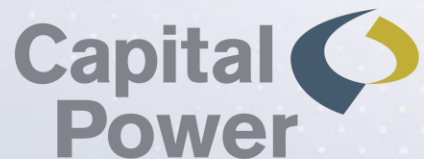


Powering the North American energy expansion

May 2025 | Investor Presentation



Capital Power at a Glance

Our Capitalization and Yield¹

~\$14_{bn}

Enterprise
Value

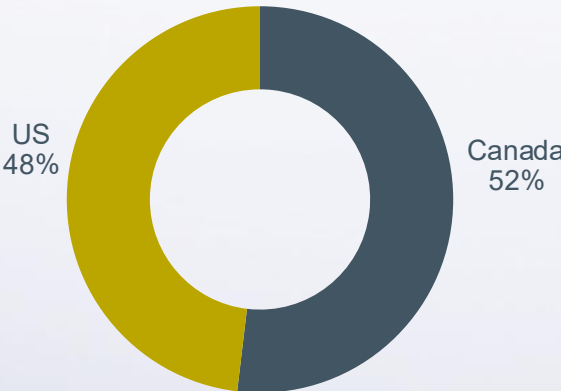
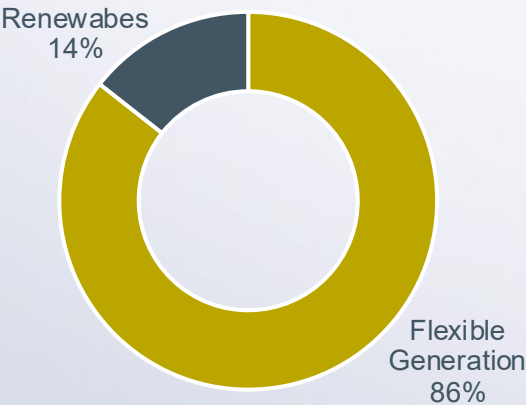
~\$8_{bn}

Market
Capitalization

~5%

Dividend
yield

Our Portfolio: 10GW Capacity



Our People and Facilities

~725

Employees

3

Corporate
Offices

30

Facilities

Our Cash Flow and Risk Profile

~\$1.4_{bn}

2025 A. EBITDA
Guidance²

BBB-

Credit Rating³

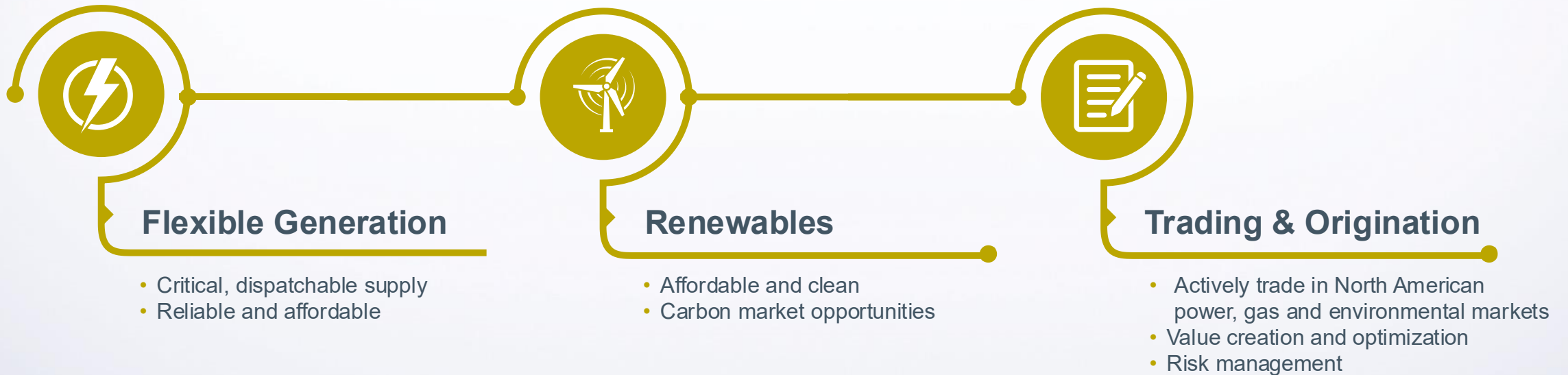
~9 years

Weighted Average
Contract Life

1. As of April 30, 2025.
2. Mid-point of adjusted EBITDA guidance prior to revising guidance for Rolling Hills and Hummel.
3. Investment Grade Credit Ratings – S&P (BBB-) and DBRS BBB (low).



Creating Balanced Energy Solutions



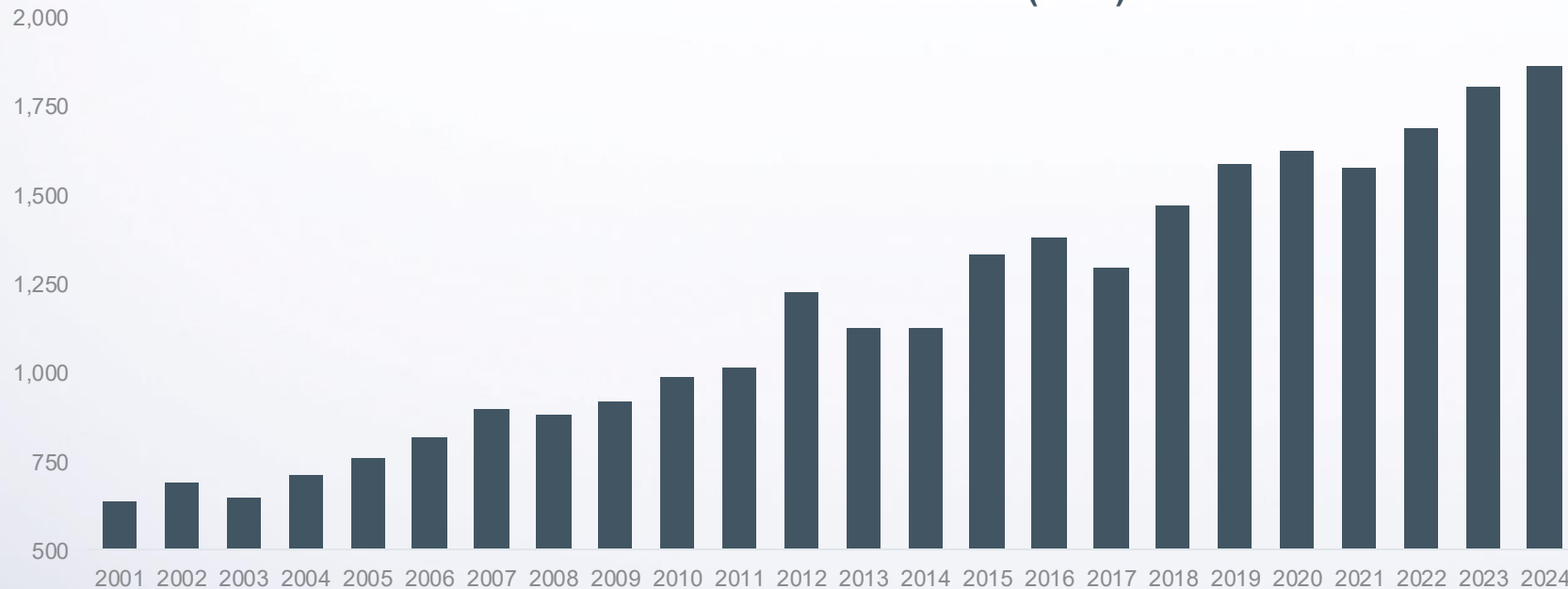
Natural gas is fueling the energy expansion



Strong fundamentals

Gas is critical to grid reliability

US Natural Gas Power Generation (TWh)¹



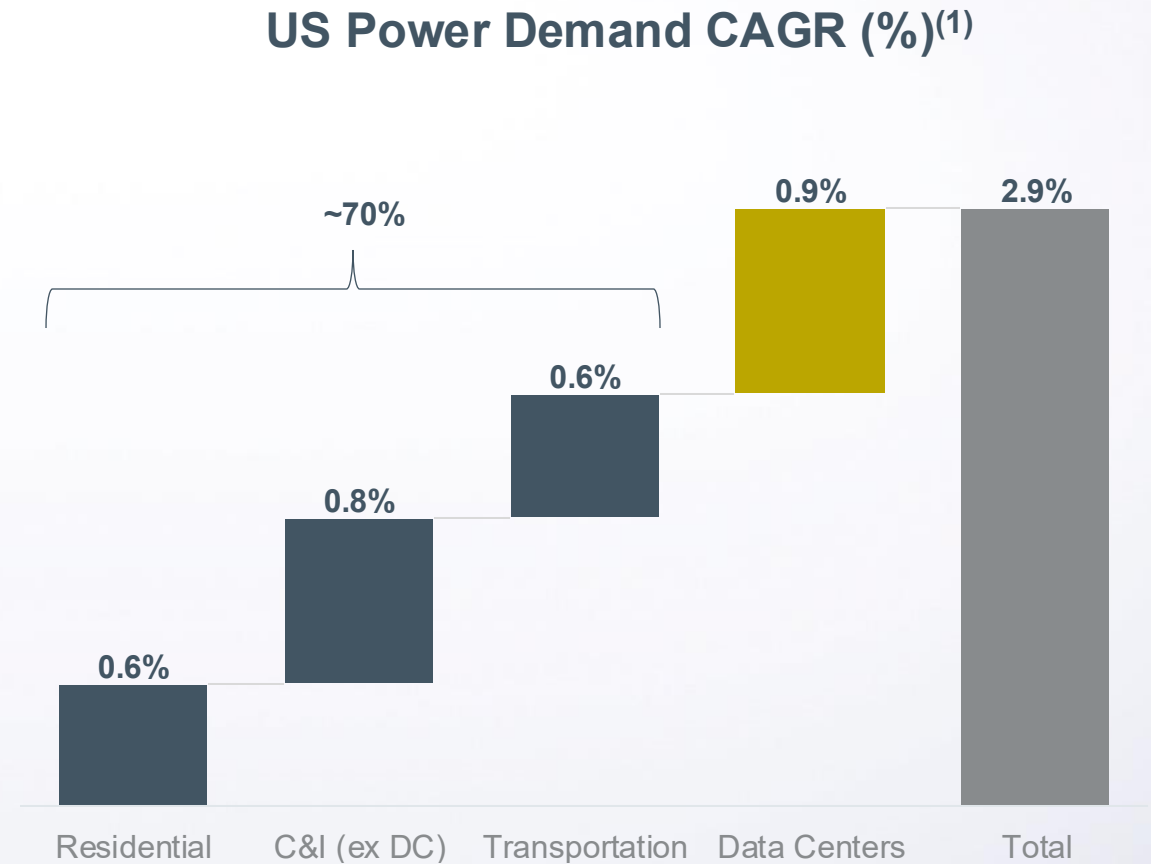
CAGR^{1,2} U.S. Power - All Technologies
~0.5%

CAGR^{1,2} U.S. Power - Natural Gas
~5.0%

U.S. GDP
~2.0%³

Natural gas power demand continues to grow through market cycles

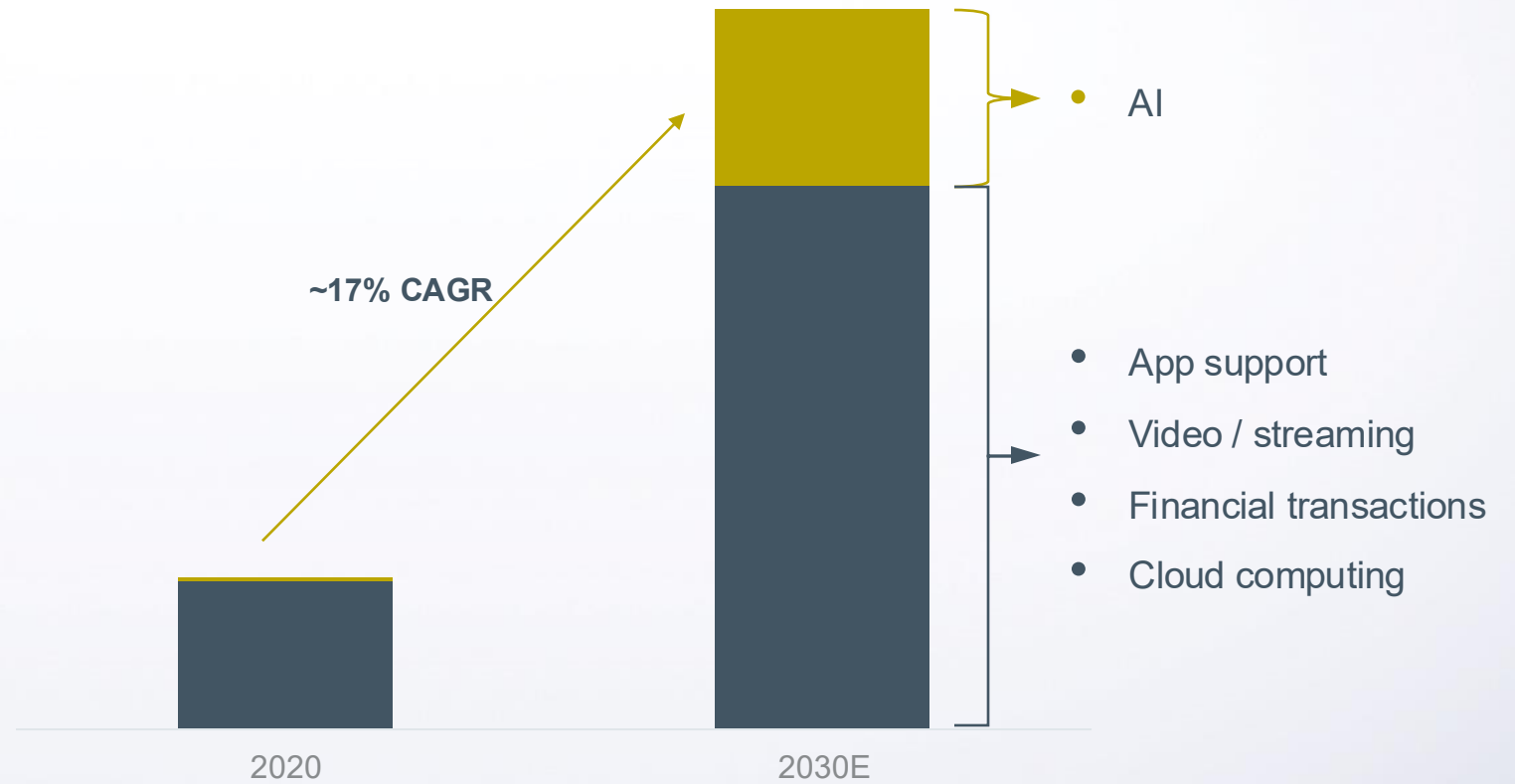
Multiple sources of growth driving power demand



1. Goldman Sachs global investment research, EIA: Total demand CAGR of 2.9% is partially offset by other factors leading to 24% total compounded growth to 2030

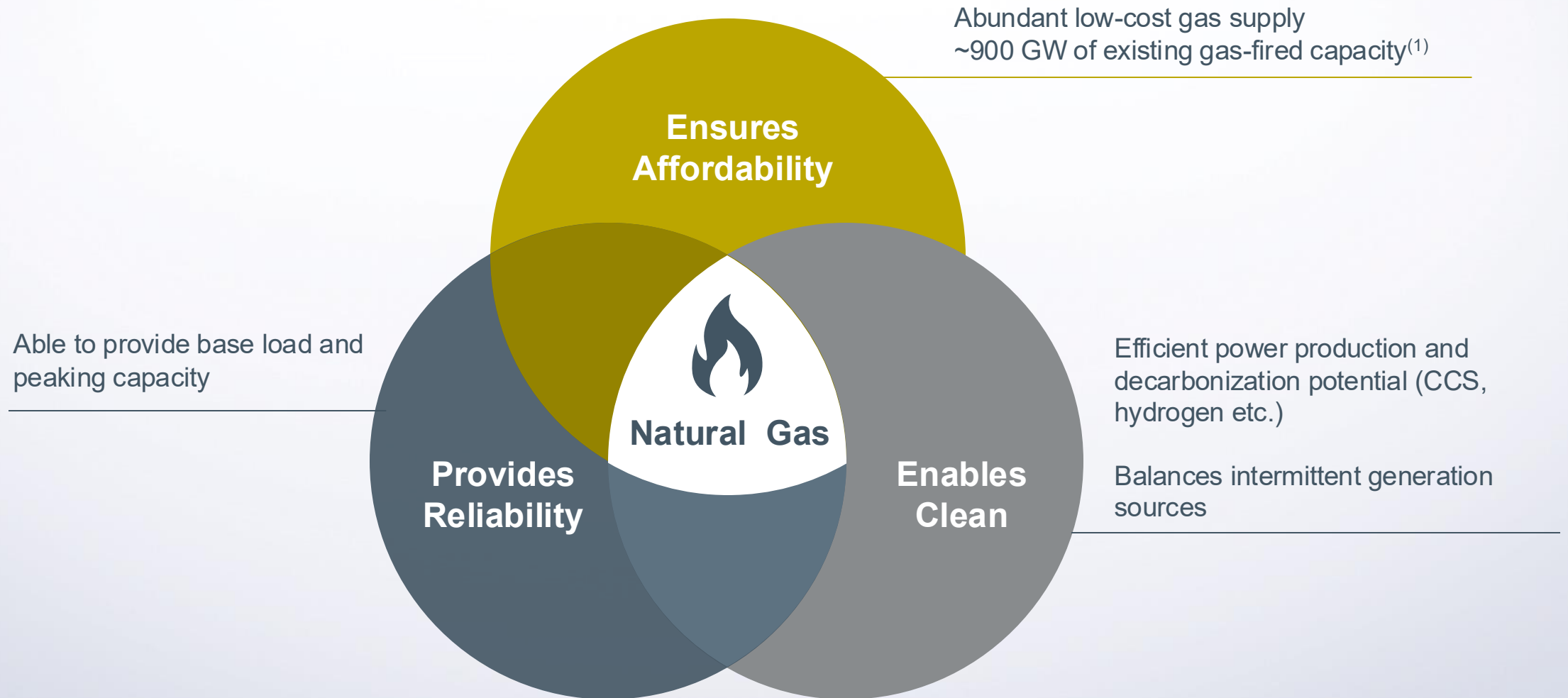
Robust and multi-faceted data center power demand growth

US Data Center Power Demand (TWh)⁽¹⁾



Majority of projected data center power demand growth is not from AI

Natural gas is critical to meeting growing electricity demand



1. SNL (S&P) as of January 2025 inclusive of gas turbines, steam turbines and combined cycle units

Strong power fundamentals favour existing natural gas generation



Multi-faceted power demand growth

- C&I
- Residential
- Transportation
- Data centers



Natural gas: fueling the future

- Reliable
- Affordable
- Clean



Existing natural gas undervalued

- Compelling acquisition opportunity

CPX has multiple ways to win

Reliable • Affordable • Clean

Capital Power Update

Positioned to succeed amid energy expansion



Execution of growth strategy enhances shareholder value

Flexible Generation¹ and Renewables



1. Flexible Generation is defined as natural gas generation assets and energy storage business.

Acquire: ~\$3.0B acquisition of two natural gas-fired facilities in PJM



Enhanced Scale

Positions Capital Power as one of five N.A. IPPs¹ with over 10GW of natural gas capacity²



PJM Market

Large and liquid market with multiple sources of demand growth



High Quality Assets

Consistent with growth, expansion and optimization strategy



Financial Merit

Expected to be accretive and to preserve investment grade balance sheet



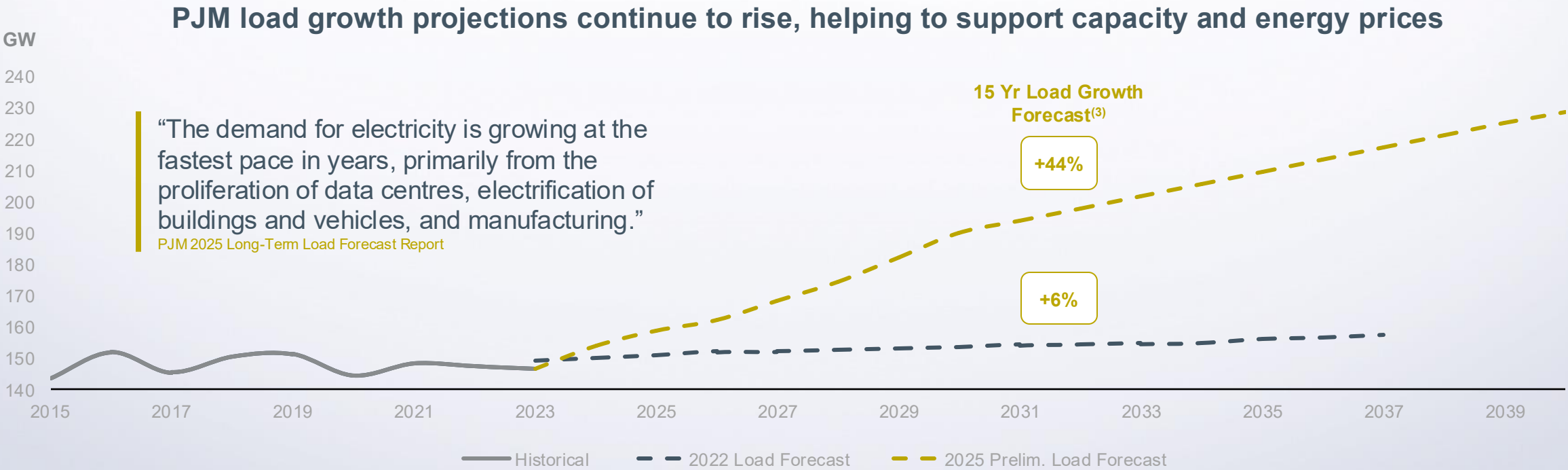
Institutional Validation

Enhanced institutional partnership

1. Independent Power Producer. 2. Based on net unregulated capacity utilizing S&P Capital IQ Pro database of gas-fired generation operators (February 2025) and referenced against publicly disclosed sources where available.



Acquire: Position of scale in a key power market

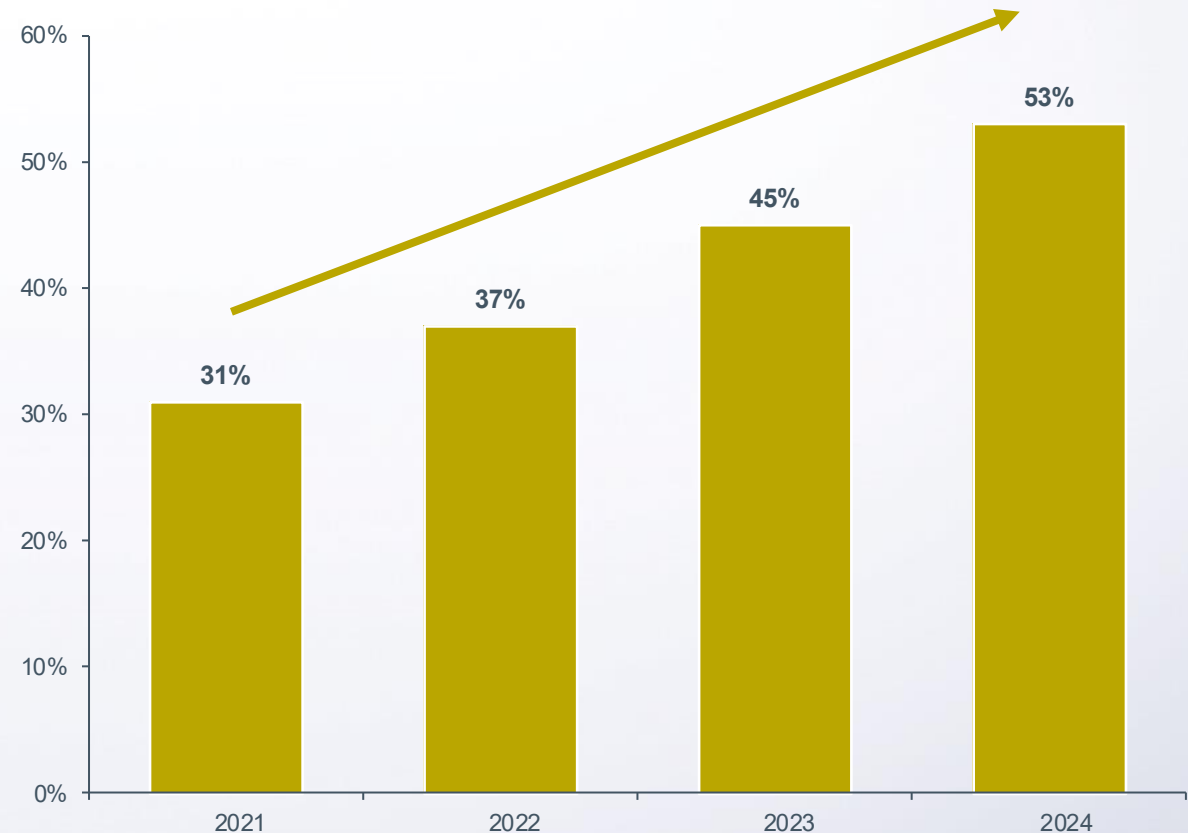


1. From 2025-2040. 2. PJM Load Forecast Reports (2022, 2025). 3. 2025 preliminary forecast growth is from 2025 to 2040; 2022 forecast growth is from 2023 to 2038.

Contract Optimization:

There is a strong case for re-contracting our existing flexible generation assets

CPX U.S. flexible generation capacity factor¹



1. Historical capacity factors have been re-baselined to include U.S. acquisitions.

Contract Optimization: Superior data center value proposition; speed to market with confidence



Existing reliable generation

14 flexible generation sites with ~7.8 GW of capacity



Top tier land position with expansion potential

~18,000 acres of developable land



In-house operational capabilities

Dedicated and highly trained specialists



Stakeholder relations

Track record for constructive engagement



Commercial and trading expertise

Thoughtful and creative approach; IG credit rating



Optimization & Expansion:

Building fleetwide efficiencies through optimization and expansion

York⁽¹⁾ and Goreway Upgrades

~60MW

Capacity
Added

~\$14M

Annual EBITDA
Benefit

3 & 6 year

Contract
Extensions

Decatur CT Upgrade

~90MW

Capacity
Added

~\$8M

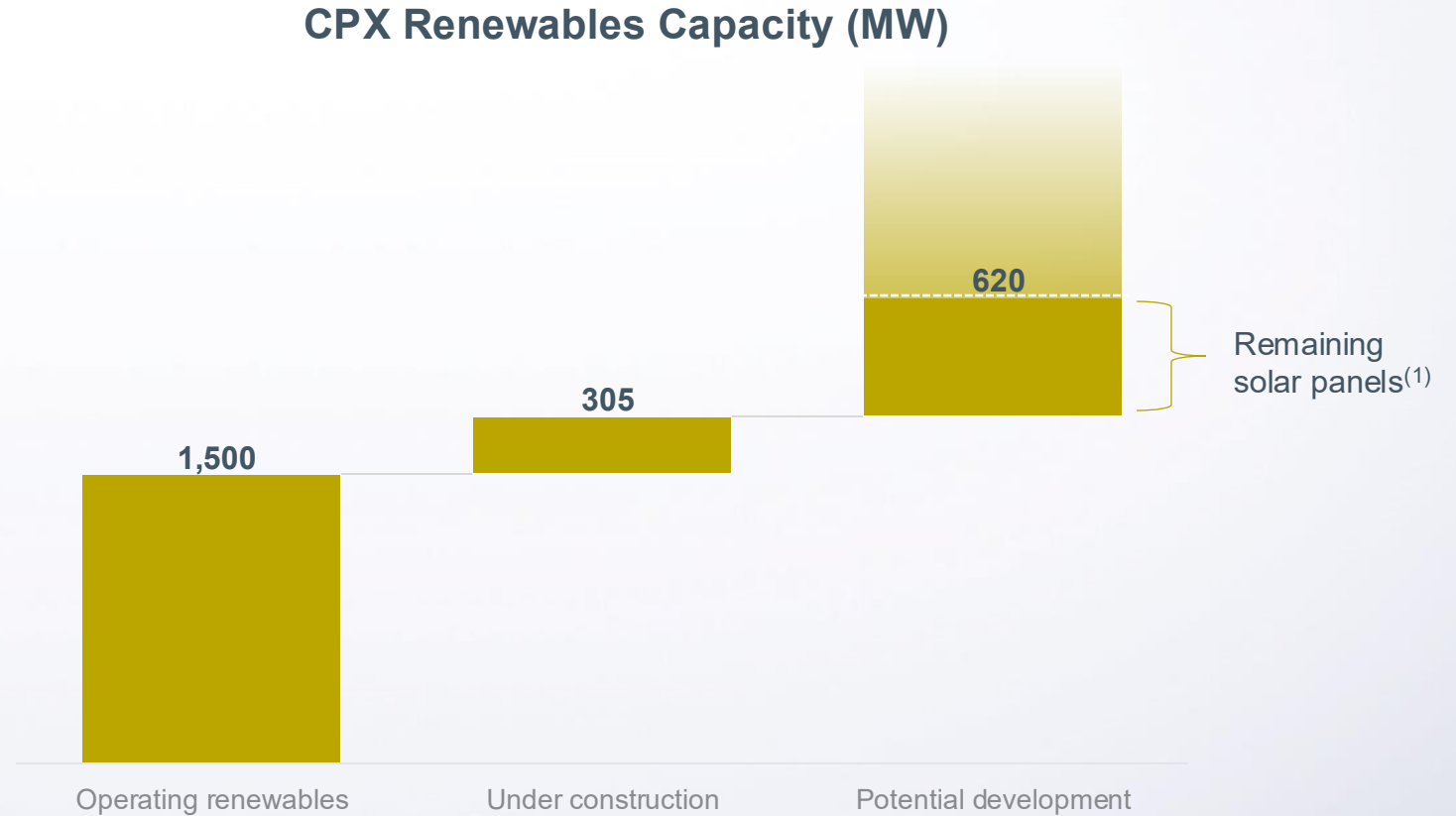
Annual EBITDA
Benefit

10 year

Contract
Extension



Develop:
Material renewables
growth with future
sell-down potential



Renewable assets: 13 operating,
4 under construction

Resilient amid uncertainty

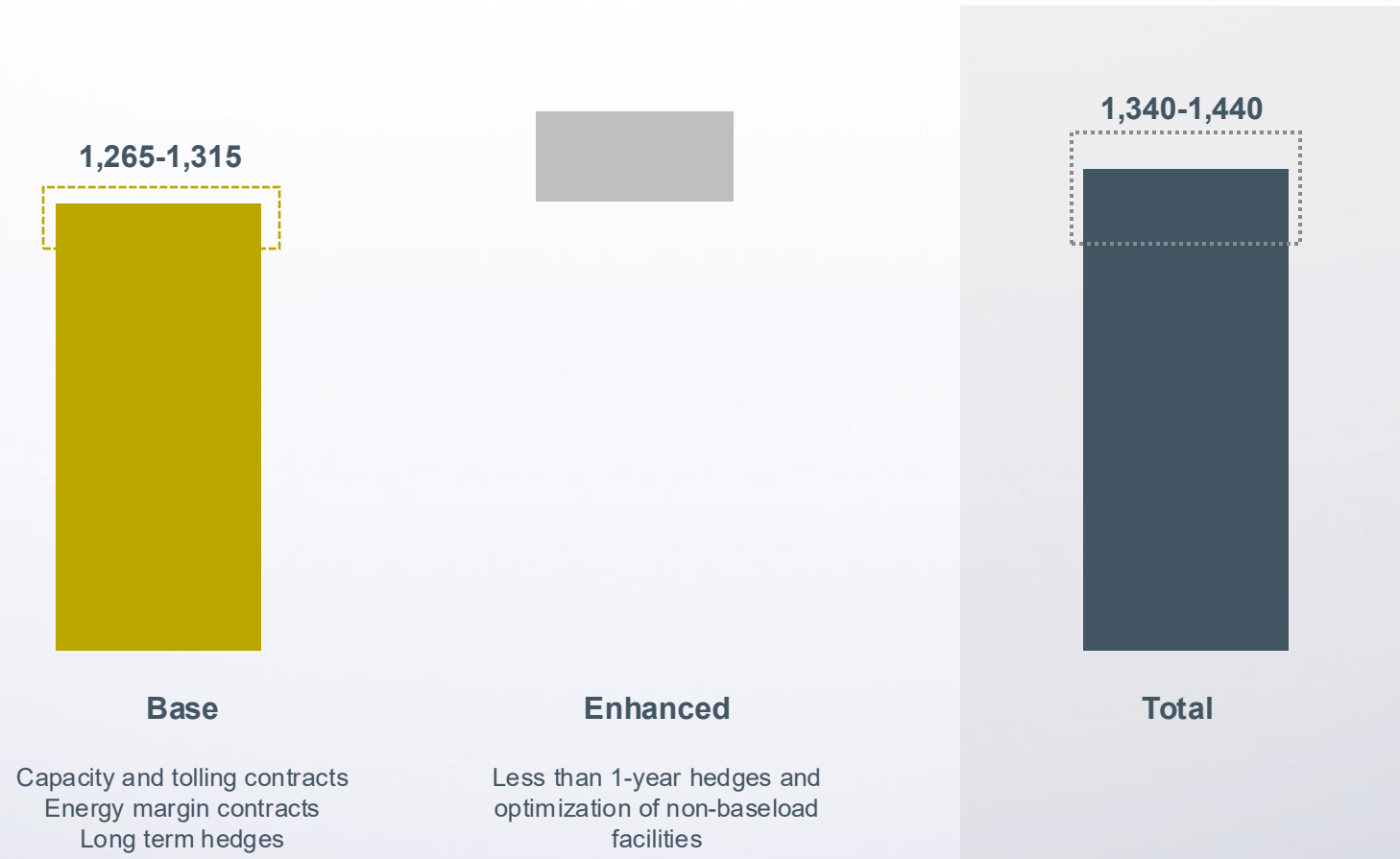
Our business is largely insulated from tariffs



1..Represents proportion of 2025 adjusted EBITDA forecast from capacity and tolling contracts, energy margin contracts, and long-term hedges (>12 months). 2. Based on 2025 adjusted EBITDA forecast from PPA contracts.



Stable and contracted EBITDA with **potential for growth** (\$M)



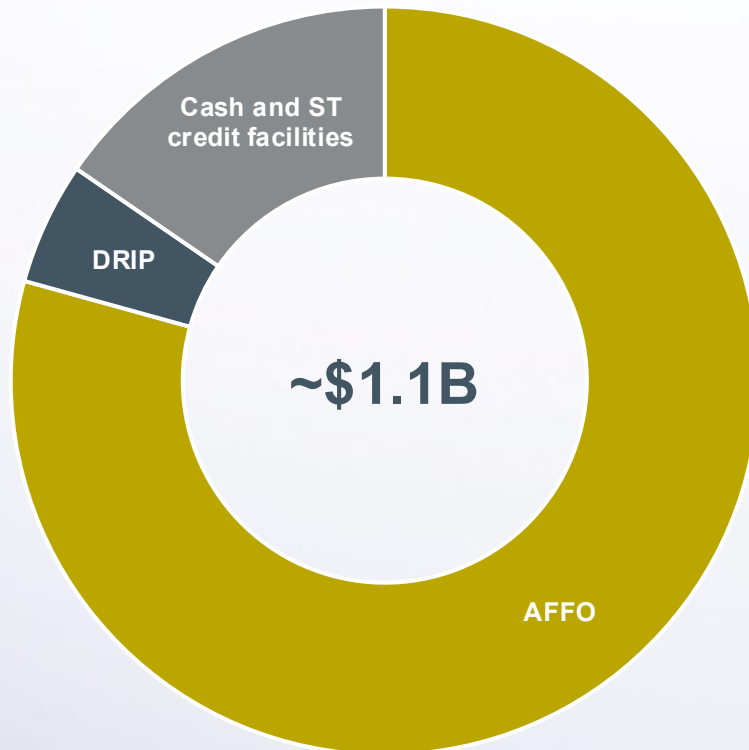
2025 Guidance summary \$M

Reaffirming 2025 guidance ranges

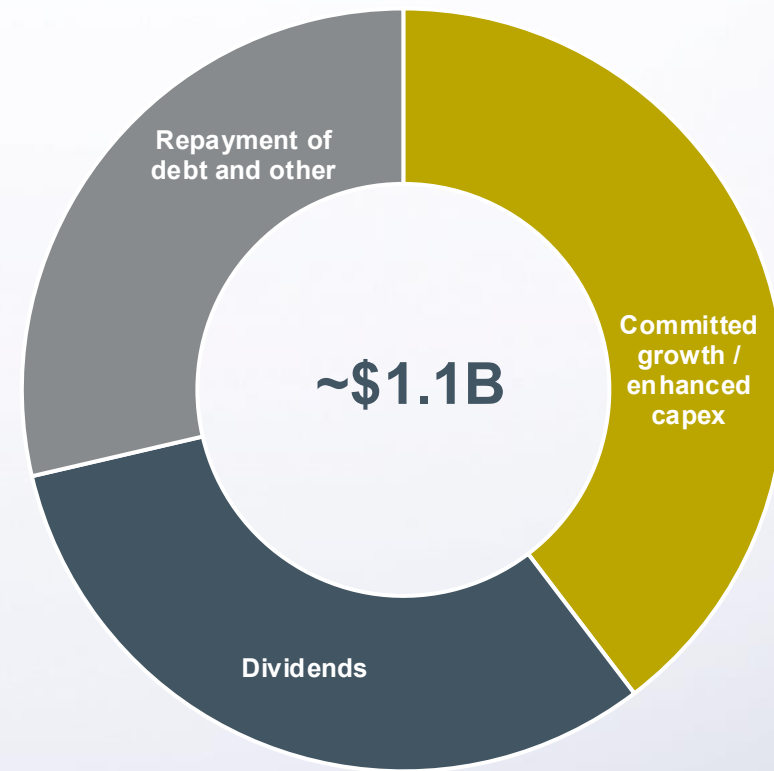


Strong Liquidity | Ready to Grow

Sources



Uses



CPX Investment Thesis

- ✓ **Strong fundamentals** favour existing gas generation capacity
- ✓ Large, diversified **existing generation footprint**
- ✓ Unparallel in-house **operational and commercial expertise**
- ✓ Proven ability to **acquire and optimize thermal generation assets**
- ✓ Contracted cash flow provides **stability and low-cost** capital

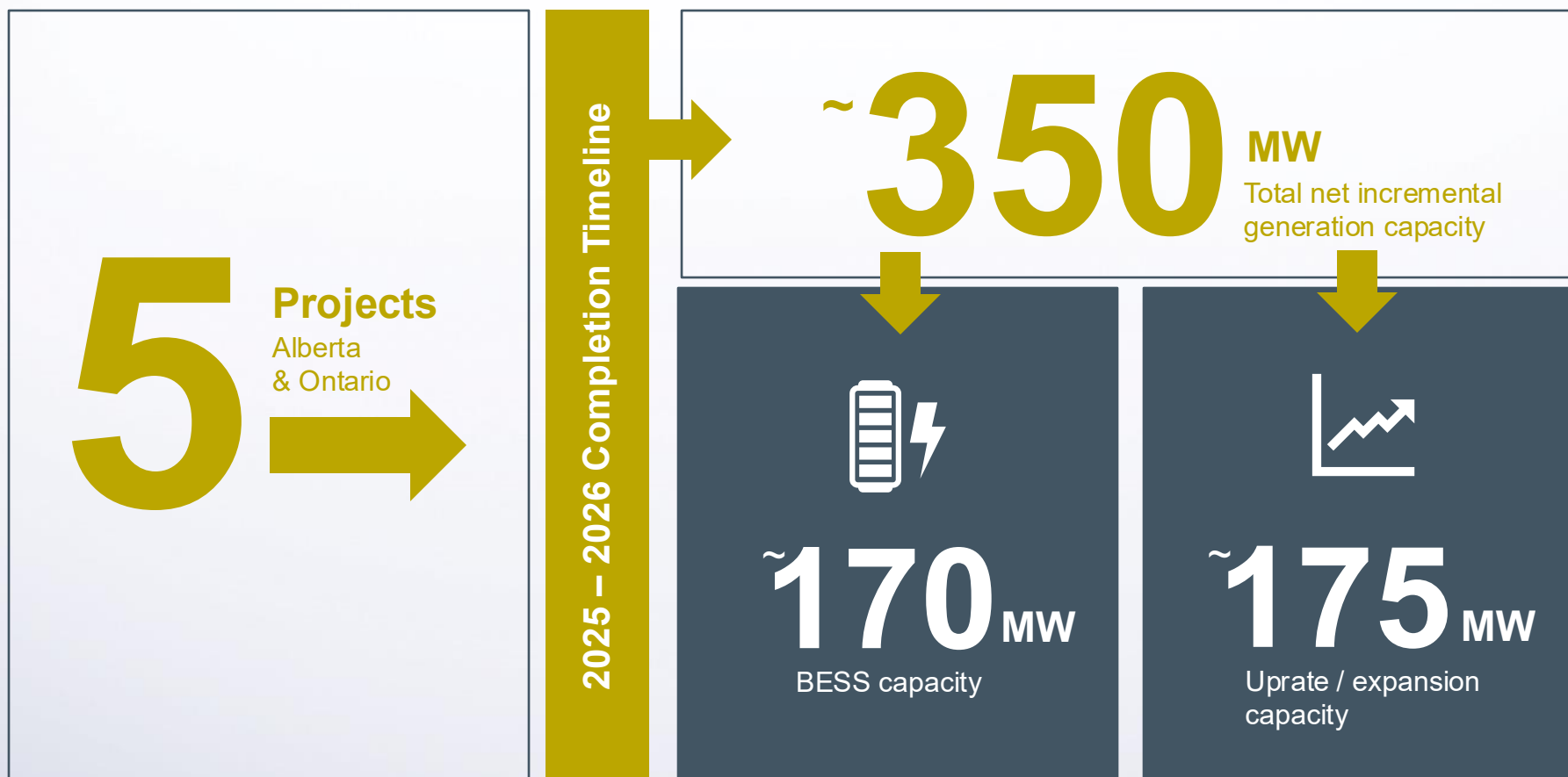




Appendix

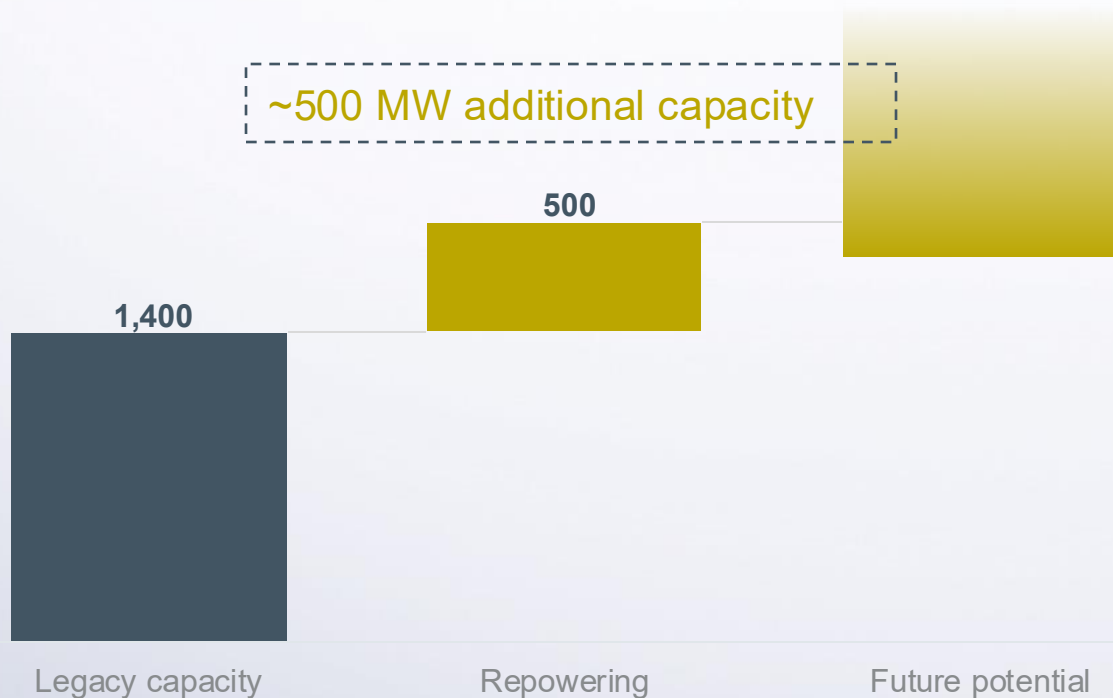
Flexible Generation

Project Portfolio Update



Genesee off-coal | Repowering complete

Genesee Generating Station capacity MW



Repowering positions CPX to succeed



Generation capacity
~1.9 GW



Future data
center potential



Maximization of
asset life

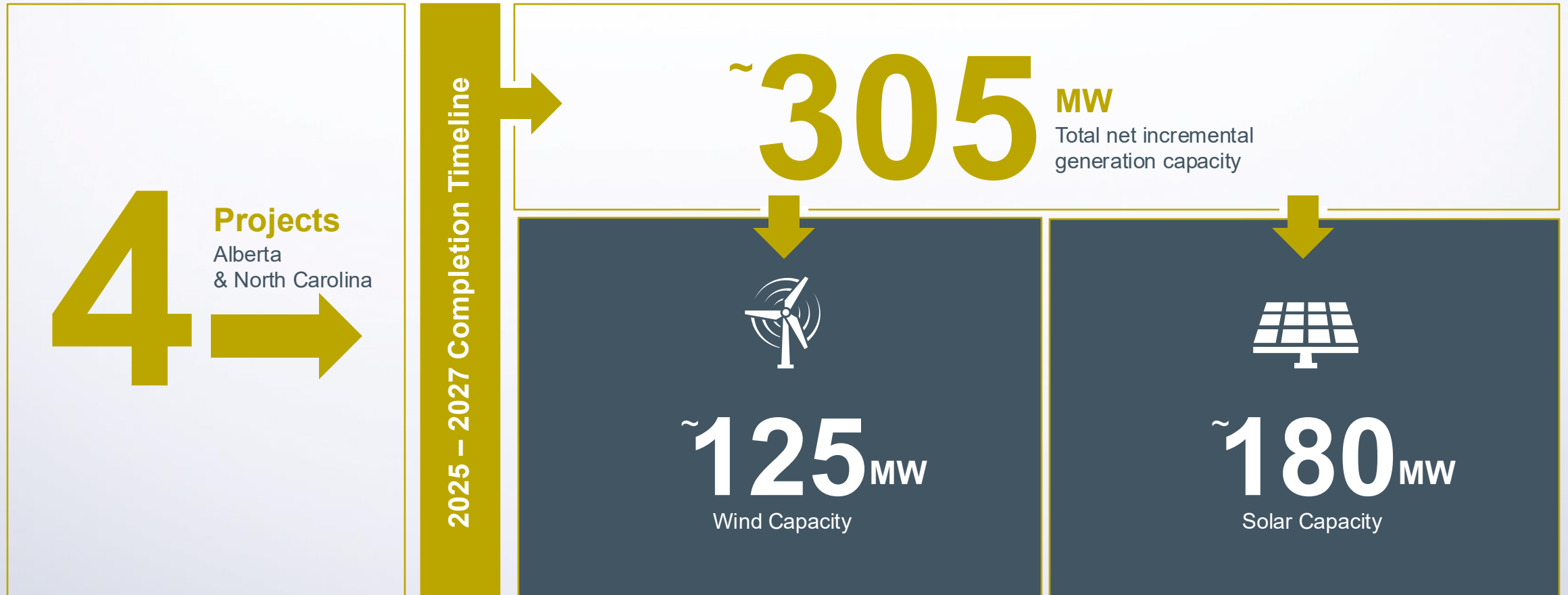


Most efficient
CCGT in Canada

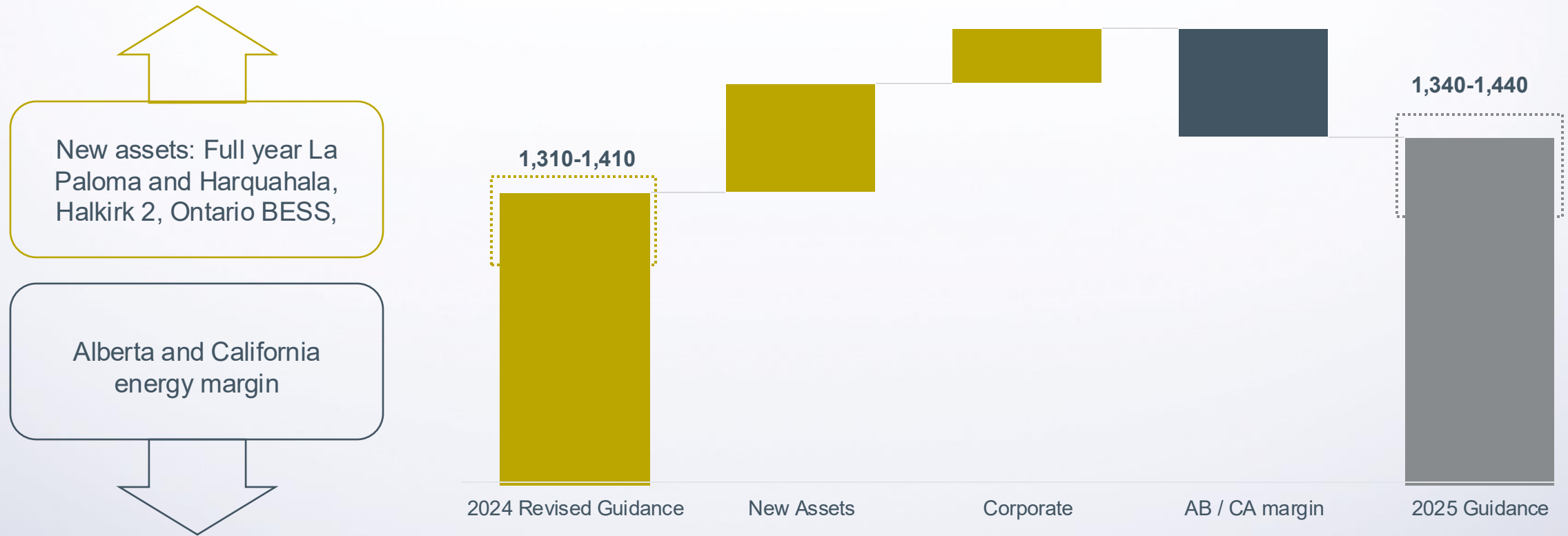


Renewables

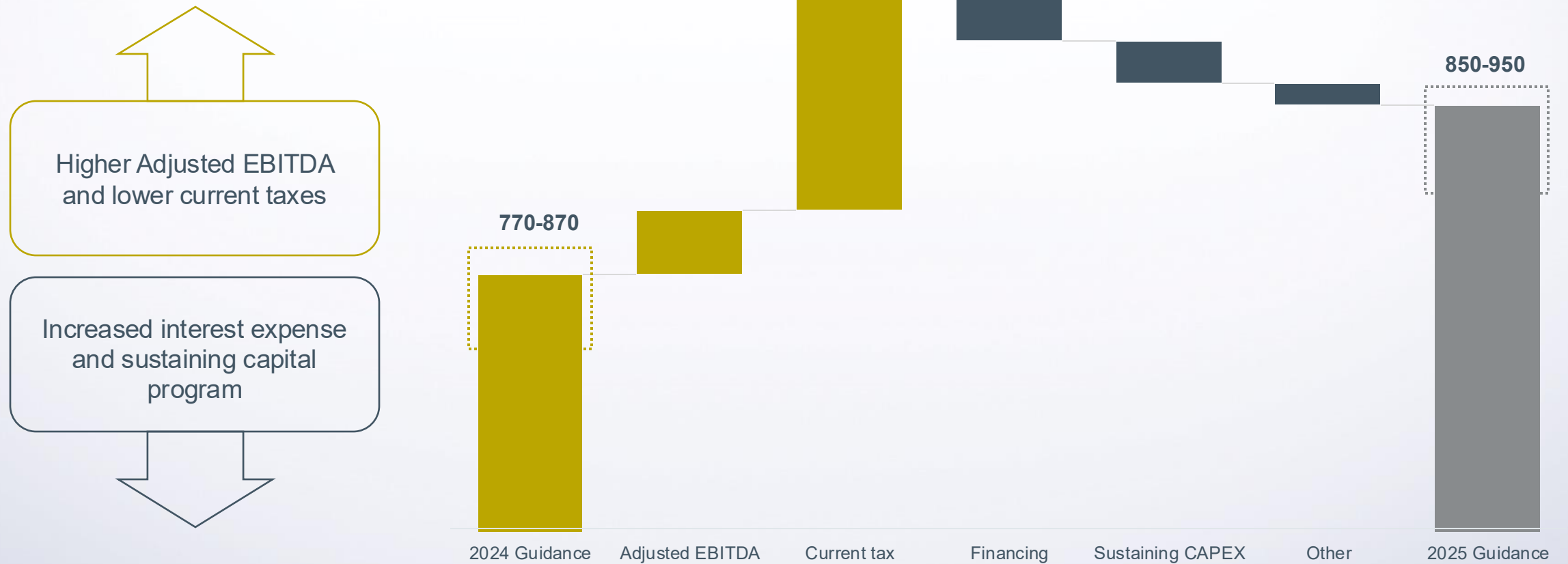
Project Portfolio Update



Year over year adjusted EBITDA reconciliation (\$M)



Year over year **AFFO** reconciliation (\$M)



We are committed to **growing our dividend per share**, as we invest in growth



1. Represents simple average of 2019 to 2023
Subject to market conditions, economic outlook, cash flow forecast, and Board approval at the time

Hummel Generating Station

1,124 MW | Pennsylvania | 100% CPX ownership

Large, new & efficient power generation in PJM MAAC

Contribution to market and customer reliability

- High historical capacity factor (~80%¹), potential to increase over time
- Low heat rate (6.8 mmbtu/MWh)

Strategically Positioned

- Demand growth driving attractive capacity pricing
 - 663 data centres are located within 200 miles²
- Advantaged access to fuel with alower cost
 - Leidy gas - cheapest gas point in PJM along with Dominion South
- Plant scale driving O&M savings

Expansion and optimization opportunities

- Plans to increase capacity; 30 MW uprate in 2026/2027



Consistent with growth, expansion and optimization strategy



Compelling long-term contract potential



1. Based on 2024 actual capacity factor. 2. Based on third party analysis on Data Centre Hawk data.



Rolling Hills Generating Station

1,023 MW | Ohio | 100% CPX ownership

Combustion turbine peaking facility in PJM RTO

Contribution to market and customer reliability

- Flexible peaker, fast ramping capability
- Elevated capacity factors given increasing PJM demand profiles

Strategically Positioned

- Demand growth (including data centres) driving attractive capacity pricing
 - 244 data centres are located within 200 miles¹
- Advantaged access to fuel with lower cost
 - TETCO - hub which prices at a discount compared to Henry Hub and other PJM gas hubs
 - Plant scale driving O&M savings

Expansion and optimization opportunities

- Excess acreage, expansion opportunities with opportunity to repower
- Co-location potential



Consistent with growth, expansion and optimization strategy



Data centre potential

1. Based on third party analysis on Data Centre Hawk data.



CPX 2025 Guidance Summary:

Revised reporting structure

	Net Capacity (GW)	Proportion of total net capacity	Generation (TWh)	Capacity Factor	Availability
U.S. Flexible Generation	4.0	41%	17	48%	90%
Canada Flexible Generation	4.2	43%	16	47% ¹	92%
U.S. Renewables	0.6	6%	2	43%	97%
Canada Renewables ²	0.8	9%	3	36%	97%
Total	9.6	100%	38		

Guidance Forwards (Sept '24)	2025	2026	2027
AESO	\$51	\$52	\$57

1. Capacity factor calculation based on current Canada Flexible Generation net operating capacity. 2. Category includes other assets (waste heat etc.).

Forward-looking information

Forward-looking information or statements included in this presentation are provided to inform our shareholders and potential investors about management's assessment of Capital Power's future plans and operations. This information may not be appropriate for other purposes. The forward-looking information in this presentation is generally identified by words such as will, anticipate, believe, plan, intend, target, and expect or similar words that suggest future outcomes.

Material forward-looking information in this presentation consists of forward-looking statements including, but not limited to, statements regarding:

- our priorities and long-term strategies, including our corporate, and decarbonization strategies;
- our 2025 performance targets, including facility availability, sustaining capital expenditures, AFFO and adjusted EBITDA;
- future revenues, expenses, earnings, adjusted EBITDA and AFFO;
- the future pricing of electricity and market fundamentals in existing and target markets;
- our future cash requirements including interest and principal repayments, capital expenditures, dividends and distributions;
- our projected 2025 and long-term targeted dividend growth;
- our expected 2025 common share and preferred share dividend dates;
- our sources of funding, adequacy and availability of committed bank credit facilities and future borrowings;
- various aspects around existing, planned and potential development projects and acquisitions (including Halkirk 2 Wind, the repowering of Genesee Generating Station Units 1 and 2, the upgrades at Goreway and York Energy, Goreway BESS, York Energy BESS, East Windsor expansion, Maple Leaf Solar, Bear Branch Solar and Homet Solar), including expectations around timing, funding, project and acquisition costs, generation capacity, costs of technologies selected, environmental and sustainability benefits, and commercial and partnership arrangements;
- the financial impacts of the La Paloma and Harquahala acquisitions;
- the anticipated timing for completing the operational integration of the La Paloma acquisition;
- our 2025 estimated capital expenditures for previously announced growth projects;
- future development opportunities arising from the completion of the Genesee Generating Station project;
- our expectation around changes to the U.S. Clean Air Act and the resulting impact to Capital Power's decarbonization obligations in connection with future expansions to our thermal fleet;
- the targeted timeline for capital allocation that includes prioritizing the advancement of SMR and CCS technologies, and data centre co-location opportunities;
- the targeted timeline for completing the feasibility study of SMR in Alberta;
- our commitment to allocating growth capital towards low-carbon solutions;
- the ability to provide power for the growing build-out of data centres in North America including at our Genesee Generating Station site;
- the anticipated growth in North American data centre electricity consumption and total U.S. power demand;
- the ability to capitalize on our 2025 growth plans including contracting existing assets, expansion and optimization of our fleet, acquisition of incremental U.S. flexible generation capacity, and developments of renewables;
- the targeted average annual total shareholder return;
- the ability of profit-sharing arrangements to support partner communities;
- the anticipated impacts of the organizational review and anticipated benefits of the organizational review;
- the performance of future projects and the performance of such projects in comparison to the market;
- future growth and emerging opportunities in our target markets;
- the future energy needs of certain jurisdictions;
- anticipated resolution of dispute with contractor regarding construction work on the Genesee Repowering project;
- anticipated litigation in respect of Environmental Protection Agency (EPA) rules and plans and the outcome thereof;
- market and regulation designs and regulatory and legislative proposals and changes, regulatory updates and the impact thereof on the Company's core markets and business;

- the impact of climate change, including our assumptions relating to our identification of future risks and opportunities from climate change, our plans to mitigate transition and physical climate risks, and opportunities resulting from those risks; and
- the eligibility of certain projects for the Clean Technology ITC.

These statements are based on certain assumptions and analyses made by Capital Power considering its experience and perception of historical and future trends, current conditions, expected future developments, and other factors it believes are appropriate including its review of purchased businesses and assets. The material factors and assumptions used to develop these forward-looking statements relate to:

- electricity and other energy and carbon prices;
- electricity and other energy (including natural gas) and carbon prices;
- performance;
- business prospects (including potential re-contracting of facilities) and opportunities including expected growth and capital projects;
- status and impact of policy, legislation and regulations;
- effective tax rates;
- the development and performance of technology;
- foreign exchange rates; and
- other matters discussed under the 2025 performance targets section.

Whether actual results, performance or achievements will conform to our expectations and predictions is subject to several known and unknown risks and uncertainties which could cause actual results and experience to differ materially from our expectations. Such material risks and uncertainties are:

- changes in electricity, natural gas and carbon prices in markets in which we operate and the use of derivatives;
- regulatory and political environments including changes to environmental, climate, financial reporting, market structure and tax legislation;
- disruptions, or price volatility within our supply chains;
- generation facility availability, wind capacity factor and performance including maintenance expenditures;
- ability to fund current and future capital and working capital needs;
- acquisitions and developments including timing and costs of regulatory approvals and construction;
- changes in the availability of fuel;
- ability to realize the anticipated benefits of acquisitions;
- limitations inherent in our review of acquired assets;
- changes in general economic and competitive conditions, including inflation and recession;
- changes in the performance and cost of technologies and the development of new technologies, new energy efficient products, services and programs; and
- risks and uncertainties discussed under the Risks and risk management section.

See Risks and Risk Management in our 2024 Integrated Annual Report, for further discussion of these and other risks.

Readers are cautioned not to place undue reliance on any such forward-looking statements, which speak only as of the date made. Capital Power does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based, except as required by law.





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