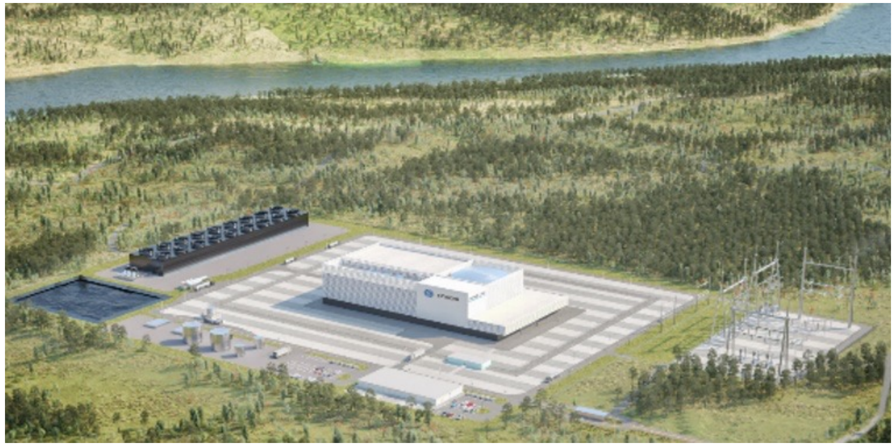
Reliability | **Resiliency** | **Responsibility**

Delivering on the Mission while Transforming for the Future

Reliability

- Operationalize TVA's Asset Strategy
- Explore viability of deploying small modular reactors





Resiliency

- **Continue delivering highly reliable power while integrating the Grid of Tomorrow**
- **Further improve transmission system resiliency readiness**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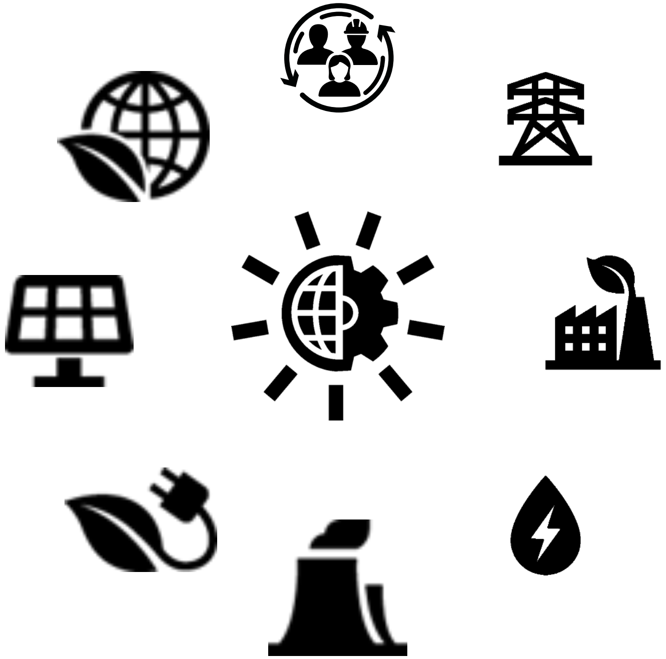
Responsibility

- **Execute Environmental Excellence Plan and lead the region in the transition to Clean Energy Economy**
- **Systematic decision-making with financial discipline**

Success for Today and Tomorrow



Operations and Nuclear Oversight Committee

Jeff Smith, Chair

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Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair

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Financial Update

John Thomas
Executive Vice President
Chief Financial & Strategy Officer

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Q3 Fiscal Year 2022

Net Income of $476 million was $314 million favorable to budget

Total Financing Obligations (TFO) were $643 million favorable to budget

Diverse power system helping to offset fuel prices

Q3 FY22 Summary Income Statement

$ million	FYTD22 Actual	FYTD22 Budget	FYTD22 Variance Fav/(Unfav)	FYTD21 Actual	FYTD21 '22 v '21 Fav/(Unfav)
Base Revenue	$ 5,649	$ 5,452	$ 197	$ 5,486	$ 163
Fuel Revenue*	2,669	1,904	765	1,808	861
Other Revenue	119	100	19	109	10
Total Operating Revenue	**$ 8,437**	**$ 7,456**	**$ 981**	**$ 7,403**	**$ 1,034**
Fuel & Purchased Power	**2,771**	**2,042**	**(729)**	**1,892**	**(879)**
Total O&M	**2,269**	**2,332**	**63**	**2,106**	**(163)**
Taxes, Depreciation, Other	**2,130**	**2,106**	**(24)**	**1,672**	**(458)**
Interest	**791**	**814**	**23**	**824**	**33**
Net Income (Loss)	**$ 476**	**$ 162**	**$ 314**	**$ 909**	**$ (433)**

* Includes off-system sales

Q3 FY22 Summary Cash Flow Statement

$ million	FYTD22			FYTD21	
Net Cash Provided by / (Used in)	**Actual**	**Budget**	**Variance**	**Actual**	**‘22 v ‘21**
Operating Activities	$ 1,834	$ 1,648	$ 186	$ 2,227	$ (393)
Investing Activities	(1,978)	(2,297)	319	(1,698)	(280)
Financing Activities	147	649	(502)	(531)	678
Net Change in Cash	**$ 3**	**$ -**	**$ 3**	**$ (2)**	**$ 5**
Beginning Total Financing Obligations	**$ 20,543**	**$ 20,660**	**$ 117**	**$ 21,421**	**$ 878**
Change in Debt and Financing Obligations	177	703	526	(517)	(694)
Ending Total Financing Obligations	**$ 20,720**	**$ 21,363**	**$ 643**	**$ 20,904**	**$ 184**

Recap of Financial Results

For nine months ended June 30, 2022 – comparison to prior year

Higher sales primarily due to economic growth and weather

All customers benefiting from Pandemic Recovery Credit

Partners realizing significant savings from credits

Diverse power system helping to offset rising energy prices

Continuing to benefit from lower debt balances

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FY23 Pandemic Recovery Credit

Background

In November 2021, the Board of Directors approved a FY23 Pandemic Recovery Credit in the amount of approximately $138 million applied as a 1.5 percent base rate credit based upon strong performance during FY21.

With continued strong performance during FY22, TVA is positioned to increase the Pandemic Recovery Credit for FY23.

The proposed credit is now estimated to be approximately $230 million and will be applied as a 2.5 percent base rate credit to local power companies (LPC) and direct-served (DS) customers beginning in October 2022 through the end of FY23.

Pandemic Recovery Credit

Public Power Benefit

- During FY22, TVA employees delivered positive results as the Valley continued to recover from the pandemic. This strong performance enables us to increase our support of the ongoing recovery and infrastructure needs in the Valley.
- LPCs will be encouraged to pass through the credit to consumers.

The FY23 Pandemic Recovery Credit will apply as follows:

- Base rate (wholesale, non-fuel) credit of 2.5% for TVA's LPCs, their large commercial and industrial customers, and TVA’s directly-served customers
- Will be applied beginning in October 2022 and will remain in effect through the end of FY23

TVA is unable to predict our ability to extend customer credits in future years.

FY23 Budget

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Purpose

Discuss the following FY23 Budget items:

- FY23 Budget
- FY23 Commercial Transactions Contracting Plan
- Financing Shelf for up to $2.0 billion of long-term bonds and associated resolutions
- Final FY22 tax equivalent payments
- Estimated FY23 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

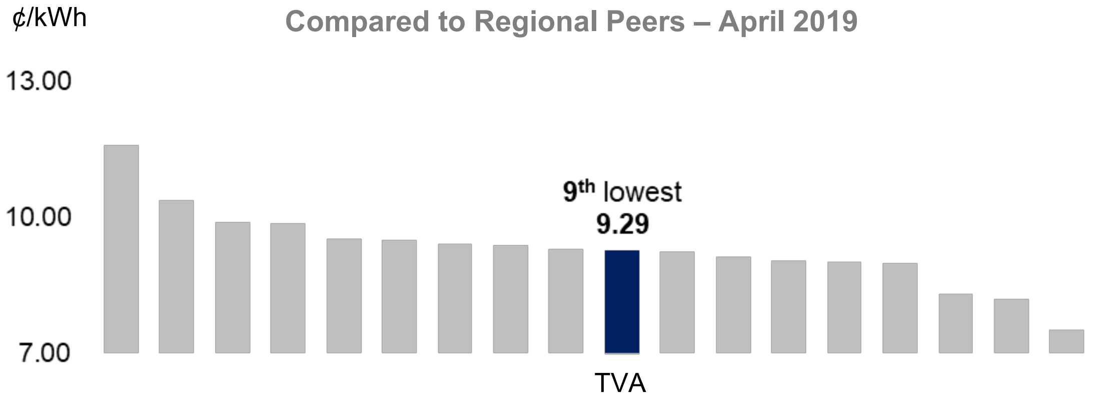
FY30 Strategic Financial Plan

FY30 Strategic Financial Plan objectives strengthen public power model

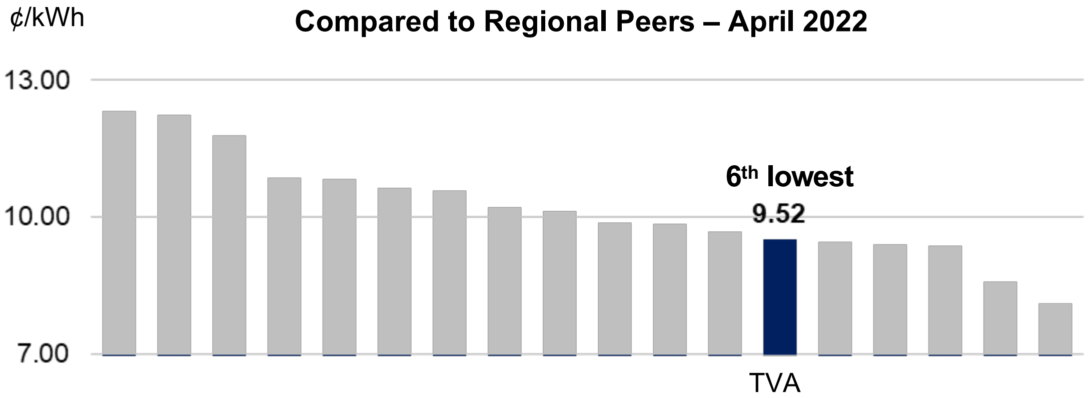
Maintain flat base rates	• Stable wholesale rate • Lower rates for long-term partners
Stabilize debt	• Balance overall capital structure • Align debt with long-term partner participation
Balance Net Portfolio Position	• Deploy commercial strategy to achieve long-term customer commitments • Continue funding for other obligations
Drive efficiencies into the business	• Hold cost escalation below inflation • Improve nuclear performance • Utilize innovation to improve performance
Advance the public power model	• Deliver differentiated products and solutions • Consider risk tradeoffs • Enable future business development

Retail Rate Competitiveness

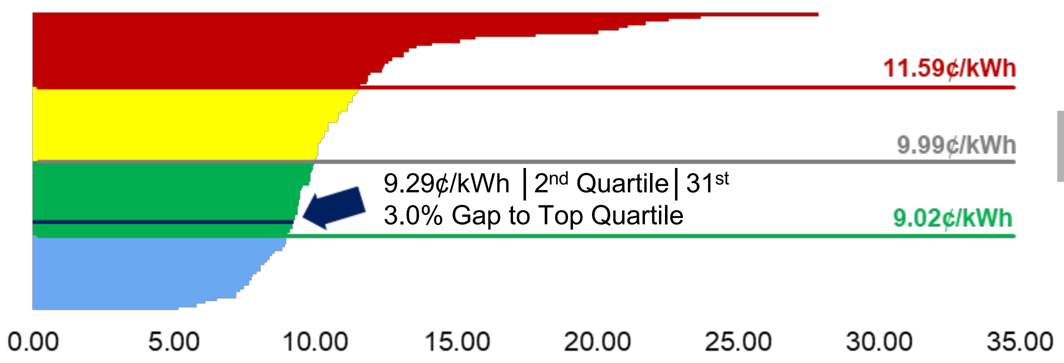
Compared to Regional Peers – April 2019



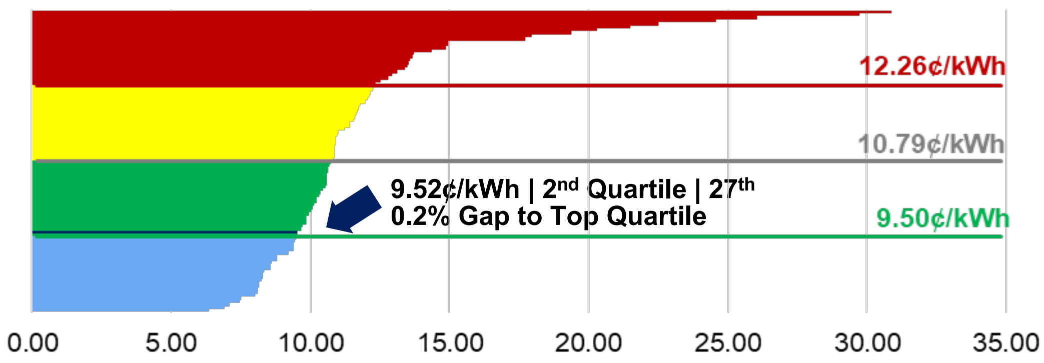
Compared to Regional Peers – April 2022



Among Top 100 U.S. Utilities – April 2019



Among Top 100 U.S. Utilities – April 2022



12-Month Rolling Average (¢/kWh) – Sources: U.S. Energy Information Administration-861M and Electricity Sales Statistics

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Key Planning Assumptions

Load forecast projecting moderate growth (1.0% CAGR FY22-25, 0.7% 10-year CAGR)

Pandemic Recovery Credit of 2.5% at wholesale for FY23

No base rate actions

Assumes 146 LPC partners

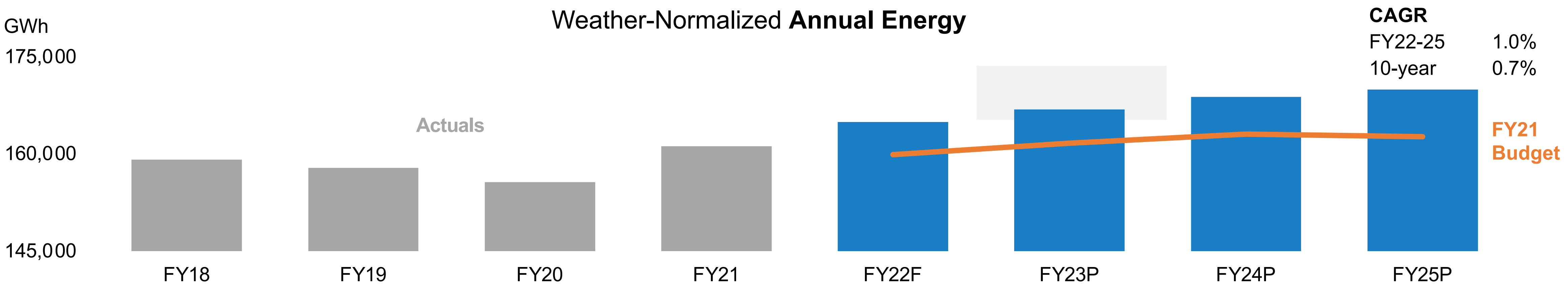
O&M cost pressures materializing

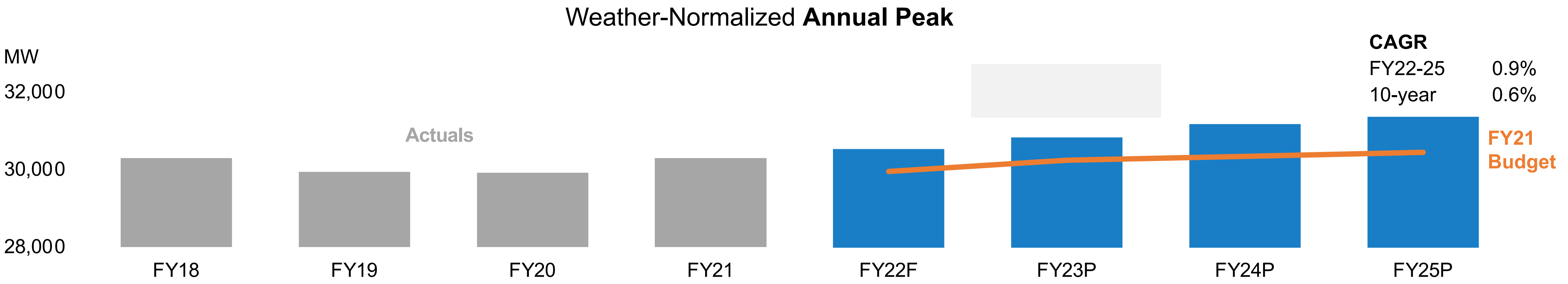
Includes capital consistent with FY23 Budget Power Supply Plan

Continue optimizing lowest variable cost dispatch and improving plant availability

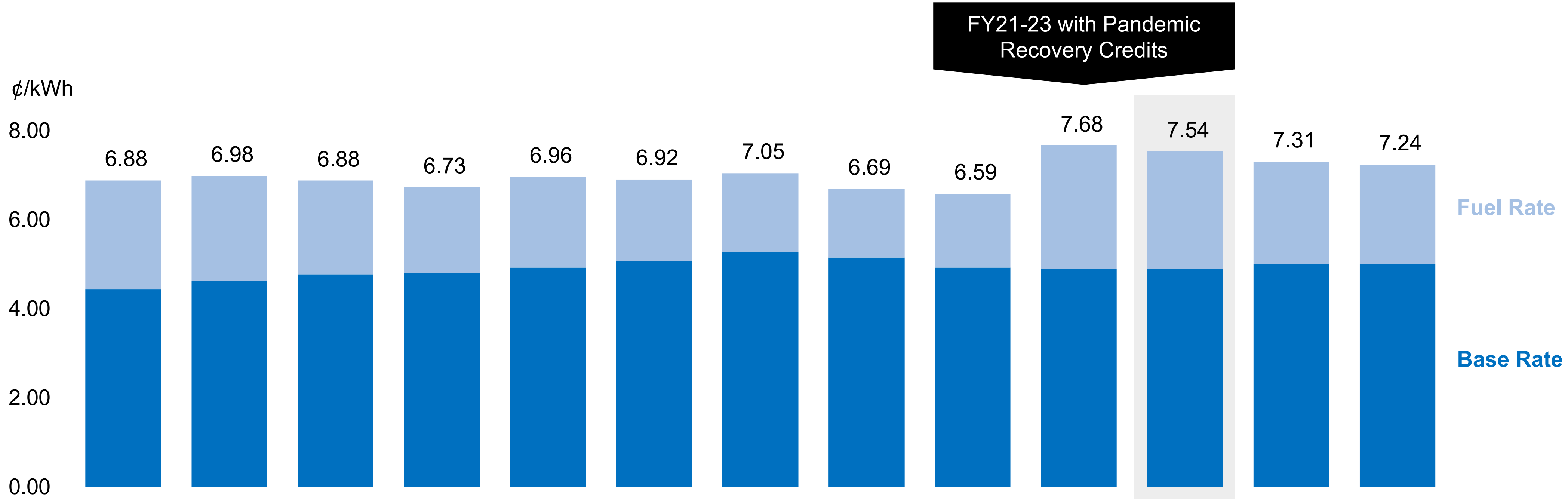
Maintain targeted cash balance of $500 million

Energy Sales and Peak Demand





Base and Fuel Rate



	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22F	FY23P	FY24P	FY25P
Base Rate	4.44	4.64	4.78	4.81	4.93	5.08	5.28	5.16	4.93	4.91	4.91	5.01	5.01
Fuel Rate	2.44	2.34	2.10	1.92	2.03	1.84	1.77	1.53	1.66	2.77	2.63	2.30	2.23
Wholesale Rate	**6.88**	**6.98**	**6.88**	**6.73**	**6.96**	**6.92**	**7.05**	**6.69**	**6.59**	**7.68**	**7.54**	**7.31**	**7.24**

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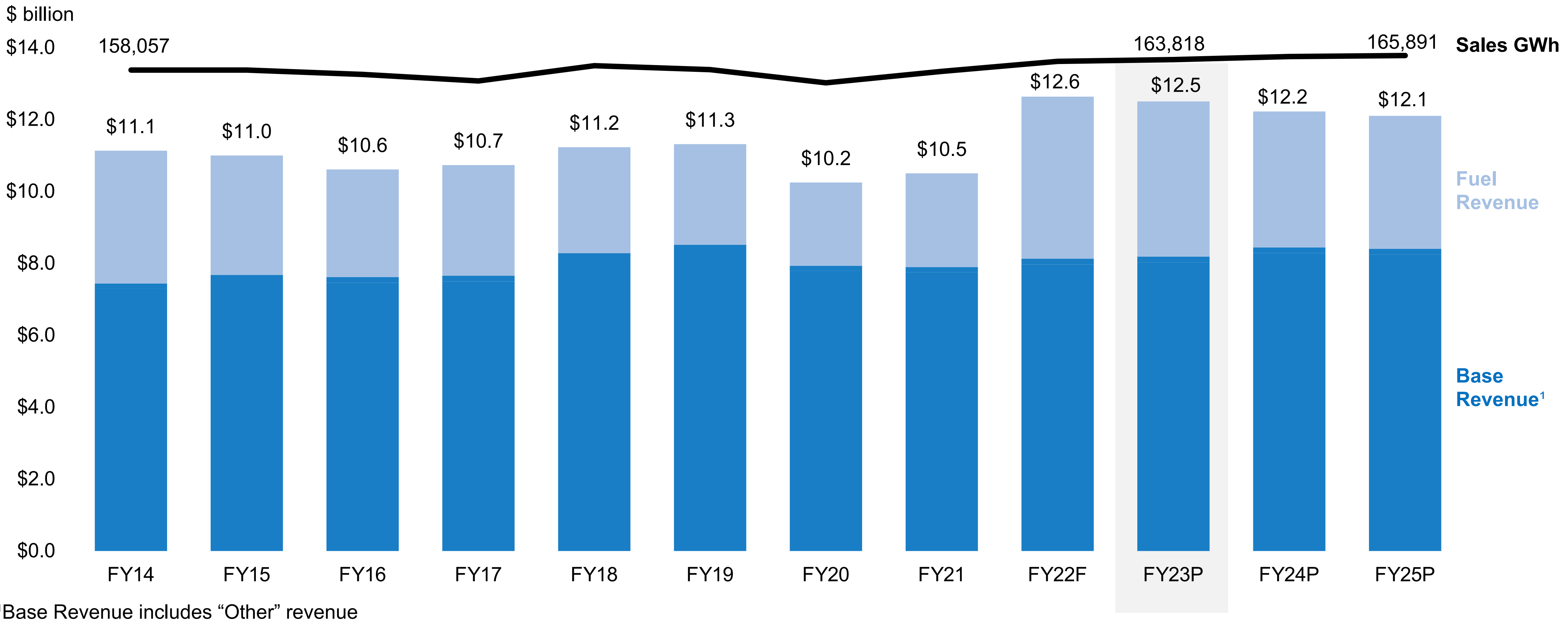
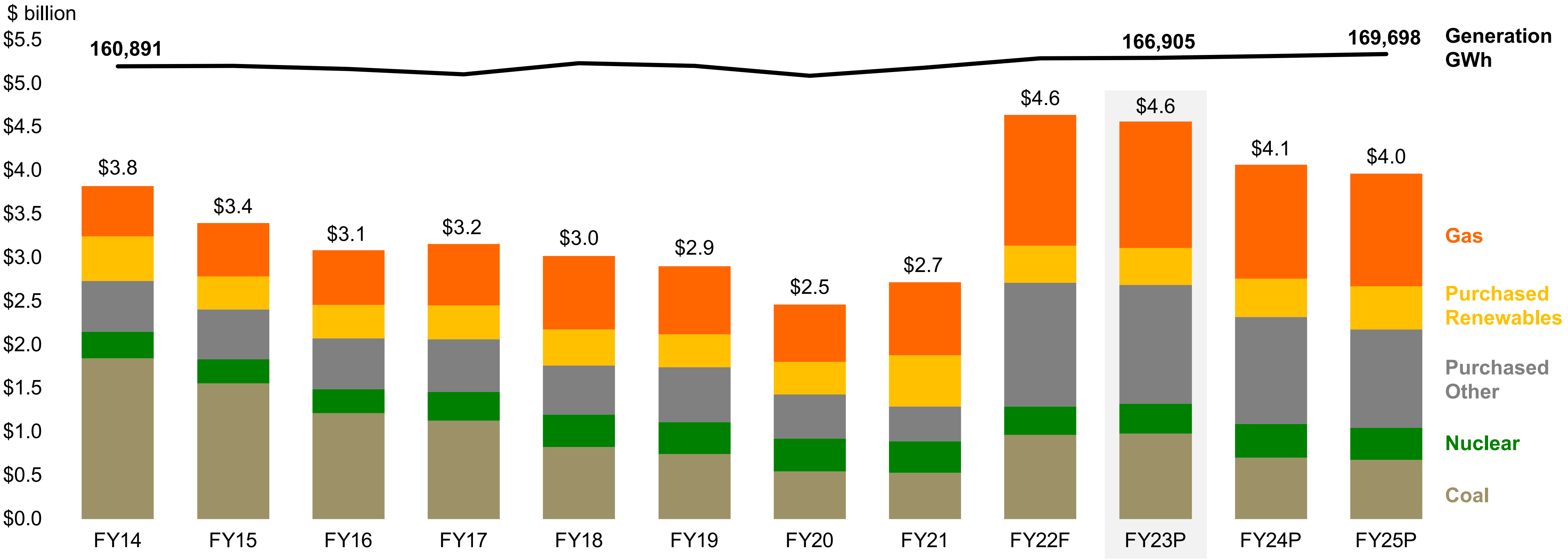
Operating Revenue



[1]Base Revenue includes "Other" revenue

Fuel and Purchased Power



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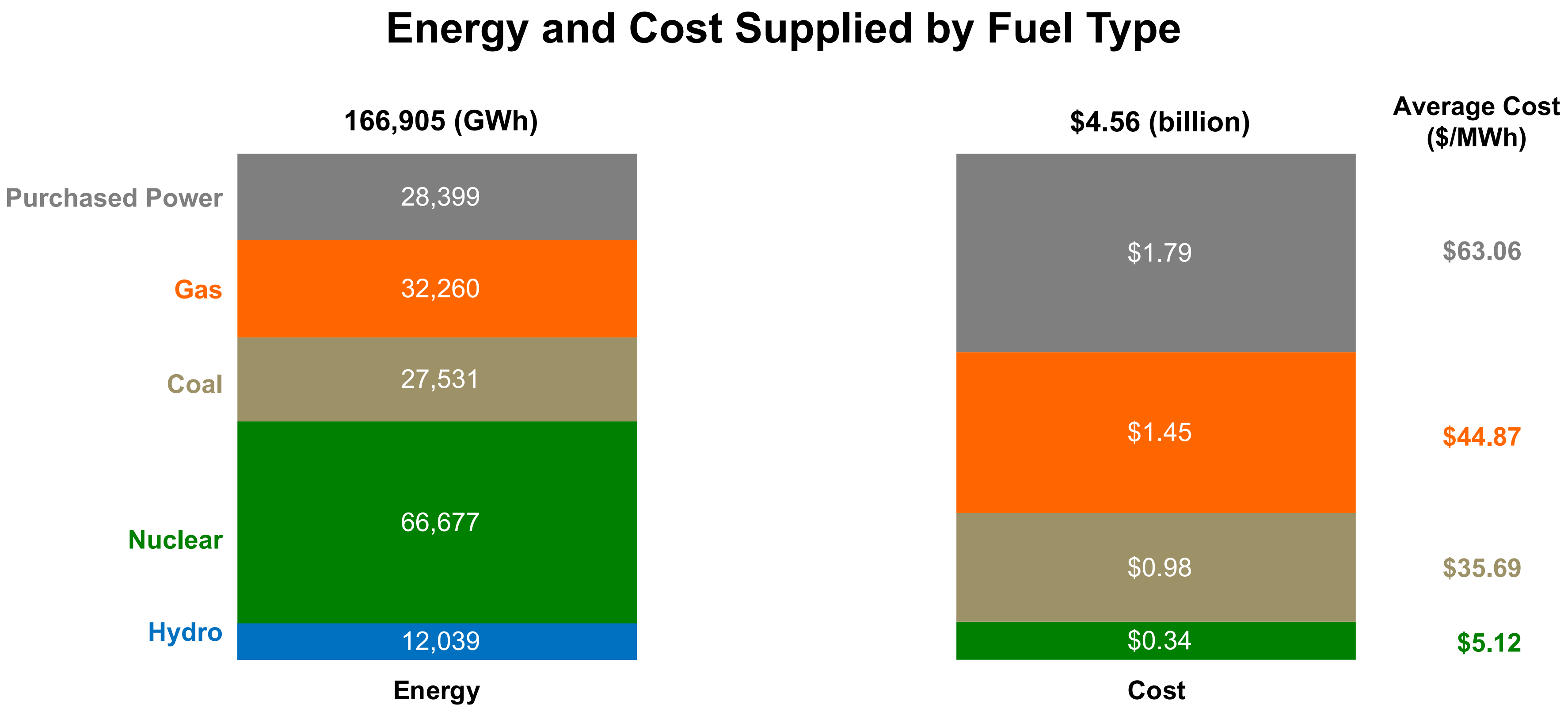
FY23 Fuel and Purchased Power Breakdown



Generation Mix and Percent Hedged

As natural gas becomes a larger portion of the portfolio, the volatility of natural gas prices becomes a greater risk

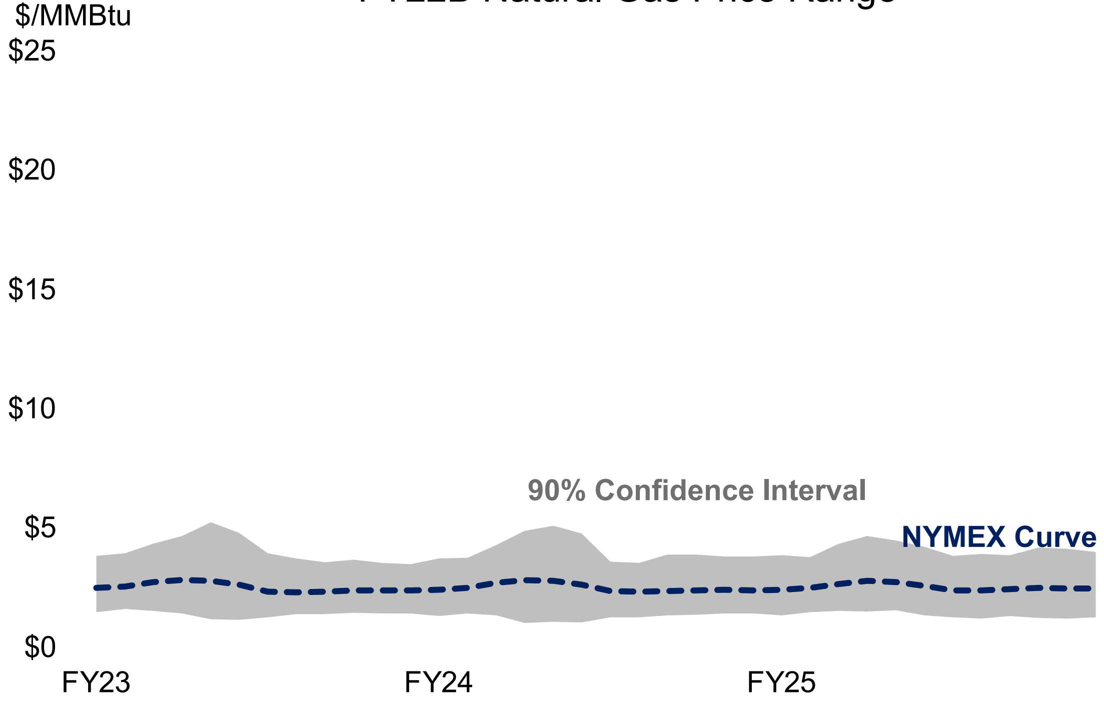
	FY23P		FY24P		FY25P	
Fuel	**Generation Mix**	**Price Hedged**	**Generation Mix**	**Price Hedged**	**Generation Mix**	**Price Hedged**
Hydro	7%	100%	7%	100%	7%	100%
Nuclear	40%	100%	40%	100%	40%	99%
Purchased Power	8%	89%	8%	89%	9%	89%
Coal	16%	70%	12%	22%	11%	10%
Natural Gas*	29%	37%	32%	19%	33%	5%
Total/Weighted Average	100%	76%	100%	64%	100%	57%

*Includes purchased power agreements with underlying natural gas price exposure. Generation mix and hedged percentages subject to change based on commodity price movements and additional fixed price transactions.

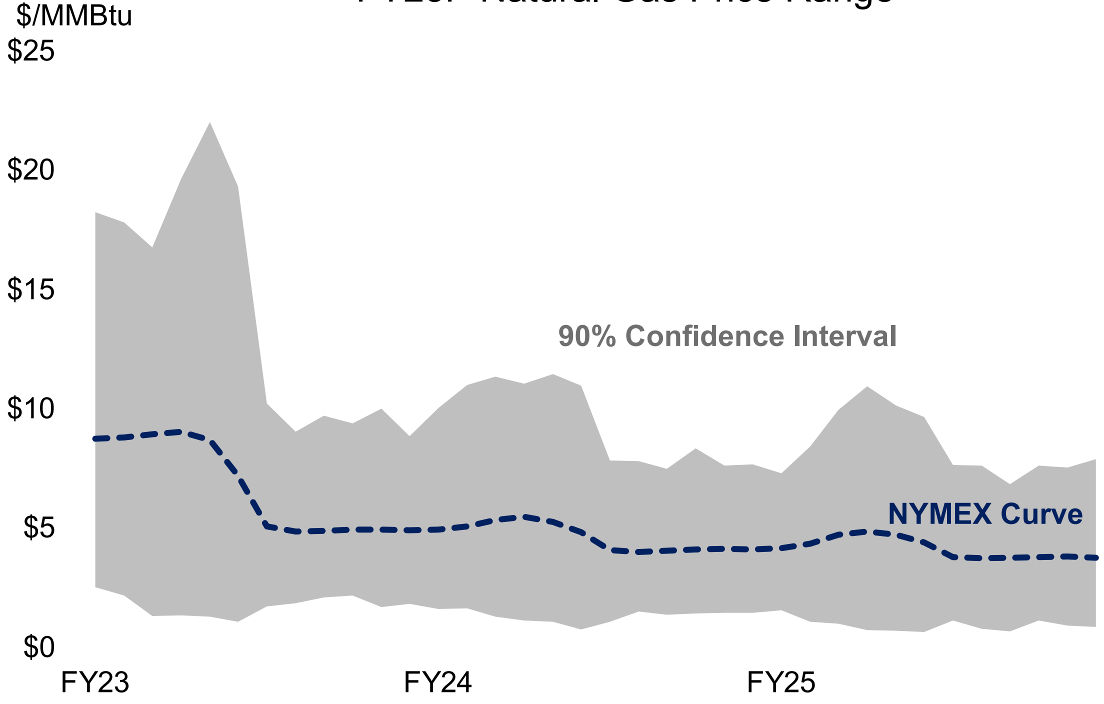
Natural Gas Price Volatility

FY23 Plan reflects elevated and volatile gas prices

FY22B Natural Gas Price Range



FY23P Natural Gas Price Range



NYMEX curve shown as of 05/05/2022 (FY23P) and 04/06/2021 (FY22B)

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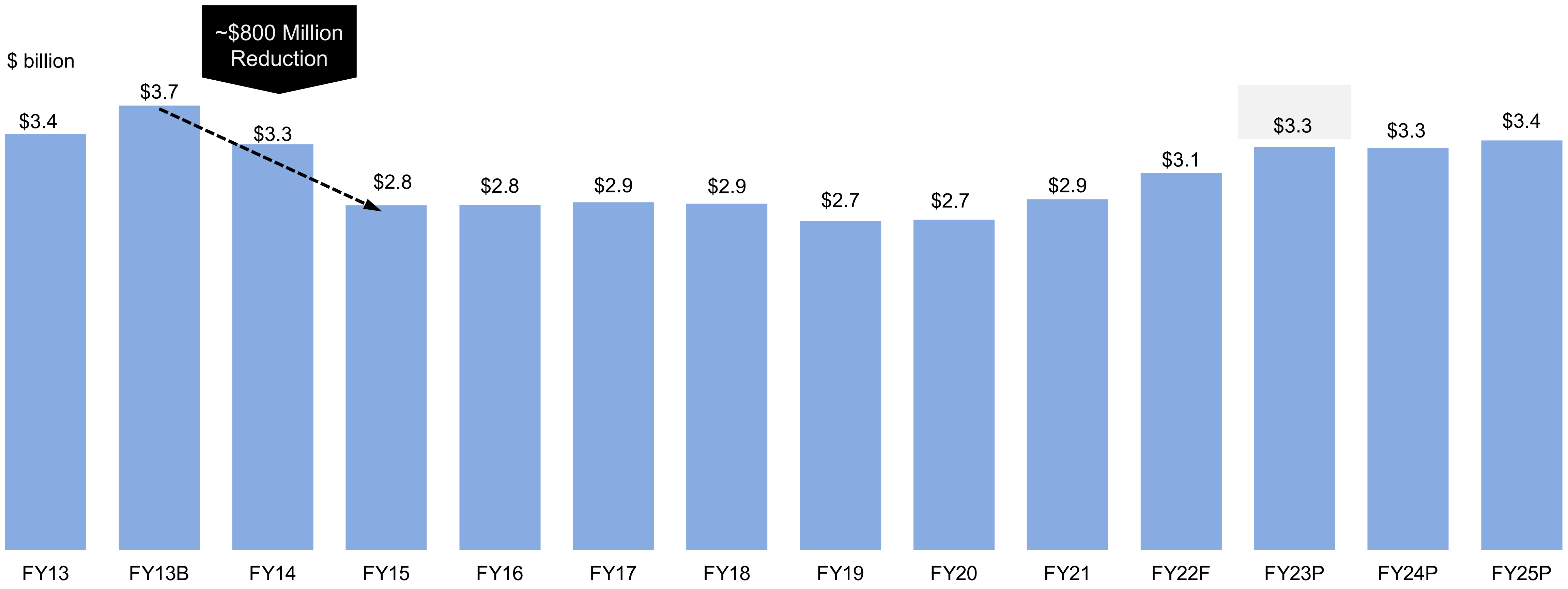
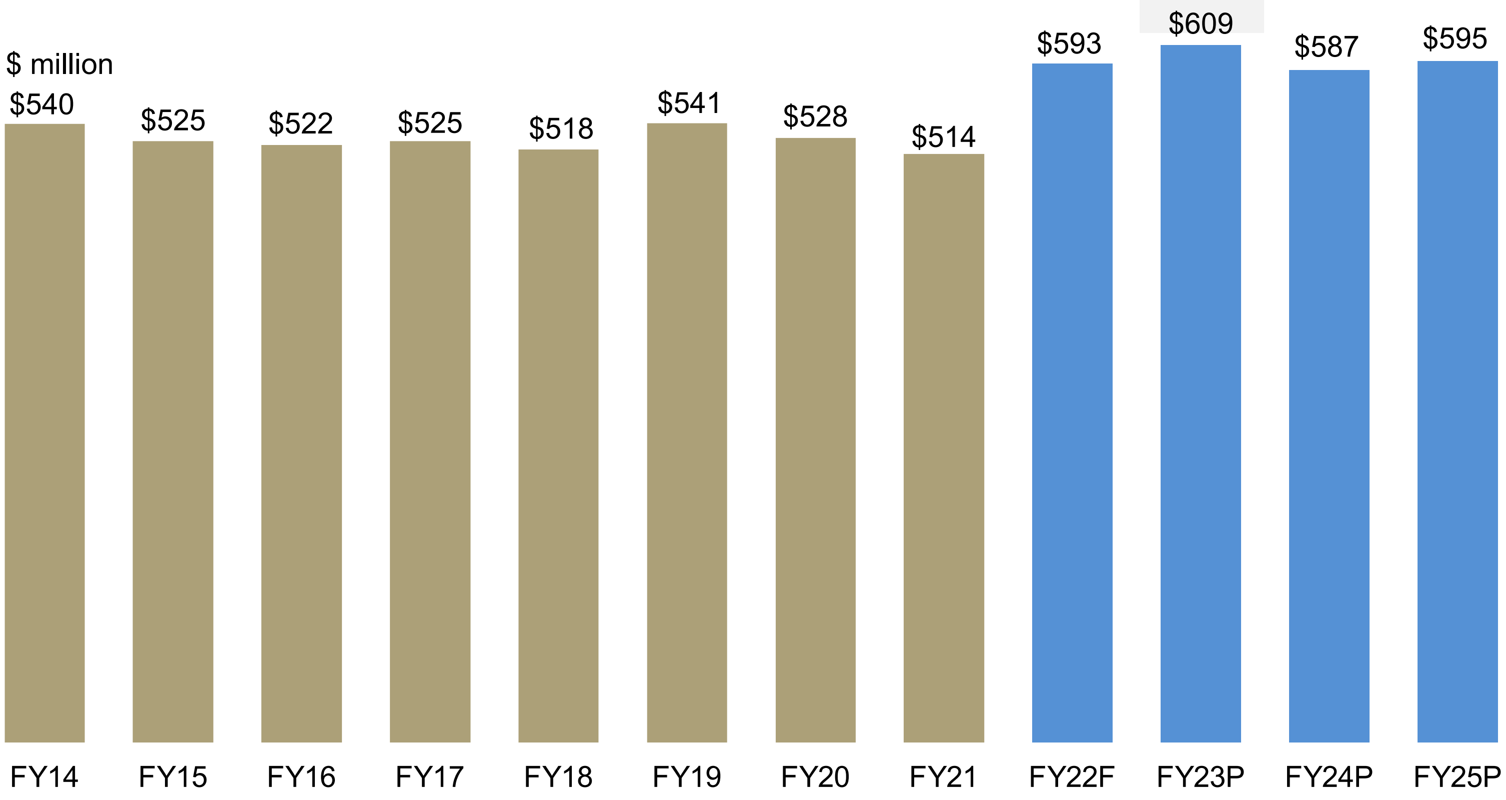
O&M Expense



Excludes FY17 and FY19 unusual items – Discretionary pension contribution, Bull Run and Paradise write-offs, and Kingston Regulatory Asset amortization

Tax Equivalents



Tax Equivalent – Final Payments by State

$ million	FY21	FY22	Delta
Tennessee	$340	$345	$ 5
Alabama	79	83	4
Mississippi	38	39	1
Kentucky	30	32	2
Georgia	8	8	-
North Carolina	3	3	-
Virginia	1	1	-
Illinois	1	1	-
Final Payments	$500	$512	$ 12
Fuel Cost Adjustment	14	81	67
Total Expense	**$514**	**$593**	**$ 79**

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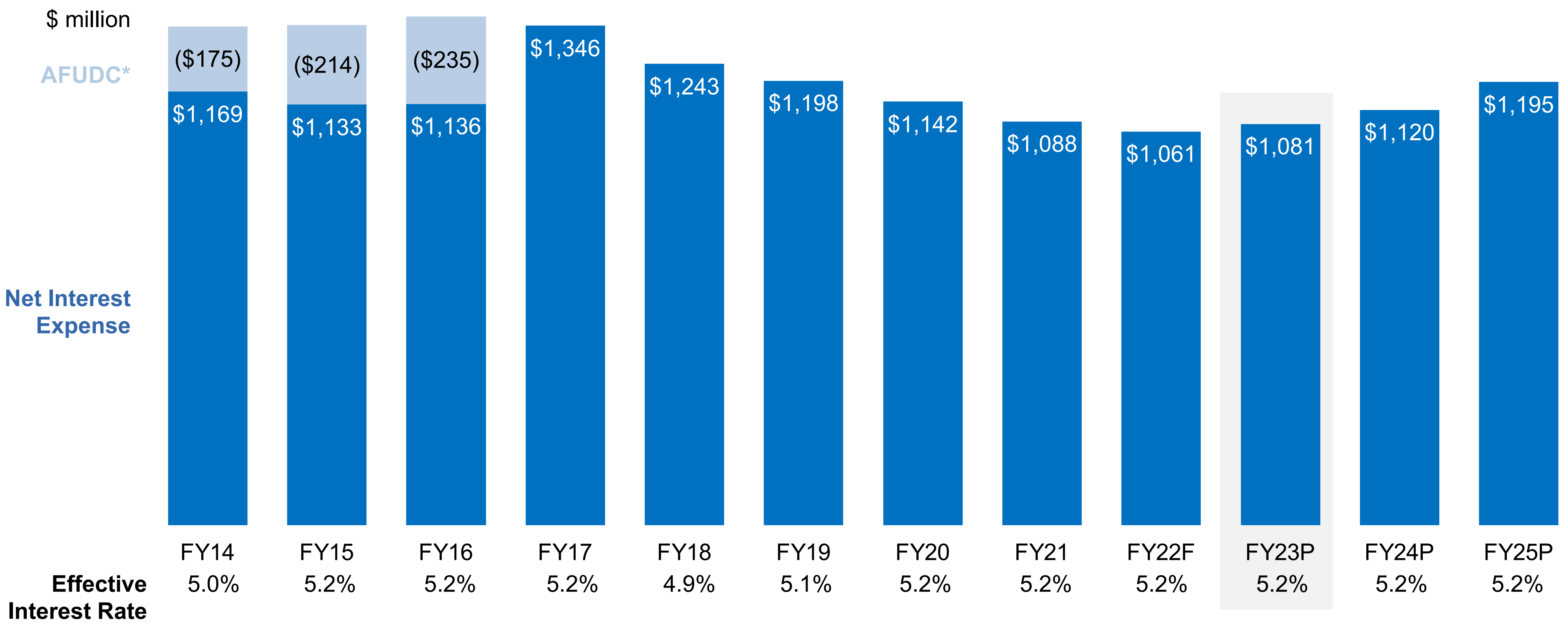
Interest Expense



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

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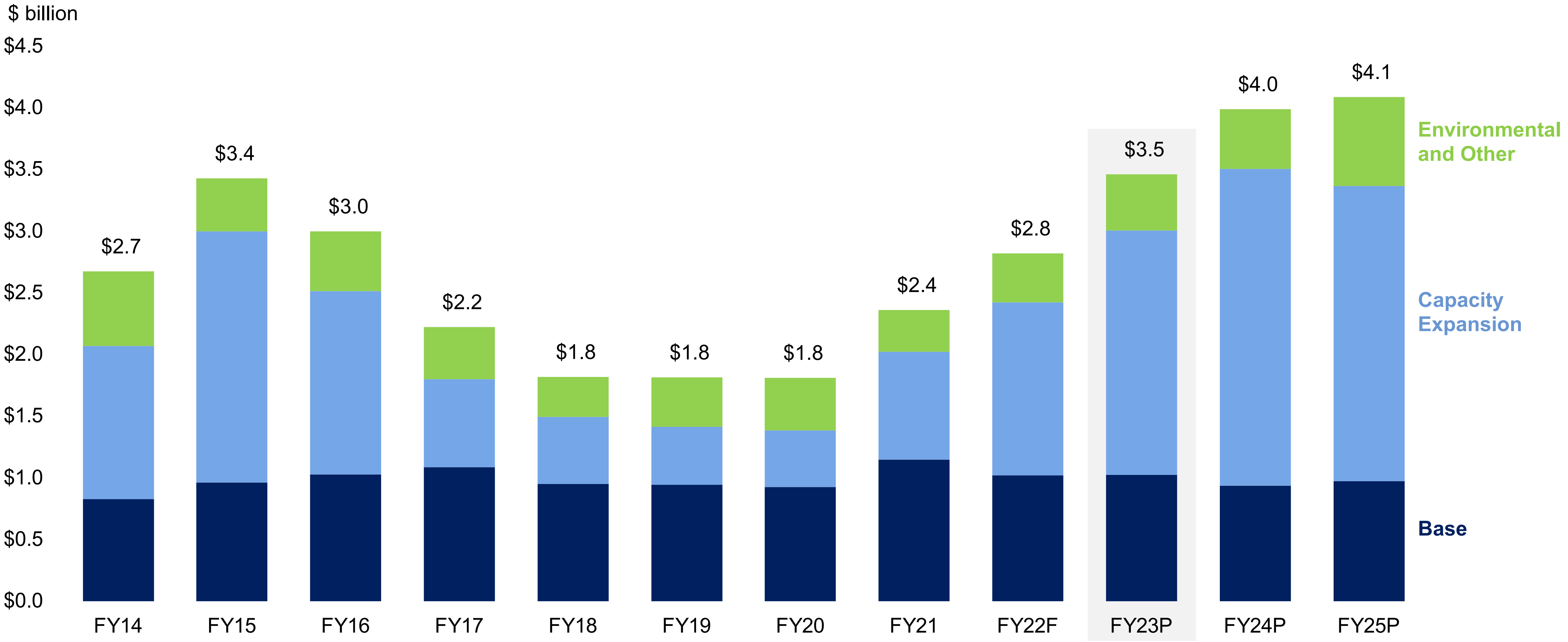
Capital Expenditures



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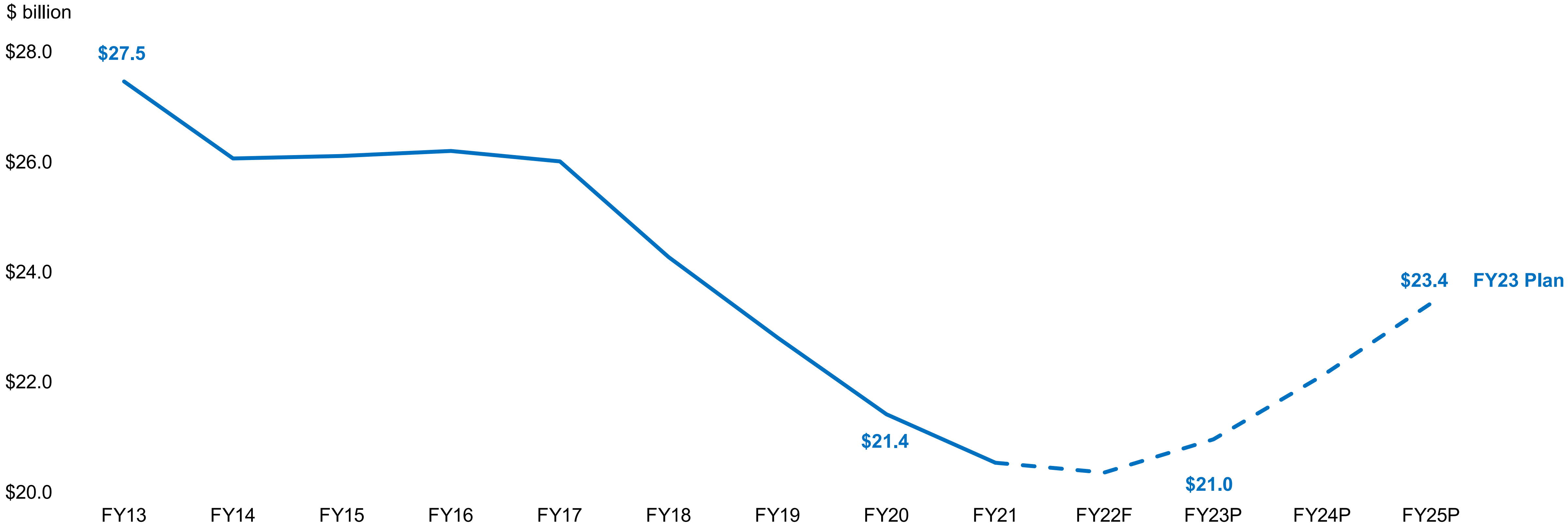
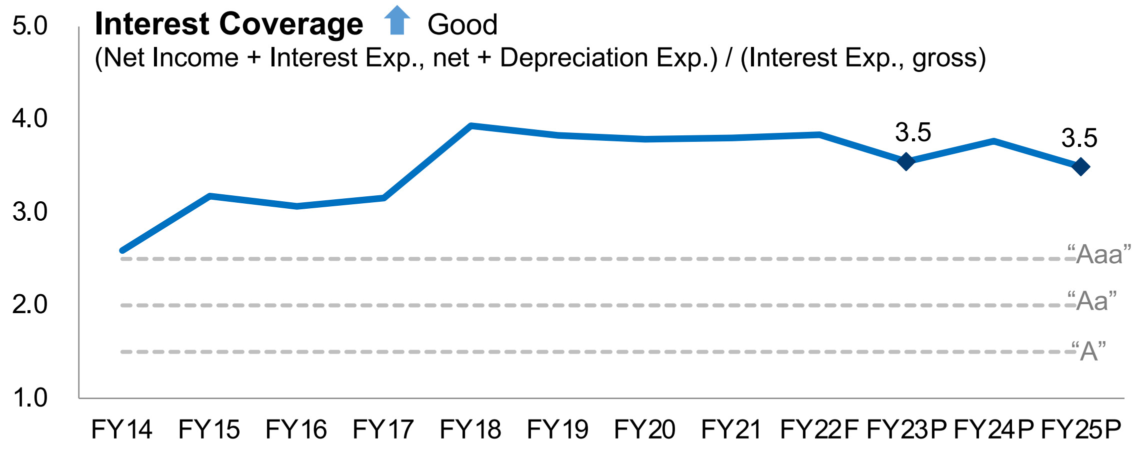
Total Financing Obligations (TFO)

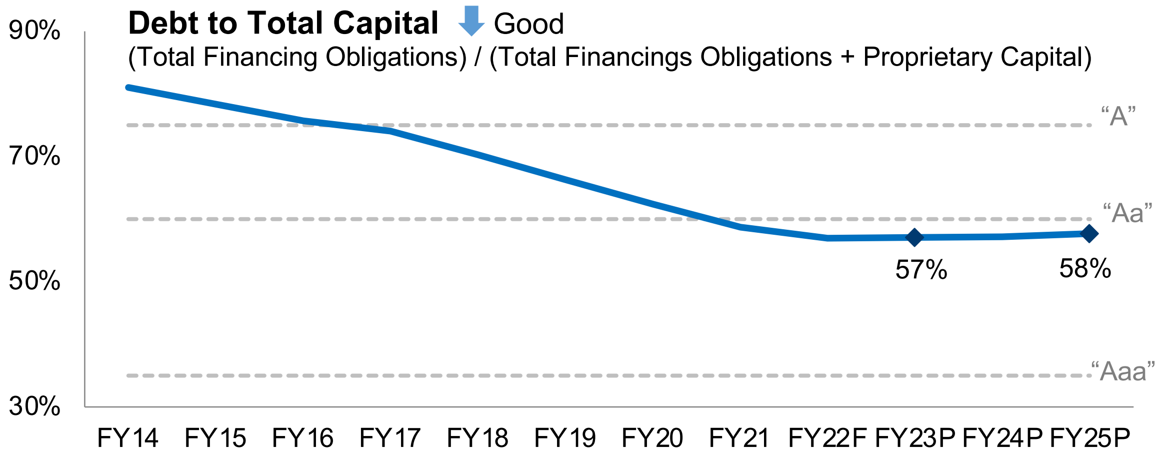
Increased system demand brings more near-term cost pressure than base revenue

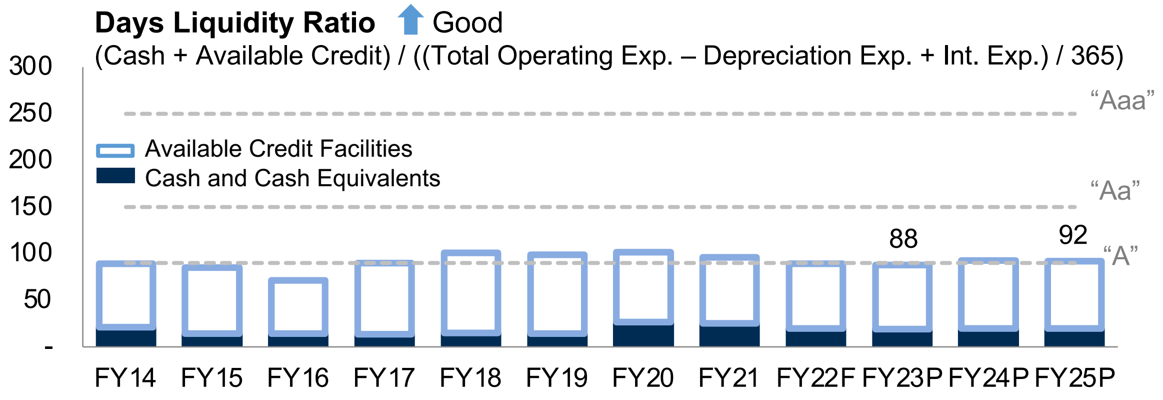


Includes 146 current partners as of 06/23/2022
TFO includes statutory and other debt issuances

Financial Health Metrics







Note: The $500 million one-time, discretionary contribution to the pension in FY17 has been excluded from all income statement ratio components

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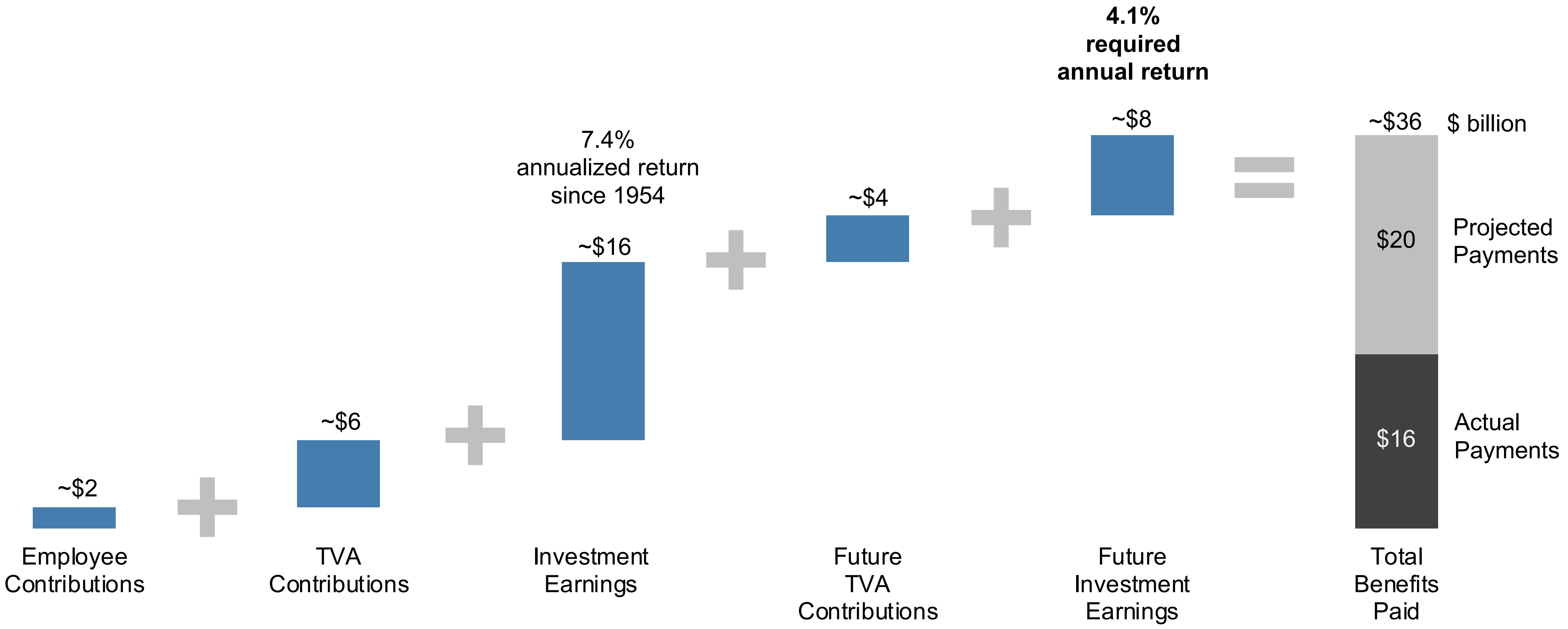
Retirement System Performance

Historical return levels are not required to meet remaining projected payments



Actuals results reflected through 05/31/2022

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Revenue Requirements

$ million	FY22B	FY22F	FY23P	FY24P	FY25P
Base Revenues	7,879	8,203	8,266	8,286	8,251
Fuel Revenues	2,629	4,509	4,315	3,794	3,702
Rate Action Revenues	-	-	-	-	-
Pandemic Recovery Credit	(220)	(227)	(230)	-	-
Total Electric Revenues	**$ 10,288**	**$ 12,485**	**$ 12,351**	**$ 12,080**	**$ 11,953**
Fuel	2,815	4,641	4,562	4,067	3,966
Operating and Maintenance	3,049	3,102	3,320	3,310	3,373
Base Capital	1,089	1,020	1,024	938	973
Interest	1,088	1,061	1,081	1,120	1,195
Tax Equivalents	514	593	609	587	595
Other	149	68	(70)	160	52
Total Operational Spend	**$ 8,704**	**$ 10,485**	**$ 10,526**	**$ 10,182**	**$ 10,154**
Funds Available for Debt Paydown	**$ 1,584**	**$ 2,000**	**$ 1,825**	**$ 1,898**	**$ 1,799**
Expansion and Environmental Capital*	2,187	1,822	2,430	3,054	3,116
Change in Cash	(200)	-	-	-	-
Debt Paydown	(1,584)	(2,000)	(1,825)	(1,898)	(1,799)
Change in TFO	**$ 403**	**$ (178)**	**$ 605**	**$ 1,156**	**$ 1,317**
Ending TFO Balance	**21,063**	**20,365**	**20,970**	**22,126**	**23,443**

*Expansion and Environmental Capital includes Ash Remediation ARO spend

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Summary Income Statement

$ million	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22B	FY22F	FY23P	FY24P	FY25P
Operating Revenue	**$ 11,137**	**$ 11,003**	**$ 10,616**	**$ 10,739**	**$ 11,233**	**$ 11,318**	**$ 10,249**	**$ 10,503**	**$ 10,421**	**$ 12,638**	**$ 12,505**	**$ 12,236**	**$ 12,111**
Fuel and Purchased Power	3,824	3,394	3,090	3,160	3,022	2,903	2,464	2,721	2,815	4,641	4,562	4,067	3,966
Operating and Maintenance	3,341	2,838	2,842	3,362	2,854	3,090	2,720	2,890	3,049	3,102	3,320	3,310	3,373
Depreciation and Amortization	1,843	2,031	1,836	1,717	2,527	1,973	1,826	1,533	2,097	2,084	2,339	2,296	2,335
Taxes	540	525	522	525	518	541	528	514	514	593	609	587	595
Operating Expenses	**9,548**	**8,788**	**8,290**	**8,764**	**8,921**	**8,507**	**7,538**	**7,658**	**8,475**	**10,420**	**10,830**	**10,260**	**10,269**
Operating Income	**1,589**	**2,215**	**2,326**	**1,975**	**2,312**	**2,811**	**2,711**	**2,845**	**1,946**	**2,218**	**1,675**	**1,976**	**1,842**
Other Income / (Expense)	49	29	43	56	50	62	36	13	24	27	18	18	18
Other Net Periodic Benefit Cost	-	-	-	-	-	(258)	(253)	(258)	(237)	(259)	(197)	(71)	(24)
Interest Expense	1,344	1,347	1,371	1,346	1,243	1,198	1,142	1,088	1,088	1,061	1,081	1,120	1,195
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**	**1,088**	**1,061**	**1,081**	**1,120**	**1,195**
Net Income	**$ 469**	**$ 1,111**	**$ 1,233**	**$ 685**	**$ 1,119**	**$ 1,417**	**$ 1,352**	**$ 1,512**	**$ 645**	**$ 925**	**$ 415**	**$ 803**	**$ 641**

*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	FY22B	FY22F	FY23P	FY24P	FY25P
Cash Flows from Operating Activities	$ 2,980	$ 3,315	$ 3,042	$ 2,736	$ 3,955	$ 3,720	$ 3,636	$ 3,256	$ 2,643	$ 3,006	$ 3,036	$ 2,783	$ 2,479
Cash Flows from Investing Activities	(2,756)	(3,585)	(3,113)	(2,536)	(2,269)	(2,243)	(2,015)	(2,338)	(3,165)	(2,765)	(3,553)	(3,855)	(3,712)
Cash Flows from Financing Activities	(1,326)	70	71	(200)	(1,687)	(1,477)	(1,422)	(921)	322	(238)	517	1,072	1,233
Net Change in Cash	(1,102)	(200)	-	-	(1)	-	199	(3)	(200)	3	-	-	-
Beginning Cash Balance	1,602	500	300	300	300	299	299	500	500	497	500	500	500
Balance Excluding Restricted Cash	500	300	300	300	299	299	500	497	300	500	500	500	500
Restricted Cash Balance	31	26	10	11	23	23	21	21	19	20	20	20	20
Ending Total Cash Balance	**$ 531**	**$ 326**	**$ 310**	**$ 311**	**$ 322**	**$ 322**	**$ 521**	**$ 518**	**$ 319**	**$ 520**	**$ 520**	**$ 520**	**$ 520**

Summary Balance Sheet

$ million	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22B	FY22F	FY23P	FY24P	FY25P
Assets:													
Current Assets	$ 3,788	$ 3,506	$ 3,644	$ 3,446	$ 3,417	$ 3,278	$ 3,246	$ 3,498	$ 3,088	$ 4,223	$ 3,929	$ 4,022	$ 3,979
Property, Plant and Equipment	30,350	32,407	34,043	34,947	35,414	35,133	35,579	36,464	37,211	36,980	37,832	39,180	40,263
Investments	1,981	2,011	2,257	2,603	2,862	2,968	3,198	4,053	4,004	4,304	4,518	4,702	4,900
Regulatory and Other Long-term Assets	9,477	10,821	10,550	9,021	6,974	9,088	10,802	8,441	7,592	7,347	7,129	7,003	6,922
Total Assets	**45,596**	**48,745**	**50,494**	**50,017**	**48,667**	**50,467**	**52,825**	**52,456**	**51,895**	**52,854**	**53,408**	**54,907**	**56,064**
Liabilities and Capitalization:													
Short-term Debt	596	1,034	1,407	1,998	1,216	922	57	780	900	1,202	1,377	2,091	1,749
Current Maturities of Long-term Debt	1,032	32	1,555	1,728	1,032	1,030	1,787	1,028	29	29	1,022	1,022	1,370
Other Current Liabilities	2,821	2,869	2,900	2,675	2,606	2,360	2,867	3,171	2,960	4,025	3,954	4,011	4,027
Other Liabilities	11,816	13,757	14,064	13,045	12,223	14,347	16,178	14,549	13,092	13,319	12,937	12,439	11,861
Long-term Debt	23,227	23,850	22,148	21,438	21,307	20,183	19,004	18,463	19,896	18,886	18,320	18,753	19,835
Total Liabilities	39,492	41,542	42,074	40,884	38,384	38,842	39,893	37,991	36,877	37,461	37,610	38,316	38,842
Proprietary Capital	6,104	7,203	8,420	9,133	10,283	11,625	12,932	14,465	15,018	15,393	15,798	16,591	17,222
Total Liabilities and Proprietary Capital	**$ 45,596**	**$ 48,745**	**$ 50,494**	**$ 50,017**	**$ 48,667**	**$ 50,467**	**$ 52,825**	**$ 52,456**	**$ 51,895**	**$ 52,854**	**$ 53,408**	**$ 54,907**	**$ 56,064**

TENNESSEE VALLEY AUTHORITY

Meeting Financial Objectives

FY30 Strategic Financial Plan remains on track

Rates remain competitive

Stronger public power model with 146 LPC partners

More than $1.4 billion in partner and pandemic recovery credits through FY23

Debt remains stable and below $21.8 billion through FY23

Opportunity to advance the public power model

Out-year risks are increasing, but effectively managed

Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair

TENNESSEE VALLEY AUTHORITY

Expanded Flexibility Option

Doug Perry
Senior Vice President
Commercial Energy Solutions

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Purpose and Background

Purpose

Request that the Board approve revised Flexibility Principles and authorize the CEO, or his designee, to approve certain modifications to the Flexibility Option.

Background

The Flexibility Option was made available in June 2020 and developed through structured engagement with Valley Partners.

As of June 2022, 78 Valley Partners have signed the Flexibility Option and ~100 MW of projects have been approved.

Through discussions with Valley Partners, constraints have been identified with the Flexibility Option, including limitations on available land and the ability to aggregate demand for larger projects.

In order to address these constraints, we are asking the Board to approve certain revisions to the Flexibility Principles and authorize the CEO to adjust the Flexibility Option.

February 2020 Board-approved Flexibility Principles

1. Each Valley Partner may deploy energy resources in an aggregated capacity amount not to exceed the greater of (1) 5% of that Valley Partner's energy, where energy is the average hourly capacity usage, initially over TVA fiscal years 2015 through 2019, or (2) 1 MW of aggregated capacity.
2. Valley Partner energy resources will either displace demand and energy usage that TVA would have otherwise charged to the Valley Partner under the prevailing wholesale power rate structure; or Valley Partner energy resources will be treated in accordance with an economically equivalent wholesale crediting mechanism.
3. A Valley Partner's energy resource implementation must be consistent with TVA's Integrated Resource Plan to help ensure that TVA's system carbon position is improved.
4. Energy resource sites must be documented, metered, operated, and connected in a manner consistent with applicable TVA standards.
5. All Valley Partner energy resource facilities, regardless of scale, must be located in the Valley.
6. Valley Partner energy resource electrical output must be provided or distributed to the interconnected Valley Partner or TVA and all energy resource environmental attributes must benefit Valley customers' carbon positions. For any aggregated project, participating Valley Partners would receive economic benefits consistent with their contributions.

Recommendation

Approve revised Flexibility Principles

Authorize the CEO to:

- approve revisions to the Flexibility Option and modifications to Flexibility Principles 4-6, and
- determine commercial elements and contractual terms regarding size, location, benefit allocation and other items.

All modifications to the Flexibility Option must be consistent with existing transmission policies. Any modification that requires additional environmental review would not be implemented until such review is completed.

Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair

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2022 Annual Ethics & Compliance Update

David Fountain,
Executive Vice President
& General Counsel (DAEO)

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In recognition of TVA's Best in Class Ethics & Compliance Program

Audit, Finance, Risk, and Cybersecurity Committee

A.D. Frazier, Chair

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People and Governance Committee

Brian Noland, Chair

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External Stakeholders and Regulation Committee

Beth Harwell, Chair

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Board Meeting

August 31, 2022
Martin, Tennessee

President's Report

Jeff Lyash
President and CEO

August 31, 2022

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Strategic Intent and Guiding Principles


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TVA Strategic Intent and Guiding Principles

May 2021

This document provides TVA's Strategic Intent and Guiding Principles, focused on energy supply and decarbonization initiatives.

This statement of Strategic Intent is to be used in accordance with all internal and external processes in providing the principle direction from TVA leadership in developing business strategies that provide reliable, resilient, low-cost and clean energy to the Tennessee Valley region in keeping with the TVA mission.

A is investing more than $2 billion in transmission
tem improvements over five years to ensure that we
tinue to provide increasingly clean, low-cost, reliable
er. We are working to find ways to ensure our grids
k together seamlessly as local power companies bring
own solar and other renewable resources onto the
m.

eart of the energy system of the future will be TVA's
ystem Operations Center and Energy Management
m, a $300 million investment employing smart
ologies to manage power grid operations more
, efficiently and securely.

nter's Energy Management System will increase
flexibility by integrating and monitoring distributed
resources and demand response, helping to keep
w and reliability high as energy sources and
rs' energy use continue to evolve.

gy system of the future will support a diverse
of clean energy sources, advanced technologies,
d electrification in the transportation sector and
. We are investing in the future today as we set
and aspirations for years to come.

Part Three: Leading in Innovation, Decorbonization

TVA Leadership in Decarbonization

TVA is an industry leader in developing innovative and cost-effective technologies that will decarbonize our economy and achieve our aspiration of a net-zero carbon energy future.

We measure and benchmark our carbon emissions in two ways, each for important reasons. Carbon intensity, or the rate of emissions, measures the amount of carbon released per unit of electricity produced and is typically reported as lbs/MWh. This measure allows customers to easily compare electric utilities in an equivalent manner. The other measure is mass, which measures the total tons of carbon emitted. This metric is also helpful because it gives a whole-picture view of the carbon in an electric utility's footprint. For 2020, TVA's carbon intensity was 562 lbs/MWh and mass emissions were 42.5 million tons.

Based on our progress in diversifying the power system and the status of our existing power system assets, we are working to achieve significant carbon reductions in the decades to come without compromising the low rates and high reliability that sustain the customers and communities we serve.

We intend to follow this trajectory as we aspire to achieve net-zero carbon emissions by 2050:

Results Delivered

We have achieved a 63% reduction in mass carbon emissions in our energy supply from calendar year 2005 to 2020, primarily by diversifying our generation portfoliowe have :

- Added about 1,600 megawatts of new, carbon-free nuclear generation with the commercial operation of Watts Bar Nuclear Plant Unit 2 and extended power uprates at all three units at Browns Ferry Nuclear Plant
- Added renewable energy, with over 400 megawatts of solar and 1,200 megawatts of wind
- Retired approximately 8,600 megawatts of coal generation in recent years, including Bull Run Fossil Plant's announced retirement of 865 megawatts by December 2023. This amounts to about 60% of our coal generation, and we are evaluating the impact of retiring the balance of the coal-fired fleet by 2035
- Added about 5,200 megawatts of new flexible and efficient gas generation
- Invested over $400 million in energy efficiency programs since 2011

Executing a plan to 70% carbon reduction by 2030

- Bringing additional solar capacity online as part of TVA's total projected solar capacity of about 10,000 megawatts by 2035, including solar commitments to date of over 2,300 megawatts expected to come online by 2023, pending environmental reviews, largely driven by customer demand
- Further reducing our reliance on coal as additional plants approach end of life
- Modernizing our gas fleet to support year-round reliability and integration of intermittent renewable generation
- Expanding our storage portfolio by adding lithium-ion batteries as costs decline
- Working with local power companies on customer-centric options
- Investing in our existing carbon-free nuclear and hydroelectric fleets
- Investing in our transmission system to enable the integrated grid of the future

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TVA




TVA


Nuclear Fleet

River System

Economic Development

Over Past 5 Years

Attracted or retained

350,000 Jobs

and almost

$46 Billion

in capital investment

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Home Uplift

Partnership among TVA, MLGW and the City of Memphis

Weatherized

500 Homes

At no cost to homeowners

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Looking Ahead

Affordability
Reliability
Resiliency
Sustainability

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Carbon Reduction Leadership

TVA is a national leader in carbon reduction

70%
Plan by 2030

~80%
Path by 2035

Net-Zero
Aspiration by 2050

New Nuclear Program

Accelerate progress toward our aspiration of net-zero carbon.

Designed to develop, deploy and safely and economically operate viable advanced nuclear reactors

Develop a roadmap for our exploration of advanced nuclear technologies

Energy System of the Future

President's Report

Jeff Lyash
President and CEO

August 31, 2022

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90 Years

90 Years

Integrated development of the region’s resources

Best use of innovative and existing technologies

Opportunities for achieving both short-term value and long-term, sustainable progress through the public power model

President's Report

Jeff Lyash
President and CEO

August 31, 2022

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Board Meeting

August 31, 2022
Martin, Tennessee

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