Building the leading power producer in North America

April 2024

Capital Power

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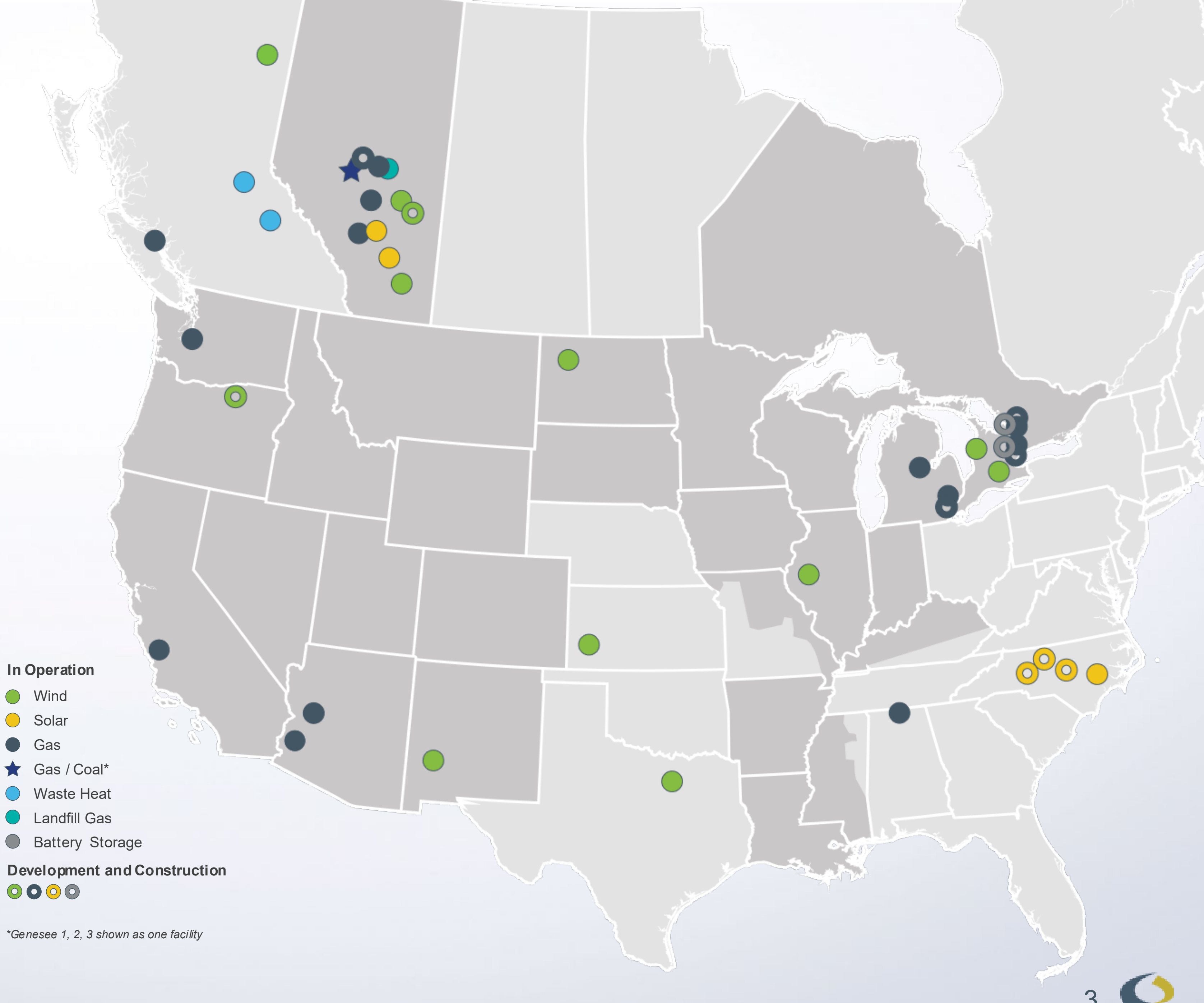
Leading North American IPP

~$5.0B Market Cap[(1)]	~6.5% Dividend yield[(2)]
BBB- / BBB (low) S&P / DBRS	~9,300 Megawatts
50/50% Canada / US Weighting[(3)]	32 Operating Facilities



(1) Based on total common shares outstanding as at March 11, 2024
(2) Based on annualization of most recent dividend
(3) Based on net working interest generation capacity

2023 Highlights

Strong financial results, record generation

Financial & operating results

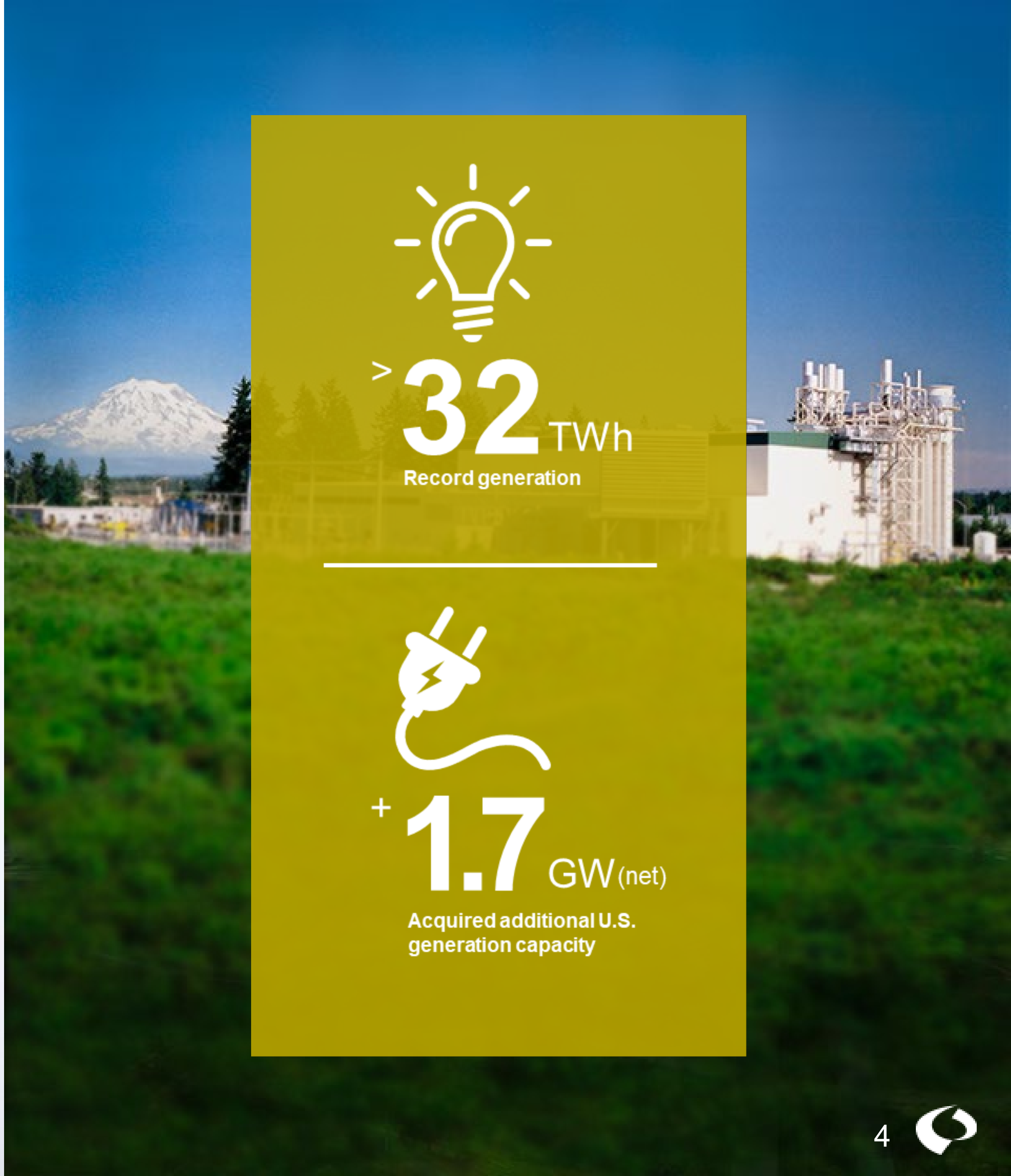
- Achieved record annual adjusted EBITDA of $1.455B
- Record power generation of >32 TWh

Strengthening our portfolio

- Completed coal to gas conversion of Genesee 3; advanced Genesee 1 and Genesee 2 Repowering project
- Acquired 3 natural gas-fired thermal facilities adding 1.7 GW (net) combined capacity in core WECC markets

Positioned for growth and decarbonization

- Executing over 380 MW of new renewables and storage projects
- U.S. First Solar ultra low carbon panels, SMR partnership with OPG
- Expanded and realigned leadership team to accelerate path to net zero



2023 Highlights

Achieved financial guidance and credit metrics

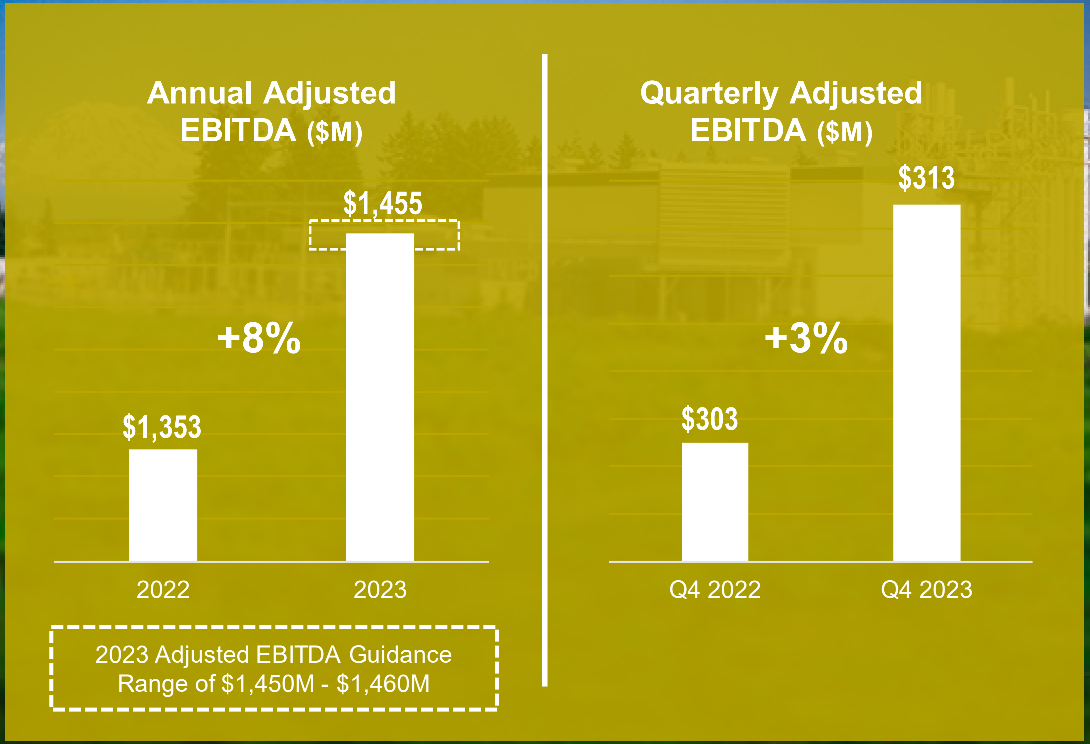
Results consistent with revised adjusted EBITDA guidance

- Favorable results from U.S. and Ontario segments
- Full year contribution of Midland Cogeneration Venture
- Reduced emissions compliance costs due to successful Genesee 3 coal-to-gas conversion

Strong balance sheet

- Net debt to 2023 adjusted EBITDA of ~2.6x
- Exceeded IG credit metrics to remain BBB- / BBB(low) (S&P / DBRS)

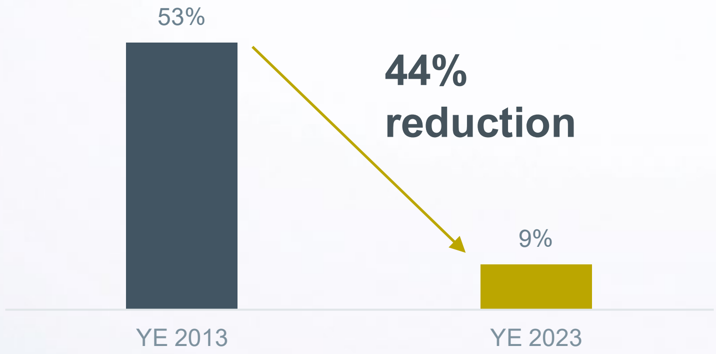
Driving shareholder value through a balanced approach to capital allocation, portfolio diversification, and decarbonization



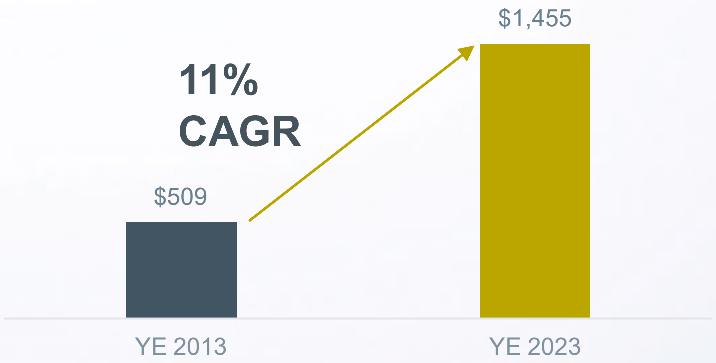
Growing through decarbonization and diversification

10-year total shareholder return CAGR of 12.5%

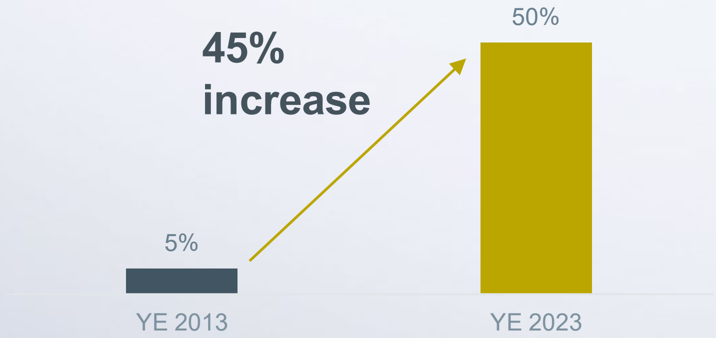
Coal/Dual Fuel Exposure (% Capacity)



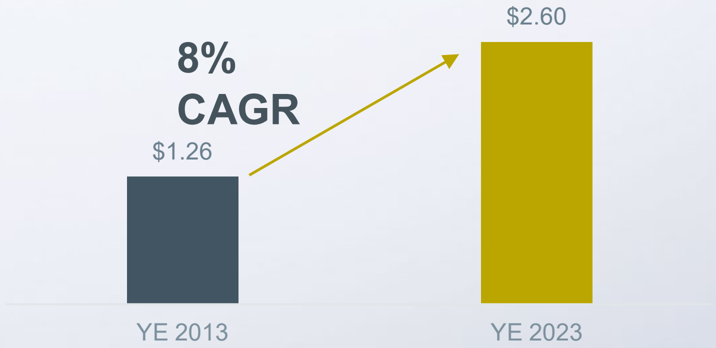
Adjusted EBITDA Growth



U.S. Exposure (% Capacity)



Dividend Per Share Growth



Note: Portfolio exposure to U.S. and coal shown pro-forma acquisitions of La Paloma and Harquahala

Increasing capacity and reducing emissions

Record generation achieved with declining emissions intensity

Total Portfolio

>32 TWh
Record generation in company history

~40 %
Reduction in carbon intensity (CO_2e/MWh vs 2014)

Pathway to Net Zero

>380 MW
Additional renewable capacity being advanced

100 %
Off-coal in 2024 through Genesee Repowering project

Genesee Repower

+512 MW
Additional net capacity

3.4 Mt
Annual CO_2 emissions reduction from 2019 levels once Genesee Repowering is complete

Capital Power's strategic imperatives

A balanced approach to energy transition

1 DELIVER

Reliable & affordable power

Optimize existing generation capacity

Consolidate critical gas generation in core growth markets

2 BUILD

Decarbonized power systems for tomorrow

Develop renewable / lower carbon power generation

Innovate to reduce emissions at existing generation sites

3 CREATE

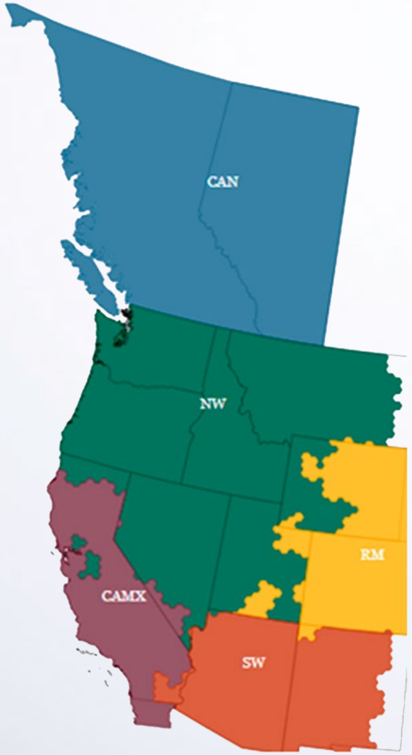
Real net-zero power solutions for customers

Invest in technologies to reduce emissions

Advance net-zero solutions for our customers

U.S. WECC Market

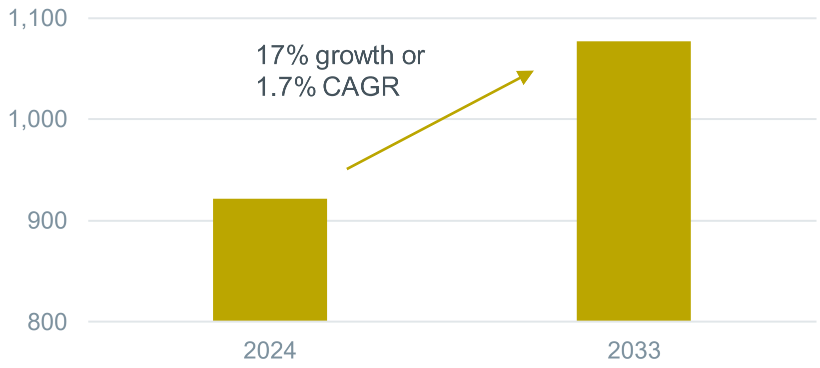
Favourable Market Dynamics in U.S. WECC



1 Strong Fundamentals

- Large demand market requiring flexibility (>900 TWh)[1]
- Favorable demand growth outlook
  - California demand growth CAGR of ~7% to 2045[2]
  - Phoenix is 2nd fastest growing U.S. city[4]

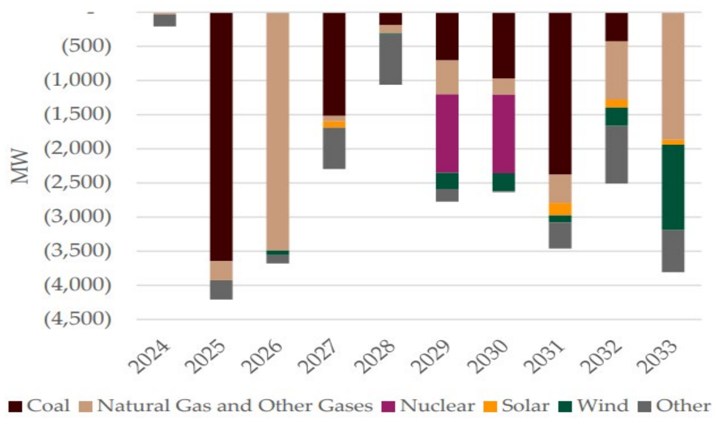
Estimated Annual Energy WECC (TWh)[1]



2 Commitment to Decarbonization

- Baseload capacity retirements
- California targeting carbon neutral by 2045
- Future low carbon solutions

WECC Retirements (MW)[1]



A total of 27GW of retirements expected between 2024 and 2033 (18GW coal and natural gas)

3 Transparent Market Design

- Competitive market with stability
- Compelling contracting opportunities

(1) Source: WECC (2023) – Western Assessment of Resource Adequacy
(2) Source: San Diego Gas & Electric, Boston Consulting Group, and Black & Veatch (April 2022). Projections of 280 TWh in 2020 and 549 TWh in 2045.
(3) Source: U.S. Census Bureau (May 2023). Based on cities with the largest population increases between July 1, 2021, and July 1, 2022, with populations of 50,000 or more.

La Paloma and Harquahala acquisitions

Positioning Capital Power as a Leading Power Producer in North America

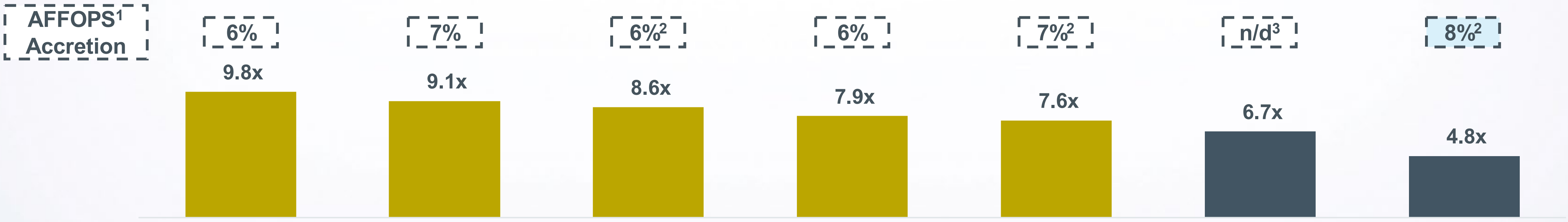
1	Key Gas Assets in Large US Market	• La Paloma and Harquahala are **critical infrastructure assets** in their respective markets • Amplifies the opportunity for further growth through a **new "hub" in the WECC[1] market**
2	Attractive Valuation & Accretion	• Acquisition multiple: **4.8x EV / Adj. EBITDA[2]** (2024) and 5.4x average Adj. EBITDA[2] ('24-'28 avg.) • AFFOPS[2] accretion: immediately accretive with **average accretion of 8%** ('24-'28 avg.) • Transaction **Adjusted EBITDA[2] contribution: $265M** ('24-'28 avg.)
3	Enhances Market Leadership	• The acquisitions[3] establish Capital Power as a **Top 5 Gas IPP in North America** • Unlocks additional O&M synergies and drives further competitive advantage
4	Institutional Validation	• Formation of a 50/50 **partnership with BlackRock** to own Harquahala • Funding includes **AIMCo $100M private placement** of Capital Power subscription receipts
5	Balanced Financing Plan	• **Maintains investment-grade credit rating** and balance sheet strength • De-risked through concurrent bought deal and private placement for aggregate proceeds of $400M

The transaction continues Capital Power's track record of acquiring accretive natural gas assets with attractive contracts in growing electricity markets

1. Western Electricity Coordinating Council. 2. See Non-GAAP Financial Measures and Ratios. 3. Inclusive of Frederickson.

Attractive valuation and re-contracting opportunity

Recent Capital Power Gas Acquisitions (EV / Adj. EBITDA[1])



	Decatur Energy Centre	East Windsor / York Energy Centre	Arlington Valley	Goreway	Midland	Frederickson	Harq. & La Paloma
PPA Term at Acquisition	5 years	14 years[4]	7 years	10 years	9 years	7 years	8 years[6]
Re-contracting Extension	10 years	3 years[5]	6 years	6 years	n/a	n/a	n/a
Province / State	Alabama	Ontario	Arizona	Ontario	Michigan	Washington	Arizona and California
Region	SERC	Ontario	WECC[7]	Ontario	MISO	WECC[7]	WECC[7]

Capital Power has a proven track record of adding value through natural gas acquisitions

1. See Non-GAAP Financial Measures and Ratios.
2. Expected 5-year average accretion from the date of acquisition.
3. n/d: not disclosed.
4. Weighted average of 12-year remaining PPA at East Windsor and 15-year remaining PPA at York Energy Centre at the time of acquisition.
5. Executed a 3-year contract extension for the York Energy Centre associated with its successful bid in the Same Technology Upgrade Solicitation. The contract extension applies to the new contracted capacity of 431 MW (from the COD of the upgrades expected in 2025) and extends the current contract from 2032 to 2035.
6. La Paloma is partially contracted through various resource adequacy contracts.
7. Excludes Alberta and British Columbia.

Market leading position in energy security

Energy Security Champion

- 5th largest reliable and flexible gas power generation fleet in North America[1,2]

Geographic Diversification

- Grows footprint in complementary and attractive markets

Balanced Development Pipeline

- Critical dispatchable gas assets support renewables build-out

Economies of Scale

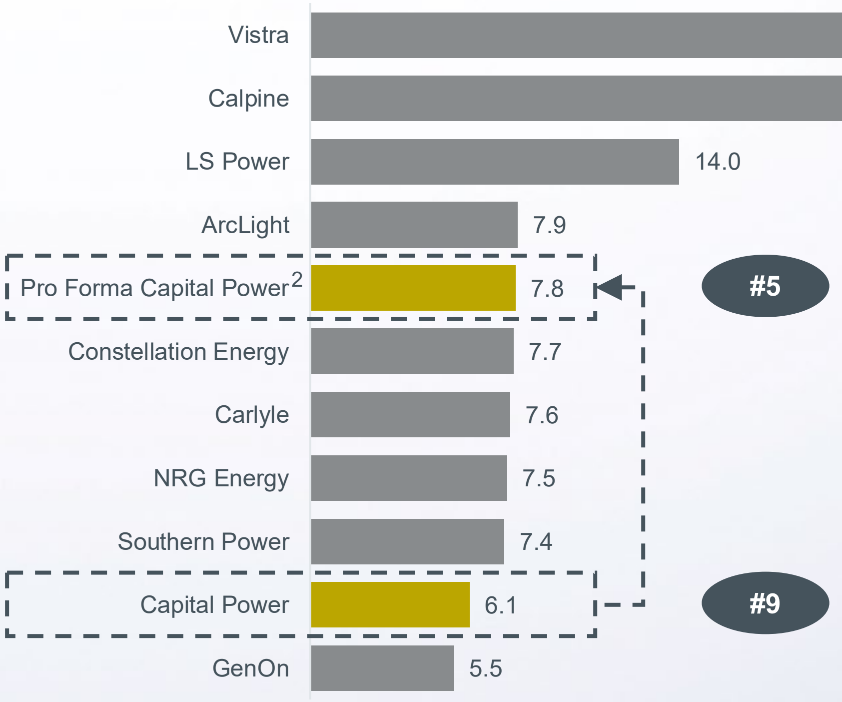
- Enhanced asset management capabilities

Access to Capital

- Increases scale of balance sheet and broadens institutional partnerships

Top 10 North American Non-Reg. Gas Operators[1]

(Net GW, Gas-Fired Capacity Only)



Capital Power is now a Top 5 Gas IPP in North America[1,2]

1. Based on net unregulated capacity utilizing S&P Global Market Intelligence database of gas-fired generation operators (November 2023) and referenced against publicly disclosed sources where available. Capital Power's status as the 5th largest operator of flexible and reliable gas-fired generation in North America includes its previously announced acquisition of the Frederickson 1 Generating Station.
2. Inclusive of Frederickson.

Ontario Market

5 successful Ontario projects adding ~350 MW

Contracts executed for all projects with Ontario IESO; COD targeted in 2025

Expedited Long-Term RFP ($655M cost)		
Project	Contracted Capacity	Term
East Windsor Expansion (106 MW)	81 MW summer 100 MW winter	To 2040 (~15 years)
York Battery Energy Storage System (120 MW)	114 MW	To 2047 (~22 years)
Goreway Battery Energy Storage System	48 MW	To 2047 (~22 years)

Same Technology Upgrade Solicitation				
Project	Existing Capacity	New Capacity	Total Capacity	Contract Expiry
Goreway Upgrade	840 MW	40 MW	880 MW	2035
York[(1)] Upgrade	393 MW	38 MW	431 MW	2035

1) 50% joint ownership with Manulife.

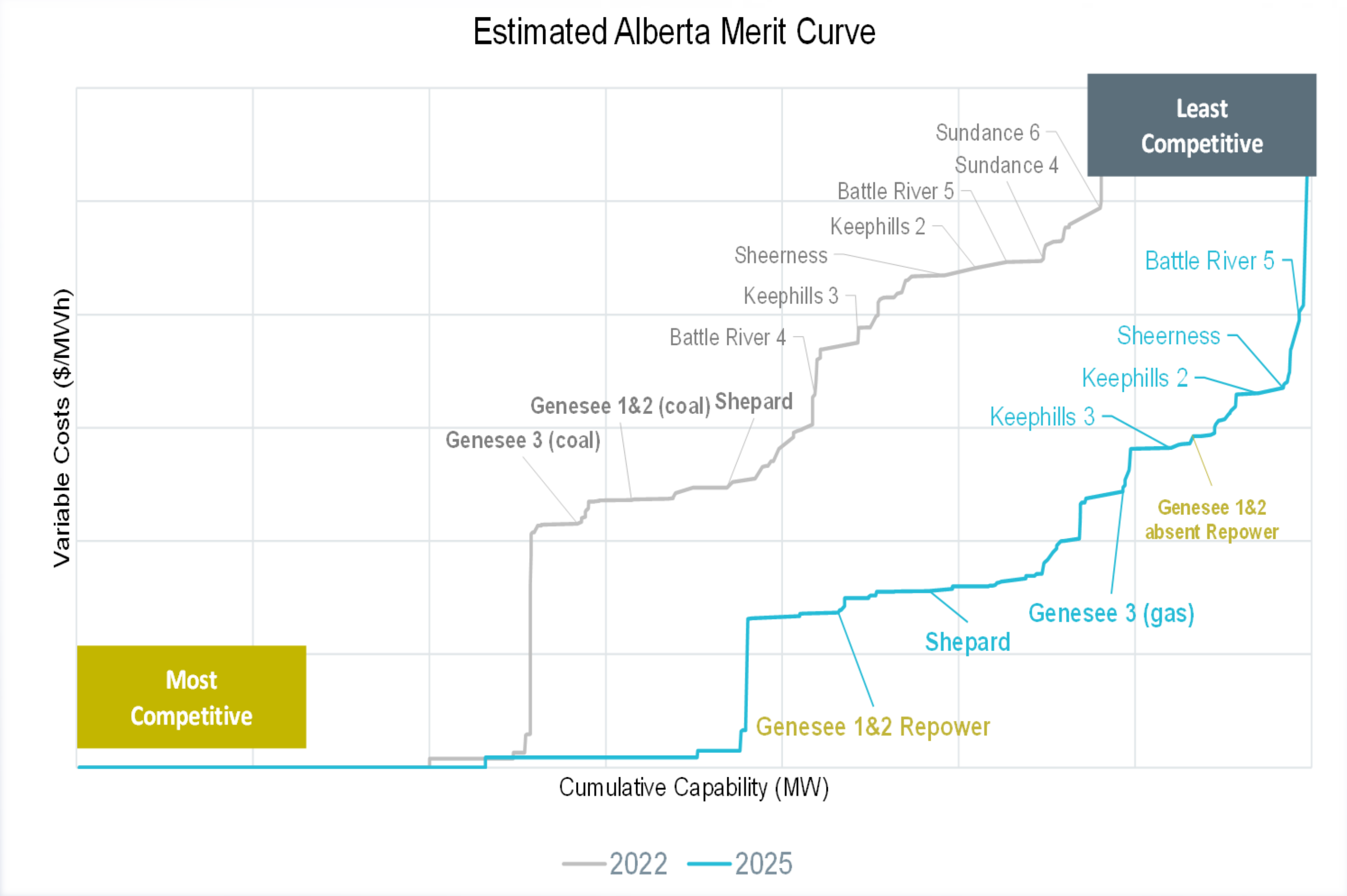
Alberta Market

Genesee 1&2 Repowering project

- Transition from dual-fuel to gas resulting in 58% increase in generating capacity to 1,332 MW
- ~40% decrease in absolute annual emissions
- ~60% decrease in GHG intensity
- Attractive proforma economics
- Following completion, Genesee 1&2 will be the most efficient natural gas combined cycle plant in Canada
- 2024 COD expected

Our Repowering project demonstrates the value creation resulting from decarbonizing existing thermal assets

Repowering of Genesee 1&2 Preserves Competitive Market Position



Retired Asset	Capacity (MW)
Battle River 3	149
Keephills 1	395
Sundance 1	280
Sundance 2	280
Sundance 3	368
Sundance 4	406
Sundance 5*	406
Sundance 6**	401
Battle River 4**	155
Battle River 5**	385
Sheerness 1**	400
Sheerness 2**	400
Keephills 2**	395
Total	**4,420**
Retirements as a % of installed capacity[1]	~24%

Financial Update

2023 Capital Allocation Update

Disciplined approach drives growth and returns to shareholders

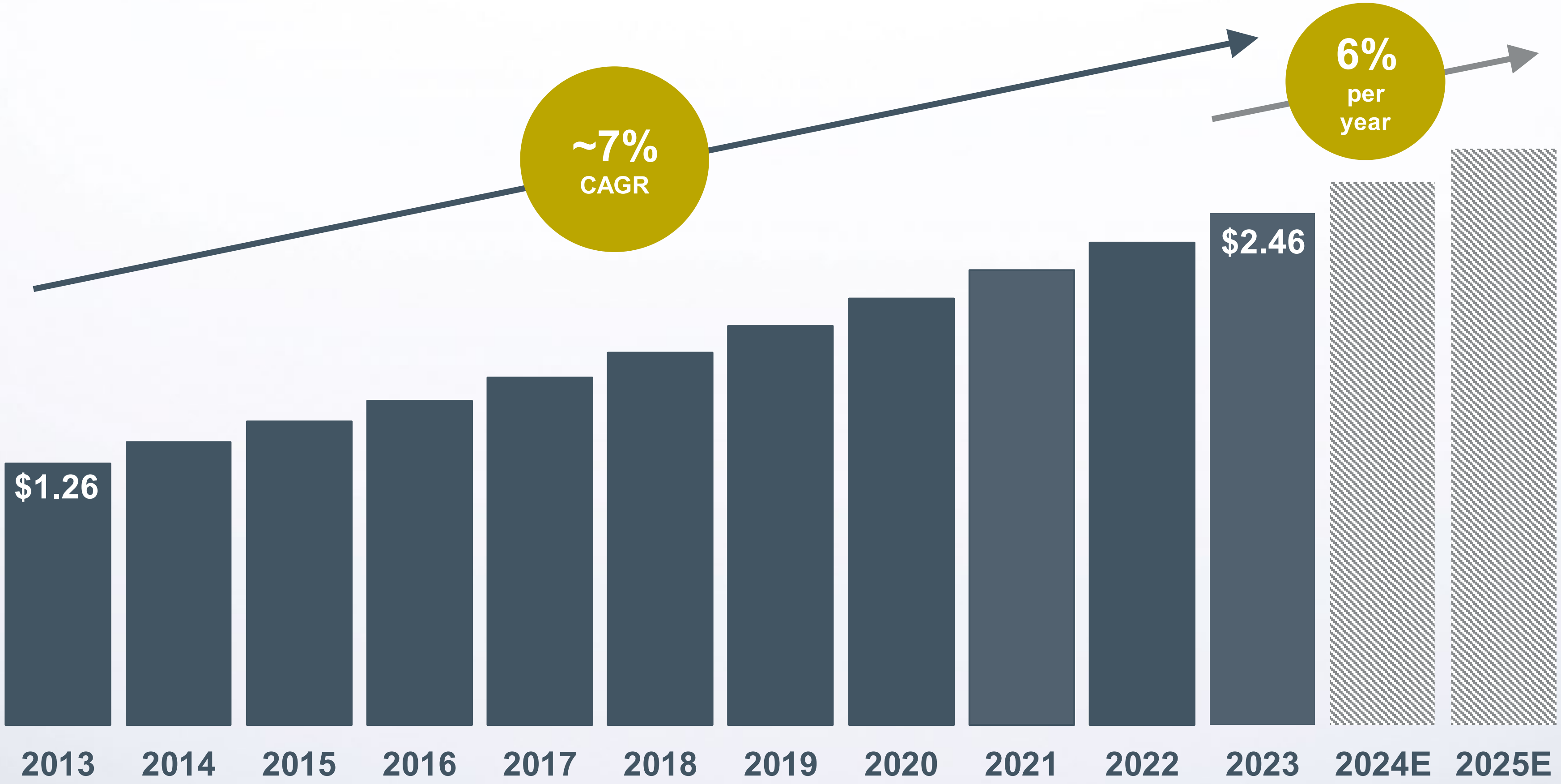
Leverage and liquidity	• Maintained FFO / Debt of 20% or higher • Preserved BBB- / BBB(low) credit rating (S&P / DBRS) • Liquidity of ~$1B (post closing La Paloma, Harquahala)

External Capital	• Largest acquisition in company's history
	    • $400M in common equity including private placement with AIMCO and $850M MTN offering
	    • 50 / 50 JV with BlackRock also provided funding
	• $350M MTN to stagger debt maturities and fund capex

Growth Capex + M&A	• Advanced renewables and Genesee repowering >$0.5B • Executed ~$1.6B of M&A
Dividends	• 10th consecutive dividend increase (6% in 2023) • Payout ratio within target range
Path to Net Zero	• $28M spent on innovation • Leveraging OPG experience for SMR feasibility assessment

Delivering a decade of dividend growth

Annual dividend guidance of 6% per year to 2025



1) Subject to market conditions, economic outlook, cash flow forecast, and Board approval at the time.
2) 2013 to 2023 annualized dividend based on year-end quarterly common shares dividend declared.

Delivering reliable, affordable and decarbonized electricity solutions

Reliable Power

Stable and growing cash flows from a highly contracted generation portfolio

Operational Excellence

Well-maintained and efficiently operated plants

Net Zero by 2045

ESG leader committed to decarbonization

Balance Sheet Strength

Committed to maintaining an investment grade credit rating

Disciplined Growth

History of dividend growth with guidance of 6% annual growth through 2025

Powering change by changing power

- Event hosted at the JW Marriott Edmonton ICE District

May 7, 2024

- Tour of Genesee site
- Evening reception

May 8, 2024

- Breakfast and registration
- Presentations and Q&A
- Lunch

Capital Power

Investor Day 2024

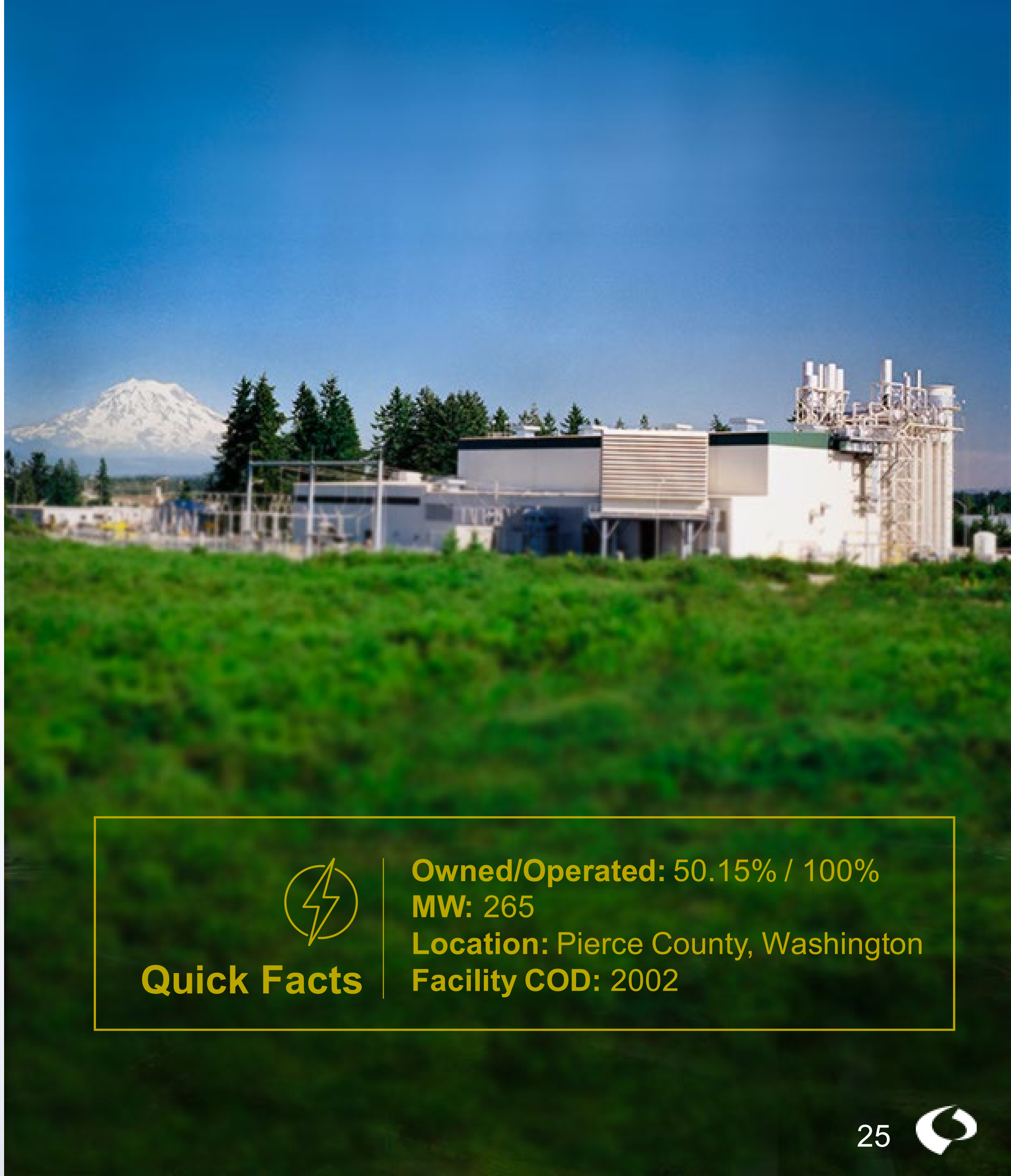
Appendix

Frederickson 1 acquisition

Strategic diversification in Pacific Northwest

Frederickson 1 Generating Station

- Fully contracted with credit-worthy counterparties to October 2030
- High-quality, reliable baseload generation asset in the Puget Sound Region diversifies our geographic footprint
- Well-positioned for re-contracting with legacy coal retirements on the horizon
- Prime location allows for future developments such as a battery installation or hybrid opportunity
- Projected average contracted EBITDA of US$15 million (CAD$21 million) per year during the 5-year period of 2024-2029
- Expected to deliver accretive near-term cash flows
- Acquisition closed in December 2023

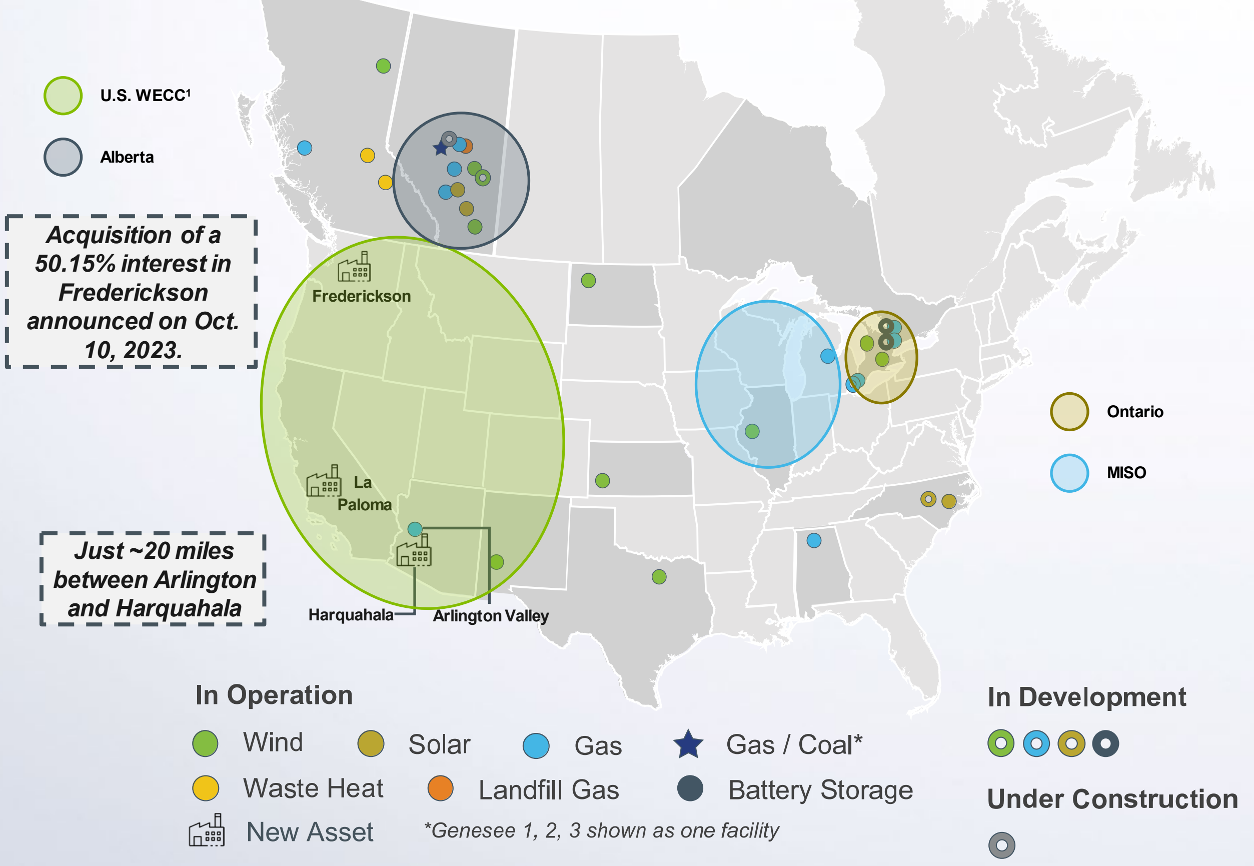


Quick Facts

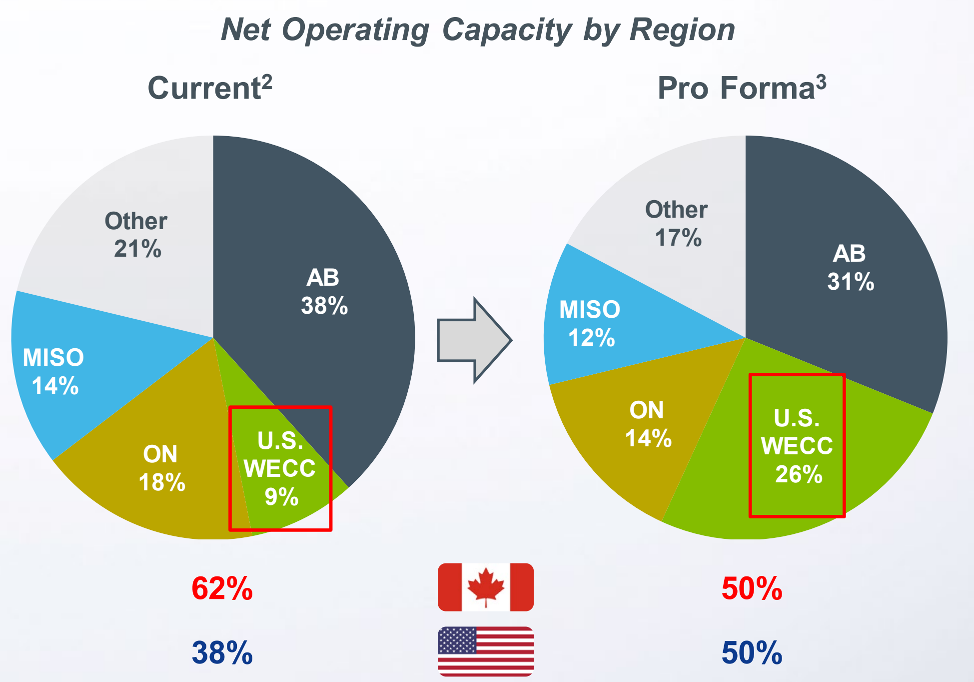
Owned/Operated: 50.15% / 100%
MW: 265
Location: Pierce County, Washington
Facility COD: 2002

Capital Power Emerges as One of the Largest and Most Diversified Power Generators in North America

Capital Power's North American Strategic "Hubs"



A Diversified North American Company



WECC expansion balances Capital Power's capacity between Canada and the U.S.

1. Excludes Alberta and British Columbia.
2. Excludes Frederickson.
3. Includes La Paloma, and net capacity at Harquahala and Frederickson.

Financial stability and strength

Strong balance sheet and continued commitment to investment grade credit ratings

S&P Global Ratings

BBB- / Stable

- Target FFO to Debt ≥ 20%[(1)]
- Target Debt to EBITDA ≤ 4x

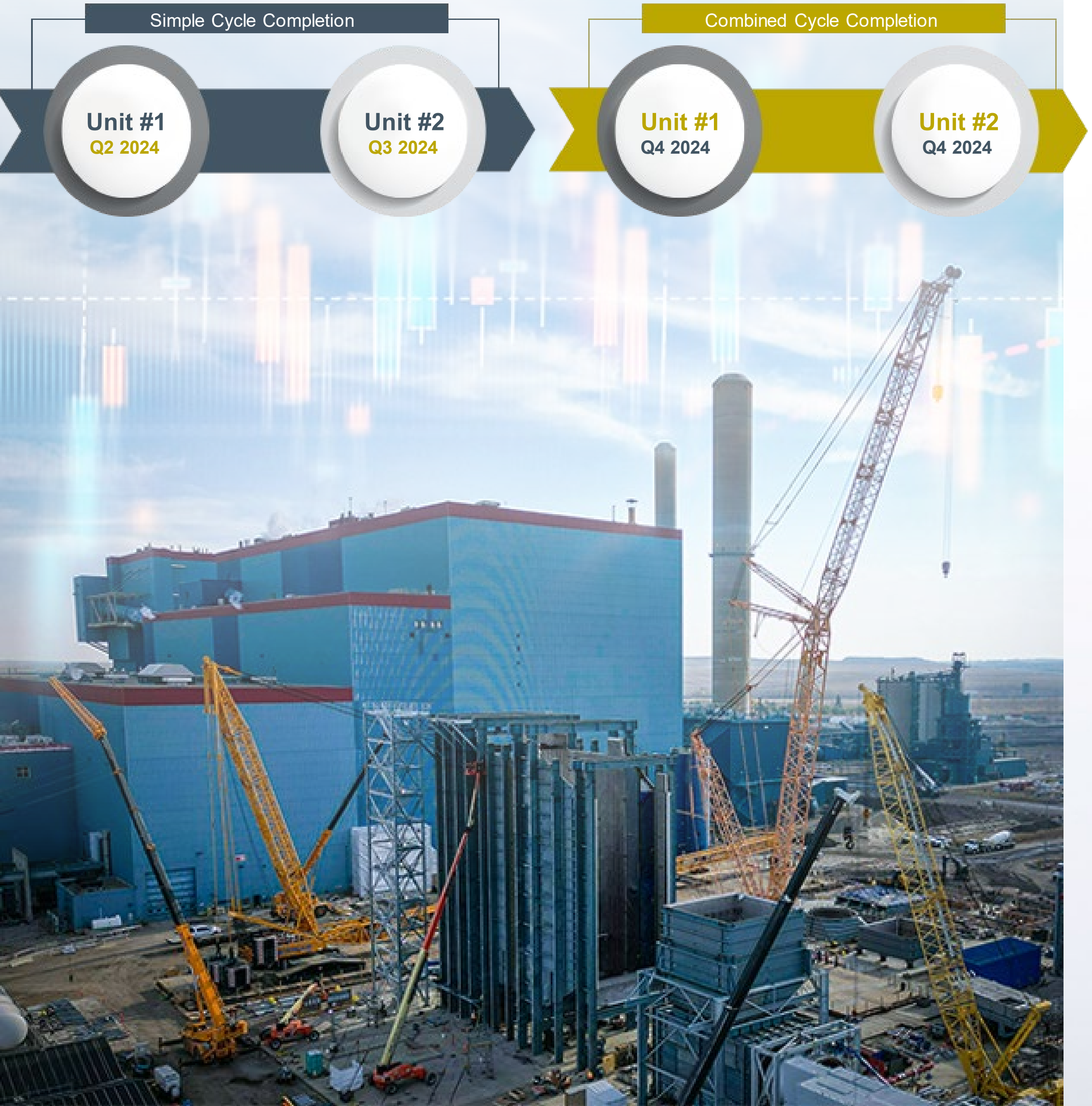
MORNINGSTAR | DBRS

BBB(low) / Stable

- Target cashflow to debt ≥ 20%
- Target EBITDA / Interest ≥ 4.5x

2024 credit metrics forecast to be onside with target thresholds

1. Based on S&P's three-year weighted-average.



Genesee repower timelines/assumptions

Simple Cycle Completion – 411 MWs capacity

- Unit 1 Q2 2024
- Unit 2 Q3 2024
- Output during commissioning will range between 0 MWs and 411 MWs
- Existing dual fuel units will run in parallel until commissioning is complete

Combined Cycle Completion – 466 MWs capacity

- Unit 1 Q4 2024
- Unit 2 Q4 2024
- Each unit will have 22-day total outage time in advance of completion
- Output will range between 0 MWs and 466 MWs during commissioning
- Expect to reach 566 MWs on both units in the first half of 2025

Mid-point of financial guidance assumes approximately 1,000 GWhs of commissioning volumes during 2024

Legal Notices

Non-GAAP Financial Measures and Ratios
This presentation contains references to certain financial measures that do not have a standardized meaning prescribed by GAAP and may not be comparable to similar measures presented by other issuers and should not be considered in isolation or used in substitution for measures of performance prepared in accordance with GAAP. Non-GAAP measures referenced herein include adjusted funds from operations (AFFO) and earnings before net finance expense, income tax expense, depreciation and amortization, impairments, foreign exchange gains or losses, finance expense and depreciation expense from the Company's joint venture interests, gains or losses on disposals and unrealized changes in fair value of commodity derivatives and emission credits (Adjusted EBITDA). These terms are not defined financial measures according to GAAP and do not have standardized meanings prescribed by GAAP and, therefore, are unlikely to be comparable to similar measures used by other enterprises.

This presentation also makes reference to other non-GAAP performance measures and ratios, including AFFO per share (AFFOPS). AFFOPS is determined by applying AFFO to the weighted average number of common shares used in the calculation of basic and diluted earnings per share. Management uses this ratio to assess the performance of Capital Power.

These measures should not be considered alternatives to net cash flows from operating activities and net income, respectively, calculated in accordance with GAAP. Rather, these measures are provided to complement GAAP measures in the analysis of our results of operations from management's perspective.

For more information regarding non-GAAP financial measures used by the Company, including the composition of these measures, how management utilizes each non-GAAP financial measure and, where applicable, a reconciliation of the Company's historical non-GAAP financial measures to the most directly comparable measure calculated in accordance with GAAP for the applicable period then ended, please see "*Non-GAAP Financial Measures and Ratios*" in the Company's Management's Discussion and Analysis for the three and nine months ended September 30, 2023, and prepared as of November 1, 2023, which is available under the Company's profile on SEDAR+ at www.sedarplus.ca and on the Company's website at www.capitalpower.com.

A reconciliation of net cash flows from operating activities to AFFO resulting from the Acquisitions is as follows:

(unaudited, $ millions)[1]	2024E
Increase in net cash flows from operating activities resulting from the Acquisitions	130
Add items included in calculation of net cash flows from operating activities:	
Interest paid	57
Income taxes paid	37
Distributions received from joint venture	(26)
	198
Net finance expense	(58)
Current income tax expense	(37)
Changes in non-cash operating working capital	15
Sustaining capital expenditures	(22)
AFFO from joint venture	35
Increase in AFFO resulting from the Acquisitions	**131**

A reconciliation of Adjusted EBITDA to net income resulting from the Acquisitions is as follows:

(unaudited, $ millions)[1]	
Increase in adjusted EBITDA resulting from the Acquisitions [2,3]	285
Depreciation and amortization [3,4]	(87)
Net finance expense [3]	(74)
Income tax expense [3]	(34)
Increase in net income resulting from the Acquisitions	**90**

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This presentation is not an offer of securities for sale in the United States and is not an offer to sell or solicitation of an offer to buy any securities of the Company, nor shall it form the basis of, or be relied upon in connection with any contract for purchase or subscription. The securities of Capital Power being sold under the bought deal public offering will only be offered in the provinces and territories of Canada by means of the prospectus referred to above. Securities may not be offered or sold in the United States absent registration under the United States Securities Act of 1933, as amended (the "**U.S. Securities Act**") or an exemption from registration thereunder. The subscription receipts and the underlying common shares to be sold pursuant to the bought deal public offering have not been and will not be registered under the U.S. Securities Act or any state securities laws and, except pursuant to exemptions from the registration requirements of the U.S. Securities Act and applicable state securities laws, may not be offered or sold in the United States. Such securities are being offered only in the United States to "qualified institutional buyers" (as defined in and in reliance on Rule 144A under the U.S. Securities Act).

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As it relates to information provided by, or in respect of, the Frederickson, La Paloma or Harquahala facilities, Capital Power, after conducting due diligence that it believes to be a prudent and thorough level of investigation, believes it to be accurate in all material respects, an unavoidable level of risk remains regarding the accuracy and completeness of such information.

Documents and websites referenced herein are not incorporated by reference into this presentation, unless such incorporation by reference is explicit.

Exchange Rates
As of November 17, 2023, the daily exchange rate as reported by the Bank of Canada for the conversion of U.S. dollars into Canadian dollars was US$1.00 = $1.3722 ($1.00 = US$0.7288).

1. 2024E items are all converted from USD to CAD using a 1.3240 FX rate, reflective of consensus estimates for 2024.
2. Adjusted EBITDA shown here is net of Acquisitions' transaction fees of $9 million. Adjusted EBITDA before Acquisitions' transaction fees is $294 million (or US$222 million), which underlies a 4.8x EV / adjusted EBITDA (2024) multiple.
3. Includes contribution from joint venture.
4. Depreciation and amortization is subject to change on finalization of purchase price allocation and closing adjustments.

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 includes expectations regarding:

- our 2023 performance targets including for facility availability, sustaining capital expenditures, hedged position, adjusted funds from operations (AFFO) and adjusted EBITDA;
- our plans to transition off-coal, advancement of the Genesee Carbon Conversion Centre and commercial application of carbon conversion, capture and storage technologies;
- future revenues, expenses, earnings, adjusted EBITDA and AFFO;
- the future pricing of electricity and market fundamentals in existing and target markets;
- future dividend growth;
- the Company's future cash requirements including interest and principal repayments, capital expenditures, dividends and distributions;
- the Company's sources of funding, adequacy and availability of committed bank credit facilities and future borrowings;
- Expectations from DRIP activation;
- the timing of, funding of, generation capacity of, operational performance and financial returns of, costs of technologies selected for, environmental benefits or commercial and partnership arrangements regarding existing, planned and potential development projects and acquisitions (including phase 2 of Halkirk Wind, the repowering of Genesee 1 and 2 (including being hydrogen ready and carbon conversion ready)), the Genesee carbon capture and storage (CCS) project, the upgrade at Goreway and York Energy, Goreway Battery Energy Storage System (BESS), York Energy BESS, East Windsor expansion, and the Maple Leaf Solar project;
- future growth and emerging opportunities in our target markets;
- the impact of the IRA on our projects;
- potential opportunities and partnerships with Indigenous communities;
- facility availability and planned outages;
- capital expenditures for facility maintenance and other (sustaining capital, future growth projects, commercial initiatives);
- market and regulation designs and proposals and the impact thereof on the Company's core markets; and
- the impact of climate change.

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;
- 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 Performance Overview, Outlook and Risks and Risk Management sections.

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 the Company's 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;
- 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 2022 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.

Investor Relations

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