Investor Presentation March 2021

Brian Vaasjo, President & CEO Sandra Haskins, SVP Finance & CFO



RESPONSIBLE ENERGY FOR TOMORROW

Growth-oriented North American power producer

- Highly-contracted, young and diversified portfolio
- Targeting 10-12% total shareholder return
- Targeting net carbon neutral before 2050

Operational facilities

6,490 MW

28 facilities

Projects under development

985 MW

7 renewable projects and Genesee 1&2 repowering



In Operation



Under construction and in advanced development

Solar Wind

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Resiliency and innovation through COVID-19

Priority to keep our employees and families healthy

Operations

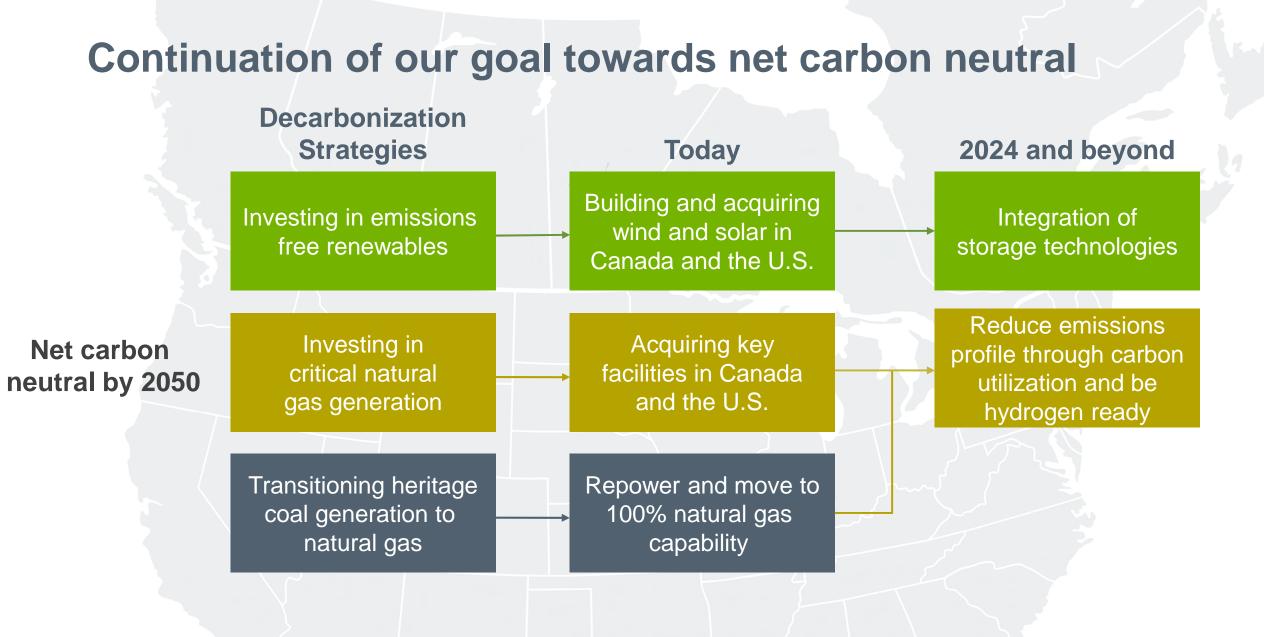
- Comprehensive health and safety protocols at plants successful
- Managed 7 major planned outages successfully in 2020

Corporate

- Ongoing remote work arrangements
- No change in efficiency or effectiveness

Post COVID-19

 Learnings will significantly enhance and transform the future of how we work



Strategic path to a low-carbon future

Accelerated growth in renewables

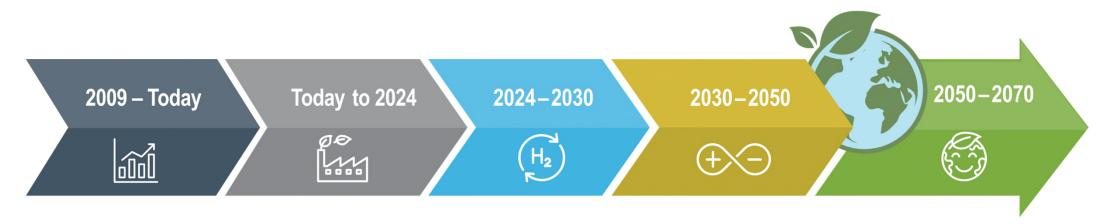
• 7 development projects totaling 425 MW; 100 MW Buckthorn Wind acquisition

Off-coal in 2023

- Retirement of Roxboro and Southport power plants in 2021
- Genesee site 100% natural gas in 2023

Natural gas critical to net carbon neutral transition

- Reliable, affordable, flexible power
- Carbon conversion and hydrogen technology enhance natural gas resiliency



Canadian Federal Government GHG Plan

Plan includes a proposed increase in carbon pricing to \$170/tonne by 2030, among range of measures and programs for Canada to exceed 2030 GHG commitments

- Plan is expected to increase demand through electrification
- Plan supports Capital Power's carbon mitigation strategies, including carbon conversion and hydrogen
- Increases renewable growth opportunities
- Our natural gas assets are well-positioned to support reliable, affordable and sustainable electricity in Alberta, BC and Ontario

Initial Assessment

Alberta

- <u>Near/medium term</u>: positive
- <u>Long-term</u>: continue to assess implications

Ontario

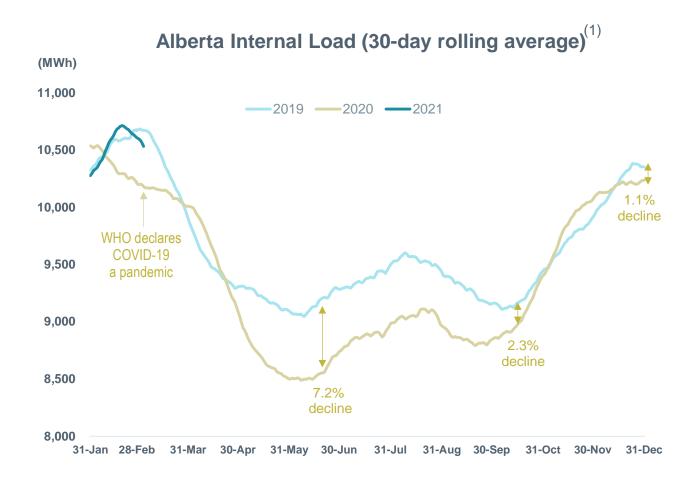
- <u>Short-term</u>: protected by contracts
- <u>Long-term</u>: continue to assess impacts; remain optimistic for re-contracting

Alberta power market

- Market showing strong recovery from impacts of COVID-19 and low oil prices
- Supply has responded to lower demand with other market participants announcing the retirement of Sundance 3 and delays on some cogen and renewable projects
- Starting in 2021, all output controlled by commercial market participants

Alberta power market

COVID-19 and crude oil impact



- When comparing 2020 to 2019 actual 30-day rolling averages, largest yoy decline in power demand was 7.2% due to COVID-19 pandemic and low crude oil prices
- Demand started to recover as the economy re-opened
- Yoy demand decrease of 1.1% at end of 2020
- 2021 demand outlook shows recovery but still some uncertainty regarding the rate of recovery
- Daily AIL demand record of 11,230 MWh on Feb 9/21 due to extreme cold weather

Alberta commercial portfolio optimization

Strong track record of value creation and managing merchant risk exposure

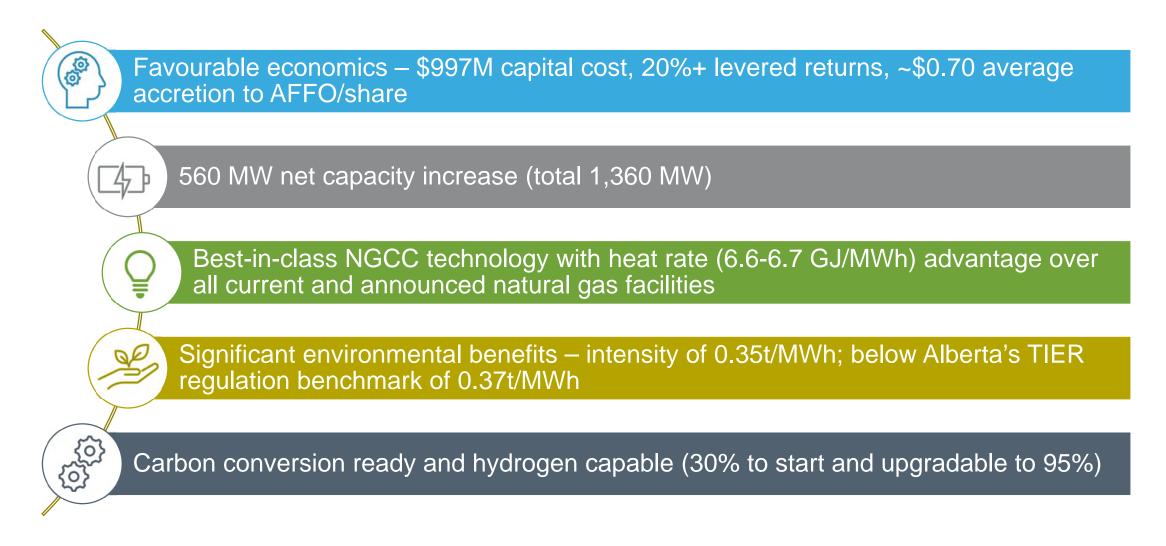
	2021	2022	2023
% sold forward ⁽¹⁾	29%	27%	21%
Contracted prices ⁽¹⁾ (\$/MWh)	Low-\$60	Mid-\$50	Mid-\$50
Current forward prices ⁽²⁾ (\$/MWh)	\$73	\$61	\$53

Forward prices have increased from a low-\$50/MWh at end of Q3/20 to \$60-\$70 range for 2021-22 reflecting a more positive outlook in the Alberta power market

1) As of December 31, 2020. Based on the Alberta baseload plants plus a portion of Joffre and the uncontracted portion of Shepard. 2) As of March 8, 2021. Forward price for 2021 is a blend of Jan 1-Mar 8 settled prices and Apr-Dec forward prices.

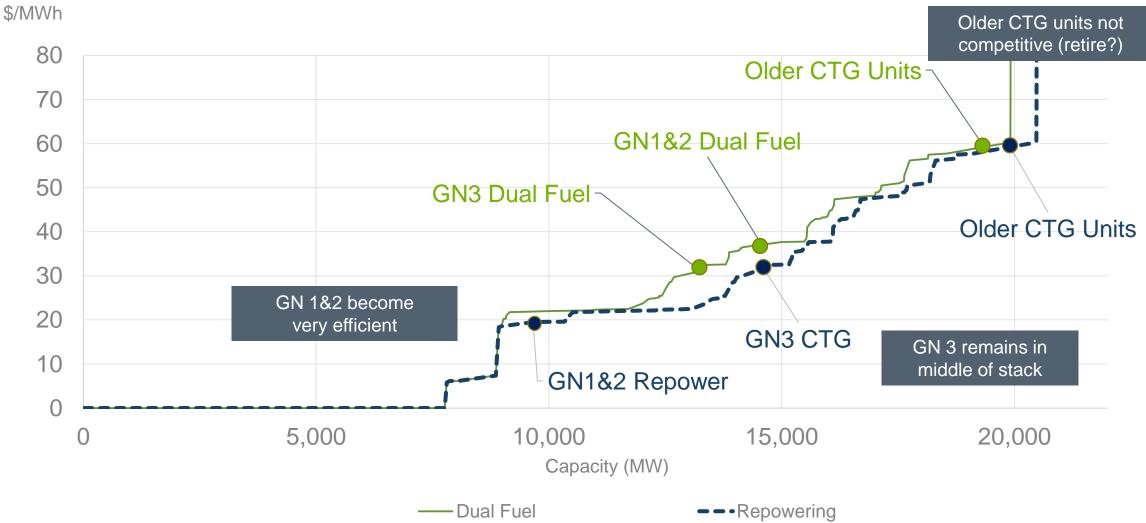
Repowering Genesee 1&2 delivers long term value

Lower operating costs, useful asset life extension, long-term cash flow growth



Genesee more competitive after repowering

Estimated variable cost merit order in 2025

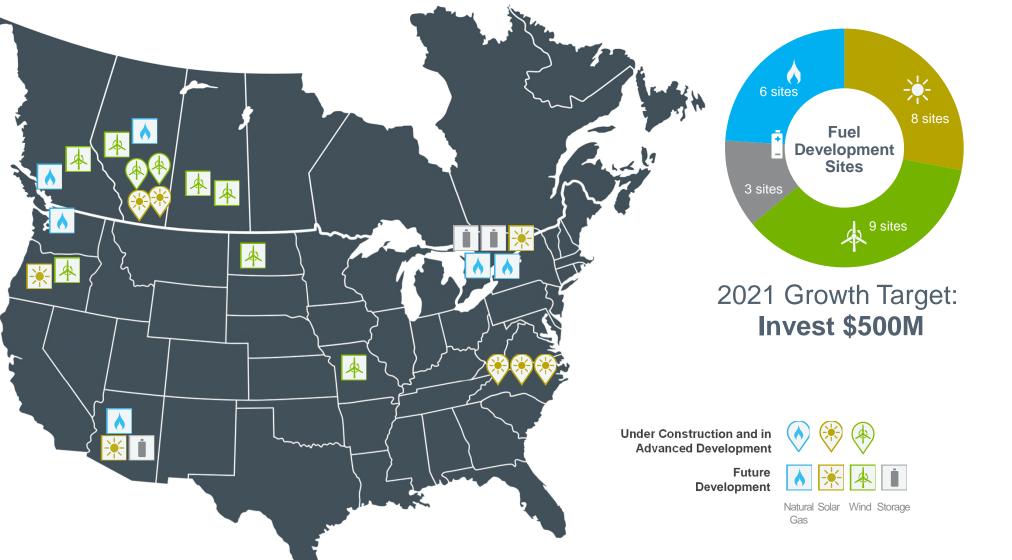


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Growth strategy

- Growth strategy aligns with our sustainability goals
- Target markets support \$500M annual capital investment
- Strong renewable growth pipeline in Alberta and the U.S.
- Potential acquisition of mid-life natural gas assets
- Targeting 10-12% total shareholder return over the long term

Dynamic pipeline supports resilient & responsible growth



Solar

8 sites Potential: 360 MW Committed: 276 MW Total: 636 MW

Wind

9 sites Potential: 1,129 MW Committed: 151 MW Total: 1,280 MW

Storage

3 sites Potential: TBD

Gas

6 sites Potential: 1,700 MW

Securing long term PPAs delivers stable cash flows

Strathmore Solar

- Long Term 25-year PPA
- 40.5 MW, 100% output
- Bundled energy and environmental attributes
- Investment grade counterparty
- Shows that we maintain our competitive advantage in Alberta

3 North Carolina solar projects

- Long Term 20-year PPA
- 160 MW, 100% output
- Bundled energy and environmental attributes
- Investment grade counterparty
- Shows that we are competitive in the U.S.

ESG priorities drive growing corporate demand for renewables

Gas generation vital for reliability and flexibility

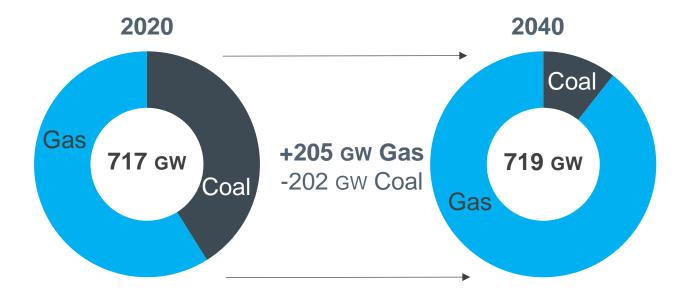
Growth drivers

- Coal & nuclear retirements
- Renewables proliferation
- Low gas prices

Value of incumbent assets

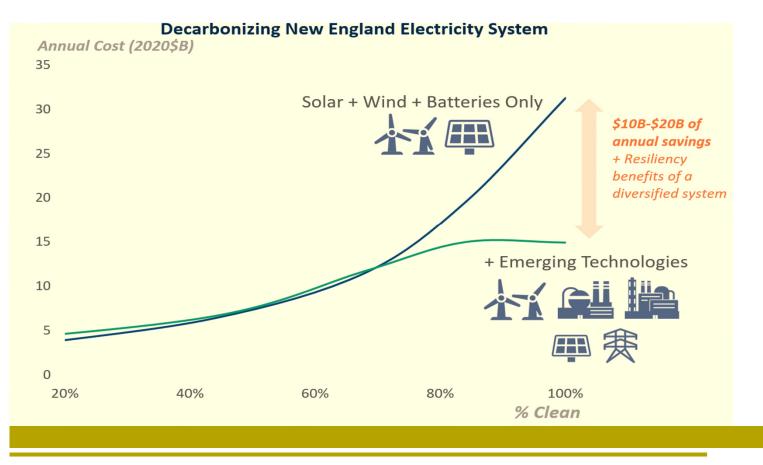
- High barrier to entry
- Strategic placement
- Optimization potential

Forecasted natural gas generation in the US⁽¹⁾



Natural gas: necessary long-term role in power

- Sustainable enables the penetration of more renewables
- Flexible dispatchable when you need it (availability >90%); offline when you don't
- Power Dense can provide 80 MW/acre
- Decarbonizable with carbon conversion and hydrogen
- Affordable keeping costs of decarbonization lower for consumers



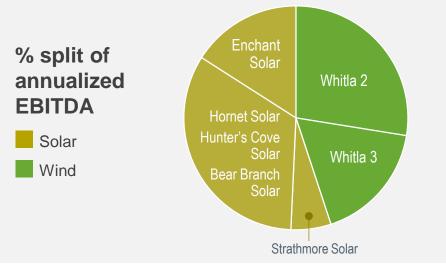
Source: Brattle Group,

"The Emerging Value of CCUS For Utilities", August 2020

Continued growth in renewable assets

7 projects — 5 solar, 2 wind

- 427 MW total
- COD in 2021-22
- 4 projects with long-term PPAs; in discussions for potential offtake contracts for remaining projects
- Expected annualized adjusted EBITDA of \$70M



Adjusted EBITDA from renewables 27% in 2020 projected to increase to 34% in 2025 (based on existing projects)



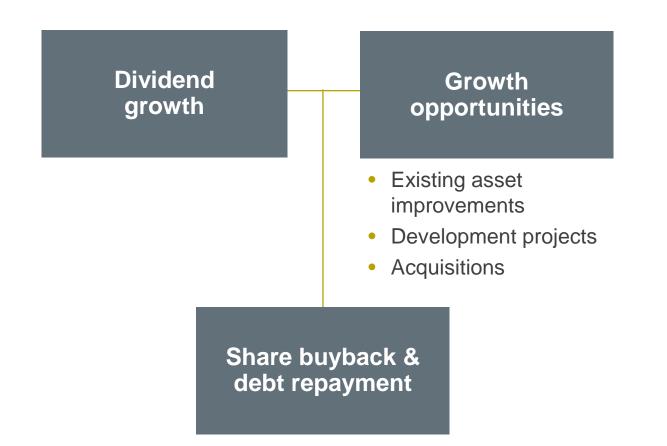
Financial strategy

- Deploying capital for the repowering of Genesee 1&2 and growing renewables portfolio
- Disciplined growth with focus on contracted cash flows and sustainability goals
- Dividend growth of 7% in 2021 and 5% in 2022
- Maintain investment grade credit rating

Overview of financial strategy

Fund growth towards low carbon future	 Fund growth in a cost-effective manner Access various sources of capital and seek innovative ways to fund growth
Maintain investment grade credit rating	 Maintain competitive cost of capital Ensure access to capital markets through business cycles Provides stability to the dividend
Deliver annual dividend growth	 Provide dividend stability through contracted cash flow profile Annual dividend growth within long term AFFO payout ratio target of 45% to 55%
Manage financing risk	 Properly laddered debt maturities Effective management of interest rate, foreign exchange and counterparty risk

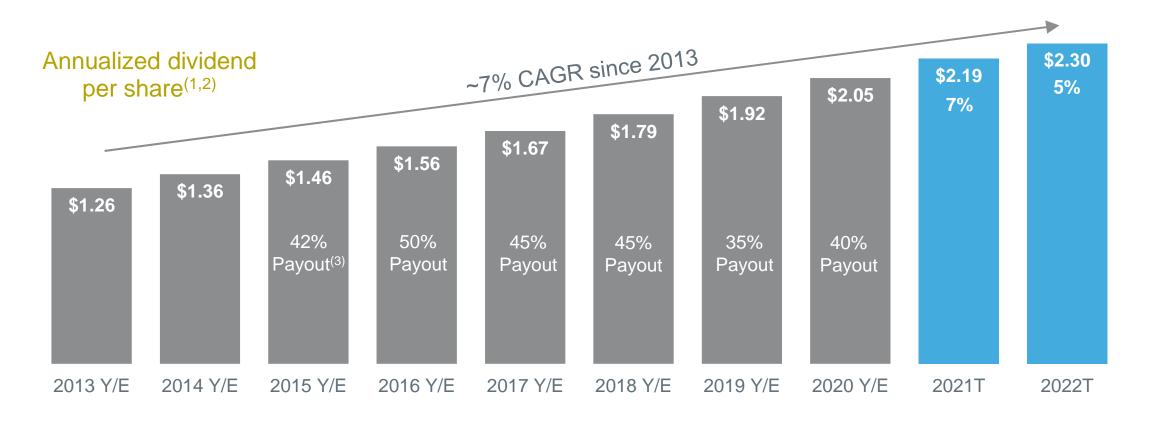
Capital allocation balance



- Balanced focus between dividend growth and growth opportunities
- Growth focused on a lower-carbon fleet
- Allocating capital strategically to develop, commercialize and implement technologies to support sustainability targets
- Share buybacks and debt repayment are considered during periods of limited growth opportunities

Efficient capital allocation creating shareholder value

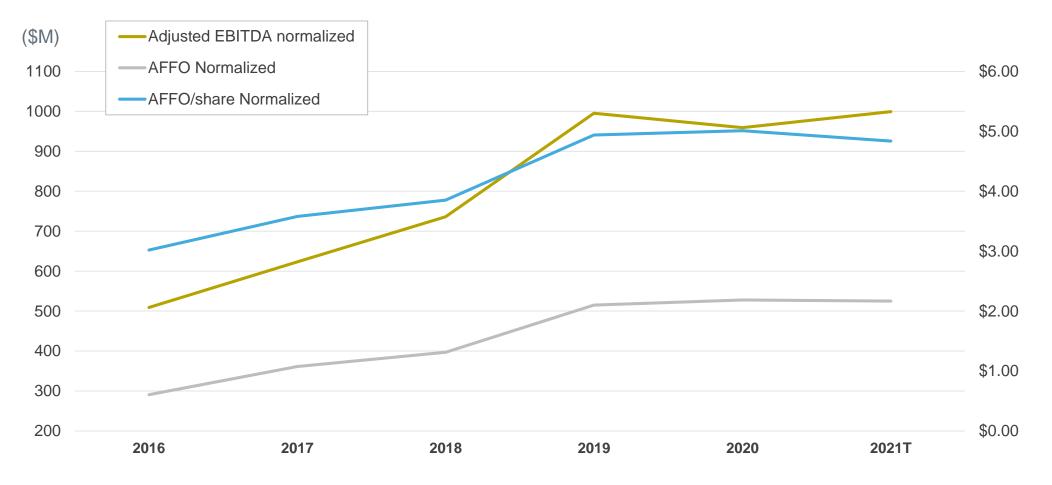
History of stable dividend growth



Long-term AFFO payout ratio target of 45-55%

Subject to market conditions, economic outlook, cash flow forecast, and Board approval at the time.
 2013 to 2020 annualized dividend based on year-end quarterly common shares dividend declared.
 Dividend payout ratio based on dividends declared per year as a percentage of AFFO per share.

5-year growth in key financial metrics



5-year growth supported by average growth capex of \$750M⁽³⁾ per annum

Normalized for Milner line loss accrual and non-recurring 2019 Arlington toll payment.
 Normalized for non-recurring 2019 Arlington toll and payment of Milner line loss.
 Includes gross capex on Tax Equity Investor projects.

Cash flow and financing outlook

Positive cash position and credit facilities to fund growth projects in 2021

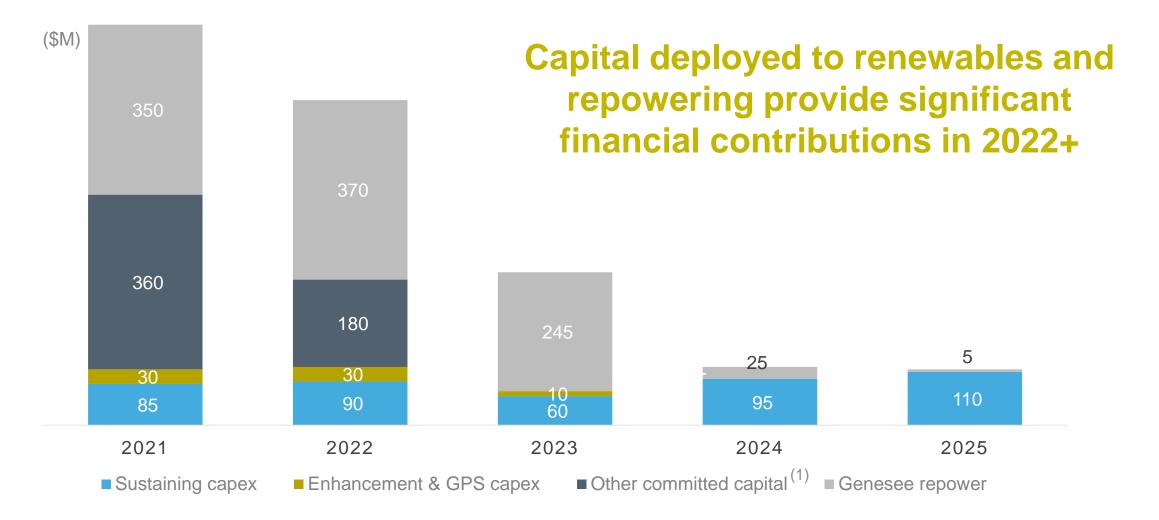
Sources	(\$M)
FFO ⁽¹⁾ + off-coal compensation	\$650
Capital markets/debt refinancing/asset recycling	\$510
DRIP reinvestment	\$70
	\$1,230
Uses	
Committed growth/enhancement capex	\$740
Dividends ⁽³⁾	\$300
Debt repayments ⁽²⁾	\$430
Sustaining & maintenance capex	\$85
	\$1,555
Change in cash position	(\$325)

1) Funds from operations (FFO) is a non-GAAP financial measure.

2) Includes principal payments on finance lease payables but excludes debt repayments to tax equity investor and equity accounted investment.

3) Includes preferred and common dividends and preferred dividend tax.

Capital program



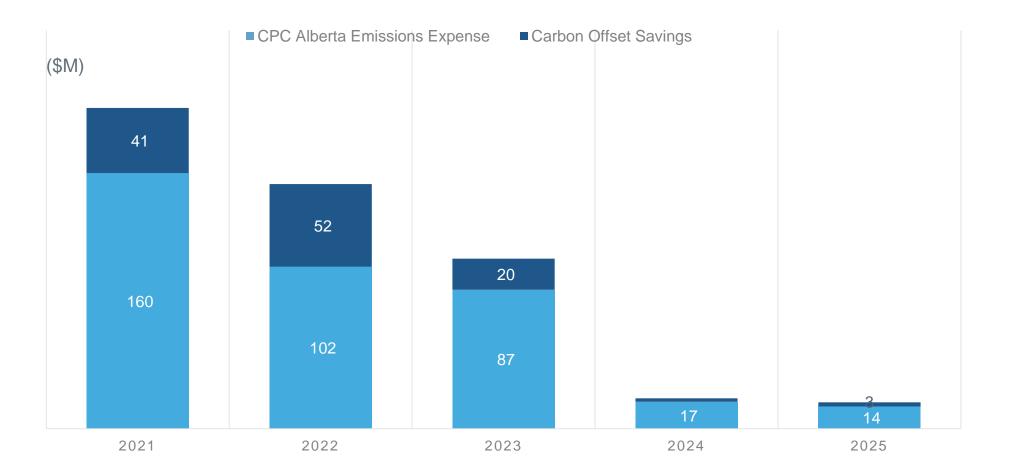
EBITDA growth from 7 renewable projects

Annualized EBITDA of ~\$70M



Full-year financial contributions starting in 2023 from growth capex in 2021-22

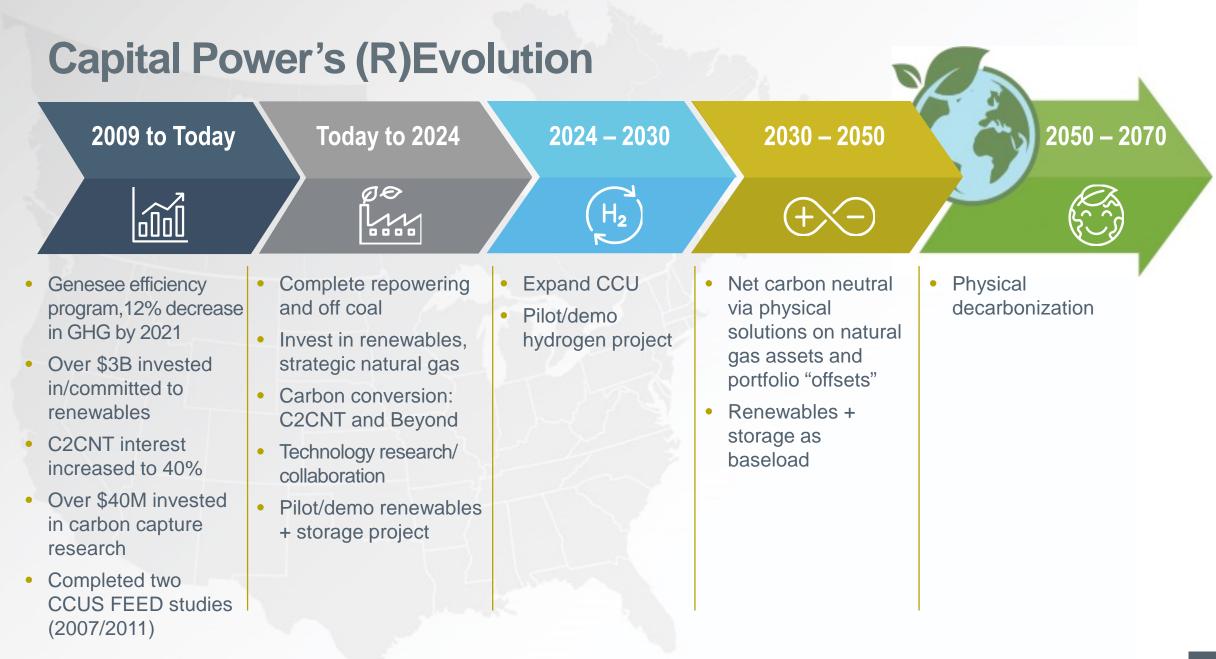
Managing Alberta carbon exposure



Low-cost offsets and transition to gas protect and enhance asset value

Sustainability / investment opportunity

- Advancing a low carbon future with a clear path to net carbon neutral before 2050
- Natural gas generation has a necessary long-term role in power
- Accelerating ESG initiatives





CO₂

Pathway to net carbon neutral



Renewables with storage



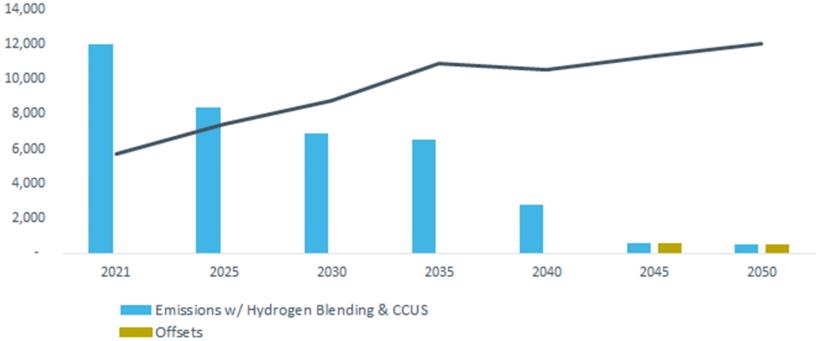
Deploying carbon conversion and hydrogen blending at thermal facilities



Limited offsets used

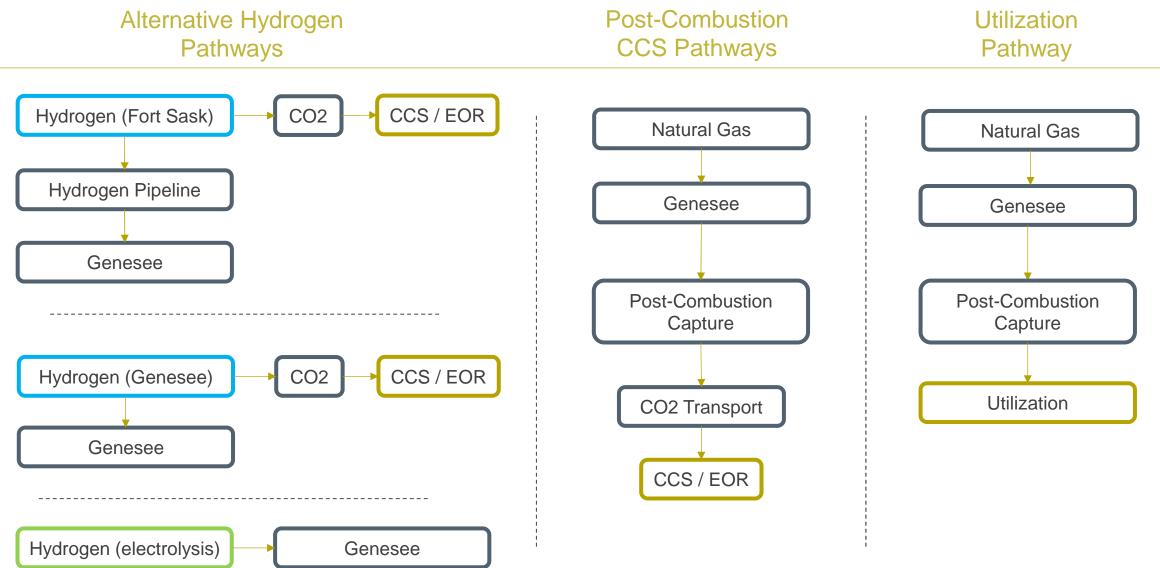
Total Generation





29

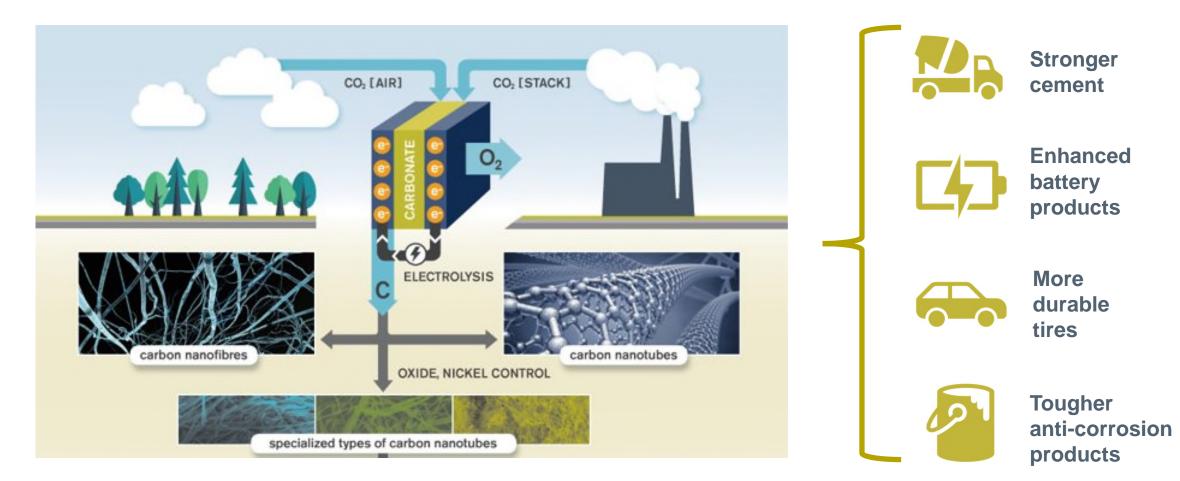
Pathways to decarbonization at Genesee



30

Genesee Carbon Conversion Centre

World's largest carbon nanotube production facility



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Accelerating ESG initiatives

Environmental



- Net carbon neutral before 2050
- Genesee repowering
- Renewables development
- Natural gas with carbon conversion and/or hydrogen
- A- CDP climate change score
- Sustainable sourcing roadmap on track to roll out in 2021
- Water strategy on track to roll out in 2021

Social

- Optimal workplace of the future to reflect key learnings and benefits from COVID-19
- Increased community investment funding in 2021; building off robust and generous response to COVID-19 relief efforts
- Indigenous training, employment and economic opportunities at Canadian wind facilities through new Vestas agreement
- Transitional support for employees at Roxboro, Southport, Genesee
- Committed to Equal by 30 supporting gender equity in our industry

Governance



- 25% of Executive short-term incentive pay linked to meeting ESG targets
- 44% of Board and 43% of Executive female versus 30% target
- Executive short-term incentive linked to presentation of diverse candidates for corporate and plant positions
- 2021 review to identify and minimize institutional bias in policies, procedures and results
- World's Most Ethical Companies⁽¹⁾ award 3 years running – 1 of 4 Canadian companies and 1 of 9 energy and utilities companies worldwide



Release of our 2020 Integrated Annual Report Key highlights

- Capital Power's resilience in the face of COVID-19 pandemic
- Acceleration of our path to a lower carbon future and net carbon neutrality with Genesee 1&2 repowering and transition off coal in 2023
- Seven new renewable projects, including five solar projects demonstrating our competitiveness in solar development
- Progress towards our ESG goals, including meeting our gender diversity goals on the Executive and Board
- Ongoing commitment to innovation, demonstrated by increased investment in C2CNT, progress on Genesee Carbon Conversion Center project, and Ops 2030 initiatives



Getting to net carbon neutral: our sustainability targets

We have a clear roadmap to guide us to our goal of being net carbon neutral by 2050

- Achieve net carbon neutrality by 2050
- Construct all new natural gas generation units to be carbon capture and/or hydrogen-ready
- Reducing Scope 1 CO₂ emissions at Genesee by 50% by 2030 from 2005 levels
- Reducing Scope 1 CO₂ emissions by 10% by 2030 from 2005 levels, based on our 2019 fleet⁽¹⁾
- Reducing Scope 1 CO₂ emission intensity by 65% by 2030 from 2005 levels⁽¹⁾
- Invest in carbon capture and utilization technology to help us achieve net carbon neutrality before 2050 and eventually physically decarbonize our natural gas fleet (ongoing)
- Complete the Genesee Carbon Conversion Centre in the first half of 2022
- Enhanced sustainable sourcing plan (2021)
- Enhanced water management plan (2021)
- Target at least 30% women on the Board and Executive Team

Attractive investment opportunity

Resilient strategy drives growth and accelerates net carbon neutral before 2050

Success in renewables from innovation and optimization

- Recent success in solar more than doubles our growth opportunities
- Long-term contracts for North Carolina solar and Strathmore Solar projects affirm competitiveness

Genesee repowering capitalizes on strong Alberta market and in-house innovation

- Most efficient natural gas combined cycle facility in Canada
- Significantly reduced carbon footprint and risk
- Carbon conversion ready and hydrogen achievable

Operational excellence and innovation remain fundamental

- \$50 million EBITDA from Ops 2030 program
- Genesee Carbon Conversion Centre
- Storage and hydrogen investigation

We create value through resiliency, optimization and innovation

Appendices

- Ops 2030 program
- Alberta portfolio optimization
- Credit rating metrics
- Debt maturity schedule

Ops 2030 generates \$50M in annual EBITDA by 2030

Creating the sustainable plant of the future through technology and innovation



Continuous Improvement

- Wind turbine upgrades
- Start-up optimization software
- Fleetwide
 Distributed Control
 System upgrades
- Energy storage



Data Analytics

- Deployment of historian with enhanced capabilities
- Advanced pattern recognition
- Implement machine learning technology to enhance system security
- Optimizing plant performance



Automation

- Mobility in operator rounds
- Worker protection system automation
- Power BI for reporting



Digital Tools

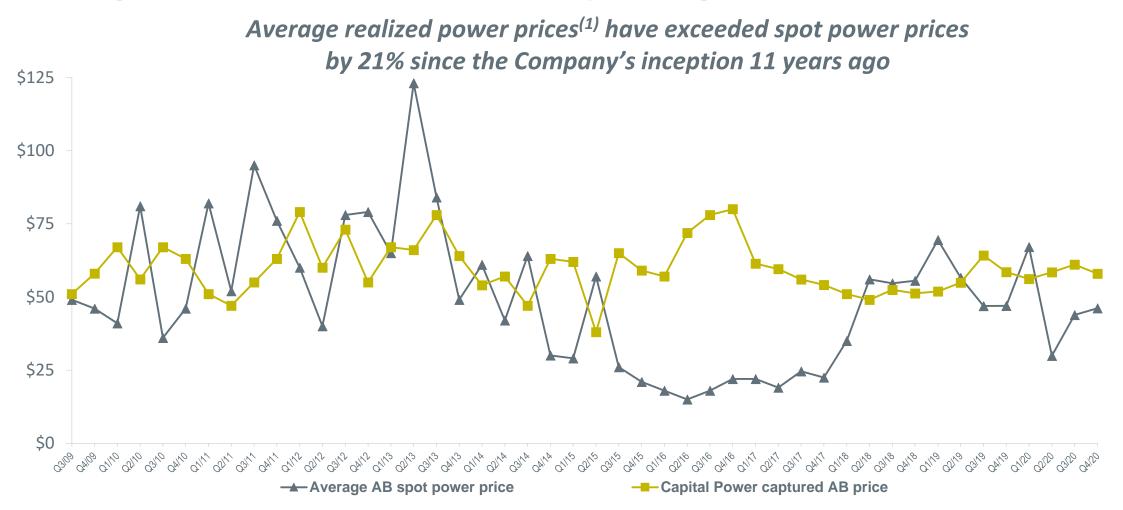
- 3D printing & scanning
- Acoustic leak
 detection
- Expanded use of drones & development of internal program and expertise
- Continuous monitoring of generator health
- Remote borescope capability deployment



Flexible and Remote Operation

- Simple cycle remote capability
- Renewables monitoring and diagnostics centre
- Remote digital worker

Maximizing the Alberta commodity portfolio Creating incremental value and stability through market expertise



1) Based on the Alberta baseload plants and the acquired Sundance PPA plus the uncontracted portion of Shepard Energy Centre baseload. Effective Mar/16, Sundance PPA is no longer a part of Capital Power's baseload generation due to termination of the Sundance PPA.

Financial stability and strength

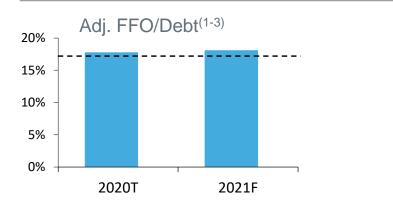
Strong balance sheet and commitment to investment grade credit ratings

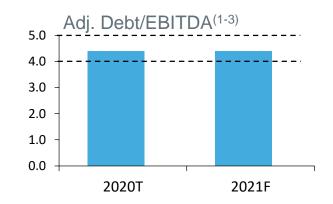
Agency	Ratings	Outlook
S&P	BBB- / P-3	Stable
DBRS	BBB(low) / Pfd-3 (low)	Stable

- Both credit rating agencies affirmed our investment grade credit ratings and stable outlook
- Strong liquidity from cash flow from operations and \$1B of committed credit facilities to 2024
- Forecast metrics are within rating agency expectations for the current ratings with stable outlook

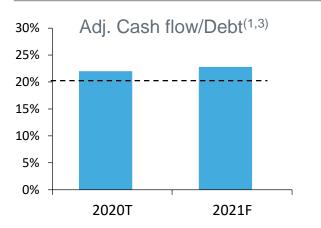
1) Cash flow and adjusted EBITDA amounts include off-coal compensation.

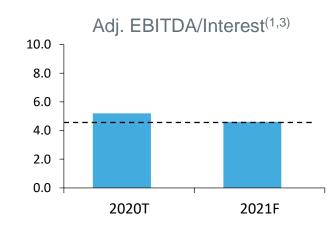
S&P financial metrics





DBRS financial metrics





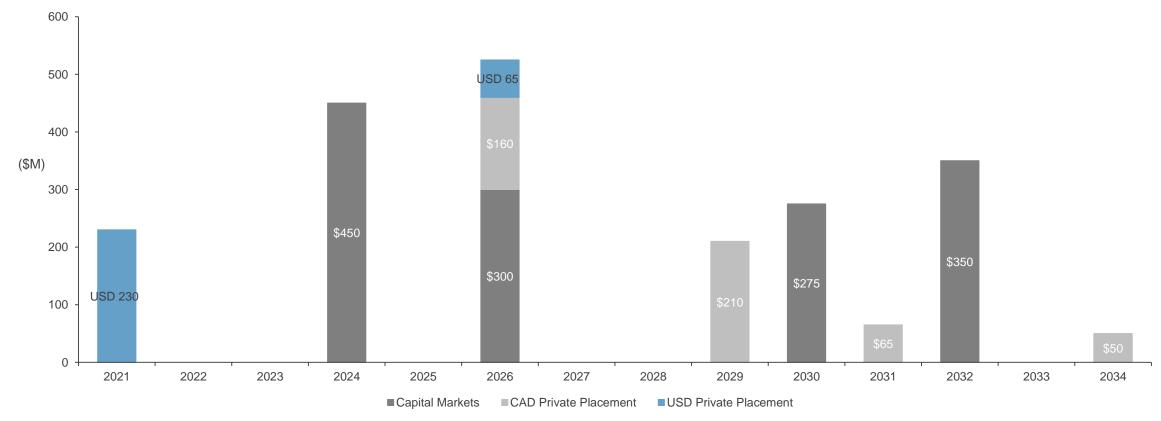
²⁾ Based on S&P's weighted average ratings methodology.

^{3) 2020}T means 2020 target. 2021F means 2021 forecast.

Debt maturity profile⁽¹⁾

Well spread-out debt maturities supported by long asset lives

- Longer term debt reflects increased confidence in Capital Power's business profile
- Strong liquidity from cash flow from operations and ~\$800M⁽¹⁾ available capacity on \$1.0B of committed credit facilities that mature in 2024



Non-GAAP financial measures

The Company uses (i) earnings before net finance expense, income tax expense, depreciation and amortization, impairments, foreign exchange gains or losses, finance expense and depreciation expense from its joint venture interests, gains or losses on disposals and unrealized changes in fair value of commodity derivatives and emission credits (adjusted EBITDA), (ii) adjusted funds from operations, (iii) adjusted funds from operations per share, (iv) normalized earnings attributable to common shareholders, and (v) normalized earnings per share as financial performance measures.

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. These measures should not be considered alternatives to net income, net income attributable to shareholders of the Company, net cash flows from operating activities or other measures of financial performance calculated in accordance with GAAP. Rather, these measures are provided to complement GAAP measures in the analysis of the Company's results of operations from management's perspective.

Reconciliations of these non-GAAP financial measures are disclosed in the Company's Integrated Annual Report prepared as of February 18, 2021 for 2020, which is available under the Company's profile on SEDAR at SEDAR.com and on the Company's website at capitalpower.com.

Forward-looking information

Forward-looking information or statements included in this presentation are provided to inform the Company's 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 priorities and long term-strategies, including our corporate, sustainability, renewables and digitalization strategies;
- our company-wide targets specific to climate-related performance, including reduction of emissions and emissions intensity and being net carbon neutral by 2050, repowering of Genesee 1 and 2, completion of the Genesee Carbon Conversion Centre and commercial application of carbon conversion technologies;
- the implementation of Ops 2030, including its expected impact on adjusted EBITDA;
- our efforts to create a more equitable workplace and our goals for diversity of our workforce;
- our goals for long-term Total Shareholder Return, annual capital growth and future dividend growth;
- our plans to discontinue operations of our Southport and Roxboro facilities in 2021;
- our 2021 performance targets, including for facility availability, sustaining capital expenditures, AFFO and adjusted EBITDA;
- our plans to add approximately 425 MW of renewables generation to our fleet by the end of 2022;
- our plans to reduce our emissions using clean energy technologies, such as carbon capture, utilization and storage technologies, including our investment in C2CNT, the anticipated production of carbon nanotubes, and resulting downstream benefits;
- our plans to commence commercial production of carbon nanotubes at the Genesee Carbon Conversion Centre;
- expectations around timing and costs associated with our upgrades and repowering plans at our Genesee facility, including being off coal in 2023;
- future revenues, expenses, earnings, adjusted EBITDA and AFFO;
- the future pricing of electricity and market fundamentals in existing and target markets;
- future dividend growth;
- our future cash requirements including interest and principal repayments, capital expenditures, dividends and distributions;
- the 2021 dividend reinvestment plan participation rate;
- our sources of funding, adequacy and availability of committed bank credit facilities and future borrowings;
- future growth and emerging opportunities in our target markets including the focus on certain technologies and expectations around future generation portfolio composition;
- the timing, funding, costs of and financial impacts (including impacts to adjusted EBITDA and AFFO) related to existing, planned and potential development projects and acquisitions (including the repowering of Genesee 1 and 2 (including being hydrogen ready), phases 2 and 3 of Whitla Wind, Buckthorn Wind, Cardinal Point Wind, Strathmore Solar, Bear Branch Solar, Hornet Solar, Hunter's Cove Solar and Enchant Solar);
- facility availability and planned outages;
- capital expenditures for facility maintenance and other (sustaining capital, future growth projects, commercial initiatives);
- the likelihood of meeting the threshold and paying out contingent consideration related to Buckthorn Wind;
- the timing of the Buckthorn Wind tax equity investor reaching the agreed upon target rate of return;
- the timing of completion of the Decatur Energy combustion turbine upgrades and impacts of the Decatur Energy tolling agreement extension on adjusted EBITDA;
- impacts of the Vestas LTSA extensions, including cost reductions, impacts on adjusted EBITDA and AFFO in the years the executed agreements become effective;

- the impacts of market designs in our core markets;
- settling our 2020 emissions compliance obligation through payments into the TIER fund;
- matters related to the LLR Proceeding including timing of payments to the AESO and recovery from appropriate parties and potential impacts to the Company arising from the foregoing; and
- the impact of climate change, the COVID-19 pandemic and the decline in oil prices.

These statements are based on certain assumptions and analyses made by the Company 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, other energy and carbon prices;
- performance;
- business prospects (including potential re-contracting of facilities) and opportunities including expected growth and capital projects;
- status of and impact of policy, legislation and regulations;
- effective tax rates;
- the development and performance of technology;
- foreign exchange rates;
- matters relating to the LLR Proceeding, including the timing of payments to the AESO and recovery from appropriate parties; and
- other matters discussed under the Our Strategy section pertaining to Performance Targets for 2021.

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

- changes in electricity, natural gas and carbon prices in markets in which the Company operates and the use of derivatives;
- regulatory and political environments including changes to environmental, climate, financial reporting, market structure and tax legislation;
- 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 the Company's review of acquired assets;
- changes in general economic and competitive conditions;
- 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 in the Integrated Annual Report.

See Risks and Risk Management in the Business Report section within the Company's December 31, 2020 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. The Company 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 the Company's expectations or any change in events, conditions or circumstances on which any such statement is based, except as required by law.

• discussion of our risks and strategies and plans for risk management and mitigation;



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Capital () Power

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