Investor Day

Talen Energy Corporation | September 5, 2024

TALEN ENERGY™

Disclaimers

The information contained herein, as well as any information that has been supplied orally in connection herewith, speaks only as of the date of this presentation. Talen Energy Corporation ("Talen," "TEC," the "Company," "we," "our," or "us") and our affiliates and representatives expressly disclaim any obligation to update any information contained herein, whether as a result of new information or circumstances, future events or otherwise. The information contained herein in summary. For additional information, see the Company's historical financial statements and other information included in its periodic reports and other filings with the Securities and Exchange Commission (the "SEC") (available at www.sec.gov/edgar). Nothing contained herein should be construed as legal, business, tax, accounting or other professional advice, and you should consult your own advisors regarding such matters. These materials should not be relied upon for the maintenance of your books and records for any tax, accounting, legal or other procedures.

Non-GAAP Financial Measures

We include in this presentation Adjusted EBITDA and Adjusted Free Cash Flow, which we use as measures of our performance and liquidity, and which are not financial measures prepared under U.S. Generally Accepted Accounting Principles ("GAAP"). Non-GAAP financial measures, such as Adjusted EBITDA and Adjusted Free Cash Flow, do not have definitions under GAAP and may be defined differently by, and not be comparable to, similarly titled measures used by other companies or used in our credit facilities, the indentures governing our notes or any of our other debt agreements. Generally, a non-GAAP financial measure is a numerical measure of financial performance, financial position or cash flows that excludes (or includes) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP. Management cautions investors not to place undue reliance on such non-GAAP measures, but to consider them along with their most directly comparable GAAP measures. Adjusted EBITDA and Adjusted Free Cash Flow have limitations as analytical tools and should not be considered in isolation or as a substitute for analyzing our results as reported under GAAP. Please see the "Reconciliation of Non-GAAP Financial Measures" section of the Appendix for more detail.

Market and Industry Data

This presentation includes market data and other information from independent industry publications, as well as surveys and our own research and knowledge of the industry. Some data is also based on management's estimates, which are derived from our review of internal sources, as well as the independent sources described above. Although we believe these sources are reliable, the third-party information contained in this presentation has not been independently investigated, verified or audited and, therefore, we cannot guarantee the accuracy or completeness of such information. As a result, you should be aware that market share, ranking and other similar data set forth in this presentation, and estimates and beliefs based on such data, may not be reliable.

Forward Looking Statements

Statements contained in this presentation concerning expectations, beliefs, plans, objectives, goals, strategies, future events or performance and underlying assumptions, and other statements that are not statements of historical fact are "forward-looking statements," and should be considered estimates, assumptions or projections. These statements often include words such as "believe," "expect," "anticipate," "intend," "plan," "estimate," "target," "project," "forecast," "seek," "will," "may," "should," "could," "would" or similar expressions. Any such forward-looking statements reflect various estimates and assumptions. Although we believe that the expectations and assumptions reflected in these statements are reasonable, there can be no assurance that they will prove to be correct. No representations or warranties are made by Talen or any of its affiliates, shareholders, directors, officers, employees, agents, partners or professional advisors as to the accuracy or achievability of any such forward-looking statements. Except as otherwise required by law, Talen undertakes no obligation to update any forward-looking statement to reflect new information or circumstances, future events or otherwise after the date on which such statement is made. Forward-looking statements are subject to many risks and uncertainties, and actual results may differ materially due to many factors. New factors emerge from time to time, and it is not possible for us to predict all of these factors. In addition to the specific factors discussed in the sections entitled "Cautionary Note Regarding Forward-Looking Information" (or "Cautionary Note Regarding Forward-Looking Statements") and "Risk Factors" in our periodic reports and other filings with the SEC, the following are among the important factors that could cause actual results to differ materially from forward-looking statements: Talen's or its subsidiaries' levels of indebtedness; the terms and conditions of debt instruments that may restrict Talen's ability to operate its business; operational, price and credit risks in the wholesale and retail electricity markets (including as a result of increases in the supply of electricity generally due to new power or intermittent renewable power generation); the risks associated with cryptocurrency mining projects due to the volatility of such currencies and oversight from federal and state agencies; the effectiveness of Talen's risk management techniques, including hedging, with respect to electricity and fuel prices, interest rates and counterparty and joint venture partner credit and non-performance risks; methods of accounting and developments in or interpretations of accounting requirements that may impact reported results, including with respect to, but not limited to, hedging activity; Talen's ability to forecast the actual load needed to perform full-requirements sales contracts; the effects of transmission congestion due to line maintenance outages and the performance of transmission facilities and any changes in the structure and operation of, or the pricing limitations imposed by, the Regional Transmission Organizations and Independent System Operators that operate those facilities; blackouts due to disruptions in neighboring interconnected systems; federal and state legislation and regulation, including federal and state tax laws and regulations, and costs of complying with governmental permits and approvals; costs of complying with environmental, social and related worker health and safety laws and regulations; the impacts of climate change, including changes in regulation or their enforcement; the availability and cost of emission allowances; the performance of Talen's subsidiaries and affiliates, on which our ability to meet our debt obligations largely depend; the risks inherent with variable rate indebtedness; disruption in or adverse developments of financial markets; acquisition or divestiture activities, including Talen's ability to realize expected synergies and other benefits from such business transactions; Talen's ability to achieve anticipated cost savings; the execution and development of proposed future enterprises, including the ability to permit, develop, construct and operate the proposed renewable energy, energy storage, data center and digital currency facilities, realization of assumptions underlying the statements regarding future enterprises, and the realization of estimates of valuations of future enterprises; Talen's ability to optimize its competitive power generation operations and the costs associated with any capital expenditures; significant increases in operation and maintenance expenses, such as health care, and pension costs, including as a result of changes in interest rates; the loss of key personnel, the ability to hire and retain qualified employees, and the possibility of union strikes or work stoppages; war (including supply chain disruptions as a result of war, and including the effects of the Ukraine and Russia conflict and attendant sanctions imposed on Russia and the related disruptions in oil and natural gas production), armed conflicts or terrorist attacks, including cyber-based attacks; and pandemics, including COVID-19. Recipients are cautioned to not place undue reliance on such forward-looking statements.

Agenda

1 Executive Summary

2 Power Markets & Hedging

3 Growth Platform

4 Appendix

Executive Summary

Why Talen?

- Pure play independent power producer that directly benefits from growing power demand in premium markets
- First mover on providing direct-connect power to data center customers and well-positioned to use this advantage
- Disciplined track record of safe, reliable and cost-effective operations
- Focused on unlocking value and returning capital to shareholders

Substantial Cash Flow per Share Growth, Enhanced by Share Repurchase Program

Adjusted Free Cash Flow per Share

Assuming Current Share Count of ~51mm

- Forecasted Adjusted Free Cash Flow growing quickly, increasingly driven by stable sources[2]
- Reloading our share repurchase program (SRP) capacity to $1.25B

Additional Upside Potential

- Evaluating multiple options across the fleet for our next data center power arrangements
- Continuous evaluation and reshaping of our asset portfolio

Note: Please refer to Reconciliation of Non-GAAP Financial Measures section of the Appendix for more detail on Adjusted Free Cash Flow. Per share amounts rounded to nearest $0.10.
1. Calculated using the midpoint of each range provided.
2. Anticipated sources include AWS revenues, capacity revenues, Nuclear PTC and other.
3. Includes January – April contribution from the ERCOT generation fleet.

Track Record of Unlocking Value

Since May 2023, Talen has identified and executed on multiple actions to unlock value with minimal capital spend

Jul - Aug 2023
- Began trading on OTCQX
- Refinanced LMBE-MC project financing, bringing cash flows to corporate level

Sep - Oct 2023
- Bought out a third party's warrants in TEC and minority interest in Cumulus
- Announced $300mm share repurchase program

Nov - Dec 2023
- Announced $50mm cost savings initiative
- Settled PPL litigation with $115mm payment to Talen

Mar 2024
- $650mm sale of Cumulus Data campus to and long-term contracts with AWS
- $785mm sale of ERCOT portfolio
- Paid off Orion project financing and bought out Orion minority interest in Cumulus
- Bought out remaining minority interests in Cumulus

Apr - May 2024
- Upsized share repurchase program to $1B
- Repriced Term Loans B and C at lower interest rates

Jun 2024
- Repurchased $612mm of stock in tender offer
- Remarketed PEDFA bonds, eliminating LC support

Jul 2024
- Repurchased $280mm of stock from largest shareholder
- Listed on NASDAQ

Aug - Sep 2024
- Received $300mm of remaining AWS proceeds from escrow
- Reloading share repurchase capacity to $1.25B

Future

Positioned for further growth and actions to unlock value

Growing Power Demand Creates Opportunity for the Sector

Unprecedented Change in the Power Markets

Significant growth in forecasted power demand, largely driven by data centers

Minimal excess capacity and few dispatchable assets, leading to reliability concerns

Development queues, still mostly renewables, lack a solution for intermittency

Increasing energy and capacity prices

Expanding spark spreads

Electrifying the Future Creates Opportunity

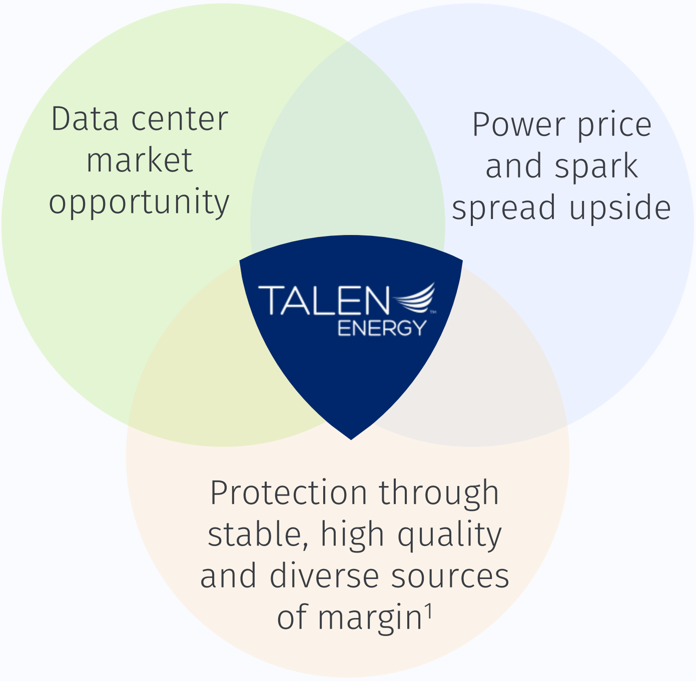
Data centers need increasing amounts of power that is quick to access, cost-effective and reliable

Supporting this growth requires a balance of direct-connected and grid-connected solutions

Talen's data center transaction is a first-mover and just one of many potential solutions to growing supply needs

Economic opportunity for all stakeholders: generators, T&D, consumers, local communities

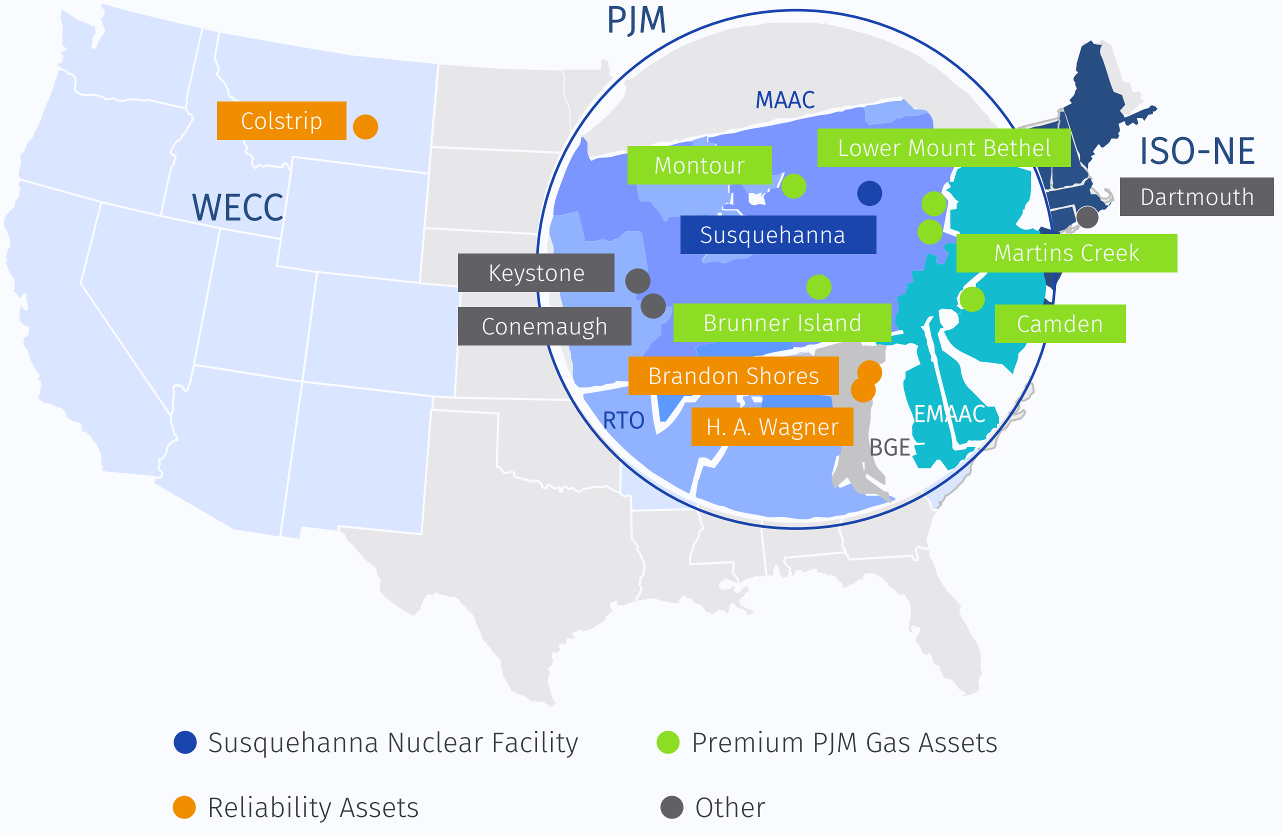
Talen is Well-Positioned to Capture the Opportunity



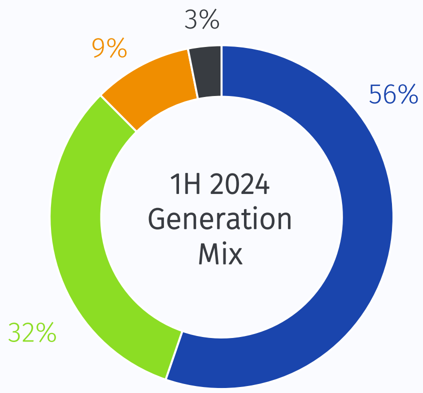
1. Anticipated sources include AWS revenues, capacity revenues, Nuclear PTC and other.

Talen by the Numbers

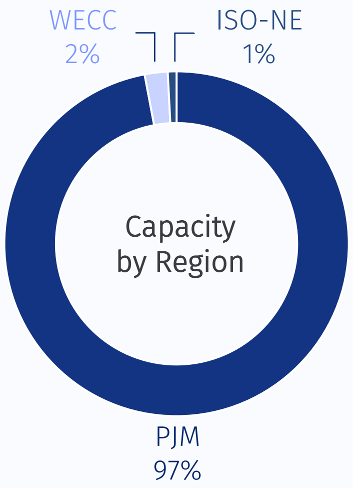
Generation Portfolio Overview



Generation Portfolio Breakdown[1]



Note: Same legend as the map.



>50%
carbon-free generation

~10.7 GW
total generation capacity

12
generation facilities

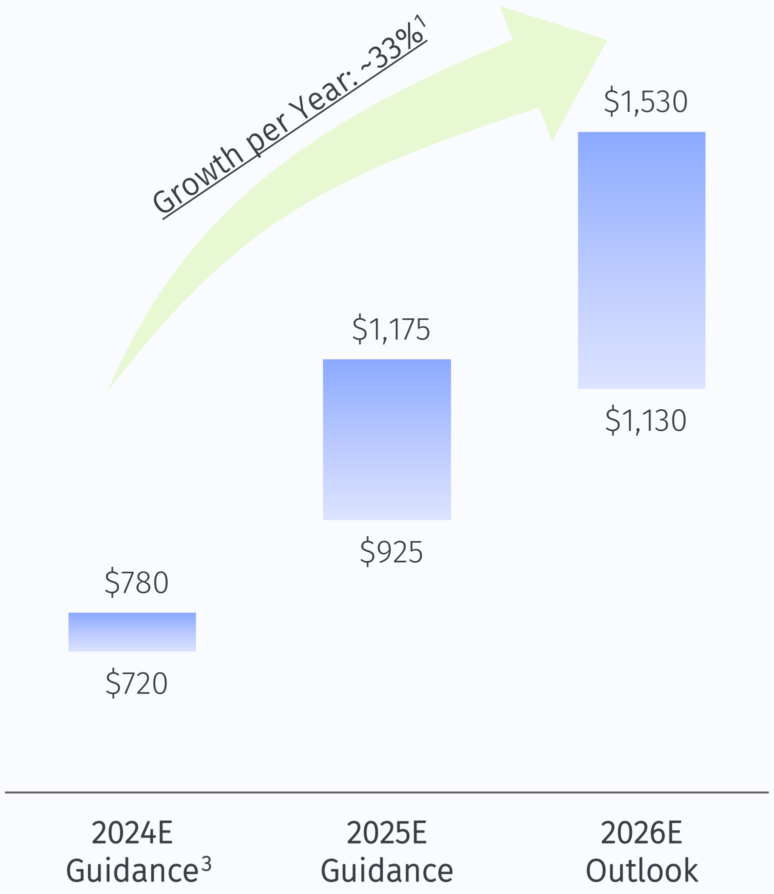
~1,900
employees

Note: As of 6/30/2024.

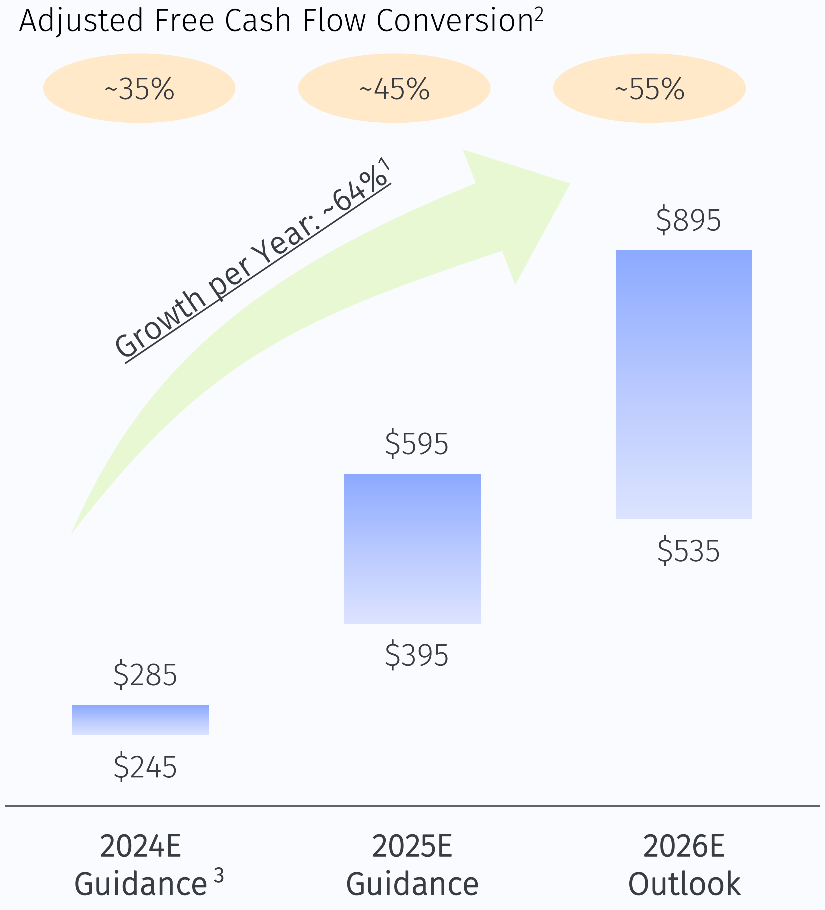
1. Excludes January – April contribution from the ERCOT generation fleet.

Introducing 2025 Guidance and 2026 Outlook

Adjusted EBITDA ($mm)



Adjusted Free Cash Flow (after Taxes, $mm)



Key Drivers of 2025 & 2026 Ranges

Dynamic hedging program; as of July 31, 2024:

- ~100% hedged for balance of 2024
- ~67% hedged for 2025
- ~31% hedged for 2026

PJM capacity auction

- ~$270/MW-day capacity price for ’25/’26 planning year
- Assumed ~$270/MW-day for ’26/’27
- $50/MW-day change in ‘26/’27 capacity price changes 2026E Adjusted EBITDA by ~$50mm

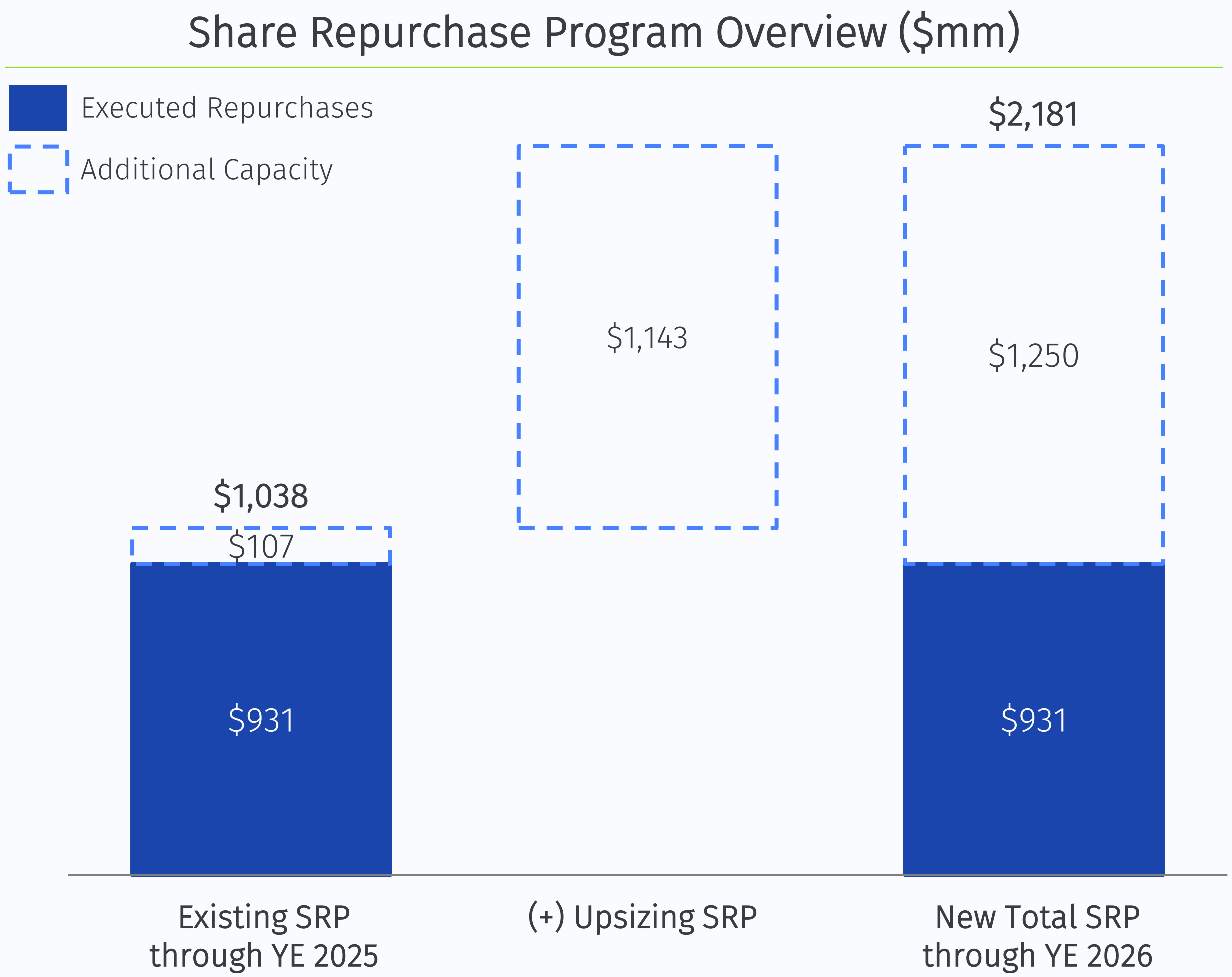
Contractual AWS PPA ramp: 120 MW starting in mid-’25, ramping to 240 MW in mid-’26

Note: Please refer to Reconciliation of Non-GAAP Financial Measures section of the Appendix for more detail on Adjusted EBITDA and Adjusted Free Cash Flow.

1. Calculated using the midpoint of each range provided.
2. Adjusted Free Cash Flow Conversion calculated as the midpoint of the Adjusted Free Cash Flow range divided by the midpoint of the Adjusted EBITDA range for each year.
3. 2024E includes January – April contribution from the ERCOT generation fleet.

TALEN ENERGY

Reloading Share Repurchase Capacity to $1.25 Billion

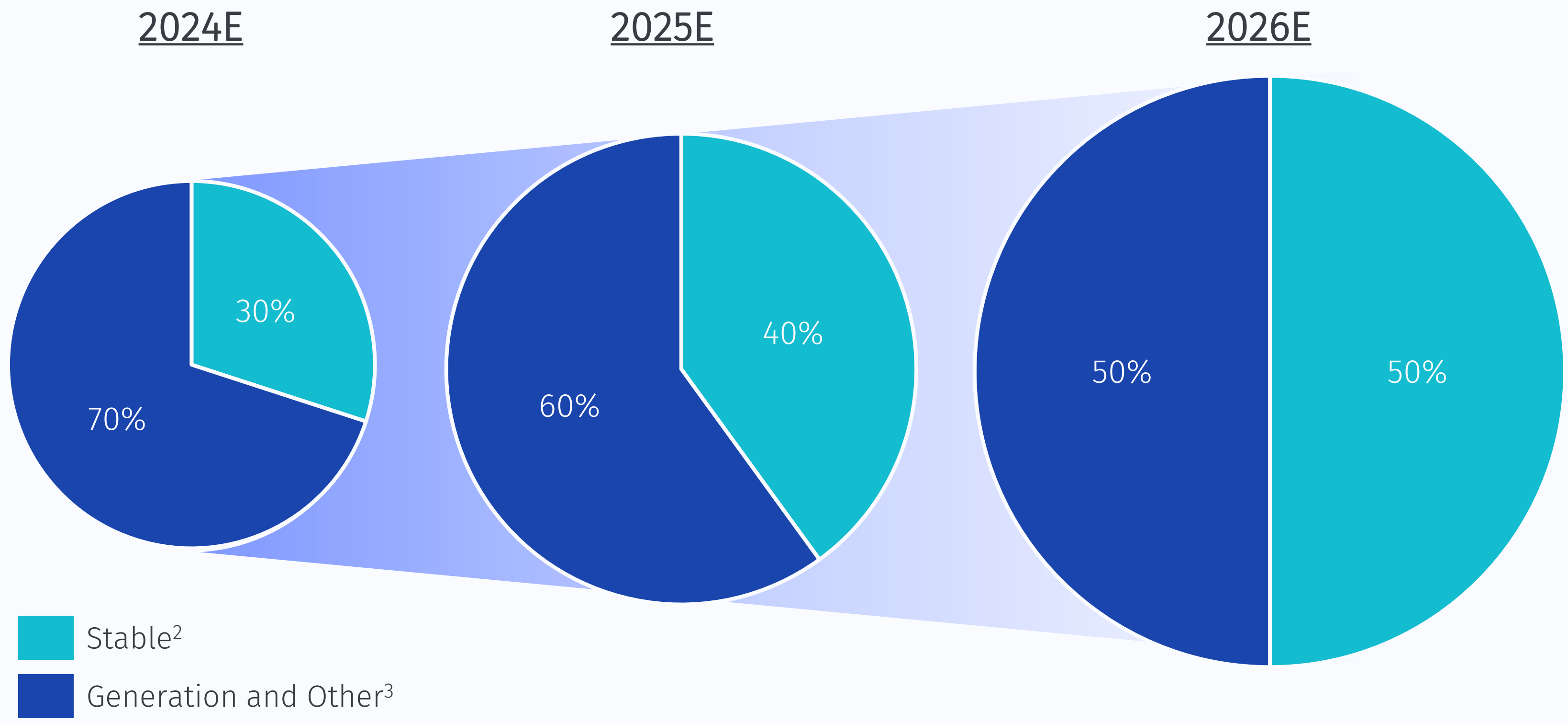


- Targeting return of ~70% of Adjusted Free Cash Flow to shareholders going forward
- Increasing SRP capacity, given confidence in cash flows, modest leverage, ample liquidity and limited need for growth capex
- Supported by $692mm of unrestricted cash[1] and >$1.2B of projected cumulative Adjusted Free Cash Flow in 2025 – 2026[2]
- Flexibility to support growth if economically justified, while remaining disciplined

Note: Please refer to Reconciliation of Non-GAAP Financial Measures section of the Appendix for more detail on Adjusted Free Cash Flow.
1. Unrestricted cash as of 8/30/2024.
2. Calculated using the midpoint of each range provided.

Significant Expected Margin Growth, with Increasing Stability

Margin Composition[1]



Talen's margin is expected to grow over time, with an increasing share coming from stable sources[2]

- Reduces hedging activity and liquidity needs
- Increases balance sheet strength and flexibility

1. Calculated using the midpoint of each guidance and outlook range provided and rounded to nearest 5%.
2. Anticipated sources include AWS revenues, capacity revenues, Nuclear PTC and other.
3. Includes margin from generation, hedges and other.

Talen is Now Eligible for Multiple Indices

After uplisting to NASDAQ, Talen is now eligible for several indices, which could drive substantial institutional / passive stock demand:

Index	S&P TMI / Completion	CRSP TMI / Small Cap	MSCI Small Cap 1750	Russell 1000	S&P 400
Potential Inclusion Date	September 2024	September 2024	November 2024	June 2025	September 2025 or later

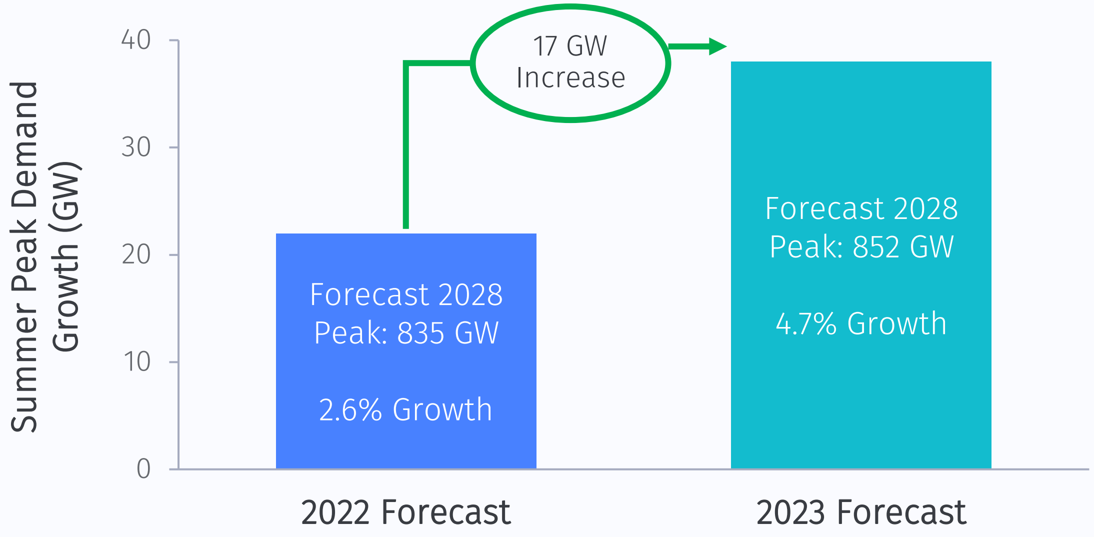
Talen may qualify for additional value, growth and/or sector-related indices, leading to further demand

Note: Inclusion is to be determined by the governing body of each index. Table is illustrative based on the current index methodologies, which are subject to change at any time. There can be no assurance that Talen's common stock will be included in any particular index at a specific time or at all.

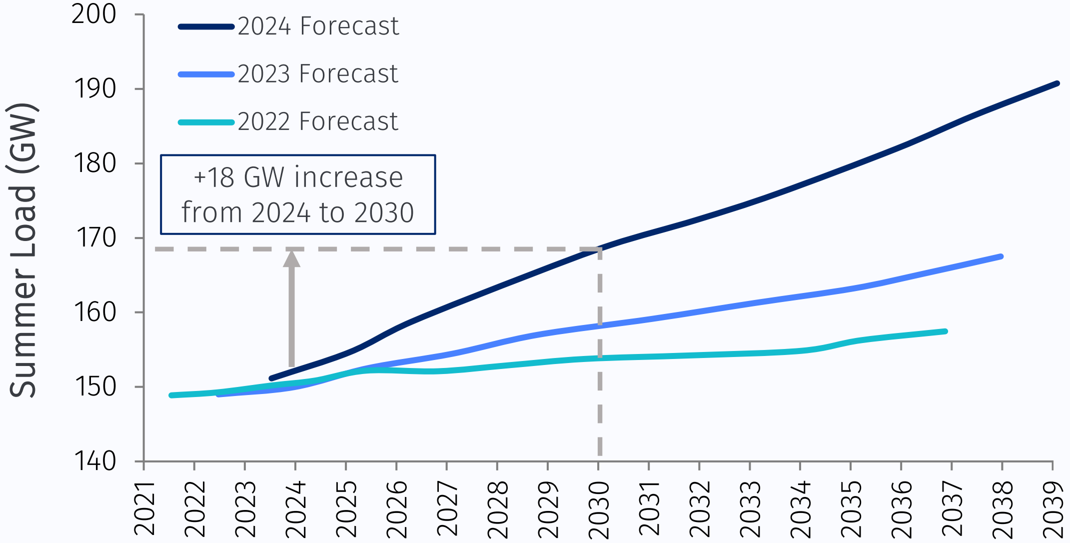
Power Markets & Hedging

U.S. Power Demand is Growing, Especially in PJM

5-Year Nationwide Growth Forecast



PJM Demand Forecast[1]



Demand Growth Drivers

Data centers:
U.S. energy demand has 5% CAGR or 7 GW total growth from 2023 to 2030

Domestic industry & manufacturing:
Manufacturing construction spending has increased substantially since 2023, also supported by government funding

Electrification:
Nearly half of industrial energy consumption could be electrified in the near-term

Sources: Grid Strategies, "The Era of Flat Power Demand is Over" (December 2023); U.S. Department of the Treasury, "Unpacking the Boom in U.S. Construction of Manufacturing Facilities" (June 2023); Schneider Electric Sustainability Research Institute, "The untold potential and rationale of industrial electrification in the United States" (June 2024).

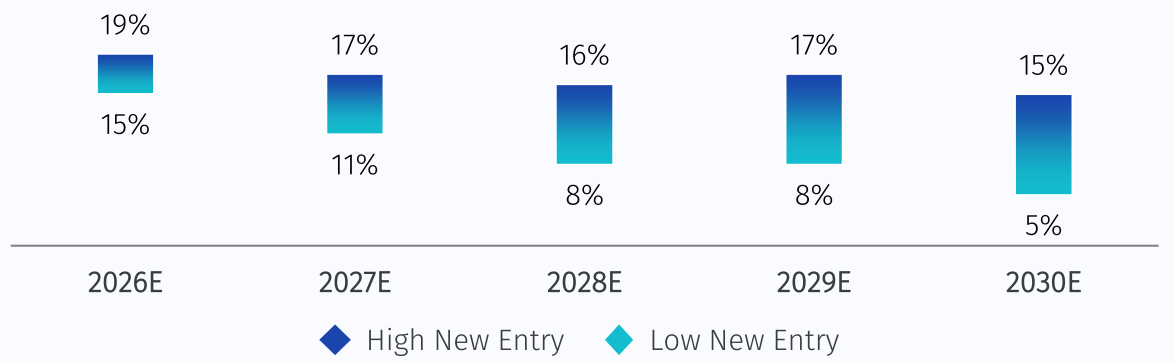
1. PJM Load Forecast Reports (Jan 2022, Jan 2023, Jan 2024).

TALEN ENERGY

PJM Market Fundamentals are Tightening

Historical Capacity Auction Results by Planning Year (RTO)

PJM Reserve Margin Forecast (%)[1]



- PJM reserve margins are shrinking as power demand grows while supply faces retirements and lack of new builds
- The 2025/2026 PJM capacity auction results demonstrate the growing need for reliable supply
- We expect this dynamic to persist in upcoming auctions, further increasing the importance of existing generation

Note: Reserve Margin includes Fixed Resource Requirement + Reliability Pricing Model (Total ICAP / Total Peak – 1). Each planning year runs from June 1 through May 31 of the following year. Resource Clearing Prices rounded to nearest $/MW-day.

1. PJM, "Energy Transition in PJM: Resource Retirements, Replacements and Risks" (February 2023). High New Entry and Low New Entry refers to the pace of generation entry driven by construction and retirement of new resources.

TALEN ENERGY

Hedging Strategy Well-Positioned in Current Market

Talen's commercial strategy creates asymmetric returns

- Protects against downside, providing cash flow stability
- Retains exposure to upside through both generation and opportunistic hedging

Hedging targets are based on % of generation[1]

- Prompt Months 1 – 12: 60% – 80%
- Prompt Months 13 – 24: 40% – 60%

Total Fleet: % Hedged and Power Price Sensitivities as of July 31, 2024		2025E	2026E
% Hedged		67%	31%
Margin[2] Impact of Change in Power Price[3]	+$10/MWh	+$190	+$285
	+$5/MWh	+$90	+$145
	-$5/MWh	-$35	-$135
	-$10/MWh	-$50	-$240

Note: Includes the impact of the Nuclear PTC.
1. Measured at end of each calendar year.
2. Margin is comprised of hedged energy margin, capacity revenues and Nuclear PTC. Excludes the effects on bitcoin margin. Figures rounded to nearest $5mm.
3. Where applicable, sensitivities adjusted monthly gas prices to maintain consistent heat rate relationships with corresponding power prices for each power market served by a particular gas supply.

Growth Platform: Powering the Future

Long-Term Agreements with AWS Create Stable Cash Flow Growth

Overview of AWS Contracts

- Susquehanna PPA for up to 960 MW direct-connect, carbon-free power
- Increasing by 120 MW in commitments per year, with option to accelerate power ramp
- Fixed price over 10-year terms, repriced at market
- Additional revenue from carbon-free energy sales (CFE)

Progress Update

- ✓ May 2024: Township zoning changes approved for data center use
- ✓ Jun 2024: Building permit received to fit-out existing data center shell
- ✓ Jul 2024: Master Site Plan approved; unlocks full campus development
- ✓ Aug 2024: $300mm escrow released

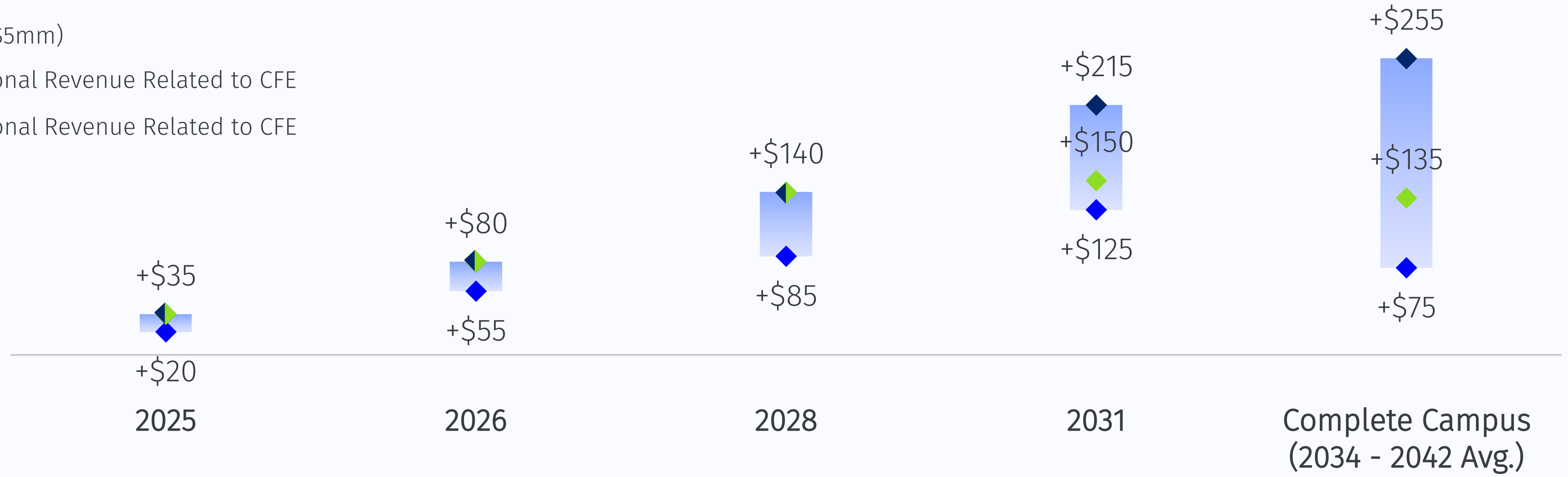
Financial Impact of AWS Contracts

Illustrative Incremental Impact Above Nuclear PTC on Adjusted EBITDA

($mm/year, rounded to nearest $5mm)

- 960 MW Power Sales + Additional Revenue Related to CFE
- 480 MW Power Sales + Additional Revenue Related to CFE
- Contractual Minimums

For every $1/MWh above the PTC Reference Price, the annual incremental EBITDA impact decreases by ~$1mm per 120 MW



	2025	2026	2028	2031	Complete Campus (2034 - 2042 Avg.)
Year-End Power Sales: 480 MW & 960 MW Cases	120 / 120	240 / 240	480 / 480	480 / 840	480 / 960
PTC Reference Price ($/MWh)	$45	$45	$46	$51	$54

Notes

- Incremental impact based on comparison of (1) Susquehanna revenues including AWS power sales and additional revenue from AWS related to sales of CFE vs. (2) Susquehanna revenues assuming the "PTC Reference Price," which represents max price of the Nuclear PTC floor (assuming 2% annual inflation) until "Complete Campus (2034 – 2042 Avg.)."
- Reference pricing shown for 2034 – 2042 represents the simple average of SSES node energy prices + MAAC capacity prices; projected SSES node prices are assumed to be at a discount to West Hub energy prices; all of these reference prices are for illustrative purposes only and not Company projections of long-dated energy or capacity prices.
- Financial outcomes and schedules depicted here are base cases subject to confidential contractual provisions that may affect the non-minimum commitment depictions in either direction; outcomes may also be impacted by IRS guidance regarding the Nuclear PTC.

Update on FERC ISA Process

The Process	Prior Amendment to 300 MW	Current Amendment to 480/960 MW
Reliability Review by PJM and PPL	▪ No issues	▪ Up to 480 MW: No issues ▪ Up to 960 MW: Identified a minor grid stability concern under extreme conditions
ISA Amendments	▪ Allows up to 300 MW co-located load	▪ Allows up to 480 MW co-located load ▪ Includes enhanced reliability safeguards (Schedule F) ▪ Talen will pay 100% of costs to address the minor stability concern (<$3mm)
FERC Review	▪ FERC approval received	▪ FERC issued deficiency letter, requesting more information on part of Schedule F

Two Separate FERC Processes

1 ISA

- PJM has responded to FERC, with PPL and Talen's support
- FERC expected to complete review by November 4

2 Technical Conference

- Set for November 1
- Separate from ISA, to address broader topic as industry
- No specific proceedings to be discussed

Talen is optimistic that FERC will approve the filed amendments after the Commission has fully reviewed PJM's response to FERC's deficiency letter

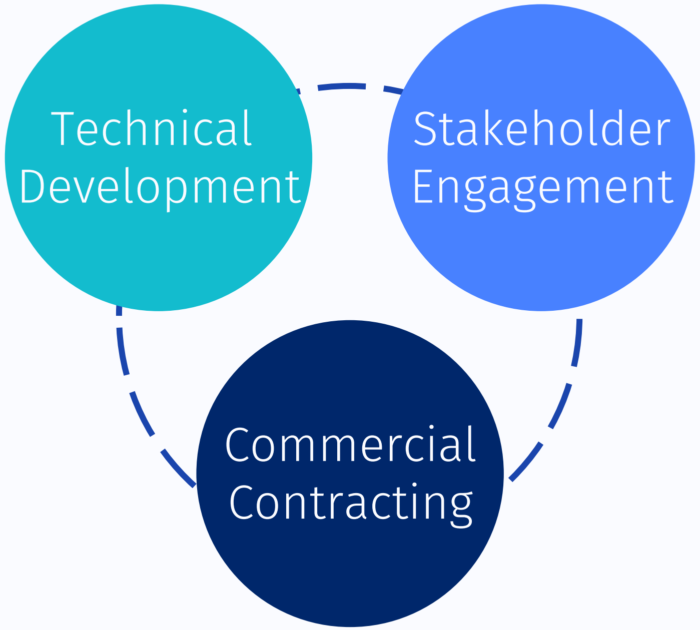
Talen Has Built a Valuable Platform to Power the Data Center Economy

Talen Understands What is Important to Hyperscalers…

- Speed of Access to Space and Power
- Scalable to Support 1 GW+ AI Customers
- 24x7 Reliable + Low-Carbon Power
- Access to Critical Data Center Infrastructure (Fiber, Water)

+

… And Has Built Industry-Leading Expertise & Team



Talen is using this platform to develop multiple options across the fleet for our next data center power arrangements

Talen is Uniquely Positioned to Power the Future

- Strong Adjusted Free Cash Flow growth enabling reloading of SRP to $1.25B
- Diverse fleet of nuclear, gas, and reliability assets
- First-mover in delivering carbon-free power to data centers, with plans to replicate this success
- Able to capitalize on power demand growth through dispatchable generation in premium PJM market
- Disciplined track record of safe, reliable and cost-effective operations
- Balance sheet is a strategic asset, allowing Talen to target the return of ~70% Adjusted Free Cash Flow to shareholders

Talen is Powering the Future

Susquehanna Nuclear Facility

Powering Data Centers

Premium PJM Gas Assets

Dynamic Commercial Hedging Strategy

Reliability Assets

Disciplined Cost and Capital Management

Appendix:
Modeling Assumptions

Energy Revenue and Margin Projections

	2024E[1]			2025E			2026E		
	Generation (TWhs)	Prices ($/MWh)	Energy Revenue ($mm)	Generation (TWhs)	Prices ($/MWh)	Energy Revenue ($mm)	Generation (TWhs)	Prices ($/MWh)	Energy Revenue ($mm)
PJM Fleet[2]	34.5	$36	$1,235	34.5	$48	$1,665	34.5	$53	$1,835
Montana	1.4	$75	$105	1.5	$78	$120	1.6	$77	$125
Total Unhedged Energy Revenue[3]	35.9	$37	$1,340	36.0	$50	$1,785	36.1	$54	$1,960
	% Generation Hedged	Prices ($/MWh)	Hedge Margin ($mm)	% Generation Hedged	Prices ($/MWh)	Hedge Margin ($mm)	% Generation Hedged	Prices ($/MWh)	Hedge Margin ($mm)
Margin from Non-PTC Hedges	70%	$8	$200	54%	$2	$40	22%	$1	$5
Fuel Expense & Purchased Power			$(610)			$(660)			$(675)
Total Hedged Energy Margin			$930			$1,165			$1,290

Note: Represents the midpoint of each guidance and outlook range provided. All projections in presentation are net to Talen's ownership interest, unless otherwise noted.

1. Excludes January – April contribution from the ERCOT generation fleet.
2. Includes Susquehanna, Lower Mount Bethel, Martins Creek, Montour, Dartmouth, Camden, Brunner Island, Conemaugh, Keystone, Brandon Shores and H.A. Wagner. Includes revenues from AWS contracts.
3. Reflects revenues earned from generation.

PJM Capacity Revenue Projections

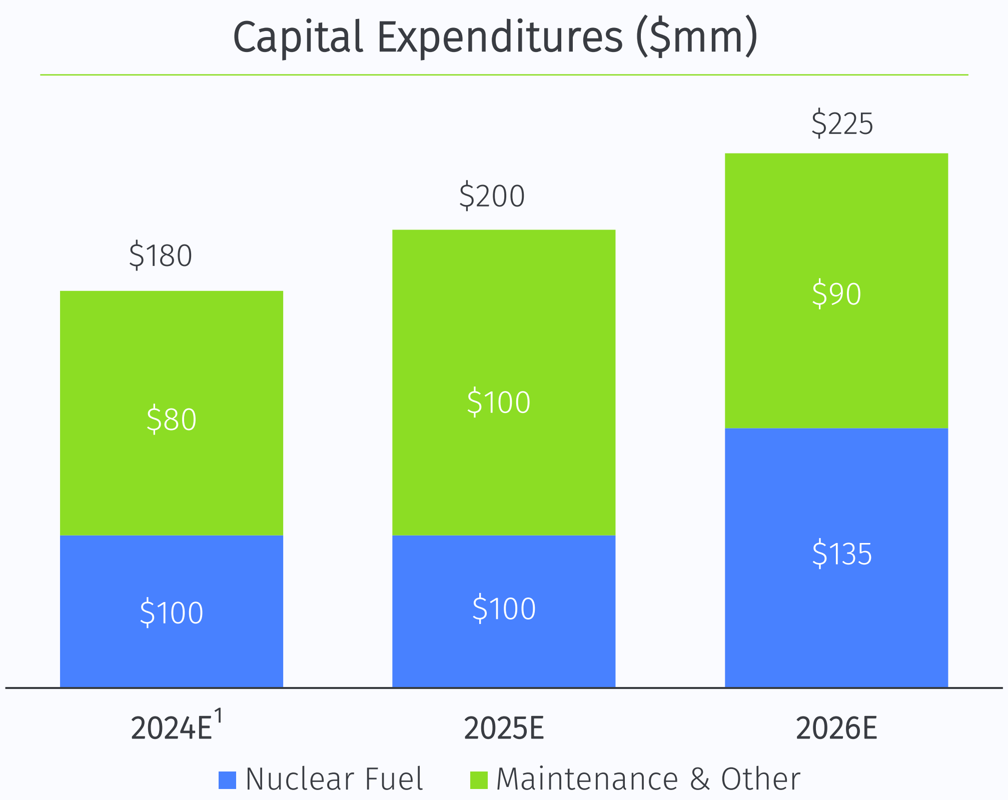
Planning Year	2023/2024			2024E/2025E			2025E/2026E			2026E/2027E		
	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)	Volumes (MW)	Prices[1] ($/MW-day)	Revenues ($mm)
PJM Capacity Revenue												
MAAC	6,792	$ 49.35	$ 123	7,281	$ 53.30	$ 142	6,705	$ 269.92	$ 661	6,283	$ 269.92	$ 619
EMAAC	142	49.35	3	142	53.60	3	115	269.92	11	112	269.92	11
BGE	1,836	70.64	47	1,786	80.16	52	-	-	-	-	-	-
Total	8,770	$ 53.81	$ 173	9,208	$ 58.51	$ 197	6,820	$ 269.92	$ 672	6,395	$ 269.92	$ 630

Fiscal Year	2024E			2025E			2026E		
	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)	Volumes (MW)	Prices ($/MW-day)	Revenues ($mm)
PJM Capacity Revenue									
MAAC	7,006	$ 53.54	$ 137	7,031	$ 173.17	$ 446	6,530	$ 269.92	$ 643
EMAAC	142	51.90	3	130	162.69	8	114	269.92	11
BGE	1,818	75.95	50	1,044	56.56	22	-	-	-
Total	8,966	$ 58.06	$ 190	8,205	$ 158.16	$ 475	6,644	$ 269.92	$ 655

Note: Volumes include the impact of incremental auctions in 2023/2024 and 2024E/2025E but reflect only the base residual auctions ("BRA") in 2025E/2026E and 2026E/2027E. Volumes are adjusted for expected reductions associated with the AWS PPA. Fiscal year capacity revenues represent the midpoint of each guidance and outlook range provided.

1. BRA clearing price for 2026E/2027E reflects Company assumptions.

O&M and Capital Expenditure Projections



Increases due to investments in continuing operations and hardening assets for reliability purposes

Note: Represents the midpoint of each guidance and outlook range provided.

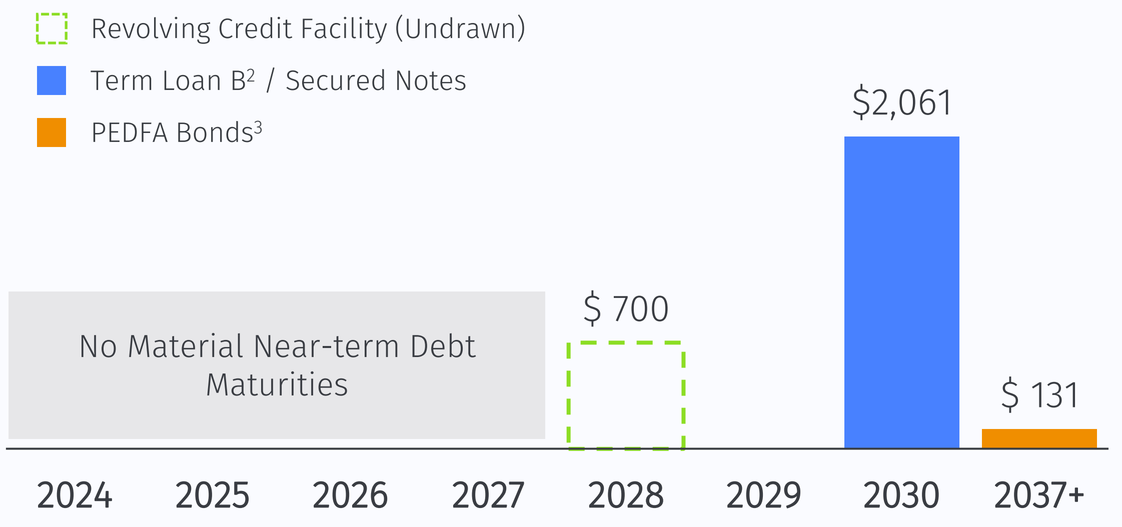
1. Includes January – April contribution from the ERCOT generation fleet.

Long-Dated Debt Maturities and Solid Credit Ratings

Debt Overview

Tranche	Maturity	Principal ($mm)	Interest Rate[1] as of 8/30
Revolving Credit Facility	May 2028	$-	~8%
Secured Notes	June 2030	1,200	8.625%
Term Loan B[2]	May 2030	861	8.60%
Secured Debt		$2,061	
PEDFA 2009B Bonds[3]	December 2038	50	5.25%
PEDFA 2009C Bonds[3]	December 2037	81	5.25%
Unsecured Debt		$131	
Total Debt		$2,192	
Excluded: Term Loan C	May 2030	$470	8.60%

Debt Maturity Summary ($mm)



Agency	IDR / Secured Debt Rating	Outlook
S&P	B+ / BB	Positive
Moody's	B1 / Ba3	Positive
Fitch	BB- / BB+	Stable

Note: Total Debt excludes $470mm Term Loan C, given that the associated cash proceeds are held in interest-bearing restricted accounts to secure LCs. Also excludes $75mm bilateral secured LC facility.

1. Revolving Credit Facility's interest rate formula is SOFR + 3.0%, and Term Loans B and C's interest rate formula is SOFR + 3.5%.
2. Subject to mandatory 1% annual amortization, not shown in graph.
3. Subject to mandatory remarketing in 2027.

Strong Credit and Liquidity Metrics

Capitalization Summary

$mm	August 30, 2024
Unrestricted Cash	$692
Secured Debt	$2,061
Total Debt	$2,192
Net Debt[4]	**$1,500**

Credit Metric Summary

Credit Metrics	
2024E Adjusted EBITDA Guidance Midpoint ($mm)[1]	$750
Net Debt / 2024E Adjusted EBITDA[2]	~2.0x
Total Liquidity ($mm)[3]	$1,392

Note: Excludes $470mm Term Loan C, given that the associated cash proceeds are held in interest-bearing restricted accounts to secure LCs. Also excludes $75mm bilateral secured LC facility. Please refer to Reconciliation of Non-GAAP Financial Measures section of the Appendix for more detail on Adjusted EBITDA.

1. Includes January – April contribution from the ERCOT generation fleet.
2. Calculated using Net Debt as of 8/30/2024.
3. Calculated as $692mm unrestricted cash as of 8/30/2024, plus $700mm revolver availability.
4. Calculated as Total Debt less Unrestricted Cash as of 8/30/2024.

Other Modeling Inputs

	2024E	2025E	2026E
Nuclear PTC ($mm)	$190	$0	$0
Other Margin ($mm)[1]	$60	$50	$40
Cash Taxes as % of Adjusted EBITDA[2]	1%	7%	11%
Pension Contributions ($mm)	$(60)	$(60)	$(30)
Asset Retirement Obligations and Environmental Liabilities ($mm)	$(20)	$(40)	$(60)

Note: Represents the midpoint of each guidance and outlook range provided.

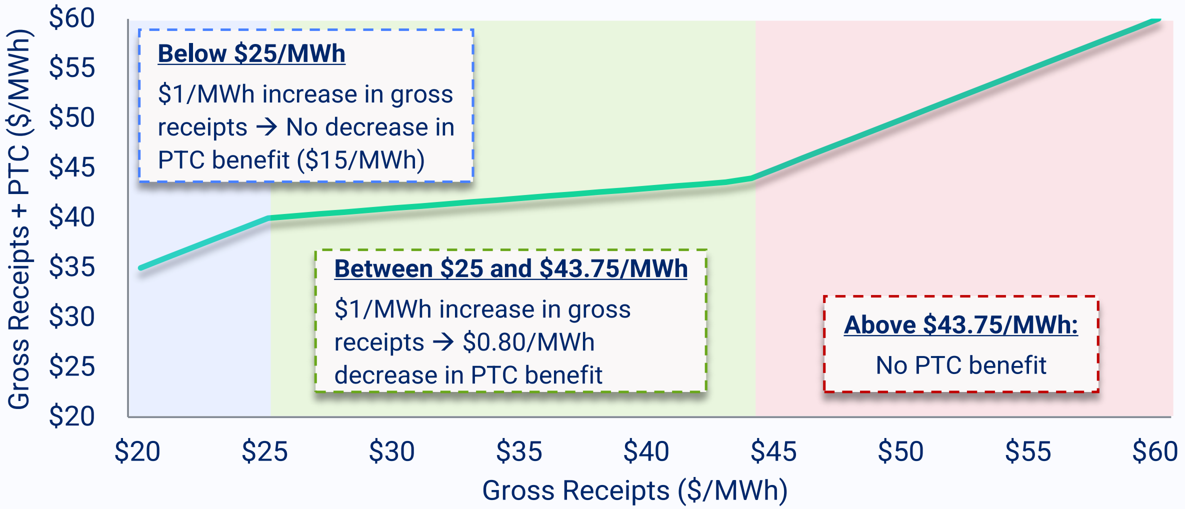
1. Represents 100% of Nautilus JV revenues less power costs. Minority interest is eliminated through non-controlling interest.
2. Excludes amounts expected to be paid on the sale of ERCOT and Cumulus Data assets in 2024.

Nuclear Production Tax Credit Overview

Nuclear PTC Overview

- Starting in 2024, the PTC benefit is calculated based on a year's annual "gross receipts" divided by annual generation
- Talen is awaiting additional regulatory guidance about PTC mechanics
- Talen's current assumption for gross receipts: physical energy margin, capacity revenues and ancillary revenues; no hedges or sales to affiliates
- Max potential benefit of $15/MWh[1] in 2024, escalating with inflation
- PTC decreases linearly for gross receipts between $25/MWh and $43.75/MWh and is fully phased out at gross receipts above $43.75/MWh
- 2025+ Inflation Adjustment = $\frac{\text{GDP price deflator in preceding year}}{\text{GDP price deflator in 2023}}$
- IRA has transfer procedures that permit project owners to transfer (sell) their PTCs to unrelated taxpayers for cash
  - Advanced contractual arrangements are allowed

Nuclear PTC Impact[1]



Illustrative PTC Inflation Adjustments (2% Inflation)

Year	Maximum PTC[2]	Gross Receipts Threshold[3]	Receipts At Which PTC = $0
2024	$15.00	$25.00	$43.75
2025	$15.00	$26.00	$44.75
2026	$15.00	$26.00	$44.75
2027	$15.00	$27.00	$45.75
2028	$17.50	$27.00	$45.75
2029	$17.50	$28.00	$49.88
2030	$17.50	$28.00	$49.88
2031	$17.50	$29.00	$50.88
2032	$17.50	$29.00	$50.88

Note: Per U.S. Congress.
1. Starting in 2024 and excluding inflation, PTC has a "base" amount of $3/MWh, which can increase 5x to $15/MWh under certain wage requirements that Susquehanna expects to meet.
2. Maximum PTC increases in increments rounded to the nearest $2.50/MWh.
3. Gross Receipts Threshold increases in increments rounded to the nearest $1/MWh.

TALEN ENERGY

Appendix: Supplemental Asset Detail

Generation Portfolio Summary as of June 30, 2024

Asset	Location	Fuel Type	Plant Type	Plant Configuration	Ownership	Owned Capacity (MW)[1]	Commercial Operations Date (COD)	Region
Susquehanna Nuclear Facility								
Susquehanna[2]	PA	Nuclear	Baseload	Dual-Unit	90%	2,228	1983 – 1985	PJM-PPL/MAAC
Premium PJM Gas Assets								
Brunner Island[3, 4]	PA	Natural Gas / Coal	Intermediate	Three-Unit	100%	1,429	1961 – 1969	PJM-PPL
Camden	NJ	Natural Gas	Peaker	Dual-Unit	100%	145	1993	PJM-PSEG
Lower Mt. Bethel	PA	Natural Gas	Baseload	Dual-Unit	100%	606	2004	PJM-PPL
Martins Creek	PA	Natural Gas	Peaker	Dual-Unit	100%	1,716	1975 – 1977	PJM-PPL
Montour	PA	Natural Gas	Peaker	Dual-Unit	100%	1,508	1972 – 1973	PJM-PPL
Reliability Assets								
Brandon Shores[5]	MD	Coal	Peaker	Dual-Unit	100%	1,283	1984 – 1991	PJM-BGE
H.A. Wagner[5]	MD	Oil	Peaker	Four-Unit[6]	100%	848	1956 – 1972	PJM-BGE
Colstrip Unit 3[2]	MT	Coal	Baseload	Single-Unit	30%	222	1984 – 1986	WECC
Other								
Conemaugh[2, 4]	PA	Coal	Intermediate	Dual-Unit	22%	386	1970 – 1971	PJM-MAAC
Keystone[2, 4]	PA	Coal	Intermediate	Dual-Unit	12%	214	1967 – 1968	PJM-MAAC
Dartmouth	MA	Natural Gas	Peaker	Three-Unit	100%	80	1992 – 2009	ISO-NE
Total						10,665		

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.
2. See Note 10 to the FY 2023 Financial Statements for additional information regarding jointly owned facilities.
3. Coal-fired electric generation is restricted during the EPA Ozone Season, which is May 1 to September 30 of each year.
4. Coal-fired electric generation is required to cease at Brunner Island, Keystone, and Conemaugh by December 2028.
5. See Note 8 to the Q2 2024 Financial Statements for additional information on the Brandon Shores and H.A. Wagner deactivations and RMR Cost of Service Filings.
6. Includes ~14 MW oil-fired peaking units.

TALEN ENERGY

Talen's Diverse Asset Fleet

Susquehanna Nuclear Facility

- 6th largest U.S. nuclear facility, with dual units; operated and 90% owned by Talen (~2.2 GW)
- Highly reliable baseload asset, with capacity factors >90%
- Supplies power to AWS data center campus
- Licensed through 2042 and 2044 and beginning work on additional 20-year extensions
- Top-decile cost efficiency[1] (~$24/MWh all-in cost in 2023)
- Downside protected by up to $15/MWh Production Tax Credit[2]
- Fuel fully contracted through 2026 outage and substantially through 2028 outage

Premium PJM Gas Assets

(Brunner Island, Camden, Lower Mount Bethel, Martins Creek, Montour)

- Valuable, low-carbon dispatchable generation
- The mix of baseload, intermediate and peaking assets creates multiple ways to capture generation margin in a volatile power market
- Low-cost Marcellus shale natural gas nearby

Reliability Assets

(Brandon Shores, Wagner, Colstrip)

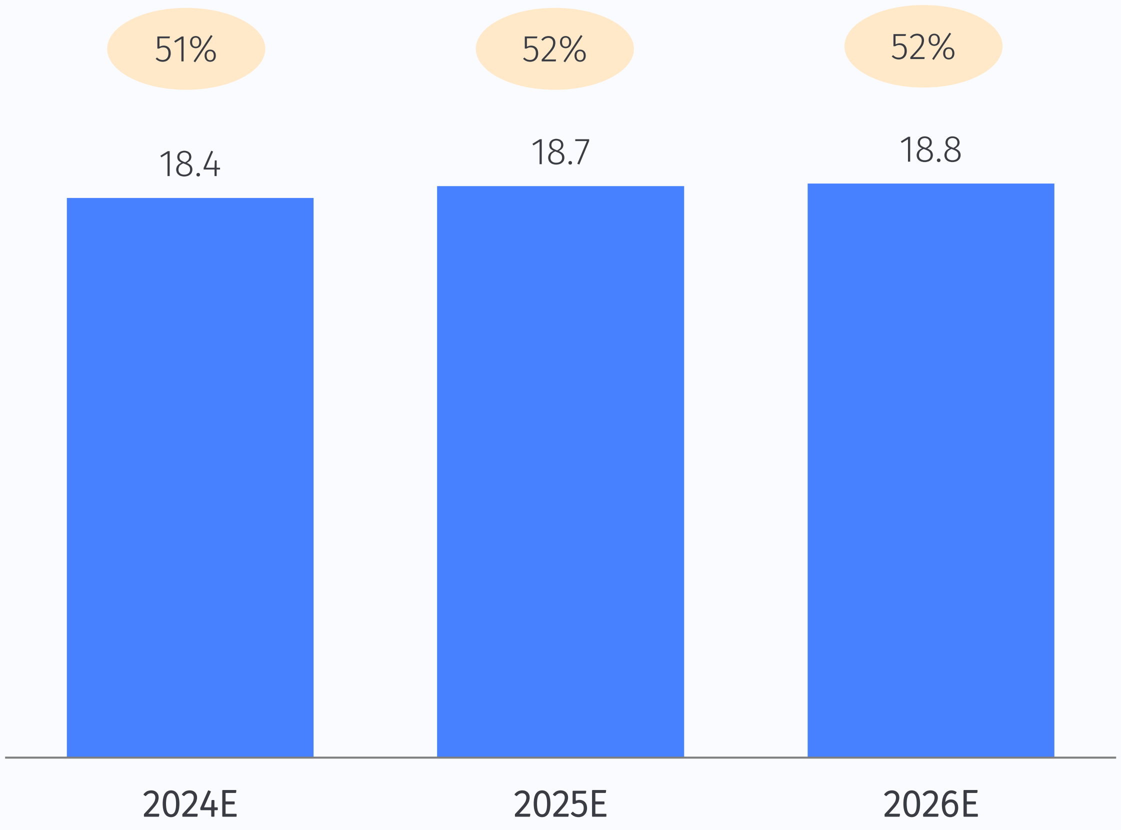
- Brandon Shores and H.A. Wagner are important for PJM grid reliability and part of a reliability-must-run (RMR) proceeding to potentially remain online through 2028
- Colstrip operates at high capacity factors in an energy-only market and is important to the region's grid and economy

1. Based on 2023 average EUCG benchmarking for all-in costs across the U.S. nuclear industry, which includes opex, capex and allocated corporate G&A.
2. Maximum Nuclear PTC benefit in 2024, excluding impact of inflation.

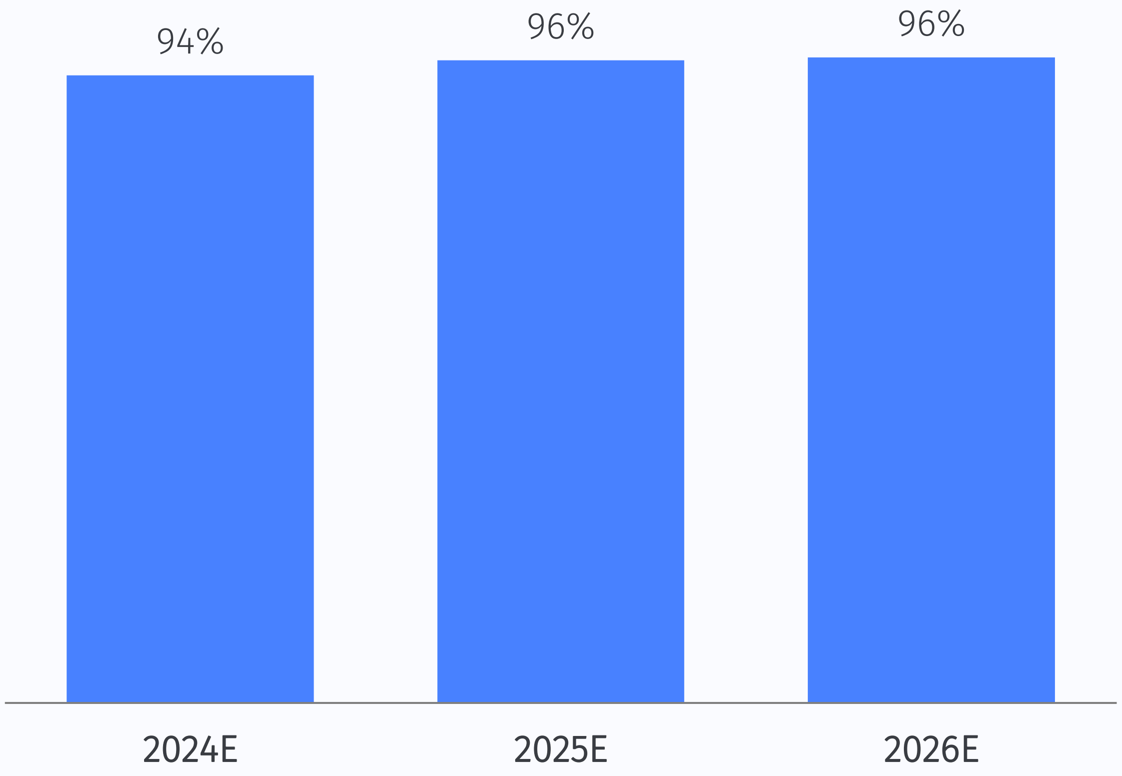
Susquehanna: Generation and Capacity Factors

Projected Annual Generation (TWh)

% of Total Fleet Annual Generation[1]



Projected Capacity Factors[2]



1. 2024E excludes January – April contribution from the ERCOT generation fleet.
2. Capacity factor based on maximum summer capacity rating.

TALEN ENERGY

Susquehanna: Operational Highlights

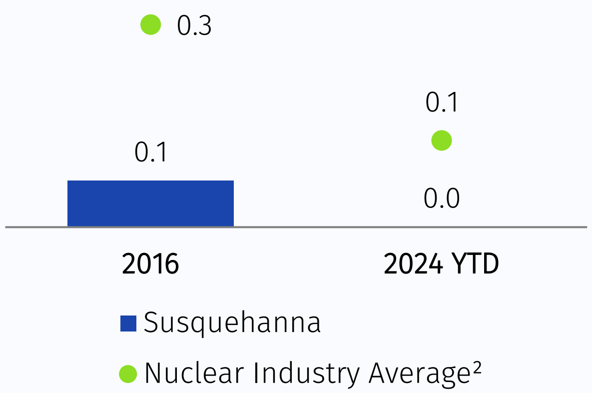
Journey to Today

- Engaged workforce at all levels to focus on safety, reliability and cost efficiency
- Improved cost structure and simplified organization and processes
- Maintained safety better than nuclear industry average
- Operations in keeping with the highest performers in the industry

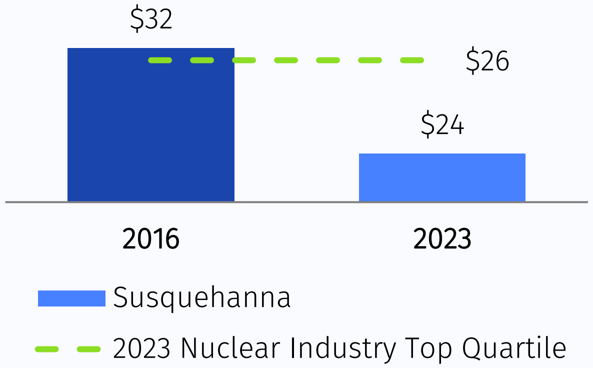
Looking Forward

- Continue to identify and eliminate risk through proactive maintenance
- Continue to focus on keeping reliability high
- Continue applying capital where we get the best return

Total Recordable Incident Rate (TRIR)[1]



All-In Cost ($/MWh)[3]

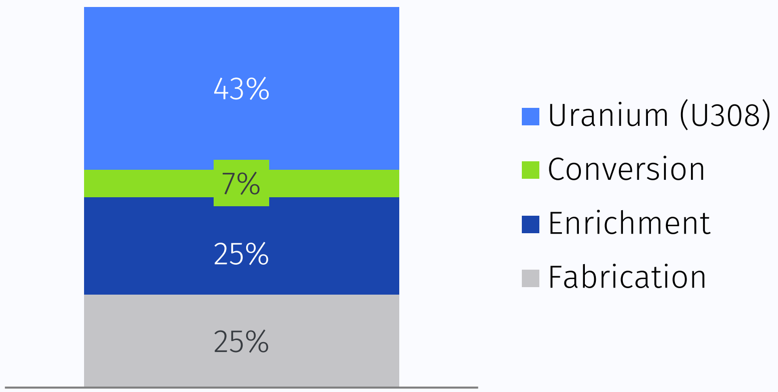


1. The number of recordable incidents x 200,000 / total number of hours worked.
2. Per the Bureau of Labor Statistics and INPO.
3. Based on EUCG benchmarking; 2023 Nuclear Industry Top Quartile is across the U.S. nuclear fleet.

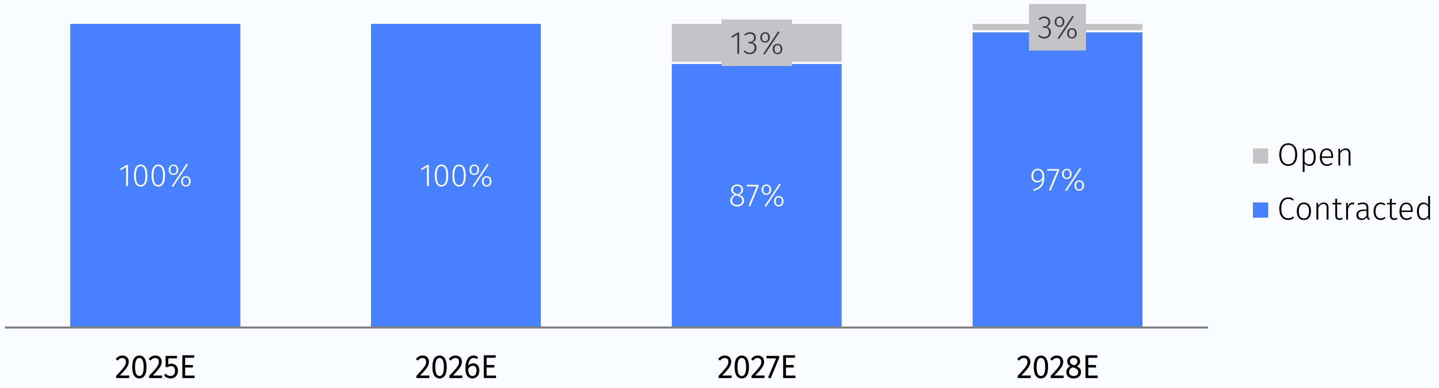
TALEN ENERGY

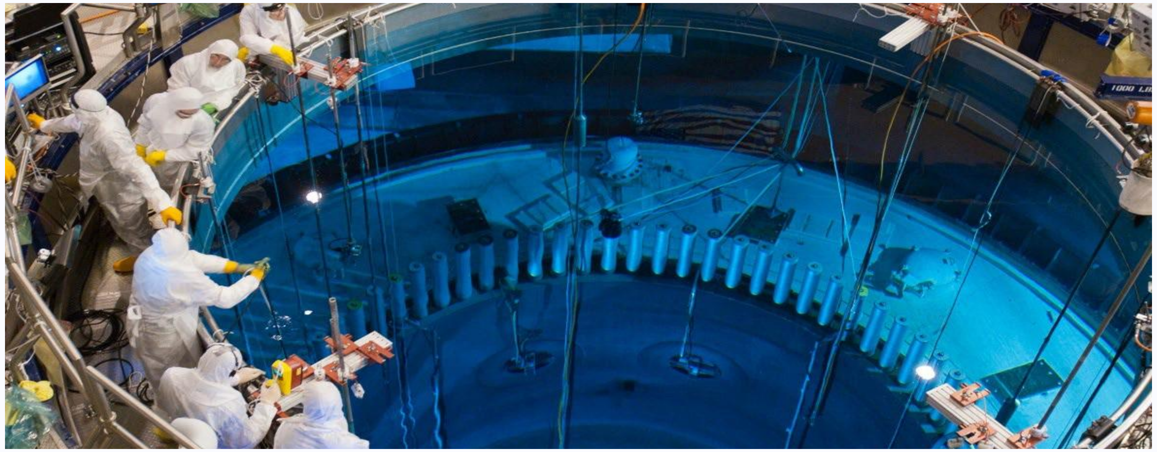
Susquehanna: Nuclear Fuel Update

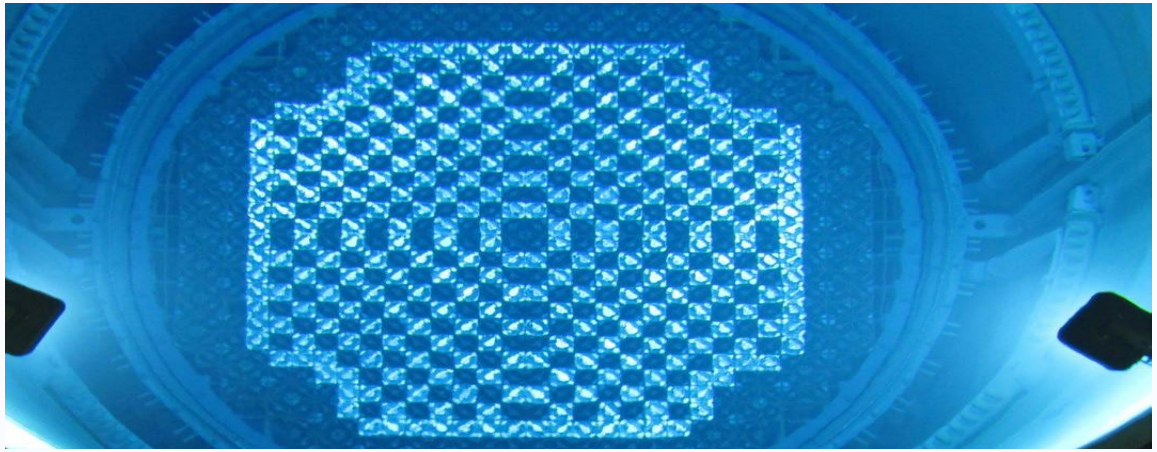
2025 Outage Fuel Cost Breakdown



% Nuclear Fuel Contracted by Outage Year[1]





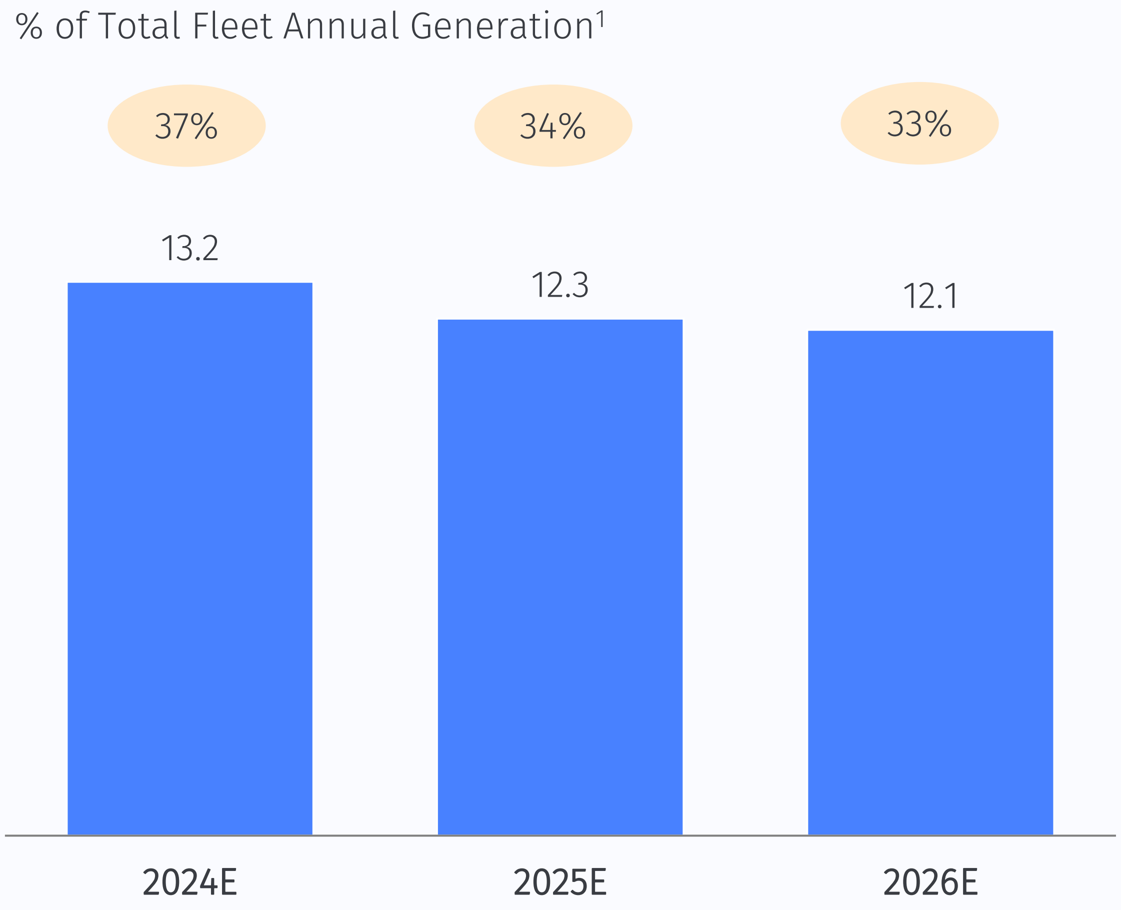


Note: As of July 2, 2024.

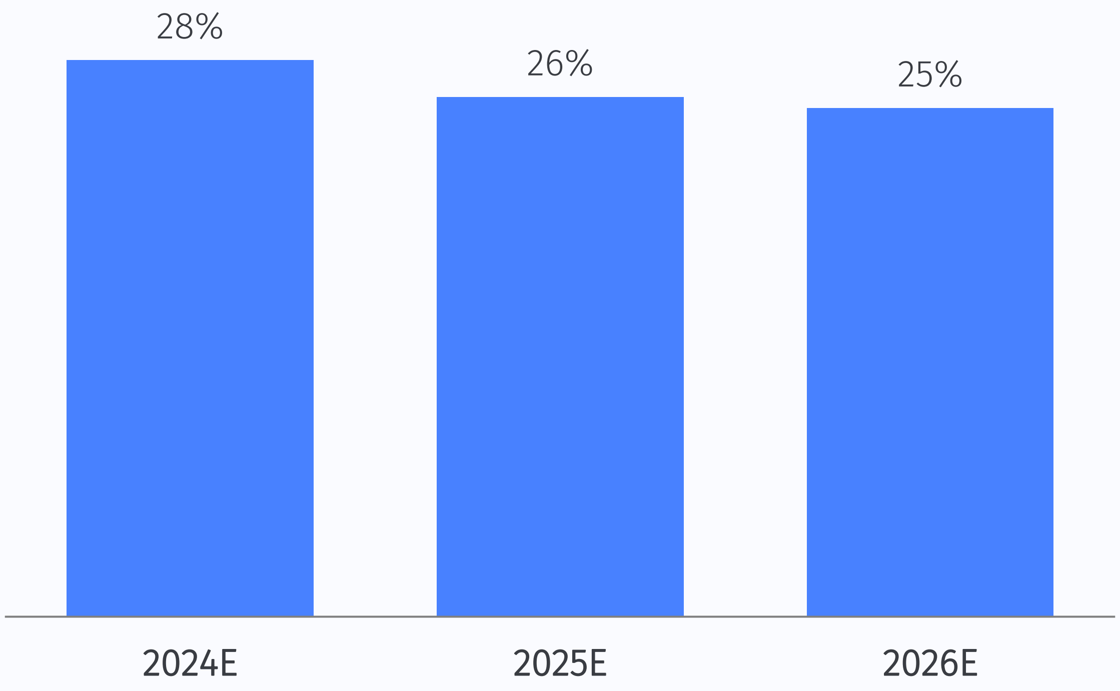
1. % of nuclear fuel capex that is open is calculated assuming recent market prices.

Premium PJM Gas Assets: Generation and Capacity Factors

Projected Annual Generation (TWh)



Projected Capacity Factors[2]



Note: Premium PJM Gas Fleet includes Brunner Island, Camden, Lower Mount Bethel, Martins Creek and Montour.

1. 2024E excludes January – April contribution from the ERCOT generation fleet.
2. Weighted average capacity factor based on maximum summer capacity rating.

Premium PJM Gas Assets: Brunner Island

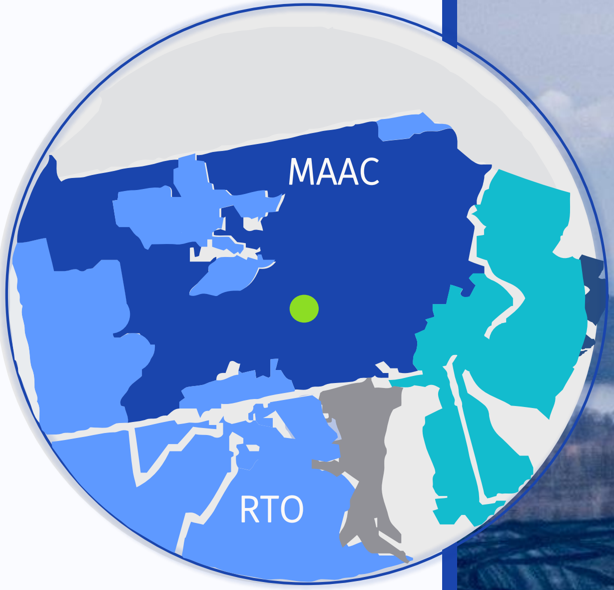
Three-unit, dual-fuel plant near the Susquehanna River

Meaningful revenues from capacity payments

Can switch between coal and gas within hours without going offline, a big advantage during peaking periods

No coal-fired generation in May to September of each year or after YE 2028

Low-cost Marcellus gas supply (TETCO M3)



Owned Capacity[1]	1,429 MW
Market	PJM-PPL
Heat Rate	~10 MMBtu/MWh
Plant Type	Intermediate
COD	1961 - 1969

TALEN ENERGY

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

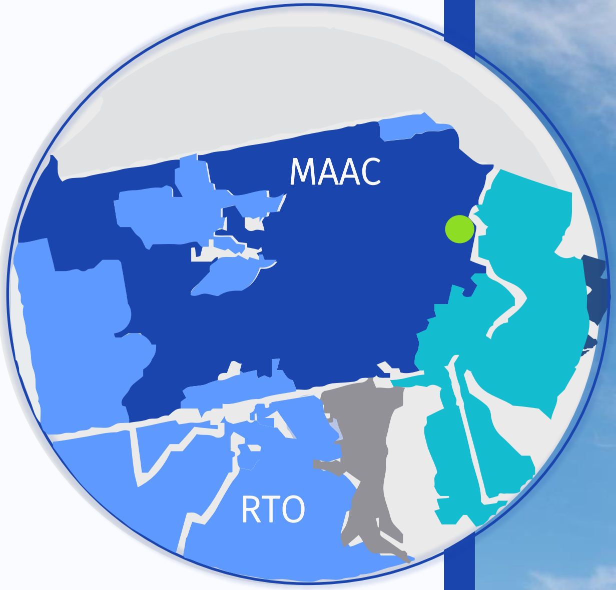
Premium PJM Gas Assets: Lower Mount Bethel

Dual-unit combined cycle gas turbine plant near the Delaware River that shares a site with Martins Creek

Low-cost Marcellus gas supply (TETCO M3), with firm transportation agreement through 2029

Low heat rate, fuel costs and operating costs enable plant to run at ~80% capacity factors

Long-term service agreement with Siemens Energy for maintenance and reliability



Owned Capacity[1]	606 MW
Market	PJM-PPL
Heat Rate	~7 MMBtu/MWh
Plant Type	Baseload
COD	2004

TALEN ENERGY

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

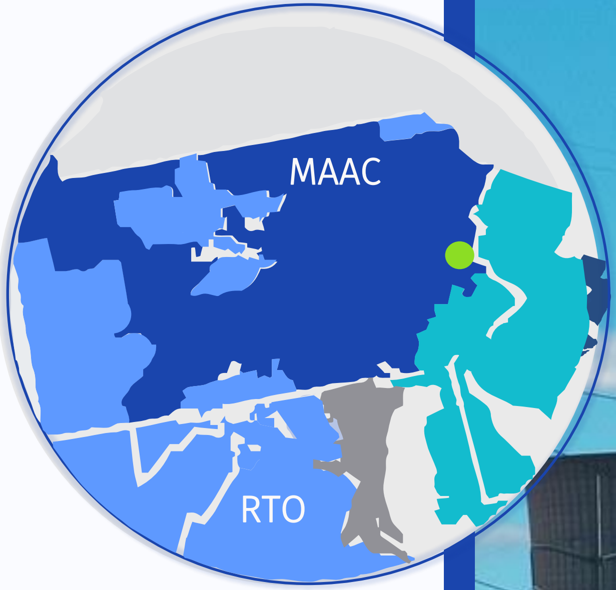
Premium PJM Gas Assets: Martins Creek

Dual-unit gas plant near the Delaware River that shares a site with Lower Mount Bethel

Meaningful revenues from capacity payments

Units capable of cycling daily to capture peak energy prices

Low-cost Marcellus gas supply (TETCO M3)



Owned Capacity[1]	1,716 MW
Market	PJM-PPL
Heat Rate	~10 MMBtu/MWh
Plant Type	Peaker
COD	1975 - 1977

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

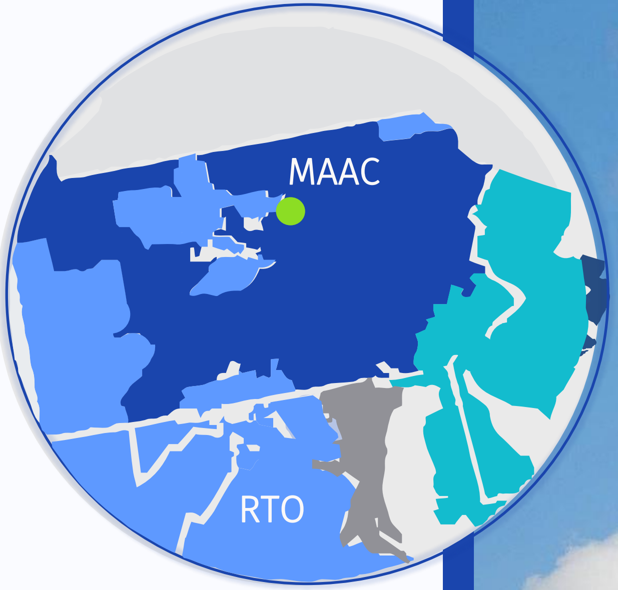
Premium PJM Gas Assets: Montour

Dual-unit gas plant in the heart of the Marcellus shale near Leidy Hub

Meaningful revenues from capacity payments

Leidy gas typically trades at discount to TETCO M3 in winter and often is the cheapest natural gas in PJM

Both units converted from coal to gas in Q3 2023, which has resulted in meaningful O&M and capex savings



Owned Capacity[1]	1,508 MW
Market	PJM-PPL
Heat Rate	~9.5 MMBtu/MWh
Plant Type	Peaker
COD	1972 - 1973

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

Reliability Assets: Brandon Shores

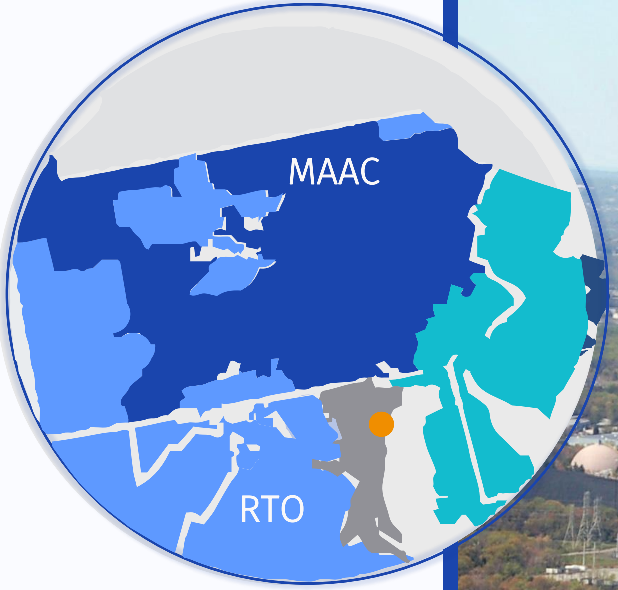
Dual-unit coal plant on a large site near Baltimore Harbor that shares a site with H.A. Wagner

PJM has determined that plant is needed through 2028 for reliability

Assuming acceptable RMR arrangement is reached, only revenues would be monthly payments from PJM

Several attractive options after 2028 depending on economics, such as sale of the land, data centers, repowering or battery storage

State-of-the-art environmental controls and modern landfill for CCR disposal near plant



Owned Capacity[1]	1,283 MW
Market	PJM-BGE
Plant Type	Peaker / Reliability
COD	1984 - 1991

TALEN ENERGY

1. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

Reliability Assets: H.A. Wagner

Four-unit[1], oil-fired plant on a large site near Baltimore Harbor that shares a site with Brandon Shores

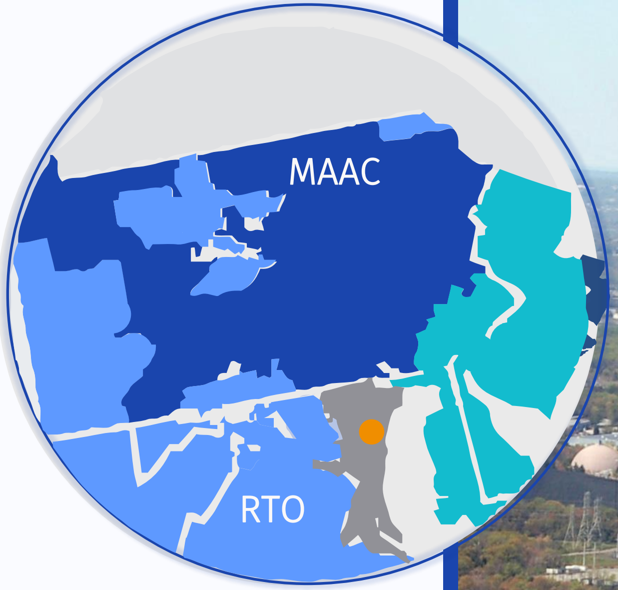
---

PJM has determined that Units 3 and 4 are needed through 2028 for reliability

---

Assuming acceptable RMR arrangement is reached, only revenues would be monthly payments from PJM

Several attractive options after 2028 depending on economics, such as sale of the land, data centers, repowering or battery storage



Owned Capacity[2]	848 MW
Market	PJM-BGE
Plant Type	Peaker / Reliability
COD	1956 - 1972

1. Units 1, 3, 4 and the CT are currently operating. Unit 1 and the CT will retire with PJM in June 2025. Units 3 and 4 are subject to ongoing RMR proceedings.
2. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

Reliability Assets: Colstrip

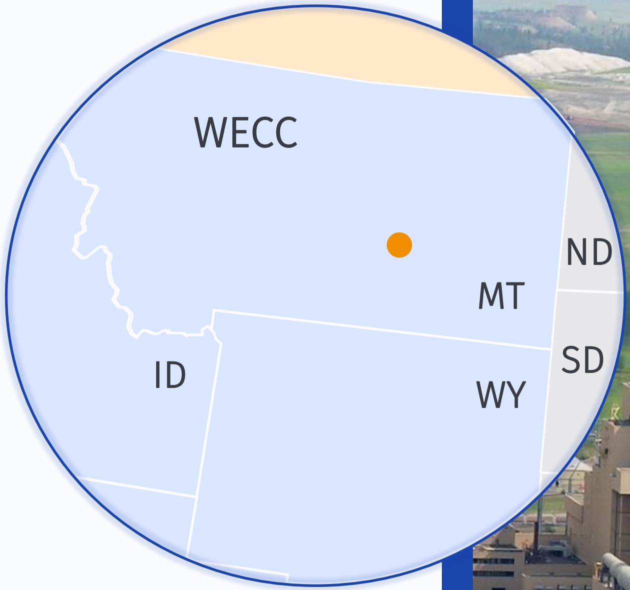
Coal plant with two active units in which Talen has a minority stake and is the operator

Important part of Montana's economy and grid, which is experiencing elevated power pricing due to tightening reserve margins

Other co-owners include Puget Sound Energy, Portland General Electric, Avista, PacifiCorp and NorthWestern Energy[1]

Adjacent coal mine supplies plant with low-cost fuel via conveyor

Environmental rules like MATS and GHG may impact the plant's operating lifespan



Owned Capacity[2]	222 MW
Market	WECC / Mid-Columbia
Plant Type	Baseload
COD	1984 – 1986 (Units 3 & 4)

TALEN ENERGY

1. NorthWestern is acquiring Avista and Puget Sound's stakes in January 2026.
2. Electric generation capacity (summer rating) is based on factors, among others, such as operating experience and physical conditions which may be subject to revision.

Appendix: Reconciliation of Non-GAAP Financial Measures

Definitions of Non-GAAP Financial Measures

Non-GAAP Financial Measures

The following non-GAAP financial measures of Adjusted EBITDA and Adjusted Free Cash Flow discussed below, which we use as measures of our performance and liquidity, are not financial measures prepared under GAAP. Non-GAAP financial measures do not have definitions under GAAP and may be defined and calculated differently by, and not be comparable to, similarly titled measures used by other companies. Non-GAAP measures are not intended to replace the most comparable GAAP measures as indicators of performance. Generally, a non-GAAP financial measure is a numerical measure of financial performance, financial position, or cash flows that excludes (or includes) amounts that are included in (or excluded from) the most directly comparable measure calculated and presented in accordance with GAAP. Management cautions readers of this financial information not to place undue reliance on these non-GAAP financial measures, but to also consider it with its most directly comparable GAAP measure. Non-GAAP measures have limitations as an analytical tool and should not be considered in isolation or as a substitute for analyzing our results as reported under GAAP.

Adjusted EBITDA

We use Adjusted EBITDA to: (i) assist in comparing operating performance and readily view operating trends on a consistent basis from period to period without certain items that may distort financial results; (ii) plan and forecast overall expectations and evaluate actual results against such expectations; (iii) communicate with our Board of Directors, shareholders, creditors, analysts, and the broader financial community concerning our financial performance; (iv) set performance metrics for the Company's annual short-term incentive compensation; and (v) assess compliance with our indebtedness.

Adjusted EBITDA is computed as net income (loss) adjusted, among other things, for certain: (i) nonrecurring charges; (ii) non-recurring gains; (iii) non-cash and other items; (iv) unusual market events; (v) any depreciation, amortization, or accretion; (vi) mark-to-market gains or losses; (vii) gains and losses on the nuclear facility decommissioning trust ("NDT"); (viii) gains and losses on asset sales, dispositions, and asset retirement; (ix) impairments, obsolescence, and net realizable value charges; (x) interest expense; (xi) income taxes; (xii) legal settlements, liquidated damages, and contractual terminations; (xiii) development expenses; (xiv) noncontrolling interests, except where otherwise noted; and (xv) other adjustments. Such adjustments are computed consistently with the provisions of our indebtedness to the extent that they can be derived from the financial records of the business. Pursuant to TES's debt agreements, Cumulus Digital contributes to Adjusted EBITDA beginning in Q1 2024, following termination of the Cumulus Digital credit facility and associated cash flow sweep.

Additionally, we believe investors commonly adjust net income (loss) information to eliminate the effect of nonrecurring restructuring expenses, and other non-cash charges, which can vary widely from company to company and period to period and impair comparability. We believe Adjusted EBITDA is useful to investors and other users of the financial statements to evaluate our operating performance because it provides an additional tool to compare business performance across companies and between periods. Adjusted EBITDA is widely used by investors to measure a company's operating performance without regard to such items described above. These adjustments can vary substantially from company to company and period to period depending upon accounting policies, book value of assets, capital structure and the method by which assets were acquired. Adjusted EBITDA is not intended to replace "Net Income (Loss)," which is the most comparable measure calculated and presented in accordance with GAAP.

Adjusted Free Cash Flow

Adjusted Free Cash Flow, a key non-GAAP financial measure, is a useful metric utilized by our chief operating decision makers to evaluate cash flow activities. Adjusted Free Cash Flow is computed as Adjusted EBITDA reduced by capital expenditures (including nuclear fuel but excluding development, growth and (or) conversion capital expenditures), cash payments for interest and finance charges, cash payments for taxes (excluding income taxes paid from the NDT) and pension contributions.

We believe Adjusted Free Cash Flow is useful to investors and other users of our financial statements in evaluating our operating performance because it provides them with an additional tool to determine a company's ability to meet future obligations and to compare business performance across companies and across periods. Adjusted Free Cash Flow is widely used by investors to measure a company's levered cash flow without regard to items such as ARO settlements; nonrecurring development, growth and conversion expenditures; and cash proceeds or payments for the sale or purchase of assets, which can vary substantially from company to company and period to period depending upon accounting methods, book value of assets, capital structure and the method by which assets were acquired.

Adjusted EBITDA / Adjusted Free Cash Flow Reconciliation: 2024 Guidance

The reconciliation from forecasted "Net Income (Loss)" to Adjusted EBITDA and Adjusted Free Cash Flow for the year ended December 31:

($Millions)	2024E	
	Low	High
Net Income (Loss)	**$730**	**$790**
Adjustments		
Interest expense and other finance charges	$240	$240
Income tax (benefit) expense	180	180
Depreciation, amortization and accretion	300	300
Nuclear fuel amortization	120	120
Unrealized (gain) loss on commodity derivative contracts	45	45
(Gain) loss	(885)	(885)
Other	(10)	(10)
Adjusted EBITDA	**$720**	**$780**
Capital expenditures, net	$(175)	$(185)
Interest and finance charge payments	(240)	(240)
Tax payments (a)	(5)	(5)
Pension contributions	(55)	(65)
Adjusted Free Cash Flow	**$245**	**$285**

Notes

a) Excludes income taxes paid from the NDT.

Note: Figures include Cumulus and are rounded to the nearest $5mm.

Adjusted EBITDA / Adjusted Free Cash Flow Reconciliation: 2025 Guidance

The reconciliation from forecasted "Net Income (Loss)" to Adjusted EBITDA and Adjusted Free Cash Flow for the year ended December 31:

($Millions)	2025E	
	Low	High
Net Income (Loss)	$ 190	$ 410
Adjustments		
Interest expense and other finance charges	$ 215	$ 225
Income tax (benefit) expense	90	110
Depreciation, amortization and accretion	295	295
Nuclear fuel amortization	105	105
Unrealized (gain) loss on commodity derivative contracts	30	30
Adjusted EBITDA	$ 925	$ 1,175
Capital expenditures, net	$ (195)	$ (205)
Interest and finance charge payments	(215)	(225)
Tax payments (a)	(65)	(85)
Pension contributions	(55)	(65)
Adjusted Free Cash Flow	$ 395	$ 595

Notes

a) Excludes income taxes paid from the NDT.

Note: Figures include Cumulus and are rounded to the nearest $5mm.

Adjusted EBITDA / Adjusted Free Cash Flow Reconciliation: 2026 Outlook

The reconciliation from forecasted "Net Income (Loss)" to Adjusted EBITDA and Adjusted Free Cash Flow for the year ended December 31:

($Millions)	2026E	
	Low	High
Net Income (Loss)	$ 350	$ 720
Adjustments		
Interest expense and other finance charges	$ 205	$ 215
Income tax (benefit) expense	180	200
Depreciation, amortization and accretion	290	290
Nuclear fuel amortization	100	100
Unrealized (gain) loss on commodity derivative contracts	5	5
Adjusted EBITDA	$ 1,130	$ 1,530
Capital expenditures, net	$ (220)	$ (230)
Interest and finance charge payments	(205)	(215)
Tax payments (a)	(145)	(155)
Pension contributions	(25)	(35)
Adjusted Free Cash Flow	$ 535	$ 895

Notes

a) Excludes income taxes paid from the NDT.

Note: Figures include Cumulus and are rounded to the nearest $5mm.