



# **Investor Presentation**

# December 2023

# **Cautionary Statements Regarding Forward-Looking Information**

This presentation contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties. Words such as "could," "may," "expects," "anticipates," "will," "targets," "goals," "projects," "intends," "plans," "believes," "seeks," "estimates," "predicts," and variations on such words, and similar expressions that reflect our current views with respect to future events and operational, economic, and financial performance, are intended to identify such forward-looking statements.

The factors that could cause actual results to differ materially from the forward-looking statements made by Constellation Energy Corporation and Constellation Energy Generation, LLC, (Registrants) include those factors discussed herein, as well as the items discussed in (1) the Registrants' combined 2022 Annual Report on Form 10-K in (a) Part I, ITEM 1A. Risk Factors, (b) Part II, ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, (c) Part II, ITEM 8. Financial Statements and Supplementary Data: Note 19, Commitments and Contingencies; (2) the Registrants' Third Quarter 2023 Quarterly Report on Form 10-Q (filed on November 6, 2023) in (a) Part II, ITEM 1A. Risk Factors, (b) Part I, ITEM 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, and (c) Part I, ITEM 1. Financial Statements: Note 13, Commitments and Contingencies; and (3) other factors discussed in filings with the SEC by the Registrants.

Investors are cautioned not to place undue reliance on these forward-looking statements, whether written or oral, which apply only as of the date of this presentation. Neither Registrant undertakes any obligation to publicly release any revision to its forward-looking statements to reflect events or circumstances after the date of this presentation.



# **Non-GAAP Financial Measures**

The Registrants report their financial results in accordance with accounting principles generally accepted in the United States (GAAP). Constellation supplements the reporting of financial information determined in accordance with GAAP with certain non-GAAP financial measures, including:

- Adjusted EBITDA represents earnings before interest, income taxes, depreciation and amortization, and excludes certain costs, expenses, gains and losses and other specified items, including mark-to-market adjustments from economic hedging activities and fair value adjustments related to gas imbalances and equity investments, decommissioning related activity, asset impairments, certain amounts associated with plant retirements and divestitures, pension and other post-employment benefits (OPEB) non-service credits, separation related costs and other items as set forth in the Appendix. Includes nuclear fuel amortization expense.
- Adjusted cash flows from operations primarily includes net cash flows from operating activities and Collection of Deferred Purchase Price (DPP) related to the revolving accounts receivable arrangement, which is presented in cash flows from investing activities under GAAP
- Free cash flows before growth (FCFbg) is adjusted cash flows from operations less capital expenditures under GAAP for maintenance and nuclear fuel, nonrecurring capital expenditures related to separation and Enterprise Resource Program (ERP) system implementation, changes in collateral, net merger and acquisitions, and equity investments and other items as set forth in the Appendix
- Adjusted operating revenues excludes the mark-to-market impact of economic hedging activities due to the volatility and unpredictability of the future changes in commodity prices
- Adjusted purchased power and fuel excludes the mark-to-market impact of economic hedging activities and fair value adjustments related to gas imbalances due to the volatility and unpredictability of the future changes in commodity prices
- **Total gross margin** is defined as adjusted operating revenues less adjusted purchased power and fuel expense, excluding revenue related to decommissioning, gross receipts tax, production tax credits (PTCs), variable interest entities, and net of direct cost of sales for certain end-user businesses
- **Adjusted operating and maintenance (O&M)** excludes direct cost of sales for certain end-user businesses, Asset Retirement Obligation (ARO) accretion expense from unregulated units and decommissioning costs that do not affect profit and loss, the impact from operating and maintenance expense related to variable interest entities at Constellation, and other items as set forth in the reconciliation in the Appendix

Due to the forward-looking nature of some projected non-GAAP financial measures, reconciliations of projected non-GAAP financial measures to the most directly comparable GAAP financial measure is not provided because we are unable to provide such reconciliation without unreasonable effort. The inability to provide each reconciliation is due to the unpredictability of the amounts and timing of events affecting the items we exclude from the non-GAAP measures.



# **Non-GAAP Financial Measures Continued**

This information is intended to enhance an investor's overall understanding of period over period financial results and provide an indication of Constellation's baseline operating performance by excluding items that are considered by management to be not directly related to the ongoing operations of the business. In addition, this information is among the primary indicators management uses as a basis for evaluating performance, allocating resources, setting incentive compensation targets and planning and forecasting of future periods.

These non-GAAP financial measures are not a presentation defined under GAAP and may not be comparable to other companies' presentations of similarly titled financial measures. Constellation has provided these non-GAAP financial measures as supplemental information and in addition to the financial measures that are calculated and presented in accordance with GAAP. These non-GAAP measures should not be deemed more useful than, a substitute for, or an alternative to the most comparable GAAP measures provided in the materials presented.

Non-GAAP financial measures are identified by the phrase "non-GAAP" or an asterisk (\*). Reconciliations of these non-GAAP measures to the most comparable GAAP measures are provided in the appendices and attachments to this presentation, except for the reconciliation for total gross margin\*, which appears on slide 55 of this presentation.



## **Constellation at a Glance**



### **Carbon-Free Generation Fleet:**

- #1 provider of carbon-free 24/7 energy in the United States
- Lowest carbon emissions and carbon intensity generator in the United States
- 32,355 MWs of total generating capacity
- ~126 million metric tons of carbon avoided <sup>(1)</sup>
- 94.8% capacity factor at nuclear plants
- Ability to extend fleet to 80 years providing 24/7 carbon-free power through 2050 and beyond



### **Industry Leading Customer Business:**

- #1 in market share for C&I customers<sup>(2)</sup>
- #2 retail electricity provider<sup>(2)</sup>
- #3 in market share for mass market customers<sup>(2)</sup>
- Ranked #1 Overall Retail Energy Supplier <sup>(3)</sup>
- Top 10 natural gas provider in the U.S.
- Serves <sup>3</sup>/<sub>4</sub> of the Fortune 100
- ~2 million total customers
- 208 TWhs of load served
- Operates in 48 states and the District of Columbia



## **Supporting our Communities:**

- Fortune 200 company, based on \$24.4B in operating revenues in 2022
- Approximately 13,400 employees nationwide
- Employees volunteered over 80.000 hours in 2022
- Donated more than \$12.5M to from employee contributions
- Increasingly diverse workforce, with strong diverse hiring and promotion rates and community workforce development partnerships

Note: Numbers reflect vear-end 2022

- (2) Per DNV's 2022 Market Share Landscape report
- (3) Per DNV's 2022 Energy Blueprint: Sales Strategies report. Constellation ranked #1 in pre-sale support, pricing and contracting, and after sale service

charitable causes, including \$4.6M



<sup>(1)</sup> Measured using the EPA Greenhouse Gas Emissions calculator <u>https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator</u>

# **Constellation is Uniquely Positioned to Create Value for Shareholders**

### Unmatched, Premium Assets in the U.S.

- Best-in-class nuclear operations
- Largest producer of reliable, carbon-free, clean electricity
- Largest provider of electricity to C&I customers
- Provides customers with hourly carbon-free energy matching

### **Beneficiary of Inflation Reduction Act**

- Downside commodity price risk protected by U.S. government, while preserving ability to capture commodity price upside
- Production Tax Credit grows with inflation
- Supports growth opportunities that will help decarbonize the U.S. including nuclear uprates, clean hydrogen and wind repowering
- Extends horizon of our clean, carbon-free nuclear fleet to 80 years

### **Growing Value for Shareholders**

- Strong free cash flow generation allows for:
  - Dividend growth
  - Robust organic growth at compelling double-digit unlevered returns
  - Growth from M&A
  - Share repurchases



LaSalle Clean Energy Center



# **Constellation's Value Proposition**



### **Enduring Businesses Ready to Meet The Climate Crisis**

- World-Class nuclear operator and largest generator
- Largest provider of energy solutions to commercial and industrial customers

### **Delivering Value For Our Shareholders**

- Disciplined capital allocation strategy supports strong owners

### **Premier ESG Company**

- workplace and communities

of 24/7 carbon-free firm electricity with ability to extend asset lives • Strong advocate for, and ideally situated to benefit from, energy policies that drive the transition to carbon-free energy

 Strong free cash flows, optimized through industry-leading operations, support of carbon-free energy and focus on costs

investment grade balance sheet, growth investment consistent with corporate strategy, and return of capital to

• ~90% carbon-free energy growing to 100% carbon-free by 2040 Committed to advancing diversity, equity and inclusion in our

Maintaining the highest standards of corporate governance



# **Constellation is the Largest Producer of Carbon-Free Electricity in the United States**

Investor-Owned Generators (2)

Lowest CO<sub>2</sub> Emissions Among Major

# Largest Producers of Carbon-Free Generation <sup>(1,2)</sup>

million MWh			ines	S					lb	/MWh				
Constellation (3)		178.2	Constellation	Constellation (3) 8								Constella	tion (3)	8
NextEra Energy (2)	110.5		PSEG	(12)	10			PSEG (12					SEG (12)	3
Duke (1)	86.7		Energy Harbor	(14)	14						1	NextEra En	ergy (2)	4
Dominion (8)	53.2		Riverstone	(18)	16							Domi	nion (8)	
Southern (4)	50.3		LS Power	(19)	19						E	Energy Har	bor (14)	
Berkshire Hathaway Energy (6)	49.2		WEC Energy Group (	(20)	23							Ent	ergy (7)	
Entergy (7)	48.6		DTE Energy	(15)	29								Duke (1)	
Energy Harbor (14)	31.9		Evergy	(17)	31							Riverst	one (18)	
PSEG (12)	31.4		Ameren	(16)	33					Energy Capital Partners (9)				
Xcel (11)	30.3		Dominion	n (8)	34							Sout	hern (4)	
AEP (10)	24.4		NRG	(13)	36			Berkshire Hathav				thaway En	ergy (6)	
Vistra Energy (5)	19.8		Entergy	/(7)	38							LS Po	wer (19)	
Riverstone (18)	—17.9		Xcel	(11)	41							)	Kcel (11)	
DTE Energy (15)	—12.9		NextEra Energy	(2)	46			Vistra				Vistra En	ergy (5)	
NRG (13)	-9.7		Energy Capital Partners	s (9)	46			WEC				Energy Gro	oup (20)	
Evergy (17)	-9.6		AEP	(10)	60							A	EP (10)	
Ameren (16)	-7.5		Berkshire Hathaway Energy	(6)	65	5						DTE Ene	rgy (15)	
Energy Capital Partners (9)	-7.3		Southern	n (4)		82						Ν	IRG (13)	
WEC Energy Group (20)	-4.7		Duke	e (1)	86							Eve	rgy (17)	
LS Power (19)	-1.0		Vistra Energy	/(5)		1	10					Ame	ren (16)	
	0 50	100 150	200	0	20	40	60	80	100	120			C	)

(1) Reflects 2021 regulated and non-regulated generation. Source: Benchmarking Air Emissions, November 2023: https://www.ceres.org/resources/reports/benchmarking-air-emissions-100-largest-electric-power-producers-united-states-2023

(2) Number in parentheses is the company's ranking among the 20 largest investor-owned producers (total MWh) in 2021, i.e. Constellation was the third largest generator in 2021

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### Lowest Carbon Intensity Among Major Investor-Owned Generators <sup>(2)</sup>

-85					
376					
429					
593					
627					
638					
807	,				
86	3				
86	9				
90	8				
1,	009				
1	,054				
1	,070				
	1,276				
	1,339	)			
	1,39	4			
	1,45	51			
	585				
	,661				
		1,771			
5	00	1,000	1,50	00	2,000



# **Strong Operations Deliver Reliable and Affordable Carbon-Free Power**

### Nuclear Capacity Factor (%) (1,2)

(Total of Rankings of 14 Indicators)



### **Ranking Among Major** Operators (2-Yr) <sup>(3)</sup> 2022 1 2021 1 2020 1 1 2019 1 2018

Operators <sup>(3)</sup>

1

1

1

1

2

### Average Nuclear Refueling Outage Days (2,4)



### Power Metrics (6)





Source: Constellation's internal benchmarking report

(1) Reflects Constellation's ownership share of CENG and other partially-owned units. Includes 100% ownership of CENG following closure of EDF Put on August 6, 2021.

Excludes Salem. Constellation and Industry averages reflect Oyster Creek and TMI partial year operation in 2018 and 2019, respectively. (2)

Major nuclear operator is defined as one entity responsible for the operation of at least two sites and comprising of at least four units; Major Operator rankings reflect 100% ownership for Constellation. (3)

Refueling outage values are not adjusted for ownership (4)

Composite Operational Excellence Metric consists of 14 indicators in Production, Cost, and Safety. Value represents the percentage of the maximum available score by ranking of Major Operators across the 14 (5) indicators.

Power Dispatch Match is used to measure the responsiveness of a unit to the market, expressed as actual energy gross margin relative to total desired energy gross margin. Desired energy gross margin is measured by (6) revenues less fuel costs and variable O&M when unit is dispatched. Wind Energy Capture represents actual energy produced by wind turbine generators of a wind farm, divided by the on-site measured total wind energy available. Solar Energy Capture represents actual energy produced by the sum of the Generating System Modules of a solar plant or group of solar plants, divided by total expected energy to be produced by the sum of

the same Generating System Modules. Energy Capture for the combined wind and solar fleet is weighted by the relative site projected pre-tax variable revenue, with deductions made for certain excusable events that are non-controllable.

Ranking An Operat	nong Major tors <sup>(3)</sup>
2022	1
2021	1
2020	1
2019	1
2018	1



# Leading Customer Platform Enables Customers to Meet Their Energy and **Sustainability Needs**

### Leading Customer Operational Metrics (TTM)<sup>(1)</sup>



## 2022 Electric Load Served by Region (TWhs)



### **Our Experience and Capabilities Deliver Value to Our Customers and for Our Shareholders**



## **Hourly Carbon-Free Matching Agreements**

- Landmark agreement with Microsoft (announced June 2023) combines the environmental attributes of nuclear power with hourly carbon-free energy matching to help one of Microsoft's Virginia data centers operate on nearly 100% clean power
- Agreement with ComEd enables ComEd to power its 54 facilities with reliable, carbon-free energy produced where and when it is used, marking another key step toward a carbon-free economy
- Agreements are setting a new standard for how companies across the U.S. can achieve real emissions reductions and is proof that hourly, regional matching of clean energy to demand is both practical and feasible today with suitable infrastructure and energy innovation

## Constellation

# **Financial Disclosures**



## **Providing Value to Our Shareholders Through Our Capital Allocation Plan**





# **Growth Opportunities Can Deliver Value for Our Shareholders**

We may pursue growth opportunities that provide additional value building on our core businesses or expanding our competitive advantages

- Opportunistic carbon-free energy acquisitions, particularly nuclear plants with supportive policy
- **Create new value from the existing fleet** through repowering, co-location and other opportunities
- Grow sustainability products and services for our customers focused on clean energy, efficiency, storage and electrification; help our C&I customers develop and meet sustainability targets
- **Produce clean hydrogen** using our carbon-free fleet
- Engagement with the technology and innovation ecosystem **through continued partnerships** with national labs, universities, startups, and research institutions
- **Explore advanced nuclear technology** for investment and participation via advisory services to maintain our leadership position as stewards of a carbon-free energy future



# Investments in Carbon-Free Future that Comfortably Exceed our Double-**Digit Return Threshold**

## **Commercial Hydrogen Production**

- Hydrogen facility will initially use ~250 MWs and produce ~33,450 TPA hydrogen, with the ability to expand to 400 MWs
  - Expect long-term off-take agreements to consume more than 90% of the ~250 MWs
- Investing total construction CapEx of ~\$900M from 2023-2025<sup>(1)</sup>
- Hydrogen will be provided to customers co-located at our facility
- We anticipate commercial production of hydrogen beginning in 2026



Note: All amounts rounded to the nearest \$25M. Items may not sum due to rounding. (1) Does not assume DOE cost-share through the hydrogen hub

\$600 million of investment included in baseline CapEx (2)

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Reflects cash CapEx at 100% ownership: excludes \$20 million invested in 2022 (3)



## **Nuclear Uprates**

- Byron and Braidwood
- plants <sup>(2)</sup>
- during planned refuel outages

## Wind Repower & Refurbishment

- in commercial operation in 2023

Increasing nuclear output by ~135 MWs at

Investing ~\$800M from 2023-2029 for needed low pressure turbine replacements, upgrading the high pressure turbines and pulling forward planned generator maintenance at Byron, of which ~\$200M is growth capital to uprate the

Anticipate uprate MWs to be phased in starting in 2026 with full implementation by 2029 based on timing of the turbine installations

315 MWs in initial scope of repowering program

Investing \$350 million from 2023-2025 (3)

First 70 MWs partial repowering expected to be



# **Gross Margin\* Update**

	<u>Septembe</u>	<u>r 30, 2023</u>	<u>Change from June 30, 2023</u>		
Gross Margin* Category (\$M) <sup>(1)</sup>	2023	2024	2023	2024	
Open Gross Margin* (including South, West, New England, Canada hedged gross margin)	\$5,000	\$5,950	\$450	\$550	
Contracted Revenues (Capacity, ZEC and IL CMC Plant Revenues) <sup>(2)</sup>	\$2,950	\$2,750	-	-	
Mark-to-Market of Hedges <sup>(3)</sup>	\$800	(\$300)	-	(\$350)	
Power New Business / To Go	\$50	\$300	(\$50)	\$100	
Non-Power Margins Executed	\$350	\$400	-	\$100	
Non-Power New Business / To Go	\$50	\$200	-	(\$50)	
Total Gross Margin <sup>* (4)</sup>	\$9,200	\$9,300	\$400	\$350	
Nuclear PTC Value For Plants Not Supported By State Programs <sup>(4,5)</sup>	N/A	\$150	N/A	(\$100)	
Total Gross Margin* + PTC <sup>(4,5)</sup>	\$9,200	\$9,450	\$400	\$250	

### **Key Messages**

- Gross margin + PTC increased \$400M in 2023 and \$250M in 2024 due to stronger new business execution
- In 2023, executed \$450M of Power New Business and raised Power New Business target by \$400M •
- In 2024, executed \$150M of Power New Business and raised the target by \$250M; executed \$100M of Non-Power New Business and raised Non-**Power New Business target by \$50M**; earning less PTC revenues as a result of higher market prices across the major regions
- PTC value reflects credits attributable to the four plants not supported by state programs and assumes gross receipts are determined using spot prices
- (1) Gross margin\* categories rounded to nearest \$50M; excludes gross margin from STP
- (2) Includes gross margin\* and CMC payments for CMC plants
- (3) Mark-to-Market of Hedges assumes mid-point of hedge percentages
- (4) Based on September 30 2023, market conditions
- (5) Plants included in PTC value are Calvert Cliffs, LaSalle, Limerick and Peach Bottom



# **Adjusted O&M\* and Capital Expenditures**



Note: All amounts rounded to the nearest \$25M. Items may not sum due to rounding.

(1) Reflects cash CapEx for Power at 100% ownership 16



# **Constellation's Strong Balance Sheet Recognized by S&P's Upgrade to** BBB+



Note: Forecasted year-end debt is ~\$8.3 billion, including 2023 financings

(1) Credit metrics forecast as of Fourth Quarter 2022 Earnings Conference Call disclosure

(2) Credit rating upgraded by S&P to BBB+ on November 22, 2023

Baa2; positive outlook

BBB+: stable outlook<sup>(2)</sup>





## Long-Term Debt Maturity Profile <sup>(1)</sup>

As of 9/30/2023 (\$M)

Note: Items may not sum due to rounding

(1) Maturity profile excludes non-recourse debt, P-Cap facility, securitized debt, capital leases, fair value adjustments, unamortized debt issuance costs and unamortized discount/premium

(2) Long-term debt balances reflect Q3 2023 Form 10-Q GAAP financials, which include items listed in footnote 1 except for the P-Cap facility

Long-Term Debt Balanc	es (2)
Recourse	\$6.1B
Non-Recourse	\$1.5B
Tabal Lawar Tauna Dalah	#7 CD



# Approximately \$1.2 Billion of Capital Still to be Allocated in 2023-2024



(1) Pro Forma FCFbg represents FCFbg as of December 31, 2022, adjusted for cash from STP

Beginning Cash Available reflects excess cash balance above minimum targets as of December 31, 2022 (2)

(3) Debt Issuance & Other Financing includes collateral activity, and contributions from and distributions to JV partners

Separation O&M / CapEx includes costs and investments related to separation and multi-year implementation of Enterprise Resource Program (ERP) system (4)

(5) Reflects consideration of the present value of tax benefits associated with the transaction due to accelerated depreciation from the tax basis step-up

Growth / Return of Capital



# Raised Full-Year Adjusted EBITDA\* Guidance Range to \$3,800M - \$4,000M

(\$M)







# Environmental, Social & Governance



# **Constellation's ESG Principles**

## Our Value Proposition and ESG Principles

Constellation is positioned to deliver long-term value for our shareholders through our enduring businesses that are ready to meet the climate crisis. We are leading the transition to a carbon-free future as one of the largest providers of energy solutions to commercial and industrial (C&I) customers and the largest producer of carbon-free power in the U.S. Furthermore, our fleet is uniquely situated to be the reliable, baseline carbonfree energy source of the energy transition. We are proud of our history of actively working to reduce our emissions and improving the value, longevity and output of our assets through policy leadership, technology and innovation. Based on this foundation, Constellation is ideally suited to support our customers' ambitions to reduce their environmental impact and seek solutions to the climate crisis. Our disciplined capital allocation strategy supports a strong investment grade balance sheet, reinvestment in our business, growth investment consistent with our corporate strategy and return of capital to owners.

Our ESG principles are core to our business strategy and value proposition. Our values and ESG principles guide us in our central purpose. We are focused on driving action in these critical focus areas:





# **Accelerating the Transition to a Carbon-Free Future**



Note: Events prior to 2022 occurred prior to Constellation's separation from Exelon Corporation

Subject to policy support and technology advancements (1)

From a 2020 baseline. Any emissions that cannot be technologically reduced by that time will be offset. (2)

### Constellation separation from Exelon

### **Constellation's Climate**

**Commitment:** 100% owned generation carbon-free by 2040<sup>(1)</sup>; 100% reduction of operations-driven emissions by  $2040^{(2)}$ ; and 100% of C&I customers provided with specific information about how to meet GHG reduction goals



2023

and beyond

First nuclearpowered hydrogen production at Nine Mile Point

Announced hourly carbon-free matching agreement with Microsoft



# **Constellation's Climate Commitment**



Of our owned generation will be carbon-free by 2040

Reduction of our operationsdriven emissions by 2040<sup>(1)</sup>

100%

### ✓ Clean Energy Supply:

- Clean Electricity Supply: We commit that our owned generation supply will be 100% carbon-free by 2040; with an interim goal of 95% carbonfree by 2030 subject to policy support and technology advancements.
- Operational Emissions Reduction Goal: We aspire to reduce operations driven emissions by 100% by 2040 subject to technology and policy advancement
  - Interim target to reduce carbon emissions by 65% from 2020 levels by 2030
  - Constellation commits to reducing methane emissions 30% from 2020 levels by 2030, aligned with the Administration's global methane pledge
- **Supply Chain Engagement:** Partner with our key energy suppliers on their GHG emissions and climate adaptation strategies

### ✓ Clean Customer Transformation:

- Prior to the end of 2022, we successfully delivered on our commitment to provide 100% of our C&I customers with customer-specific information on their GHG impact for facilities contracting for power and gas supply from Constellation, that include hourly carbon-free energy matching
- Commit to support reductions in customers' gas emissions and a transition to low carbon fuels

### Technology Enablement and Commercialization:

Commit to enable the future technologies and business models needed to drive the clean energy economy to improve the health and welfare of communities through venture investing and R&D. We will target 25 percent or more of our investments in business enterprises led by minorities, women, veteran/service-disabled veterans and LGBTQ+ individuals and will require investment recipients to disclose how they engage in equitable employment and contracting practices, using performance as a factor when considering investments



Of C&I customers provided with specific information about how to meet GHG reduction goals



# **Constellation's Emissions are Already Significantly Below Paris Climate Agreement Levels**



# Nuclear is One of the Cleanest and Safest Forms of Power Generation



**Nuclear has One of the Lowest Mortality Rates per TWh** of Electricity <sup>(2)</sup>



Source: https://unece.org/sites/default/files/2022-04/LCA\_3\_FINAL%20March%202022.pdf (1)

(2) Source: https://ourworldindata.org/grapher/death-rates-from-energy-production-per-twh



# **Constellation's Nuclear Plants are Clean Energy Centers**









# **State and Federal Policies**



# Inflation Reduction Act (IRA) Transforms Constellation

### Nuclear PTC Floor Price (1,2)



(1) See H.R. 5376 for additional details; all numbers assume that prevailing wage requirements are satisfied

(2) Annual inflation adjustment is consistent with past published guidance for renewable energy credits, published annually





# PTC Provides Support for Nuclear Units When Revenues Fall Below \$43.75/MWh



### **Illustrative Payoff Dynamics for Non-State-Supported Units in 2024**

- The PTC provides support of up to \$15.00/MWh for units • when revenues are between \$25.00/MWh and \$43.75/MWh while preserving the ability of the unit to participate in upside from commodity markets
- The green line assumes revenues of \$47.00/MWh and since it is above the \$43.75/MWh PTC phase out units would not receive PTC value
- When revenues fall below the \$43.75/MWh phase out, the PTC will provide support for the units
- Assuming revenues of \$35.00/MWh, the orange line, we would expect units to receive \$7.00/MWh PTC, bringing the total value the unit would receive to \$42.00/MWh



# Inflation of Nuclear Production Tax Credit (PTC)<sup>(1)</sup>

### **PTC Overview**

## Example Assuming 2%, 3% and 4% Inflation<sup>(2)</sup>

- The PTC is in effect beginning after 12/31/23 and through 12/31/32
- In the base year 2024, Constellation gualifies for the nuclear PTC up to \$15.00/MWh; the PTC amount is reduced by 80% of gross receipts exceeding \$25.00/MWh, phasing out completely after \$43.75/MWh
- The nuclear PTC can be credited against taxes or monetized through sale to an unrelated taxpayer

## **PTC Inflation Adjustment**

Starting in 2025, the maximum PTC and gross receipts threshold are subject to an inflation adjustment based on the GDP price deflator for the preceding calendar year:

> Inflation Adjustment=  $\frac{\text{GDP price deflator in preceeding year}}{222}$ GDP price deflator in 2023

Maximum PTC is rounded to nearest \$2.50/MWh and gross receipts threshold is rounded to nearest \$1.00/MWh

	2% Inflation				3% Inflation						4% Inflation						
	Ma	ximum PTC	Q Re Thr	àross ceipts reshold	Power Price At Which PTC=\$0	Ма	ximum PTC	( Re Thi	àross ceipts reshold	P Pi V P1	Power rice At Vhich FC=\$0	Ma	ximum PTC	( Re Thi	àross ceipts reshold	P Pr V P1	ower ice At Vhich TC=\$0
2024	\$	15.00	\$	25.00	\$ 43.75	\$	15.00	\$	25.00	\$	43.75	\$	15.00	\$	25.00	\$	43.75
2025	\$	15.00	\$	26.00	\$ 44.75	\$	15.00	\$	26.00	\$	44.75	\$	15.00	\$	26.00	\$	44.75
2026	\$	15.00	\$	26.00	\$ 44.75	\$	15.00	\$	27.00	\$	45.75	\$	15.00	\$	27.00	\$	45.75
2027	\$	15.00	\$	27.00	\$ 45.75	\$	17.50	\$	27.00	\$	48.88	\$	17.50	\$	28.00	\$	49.88
2028	\$	15.00	\$	27.00	\$ 45.75	\$	17.50	\$	28.00	\$	49.88	\$	17.50	\$	29.00	\$	50.88
2029	\$	17.50	\$	28.00	\$ 49.88	\$	17.50	\$	29.00	\$	50.88	\$	17.50	\$	30.00	\$	51.88
2030	\$	17.50	\$	28.00	\$ 49.88	\$	17.50	\$	30.00	\$	51.88	\$	20.00	\$	32.00	\$	57.00
2031	\$	17.50	\$	29.00	\$ 50.88	\$	17.50	\$	31.00	\$	52.88	\$	20.00	\$	33.00	\$	58.00
2032	\$	17.50	\$	29.00	\$ 50.88	\$	20.00	\$	32.00	\$	57.00	\$	20.00	\$	34.00	\$	59.00

(2) Annual inflation adjustment is consistent with past published guidance for renewable energy credits, published annually



# **Zero-Emission Credit (ZEC) Overview and Timelines**

State	2023	2024	2025	2026	2027	2028	20	29
New York	April '17						March '29	
Illinois	June '17			М	ay '27			
New Jersey	June '22	Ma	y '25					
Program Eleme	nts	New York ZEC P	rogram	II	linois ZEC Progra	m		New Je
General Description	Under the sta entities must NYSERDA wi plants.	ate's clean energy star purchase Zero Emiss no purchases them fro	ndard, load serving ion Credits from om the eligible nuclear	Under Future Ene contract with zero Zero Emission Cr	Under the state's clea purchase Zero Emiss nuclear plants in an a of the plant.			
Eligibility	<ul> <li>PSC selects units based on:</li> <li>Impact on NY air quality based on PSC evaluation</li> <li>Financial distress</li> <li>Alternatives, customer impact, public interest</li> </ul>				<ul><li>IPA selects units based on:</li><li>Impact on IL air quality based on a formula</li><li>Financial distress</li></ul>			
Bidder Data provide	dder Data provided Multi-year costs, risks and revenue projections			6 year costs, risks	tion	3 year costs, risks and		
Term	12 years (six	2-year periods)		10 years	3-year periods			
ZEC Price	\$17.48/MWh for 1 <sup>st</sup> period (additional ~\$2.30/period thereafter)			\$16.50/MWh for (additional \$1/ye	~\$10/MWh through			
Price Adjustment(s)	Adjustment(s) \$39/MWh – Market Price Index RGGI price deduct			\$31.40/MWh – N	BPU will determine if May 1, 2025			
Program Budget Ca	m Budget Cap \$480M per year initially			~\$230M per year	~\$270M per year init			

### 2030

### lersey ZEC Program

lean energy standard, utilities will ssion Certificates from certified amount equivalent to all of the output

ased on:

r quality based on bidder input

required for each 3-year period

and revenue projections. Air impacts.

n May 2025

if there will be ZEC payments beyond

itially



# **New York ZEC Price Determination**

Tranche	Date	U.S. SCC "Central Value" (\$/Short Ton)	Baseline RGGI Estimate (\$/Short Ton)	Net CO <sub>2</sub> Externality (\$/Short Ton)	Short Ton to MWh (Conversion Factor)	Adjusted SCC (\$/MWh)	Reference Price (\$/MWh)
Tranche 1	4/1/2017- 3/31/2019	\$42.87	\$10.41	\$32.47	0.53846	\$17.48	N/A
Tranche 2	4/1/2019- 3/31/2021	\$46.79	\$10.41	\$36.38	0.53846	\$19.59	\$39.00
Tranche 3	4/1/2021- 3/31/2023	\$50.11	\$10.41	\$39.71	0.53846	\$21.38	\$39.00
Tranche 4	4/1/2023- 3/31/2025	\$54.66	\$10.41	\$44.26	0.53846	\$23.83	\$37.78
Tranche 5	4/1/2025- 3/31/2027	\$59.54	\$10.41	\$49.13	TBD	TBD	\$37.78
Tranche 6	4/1/2027- 3/31/2029	\$64.54	\$10.41	\$54.13	TBD	TBD	\$37.78

Energy and Capacity Forecast Adjustment (\$/MWh)	Upstate ZEC Price (\$/MWh)
N/A	\$17.48
N/A	\$19.59
N/A	\$21.38
\$5.56	\$18.27
TBD	TBD
TBD	TBD



# Illinois Carbon Mitigation Credit (CMC) Overview and Timelines

Plant	State	Capacity (MW)	2022	2023	2024	2025	2026	202
Braidwood	IL	2,386	June '22				May	'27
Byron	IL	2,347	June '22				May	'27
Dresden	IL	1,845	June '22				May	'27

Program Elements	Illinois Carbon Mitigation Credits Program
Eligibility	<ul> <li>IL CMC program is similar to the IL ZEC program, except that ComEd is the only buyer and only PJM units are eligible</li> <li>Bidders must submit financial projections to demonstrate financial need, and selection is based on air quality impact</li> </ul>
Term	5-energy years
Product	<ul> <li>A Carbon Mitigation Credit means the environmental attributes of 1 MWH of nuclear generation</li> <li>Suppliers are selling environmental attributes only, not energy or capacity</li> <li>Procurement quantity is 54.5 TWH per year (3 plants), with obligation to operate</li> </ul>
CMC Price	<ul> <li>Suppliers bid an "all-in" price, not a fixed credit price <ul> <li>Supplier payment = Bid Price – Energy Index – Capacity Index – Other Subsidies (eg, PTC)</li> <li>Energy Index = average day-ahead price at selected nuclear plants</li> <li>Capacity Index = ComEd zone capacity price</li> </ul> </li> <li>Payment can be positive (to supplier) or negative (to buyer)</li> </ul>
Bid Price Cap	\$30.30/MWh, \$32.50/MWh, \$33.43/MWh, \$33.50/MWh, \$34.50/MWh (for the 5 years)



le	
ts in	Illinois.



# Nuclear



# Firm Nuclear Power Plays a Unique Role in the Fight Against the Climate Crisis



### **Firm Carbon-Free**

Nuclear power provides firm carbonfree electricity while displacing fossil fuels in applications requiring a continuous power supply

### Resilient

Nuclear power has onsite fuel for 18-24 months, providing resilient and reliable power every season, no matter the weather

## Variable Renewables

Nuclear power can support higher deployment of variable wind and solar generation without the need for backup capacity from fossil fuel generation

## 80 years

## **License Renewals**

Second license renewals will extend carbon-free production to 80years – more than 3 times the useful life of renewables and 2 times the useful life of coal



# **Extending the Life of our Nuclear Fleet to 80 years**



Reflects Peach Bottom's subsequent license renewal (SLR) that was previously granted by the NRC in March 2020, renewing the licenses out to 2053 and 2054. On February 24, 2022 the (1)NRC issued orders in the Peach Bottom and Turkey Point adjudicatory proceedings (which had not been terminated even though the NRC had already issued the renewed licenses) finding that the NRC's environmental review was inadequate under the National Environmental Policy Act (NEPA). The Commission kept the SLRs in place but directed the staff to amend the Peach Bottom licenses to change the expiration dates to the initial renewed license period (2033 and 2034) until the NRC updates its generic environmental analysis and regulations, which is expected to be completed in 2024. Please refer to 2022 Annual Form 10-K for additional information.

Potential Subsequent License Renewal for Remaining Fleet Peach Bottom Subsequent License Renewal (80 Years)<sup>(1)</sup>



# **Process for Subsequent License Renewal**

- Under the Atomic Energy Act, reactor licenses are limited to an initial period of 40 years. This was based on antitrust considerations, not limitations in the technology.
- NRC permits nuclear reactor licensees to renew license periods of 20 years from 40 to 60 years; NRC also allows for subsequent license renewal for an additional 20 years from 60 to 80 years
- Total process takes approximately four years
  - Process takes approximately 22 months to develop the license renewal application
  - NRC's review of license renewal application takes between 18 months to two years
    - Scope of review is limited to ensuring plant will take appropriate steps to mitigate effects of aging during license renewal period (i.e. Aging Management Programs)
- Applicant must also submit an environmental report used by NRC in development of an Environmental Impact Statement (EIS). NRC is required to do analysis under the National Environmental Policy Act (NEPA).
  - This environmental review is also limited in scope to matters for which there could be an environmental impact during the renewal period
  - NRC has generically determined that about 70% of the environmental issues associated with license renewal have little to no environmental impact, which is documented in a Generic EIS for License Renewal (GEIS). In April 2022, the Commission approved a plan to update the NRC's generic environmental analysis and regulations within two years, or 2024.
  - NRC must offer an opportunity for an adjudicatory hearing to the public with each license renewal application. Hearings can result in changes to the applicant's proposed Aging Management Programs, but this is extremely rare.



# **Securing Nuclear Fuel Supply Through 2028**



### **Nuclear Fuel Capital Expenditures**

- We have built a diverse and resilient portfolio that can withstand a Russian supply disruption
- We entered into contracts to increase our inventory to mitigate the risk of possible supply disruption that could occur between now and 2028 - the year when multiple Western enrichment providers expect to have additional capacity online
- We will continue to work with policymakers and suppliers to ensure reliable sources of supply remain available in the long-term
- Fuel costs are expected to rise over coming years but remain under \$6/MWh through 2028, even with higher prices



# **Constellation's Nuclear Fuel Hedging Strategy**

### **Operational Risk Management**

- **Hedge well in advance** to secure supply and avoid near-term costs variability
- **Promote supplier diversity and competition** while managing levels of concentrated risk to our partners
- Appropriately size inventory holdings and forward contractual requirements to protect against supply disruptions and price shocks while allowing capital flexibility

### **Financial Risk Management**

- Structure forward contracts to control price risk
- Establish metrics to measure and forecast cost variability
- **Allow flexibility** to pursue market opportunities and cost optimization •
- Negotiate ceiling prices in market-related contracts and caps on references to inflation indexes
- Amortize fuel cost over the time the fuel is in the core



# Nuclear Fuel Cycle – Front End <sup>(1)</sup>



- Uranium mining can be done through conventional methods (surface mining, open pits, underground) or non-conventional methods (in-situ recovery)
- Uranium milling process results in uranium concentrate (U<sub>3</sub>O<sub>8</sub>), commonly referred to as "yellowcake"



- $U_3O_8$  is then converted to uranium hexafluoride (UF<sub>6</sub>)
- UF<sub>6</sub> is a solid at room temperature but can be transformed to a gas at higher temperatures, which is required for enrichment



- When uranium is mined, milled and converted, only approximately 0.7% is U235, the uranium isotope needed for most commercial nuclear fuel
- Enrichment is the process in which the concentration of the U235 isotope in the uranium hexafluoride is increased from 0.7% to 3%-5%, which is the level used by most nuclear reactors

## Nuclear fuel is extremely dense compared to other fuel resources <sup>(2)</sup>







**17,000 cubic ft** of natural gas

120 gallons of oil

(1) Source: https://www.eia.gov/energyexplained/nuclear/the-nuclear-fuel-cycle.php

(2) Source: https://www.energy.gov/ne/articles/3-reasons-why-nuclear-clean-and-sustainable



 Fabrication plants convert enriched uranium into uranium oxide (UO<sub>2</sub>) powder and form that into small ceramic pellets

• These pellets are loaded into fuel rods and combined to form fuel bundles or assemblies, which are then shipped to reactors



# **Uranium is Relatively Abundant**

### **Global Distribution of Identified Resources**

(<USD 130/kgU as of 1 January 2021)



\*Secretariat estimate or partial estimate

### 95% of the global distribution of identified conventional resources are spread across 16 countries

Source: NEA/IAEA (2023), Uranium 2022: Resources, Production and Demand, OECD Publishing, Paris, https://doi.org/10.1787/2c4e111b-en Source: 95% represents < USD 130/kgU cost category as of 1 January 2019; Source: Uranium 2020:

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### **Distribution of Reasonably Assured Resources (RAR)**





# **Conversion, Enrichment and Fabrication**



Sources: World Nuclear Association: https://www.world-nuclear.org/information-library/nuclear-fuel-cycle/conversion-enrichment-and-fabrication.aspx and The Nuclear Fuel Report, Global Scenarios for Demand and Supply Availability 2023-2040

- (1) Based on 2022 Total Capacity utilization
- (2) Orano's conversion facility is in the process of production ramp-up, which is expected to be finalized in the coming years
- (3) Estimated capacity according to the assumption that China will develop its conversion capacity to supply the needs of the domestic reactor fleet
- (4) ConverDyn (U.S.) reduced capacity of its Metropolis plant in 2016 and then subsequently closed in 2017. In January 2021, it announced plans to restart the plant in 2023 after refurbishment. The plant restarted July 2023 and is ramping up production. When the plant is at its targeted production levels, it is anticipated to produce 14% of the global capacity utilization, with Cameco at 22%. CNNC at 21%. Orano at 18%, and Rosatom at 25%.
- (5) Other includes JNFL (Japan), Resend (Brazil), Rattehallib (India), and Natanz (Iran)
- (6) Represents capacity for assembling fuel rods of three U.S. fabricators; there is not substantial use of overseas fabricators
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Note: ConverDyn (U.S.)<sup>(4)</sup> was not operating in 2022

# **Disposal of Nuclear Fuel is the Responsibility of the U.S. Government**

- Under the Nuclear Waste Policy Act (NWPA) of 1982, DOE is responsible for the development of a permanent geologic repository for the disposal of spent nuclear fuel and high-level radioactive waste from existing nuclear plants
- As required by the NWPA, Constellation is a party to contracts with the DOE (the "Standard Contract") requiring DOE to take possession and dispose of Constellation's spent nuclear fuel
- Under the terms of the NWPA and Standard Contract, DOE was required to begin taking possession of spent nuclear fuel no later than January 1, 1998. The DOE failed to meet that deadline and effectively discontinued work on the geologic repository (Yucca Mountain) in 2010.
- Under several settlement agreements with DOE, DOE is required to reimburse Constellation for most of the costs associated with storage of spent nuclear fuel at our nuclear stations caused by DOE's breach
- Notwithstanding the fact that DOE is not actively pursuing Yucca Mountain, it continues to work on "consent based siting" of either a permanent repository or interim storage





# Spent Nuclear Fuel is Safely and Securely Stored

We know where every ounce of nuclear fuel is located: 100% of spent nuclear fuel is contained, numbered, catalogued, tracked and isolated from the environment

**Strong oversight from U.S. Nuclear Regulatory Commission (NRC):** Spent nuclear fuel is stored in compliance with stringent safety and security requirements and oversight from the NRC

### Nuclear fuel produces less waste than other sources of energy:

- All of the spent nuclear fuel produced in the United States from the dawn of the civilian nuclear era, when President Eisenhower gave his 1953 Atoms for Peace speech until now, could fit inside of a Super Walmart
- A single coal plant generates as much spent fuel waste by volume in one hour as the entire nuclear power industry has during its history

### Safely stored on our sites first in pools and then in dry cask storage:

- After spent fuel is cooled in pools, it is sealed in a metal or steel cylinder, surrounded by helium gas and then encapsulated in a metal or concrete outer shell, which is 20-30 inches thick to shield radiation
- Since the first casks were loaded in 1986, there has never been a release of radiation that affected the public or the environment <sup>(1)</sup>
- Radioactivity from the site must be less than 25 millirem per year at the site boundary which
  is lower than the radioactivity from a chest x-ray
- Casks are designed to withstand earthquakes, projectiles, floods

# The NRC has investigated the safety of long-term dry cask storage and concluded there to be minimal risk, even after 100 years <sup>(2)</sup>

Sources: Nuclear Regulatory Commission, Nuclear Energy Institute

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(1) https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/dry-cask-storage.html







# **Zero-Emitting Nuclear is Prime Vehicle for Producing Hydrogen**



**Superior Economics** 

Green hydrogen from nuclear currently beats hydrogen production from renewables on a levelized cost basis



Low barriers to implementation

Existing nuclear plants require no siting or permitting and offer a secure and steady production source



Scalable and iterative

Electrolyzer capacity can be modularly ramped onto nuclear assets from pilot stage to at-scale production - allowing iterative electrolyzer installation costdowns and quick production scale-up with new offtakers



**Advantageous** end-uses

Certain end-uses benefit from high heat industrial process such as synfuels that create a synergistic relationship with nuclear sites





### **Enhanced criticality** of nuclear assets

With increasing renewables intermittency, electrolyzers can also be used to add flexibility to nuclear assets to improve value in a decarbonizing world







# Appendix



# **Nuclear Fleet Overview**

Plant Location	Type/Containment	License Extension Status	License Expiration <sup>(1)</sup>	Capacity (MW) <sup>(2)</sup>	Policy Support (Term)	Ownership
Braidwood, IL (Units 1 and 2)	Pressurized Water Reactor Concrete/Steel Lined	Renewed	Unit 1: 2046 Unit 2: 2047	2,386	CMC Jun '22 – May '27	Constellation: 100%
Byron, IL (Units 1 and 2)	Pressurized Water Reactor Concrete/Steel Lined	Renewed	Unit 1: 2044 Unit 2: 2046	2,347	CMC Jun '22 – May '27	Constellation: 100%
Calvert Cliffs, MD (Units 1and 2)	Pressurized Water Reactor Concrete/Steel Lined	Renewed	Unit 1: 2034 Unit 2: 2036	1,789	N/A	Constellation: 100%
Clinton, IL (Unit 1)	Boiling Water Reactor Concrete/Steel Lined/Mark III	2027 <sup>(4)</sup>	Unit 1: 2027 <sup>(5)</sup>	1,080	ZEC Jun '17 – May '27	Constellation: 100%
Dresden, IL (Units 2 and 3)	Boiling Water Reactor Steel Vessel/Mark I	Renewed <sup>(4)</sup>	Unit 2: 2029 Unit 3: 2031	1,845	CMC Jun '22 – May '27	Constellation: 100%
Fitzpatrick, NY (Unit 1)	Boiling Water Reactor Steel Vessel/Mark I	Renewed	Unit 1: 2034	842	ZEC Apr '17 – Mar '29	Constellation: 100%
LaSalle, IL (Units 1 and 2)	Boiling Water Reactor Concrete/Steel Lined/Mark II	Renewed	Unit 1: 2042 Unit 2: 2043	2,320	N/A	Constellation: 100%
Limerick, PA (Units 1 and 2)	Boiling Water Reactor Concrete/Steel Lined/Mark II	Renewed	Unit 1: 2044 Unit 2: 2049	2,315	N/A	Constellation: 100%
Nine Mile Point, NY (Units 1 and 2)	Boiling Water Reactor Steel Vessel /Mark I Concrete/Steel Vessel/Mark II	Renewed	Unit 1: 2029 Unit 2: 2046	1,676	ZEC Apr '17 – Mar '29	Unit 1: Constellation 100% Unit 2: Constellation: 82%, 18% LIPA
Peach Bottom, PA (Units 2 and 3) <sup>(6)</sup>	Boiling Water Reactor Steel Vessel/Mark I	Renewed	Unit 2: 2033 Unit 3: 2034	1,324	N/A	Constellation: 50% PSEG: 50%
Quad Cities, IL (Units 1 and 2)	Boiling Water Reactor Steel Vessel/Mark I	Renewed	Unit 1: 2032 Unit 2: 2032	1,403	ZEC Jun '17 – May '27	Constellation: 75% Mid-American Holdings: 25%
R.E. Ginna, NY (Unit 1)	Pressurized Water Reactor Concrete/Steel Lined	Renewed	Unit 1: 2029	576	ZEC Apr '17 – Mar '29	Constellation: 100%
Salem, NJ (Units 1 and 2)	Pressurized Water Reactor Concrete/Steel Lined	Renewed	Unit 1: 2036 Unit 2: 2040	993	ZEC Jun '22 – May '25	Constellation: 42.59% PSEG: 57.41%

(1) Operating license renewal process takes approximately 4-5 years from commencement until completion of NRC review

(2) Net generation capacity is stated at estimated proportionate ownership share as of December 31, 2022 per Annual Form 10-K

(3) 2-Year capacity factor based on 2020-2021

(4) Constellation has notified the Nuclear Regulatory Commission (NRC) of intent to seek license renewals at Clinton and Dresden units

(5) In 2019, the NRC approved a change of the operating license expiration for Clinton from 2026 to 2027

(6) In February 2022, the NRC issued an order related to its review of our subsequent license renewal application for Peach Bottom and the NRC directed its staff to change the expiration dates for the licenses back to 2033 and 2034. We expect that the license expiration dates will be restored to 2053 and 2054, respectively.

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Spent Fuel Storage	2-Year Capacity Factor <sup>(3)</sup>
Dry Cask	Unit 1: 96.4% Unit 2: 94.0%
Dry Cask	Unit 1: 94.1% Unit 2: 97.8%
Dry Cask	Unit 1: 96.0% Unit 2: 95.9%
Dry Cask	Unit 1: 94.6%
Dry Cask	Unit 2: 94.8% Unit 3: 93.3%
Dry Cask	Unit 1: 94.7%
Dry Cask	Unit 1: 96.3% Unit 2: 91.3%
Dry Cask	Unit 1: 94.4% Unit 2: 95.8%
Dry Cask	Unit 1: 96.7% Unit 2: 94.4%
Dry Cask	Unit 2: 93.3% Unit 3: 96.4%
Dry Cask	Unit 1: 95.9% Unit 2: 95.8%
Dry Cask	Unit 1: 89.3%
Dry Cask	Unit 1: 84.1% Unit 2: 87.4%



# **Commercial Disclosures**

**September 30, 2023** 



# **Components of Gross Margin\* Categories**

Gros	Gross n other bus			
Open Gross Margin*	Contracted Revenues	MtM of Hedges <sup>(2)</sup>	"Power" New Business	"Non Power" Executed
<ul> <li>Generation Gross Margin* at current market prices, including ancillary revenues, nuclear fuel amortization and fuel expense</li> <li>Power Purchase Agreement (PPA) Costs and Revenues</li> <li>Provided at a consolidated level for all regions (includes hedged gross margin* for South, West, New England and Canada<sup>(1)</sup>)</li> </ul>	<ul> <li>Expected contracted revenues from CMC payments to eligible IL plants</li> <li>Expected capacity revenues for generation of electricity</li> <li>Expected revenues from Zero Emissions Credits (ZEC)</li> </ul>	<ul> <li>Mark-to-Market (MtM) of power, capacity and ancillary hedges, including cross commodity, retail and wholesale load transactions</li> <li>Provided directly at a consolidated level for four major regions. Provided indirectly for each of the four major regions via Effective Realized Energy Price (EREP), reference price, hedge %, and expected generation.</li> </ul>	<ul> <li>Retail, Wholesale planned electric sales</li> <li>Portfolio Management new business</li> <li>Mid marketing new business</li> </ul>	<ul> <li>Retail, Wholesale executed gas sales</li> <li>Energy Efficiency <sup>(3)</sup></li> <li>Constellation Home <sup>(3)</sup></li> </ul>
		Margins move from ne of hedges over the co sales are ex	ew business to MtM ourse of the year as ecuted <sup>(5)</sup>	Margins move business" to "Non cours

(1) Hedged gross margins\* for South, West, New England & Canada region will be included with Open Gross Margin\*; no expected generation, hedge %, EREP or reference prices provided for these regions

- (2) MtM of hedges provided directly for the four larger regions; MtM of hedges is not provided directly at the regional level but can be easily estimated using EREP, reference price and hedged MWh
  - (3) Gross margin\* for these businesses are net of direct "cost of sales"
  - (4) Proprietary trading gross margins\* will generally remain within the "Non Power" New Business category and only move to the "Non Power" Executed category upon management discretion
  - (5) Margins for South, West, New England & Canada regions and optimization of fuel and PPA activities captured in Open Gross Margin\*

### nargin\* from ness activities



- •Retail. Wholesale planned gas sales
- •Energy Efficiency <sup>(3)</sup>
- •Constellation Home<sup>(3)</sup>
- •Portfolio Management / origination fuels new business
- Proprietary trading <sup>(4)</sup>

from "Non power new power executed" over the course of the year



# **Gross Margin\***

	<u>September 30, 2023</u>		Change from	<u>June 30, 2023</u>
Gross Margin Category (\$M) <sup>(1)</sup>	2023	2024	2023	2024
Open Gross Margin				
(including South, West, New England & Canada hedged GM)*	\$5,000	\$5,950	\$450	\$550
Contracted Revenues (Capacity, ZEC and IL CMC Plant Revenues) <sup>(2)</sup>	\$2,950	\$2,750	-	-
Mark-to-Market of Hedges <sup>(3)</sup>	\$800	(\$300)		(\$350)
Power New Business / To Go	\$50	\$300	(\$50)	\$100
Non-Power Margins Executed	\$350	\$400		\$100
Non-Power New Business / To Go	\$50	\$200	-	(\$50)
Total Gross Margin <sup>* (4)</sup>	\$9,200	\$9,300	\$400	\$350
Nuclear PTC Value for Plants Not Supported By State Programs <sup>(4,5)</sup>	N/A	\$150	N/A	(\$100)
Total Gross Margin* + PTC <sup>(4,5)</sup>	\$9,200	\$9,450	\$400	\$250
Reference Prices <sup>(4)</sup>	2023	2024	2023	2024
Henry Hub Natural Gas (\$/MMBtu)	\$2.59	\$3.39	(\$0.09)	(\$0.14)
Midwest: NiHub ATC prices (\$/MWh)	\$28.48	\$39.18	\$0.45	\$2.42
Mid-Atlantic: PJM-W ATC prices (\$/MWh)	\$34.36	\$46.33	\$0.29	\$2.38
ERCOT-N ATC Spark Spread (\$/MWh) <i>HSC Gas, 7.2HR, \$2.50 VOM</i>	\$39.03	\$25.80	\$15.13	\$7.74
New York: NY Zone A (\$/MWh)	\$27.16	\$40.18	(\$0.02)	\$2.79

Gross margin\* categories rounded to nearest \$50M
 Includes gross margin\* and CMC payments for CMC plants
 Mark-to-Market of Hedges assumes mid-point of hedge percentages
 Based on September 30, 2023, market conditions
 Plants included in PTC value are Calvert Cliffs, LaSalle, Limerick and Peach Bottom



# **Generation and Hedges**

	<u>Septembe</u>	Change from Ju	
Generation and Hedges	2023	2024	2023
Expected Generation (GWh) <sup>(1)</sup>	195,400	198,200	(800)
Midwest (Total) <sup>(2)</sup>	95,500	96,000	100
Midwest (Excluding CMCs)	40,900	42,200	-
Mid-Atlantic	55,300	55,600	500
ERCOT	19,100	21,600	(1,200)
New York	25,500	25,000	(200)
% of Expected Generation Hedged <sup>(3)</sup>	97%-100%	80%-83%	(1%) - 2%
Midwest (Total)	98%-101%	79%-82%	(1%) - 2%
Midwest (Excluding CMCs)	97%-100%	54%-57%	(2%) - 1%
Mid-Atlantic	97%-100%	77%-80%	(3%) - 0%
ERCOT	96%-99%	88%-91%	1% - 4%
New York	96%-99%	82%-85%	2% - 5%

### Effective Realized Energy Price (\$/MWh)<sup>(4)</sup>

Midwest (Excluding CMCs)	\$35.50	\$36.50	\$2.00	(\$0.50)
Mid-Atlantic	\$52.00	\$49.50	\$2.50	\$0.50
ERCOT <sup>(5)</sup>	\$11.50	\$13.50	\$0.50	\$2.00
New York	\$27.50	\$34.00	\$1.00	(\$0.50)

- (1) Expected generation is the volume of energy that best represents our commodity position in energy markets from owned or contracted for capacity based upon a simulated dispatch model that makes assumptions regarding future market conditions, which are calibrated to market quotes for power, fuel, load following products, and options. Expected generation assumes 14 refueling outages in 2023 and 13 in 2024 at Constellation-operated nuclear plants and Salem. Expected generation assumes capacity factors of 94.1% and 94.2% in 2023 and 2024, respectively at Constellation-operated nuclear plants, at ownership. These estimates of expected generation in 2023 and 2024 do not represent guidance or a forecast of future results as we have not completed its planning or optimization processes for those years.
- (2) Midwest (Total) expected generation includes generation from CMC plants of 54,600 GWh in 2023 and 53,800 GWh in 2024

(3) Percent of expected generation hedged is the amount of equivalent sales divided by expected generation. It includes all hedging products, such as wholesale and retail sales of power, options and swaps. The Midwest values in the table reflect IL plants receiving CMC payments as 100% hedged. To align with the Midwest EREP, however, one should exclude plant and hedge volumes associated with CMC payments. New York values include the effect of the New York ZEC.

(4) Effective realized energy price is representative of an all-in hedged price, on a per MWh basis, at which expected generation has been hedged. It is developed by considering the energy revenues and costs associated with our hedges and by considering the natural gas that has been purchased to lock in margin. It excludes uranium costs, RPM capacity, ZEC and CMC revenues, but includes the mark-to-market value of capacity contracted at prices other than RPM clearing prices including our load obligations. It can be compared with the reference prices used to calculate open gross margin\* in order to determine the mark-to-market value of Constellation's energy hedges.

(5) Spark spreads shown for ERCOT

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### ne 30. 2023

2024	
(600)	
(400)	
(100)	
(500)	
600	
(300)	

### 0%-3%

(5%) - (2%)	
(10%) - (7%)	
2% - 5%	
15% - 18%	
1% - 4%	



## Sensitivities

Gross Margin*				Nuclear PT Supported	
<u>Septembe</u>	<u>r 30, 2023</u>	<u>Chang</u> June 3	<u>e from</u> 0, 2023	<u>September 30,</u>	
2023	2024	2023	2024	2024	
-	\$85	-	\$25	(\$75)	
-	(\$85)	-	(\$25)	\$75	
-	\$60	-	-	(\$85)	
-	(\$55)	-	\$5	\$115	
\$5	\$15	-	(\$5)	- /	
(\$5)	(\$15)	-	\$5		
+/- \$25	+/- \$55	(\$5)	\$5	-	
	Septembe 2023 - - - - - \$5 (\$5) +/- \$25	Gross №         September 30, 2023         2023       2024         -       \$85         -       (\$85)         -       (\$60)         -       \$60)         -       (\$55)         \$5       \$15         (\$5)       (\$15)         +/- \$25       +/- \$55	Gross Margin*         September 30, 2023       Chang June 30         2023       2024       2023         -       \$85       -         -       \$85       -         -       (\$85)       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$60       -         -       \$5       \$15         -       -       -         \$5       \$15       -         (\$5)       (\$15)       -         +/- \$25       +/- \$55       (\$5)	Gross Margin*         Change from.         June 30, 2023         2023       2024       2023       2024         -       \$85       -       \$25         -       (\$85)       -       (\$25)         -       (\$60       -       -         -       \$60       -       -         -       (\$55)       -       \$5         \$5       \$15       -       \$5         \$5       \$15       -       \$5         (\$5)       (\$15)       -       \$5         +/- \$25       +/- \$55       (\$5)       \$5	

(1) Sensitivities rounded to the nearest \$5M

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(2) Based on September 30, 2023, market conditions and hedged position; power price sensitivities are derived by adjusting the power price assumption while keeping all other price inputs constant; due to correlation of the various assumptions, the hedged gross margin\* impact calculated by aggregating individual sensitivities may not be equal to the hedged gross margin\* impact calculated when correlations between the various assumptions are also considered; sensitivities based on commodity exposure which includes open generation and all committed transactions.

(3) Plants included in PTC value are Calvert Cliffs, LaSalle, Limerick and Peach Bottom





# Illustrative Example of Modeling 2024 Total Gross Margin\*

Row	Item	Midwest (Excl. CMCs) <sup>(2)</sup>	Mid-Atlantic	ERCOT <sup>(3)</sup>	New York
(A)	Start with fleet-wide open gross margin*	4	\$5.95 k	oillion	
(B)	Contracted Revenues	4	\$2.75 k	billion	
(C)	Expected Generation (TWh)	42.2	55.6	21.6	25.0
(D)	Hedge % (assuming mid-point of range)	55.5%	78.5%	89.5%	83.5%
(E=C*D)	Hedged Volume (TWh)	23.4	43.6	19.3	20.9
(F)	Effective Realized Energy Price (\$/MWh)	\$36.50	\$49.50	\$13.50	\$34.00
(G)	Reference Price (\$/MWh)	\$39.18	\$46.33	\$25.80	\$40.18
(H=F-G)	Difference (\$/MWh)	(\$2.68)	\$3.17	(\$12.30)	(\$6.18)
(I=E*H)	Mark-to-Market value of hedges (\$ million) <sup>(1)</sup>	(\$65)	\$140	(\$240)	(\$130)
(J=A+B+I)	Hedged Gross Margin* (\$ million)		\$8,4	00	
(K)	Power New Business / To Go (\$ million)		\$30	00	
(L)	Non-Power Margins Executed (\$ million)		\$4C	00	
(M)	Non-Power New Business / To Go (\$ million)		\$20	00	
(N=J+K+L+M)	Total Gross Margin <sup>*</sup>		\$9,300	million	
(0)	Nuclear PTC Value For Plants Not Supported By State Programs <sup>(4)</sup>		\$15	50	
(P=N+O)	Total Gross Margin* + Nuclear PTC <sup>(4)</sup>		<b>\$9,450</b>	million	
<ol> <li>Mark-to-market rounded</li> <li>Uses the Midwest hedge</li> <li>Spark spreads shown for</li> <li>Plants included in PTC values</li> </ol>	to the nearest \$5M ratio that excludes the CMC plant volume and hedges ERCOT alue are Calvert Cliffs, LaSalle, Limerick and Peach Bottom			<b>2</b> 0	onstellation

# **Additional Constellation Modeling Data**

Total Gross Margin* Reconciliation (\$M) <sup>(1)</sup>	2023	2024
Adjusted Operating Revenues* (2)	\$27,225	\$30,100
Adjusted Purchased Power and Fuel* (2)	(\$17,575)	(\$20,200)
Nuclear PTC Value for Plants Not Supported by State Programs <sup>(3)</sup>	N/A	(\$150)
Wind PTCs	(\$25)	(\$25)
Other Revenues <sup>(4)</sup>	(\$200)	(\$200)
Direct cost of sales incurred to generate revenues for certain Commercial and Power businesses	(\$225)	(\$225)
Total Gross Margin* (Non-GAAP)	\$9,200	\$9,300
Nuclear PTC Value for Plants Not Supported by State Programs <sup>(3)</sup>	N/A	\$150
Total Gross Margin* + Nuclear PTC <sup>(3)</sup>	\$9,200	\$9,450

Inputs (\$M) <sup>(1)</sup>	2023	2024
Adjusted O&M*	(\$5,000)	(\$4,900)
Wind PTCs	\$25	\$25
Other <sup>(5)</sup>	\$75	(\$25)
Taxes Other Than Income (TOTI) <sup>(6)</sup>	(\$400)	(\$450)
Effective Tax Rate	27%	26%
Cash Tax Rate <sup>(7)</sup>	9%	4%

Note: 323 million average outstanding diluted shares as of September 30, 2023, per Form 10-Q

(1) Items may not sum due to rounding. All amounts rounded to the nearest \$25M

(2) Excludes the mark-to-market impact of economic hedging activities due to the volatility and unpredictability of the future changes to power prices

(3) Plants included in PTC value are Calvert Cliffs, LaSalle, Limerick and Peach Bottom

(4) Other Revenues primarily reflects revenues from variable interest entities, funds collected through revenues for decommissioning the former PECO nuclear plants through regulated rates and gross receipts tax revenues

(5) Other primarily reflects noncontrolling interest and Other Revenues (excluding gross receipts tax revenue)

(6) Taxes Other Than Income (TOTI) includes gross receipts tax revenues

(7) Cash tax rate excludes impact from PTC. Includes receivable from Exelon for tax credits. If receivable were to be excluded in calculation, cash tax rate would be 13% in 2023 and 14% in 2024.



# Appendix

# Reconciliation of Non-GAAP Measures



# GAAP to Non-GAAP Reconciliations <sup>(1)</sup>

S&P FFO/Debt <sup>(2)</sup> =

### FFO (a)

Adjusted Debt (b)

### S&P FFO Calculation <sup>(2)</sup>

GAAP Operating Income + Depreciation & Amortization = EBITDA - Interest +/- Cash Taxes + Nuclear Fuel Amortization +/- Mark-to-Market Adjustments (Economic Hedges) +/- Other S&P Adjustments

= FFO (a)

### S&P Adjusted Debt Calculation <sup>(2)</sup>

### Long-Term Debt

+ Short-Term Debt

- + Purchase Power Agreement and Operating Lease Imputed Debt
- + Pension/OPEB Imputed Debt (after-tax)
- + AR Securitization Imputed Debt
- Off-Credit Treatment of Non-Recourse Debt
- Cash on Balance Sheet
- +/- Other S&P Adjustments
- = Adjusted Debt (b)

### Moody's CFO Pre-WC/Debt <sup>(3)</sup> =

### Moody's CFO Pre-WC Calculation (3)

Cash Flow From Operations +/- Working Capital Adjustment - Nuclear Fuel Amortization

- +/- Other Moody's CFO Adjustments
- = CFO Pre-Working Capital (c)

### Moody's Adjusted Debt Calculation (3)

Long-Term Debt

- + Short-Term Debt
- + Underfunded Pension (pre-tax)
- +Operating Lease Imputed Debt
- +/- Other Moody's Debt Adjustments
- = Adjusted Debt (d)

(1) Due to the forward-looking nature of some forecasted non-GAAP measures, information to reconcile the forecasted adjusted (non-GAAP) measures to the most directly comparable GAAP measure may not be available; therefore, management is unable to reconcile these measures

(2) Calculated using S&P Methodology

(3) Calculated using Moody's Methodology

## CFO (Pre-WC) (c) Adjusted Debt (d)



# GAAP to Non-GAAP Reconciliations <sup>(1)</sup>

Net Debt/EBITDA =

Net Debt (a)

Adjusted EBITDA\* (b)

### **Net Debt Calculation**

Long-Term Debt (including current maturities)

- + Short-Term Debt
- Cash on Balance Sheet
- = Net Debt (a)

### **Adjusted EBITDA\* Calculation**

GAAP Net Income

- + Income Tax Expense
- + Interest Expense, Net
- + Depreciation & Amortization
- +/- Adjustments

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= Adjusted EBITDA\* (b)

### Net Debt/EBITDA **Excluding Non-Recourse**

### Net Debt Calculation Excluding Non-Recourse

Long-Term Debt (including current maturities)

- + Short-Term Debt
- Cash on Balance Sheet
- Non-Recourse Debt
- = Net Debt Excluding Non-Recourse (c)

### Adjusted EBITDA\* Calculation Excluding Non-Recourse

GAAP Net Income

- + Income Tax Expense
- + Interest Expense, Net
- + Depreciation & Amortization
- +/- Adjustments
- EBITDA from Projects Financed by Non-Recourse Debt
- = Adjusted EBITDA\* Excluding Non-Recourse Debt (d)

### Net Debt (c) Adjusted EBITDA\* (d)



	Three Months Ended September 30,		Nine Months Ended September 30,		
Adjusted EBITDA* Reconciliation (\$M)	2022	2023	2022	2023	
GAAP Net (Loss) Income	(\$188)	\$731	(\$194)	\$1,660	
Income Taxes <sup>(1)</sup>	(\$149)	\$209	(\$472)	\$682	Note (1)
Depreciation and Amortization	\$262	\$266	\$818	\$808	( )
Interest Expense, Net	\$75	\$82	\$187	\$292	(2)
Unrealized (Gain) Loss on Fair Value <sup>(2)</sup>	\$550	(\$215)	\$645	(\$344)	(3)
Plant Retirements & Divestitures	\$5	-	(\$3)	(\$28)	
Asset Impairments	-	\$71	-	\$71	
Decommissioning-Related Activities (3)	\$88	\$79	\$1,126	(\$277)	(4)
Pension & OPEB Non-Service Credits	(\$27)	(\$14)	(\$85)	(\$41)	
Separation Costs <sup>(4)</sup>	\$30	\$18	\$99	\$84	(5)
ERP System Implementation Costs <sup>(5)</sup>	\$5	\$5	\$16	\$20	(5)
Change in Environmental Liabilities	\$3	\$13	\$12	\$29	(6)
Acquisition Related Costs	-	-	-	\$2	(/)
Prior Merger Commitment <sup>(6)</sup>	(\$50)	-	(\$50)		
Noncontrolling Interests <sup>(7)</sup>	(\$12)	(\$46)	(\$37)	(\$70)	
Adjusted EBITDA*	\$592	\$1,199	\$2,062	\$2,888	

Other, net

Includes mark-to-market on economic hedges and fair value adjustments related to gas imbalances and equity investments

- - commitment

: Items may not sum due to rounding

Includes amounts contractually owed to Exelon under the Tax Matters Agreement (TMA) reflected in

Reflects all gains and losses associated with Nuclear Decommissioning Trusts (NDT), Asset Retirement Obligation (ARO) accretion, ARO remeasurement, and any earnings neutral impacts of contractual offset for Regulatory Agreement Units

Represents certain incremental costs related to the separation (system-related costs, third-party costs paid to advisors, consultants, lawyers, and other experts assisting in the separation), including a portion of the amounts billed to us pursuant to the Transition Services Agreement (TSA)

Reflects costs related to a multi-year Enterprise Resource Program (ERP) system implementation Reversal of a charge related to a 2012 merger

Represents elimination of the noncontrolling interest related to certain adjustments



Adjusted EBITDA* Reconciliation (\$M)	2023
GAAP Net Income	\$2,025 - \$2,225
Income Taxes	\$850
Interest Expense	\$450
Depreciation and Amortization	\$1,100
Unrealized (Gain)/Loss on Fair Value Adjustments (1)	(\$500)
Pension and OPEB Non-Service Credits	(\$50)
Decommissioning Related Activity <sup>(2)</sup>	(\$175)
Separation Costs <sup>(3)</sup>	\$125
ERP System Implementation <sup>(4)</sup>	\$25
Noncontrolling Interest <sup>(5)</sup>	(\$50)
Adjusted EBITDA* (Non-GAAP)	\$3,800 - \$4,000

Note: Items may not sum due to rounding. All amounts rounded to the nearest \$25M

(1) Includes mark-to-market on economic hedges, fair value adjustments related to gas imbalances and equity investments, and gain on property sales.

(2) Reflects all gains and losses associated with NDT, ARO accretion, ARO remeasurement, and any earnings neutral impacts of contractual offset for Regulatory Agreement Units

(3) Represents certain incremental costs related to the separation (system-related costs, third-party costs paid to advisors, consultants, lawyers, and other experts assisting in the (3) Represents certain incremental costs related to the separation (system related costs separation), including a portion of the amounts billed to us pursuant to the TSA
 (4) Reflects costs related to a multi-year ERP system implementation
 (5) Represents elimination of the noncontrolling interest related to certain adjustments



Adjusted O&M* Reconciliation (\$M)	2023	2024	2025
GAAP O&M	\$5,575	\$5,325	\$5,250
Decommissioning <sup>(1)</sup>	(\$175)	(\$200)	(\$175)
Direct cost of sales incurred to generate revenues for certain Commercial and Power businesses <sup>(2)</sup>	(\$225)	(\$225)	(\$225)
Separation Costs <sup>(3)</sup>	(\$125)	-	-
ERP System Implementation <sup>(4)</sup>	(\$25)	-	-
Change in Environmental Liabilities	(\$25)	-	-
Adjusted O&M* (Non-GAAP)	\$5,000	\$4,900	\$4,850

- Note: Items may not sum due to rounding. All amounts rounded to the nearest \$25M.
  (1) Reflects all gains and losses associated with ARO accretion, ARO remeasurement, and any earnings neutral impacts of contractual offset for Regulatory Agreement Units
  (2) Reflects the direct cost of sales of certain businesses, which are included in Total Gross Margin\*
  (3) Represents certain incremental costs related to the separation (system-related costs, third-party costs paid to advisors, consultants, lawyers, and other experts assisting in the separation), including a portion of the amounts billed to us pursuant to the TSA
  (4) Reflects costs related to a multi-year ERP system implementation



Free Cash Flow before Growth* (\$M)	2023 - 2024	
Adjusted Cash Flows from Operations* (Non-GAAP) (1,3)	\$8,050 - \$8,450	
Baseline and Nuclear Fuel Capital Expenditures	(\$4,000)	
Reinvestment in Nuclear Decommissioning Trust Funds <sup>(2)</sup>	(\$450)	
Collateral activity	\$150	
O&M related to Separation and ERP System Implementation	\$100	
Other Net Investing Activities	(\$50)	
Free Cash Flow before Growth* <sup>(3)</sup>	\$3,750 - \$4,150	

- (2) Reflects reinvestment of proceeds from nuclear decommissioning trust funds that are presented in Adjusted Cash Flows from Operations\*. Impact is cash flow neutral.
   (3) Reflects FCFbg as of December 31, 2022 disclosed at Q4 2022 earnings call. Does not include pro forma impact from STP as shown on slide 19.



Note: All amounts rounded to the nearest \$50M. Items may not sum due to rounding (1) Includes Collection of Deferred Purchase Price (DPP) related to the revolving accounts receivable arrangement, which is presented in cash flows from investing activities for GAAP. Cash flows from collection of DPP are not forecasted.

## **Contact Information**

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