



Investor Day

SEPTEMBER 28, 2021



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This written and accompanying oral presentation contains "forward-looking information", within the meaning of applicable Canadian securities laws, and "forward-looking statements", within the meaning of applicable United States securities laws, including the United States Private Securities Litigation Reform Act of 1995 (collectively referred to herein as "forward-looking statements"). The forward-looking statements are provided for the purpose of presenting information about management's current expectations and plans and readers are cautioned that such statements may not be appropriate for other purposes. TransAlta's actual results could differ materially from those expressed in, or implied by, these forward-looking statements, and accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur. Forward-looking statements are predictive in nature, depend upon or refer to future events or conditions, or include words such as "expects", "anticipates", "plans", "predicts", "believes", "estimates", "intends", "targets", "projects", "forecasts" or negative versions thereof and other similar expressions or future or conditional verbs such as "may", "will", "should", "would" and "could". These statements may include, without limitation, statements regarding: TransAlta's ability to maintain and execute its strategy, including increasing shareholder value and delivering stable and predictable cash flows; TransAlta's emissions reductions, including reducing emissions by 70% below 2005 levels by 2030 and achieving carbon neutrality by 2050; achieving record free cash flow in 2021; the technology cost of renewables and storage continuing to decline; the extent of renewable investment required to achieve stated global decarbonization targets; anticipated evolution of the Alberta merchant market, including moderation of load growth; strong customer demand for renewables and storage; cost of carbon emissions increasing; significant supply additions in the Alberta market; the Company's growth strategy, including its growth pipeline and forecasted growth capital expenditures; forecasted composition of 2026 earnings before interest, taxes, depreciation and amortization ("EBITDA"); the Company's pathways to achieving carbon neutrality, including the role of large scale storage and hydrogen; targeted returns from growth projects, and the ability to realize or optimize such returns; the development of renewable projects in the current development pipeline, including the expected commercial operation dates; projects under construction and their anticipated commercial operation dates and contributions to EBITDA; Alberta's forecasted load growth and supply additions; expectations regarding the Company's relationship with TransAlta Renewables Inc., including the extent of future drop-downs; realizing the benefits of dropping down assets to TransAlta Renewables Inc.; Alberta pool price forecasts and increased price volatility; emission intensity standards and impacts on generating resources; expected contract renewals; expected 2021 EBITDA contribution from TransAlta's Energy Marketing segment capital allocation; the conversion of securities held by Brookfield and the timing thereof; and the utilization of asset level financing.

These statements are based upon certain material factors or assumptions that were applied in developing the forward-looking statements, including: the design specifications of development projects; the provisions of contracts to which TransAlta or a subsidiary is a party; management's current plans and its perception of historical trends; current conditions and expected future developments; as well as other factors that are believed to be appropriate in the circumstances. Some of the factors, many of which are beyond TransAlta's control and the effects of which can be difficult to predict, but may cause actual results to differ materially from those contemplated or implied by forward looking statements include, but are not limited to: more restrictive directives of government and public health authorities; reduced labour availability and ability to continue to staff the Company's operations and facilities; disruptions to TransAlta's supply chains, including its ability to secure necessary equipment and to obtain regulatory approvals on the expected timelines or at all; force majeure claims; curtailments reducing merchant production; TransAlta's ability to maintain its credit ratings; restricted access to capital and increased borrowing costs; increased costs, including those resulting from TransAlta's efforts to mitigate the impact of the COVID-19 pandemic; regulatory and environmental process delays; adverse impacts on the Company's information technology systems and its internal control systems; political uncertainty; disruptions in the transmission and distribution of electricity; the effects of weather, natural disasters and other climate-related risks; results and exposures of TransAlta's Energy Marketing segment, including deviations from historical trends; disruptions to the operations, including unplanned outages, equipment failures and TransAlta's ability to carry out repairs in a cost-effective or timely manner; and general competition and industry risks. TransAlta cautions that the foregoing list of important factors that may affect future results is not exhaustive. When relying on the Company's forward-looking statements, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Except as required by law, TransAlta undertakes no obligation to publicly update or revise any forward-looking statements or information in this presentation, whether as a result of new information, future events or otherwise. Past performance is not indicative or a guarantee of future results. The foregoing risk factors, among others, are described in further detail in the Company's Management Discussion and Analysis and Annual Information Form for the year ended December 31, 2020, filed under the Company's profile on SEDAR at www.sedar.com and with the U.S. Securities and Exchange Commission at www.sec.gov. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect the Company's expectations only as of the date of this presentation. The purpose of the financial outlooks contained in this presentation are to give the reader information about management's current expectations and plans and readers are cautioned that such information may not be appropriate for other purposes.

This presentation contains references to financial measures that are calculated and presented using methodologies other than in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board, including EBITDA, funds from operations ("FFO") and free cash flow ("FCF"), and such measures may not be comparable to similar measures presented by other entities. These measures should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS. Please refer to the "Additional IFRS Measures and Non-IFRS Measures" and "Reconciliation of Non-IFRS Measures" section of Management's Discussion and Analysis for the six months ended June 30, 2021 for further discussion of these items, including, where applicable, reconciliations to measures calculated in accordance with IFRS. The Company utilizes these measures in managing the business, including for performance measurement, capital allocation and valuation purposes and believe that providing these performance measures on a supplemental basis to its IFRS results is helpful to investors in assessing the overall performance of TransAlta's businesses. The Company cautions readers that these non-IFRS financial measures or other financial metrics may differ from the calculations disclosed by other businesses and, as a result, may not be comparable to similar measures presented by other issuers and entities.

TransAlta's Executive Leadership Team



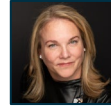
John Kousinioris | PRESIDENT AND CEO

- Joined in 2012
- Prior leadership roles as Chief Legal and Compliance Officer, Chief Growth Officer and Chief Operating Officer, and President of TransAlta Renewables Inc.
- Extensive experience in operations, shared services, commercial, trading, customer solutions, hedging and optimization and business development



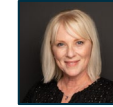
Todd Stack | EVP AND CFO

- Joined in 1990
- President of TransAlta Renewables Inc.
- Prior leadership roles as Corporate Controller and Corporate Treasurer
- Extensive experience in finance, valuation, economics, engineering and the power industry



Kerry O'Reilly Wilks | EVP, Legal, Commercial and External Affairs

- Joined in 2018
- 20+ years of global experience in natural resources and energy
- Extensive experience in legal, sustainability, Indigenous affairs, government relations, policy and mergers and acquisitions



Jane Fedoretz | EVP, People, Talent and Transformation

- Joined in 2018
- Chair of TransAlta's Equity, Diversity and Inclusion Council
- Extensive experience in strategic HR matters, including executive compensation and organizational culture
- 21 years of legal experience as an industrial construction lawyer



Aron Willis | EVP, Growth

- Joined in 1999
- 22+ years of experience across TransAlta's fleet
- Led TransAlta's gas and renewables operating fleet as the SVP from 2017-2019
- Led TransAlta's business in Australia from 2007 to 2017 including the addition of significant new growth opportunities



Brent Ward | SVP, M&A, Strategy and Treasurer

- Joined in 2001
- CFO, TransAlta Renewables Inc.
- Prior leadership roles as Treasurer and in Investor Relations
- Extensive experience in capital markets, valuation, business development, mergers and acquisitions, insurance and pensions



Blain van Melle | EVP, Alberta Business

- Joined in 2004
- Prior roles of Managing Director, Head Trader and SVP of Trading and Commercial
- Extensive experience in energy trading and marketing, commercial and the Alberta power market



Shasta Kadonaga | SVP, Shared Services

- Joined in 2002
- Extensive experience in operations, project management, engineering, supply chain management, process improvement and optimization
- Previous leadership role as Vice President, Operational Services



Michael Novelli | EVP, Generation

- Joined in 2020
- 28+ years of IPP experience
- Prior to joining TransAlta, was Vice President, Operations and Engineering, European General Manager and Chief Operating Officer at InterGen

Agenda

- | | | |
|---|---|----------------------|
| 1 | Strategic Overview | John Kousinioris |
| 2 | Leading Decarbonization and ESG | Kerry O'Reilly Wilks |
| 3 | Accelerating Clean Growth Strategy | Aron Willis |
| 4 | Optimizing and Maintaining Competitive Advantage in Alberta | Blain van Melle |
| 5 | Delivering Operational Excellence | Michael Novelli |
| 6 | Enhancing Value with Energy Marketing | Todd Stack |
| 7 | Financing Strategy and Plan | Todd Stack |
| 8 | Our People and Culture | Jane Fedoretz |
| 9 | Closing Remarks / Q&A | John Kousinioris |

Strategic Overview

John Kousinioris

President and Chief Executive Officer

TransAlta at a Glance



\$10 billion

ENTERPRISE VALUE

Strong balance sheet and capital discipline



110 Years

GENERATION EXPERIENCE

The foundation of our focused strategy



\$3.5 billion

MARKET CAPITALIZATION

Listed on the TSX and NYSE



1,300

EMPLOYEES

Central to value creation

~8,000 MW

DIVERSIFIED PORTFOLIO

74 generating facilities in Canada, the United States and Australia

\$440 - \$515 million

2021 EXPECTED FREE CASH FLOW

Continued strong performance

25 million tonnes

ANNUAL EMISSIONS REDUCTIONS SINCE 2005

8% of Canada's emissions reduction target

Who We Are

A Customer-Centred Clean Energy Leader

Our Vision

A **leader** in clean electricity – committed to a **sustainable future**



OUR STRATEGY

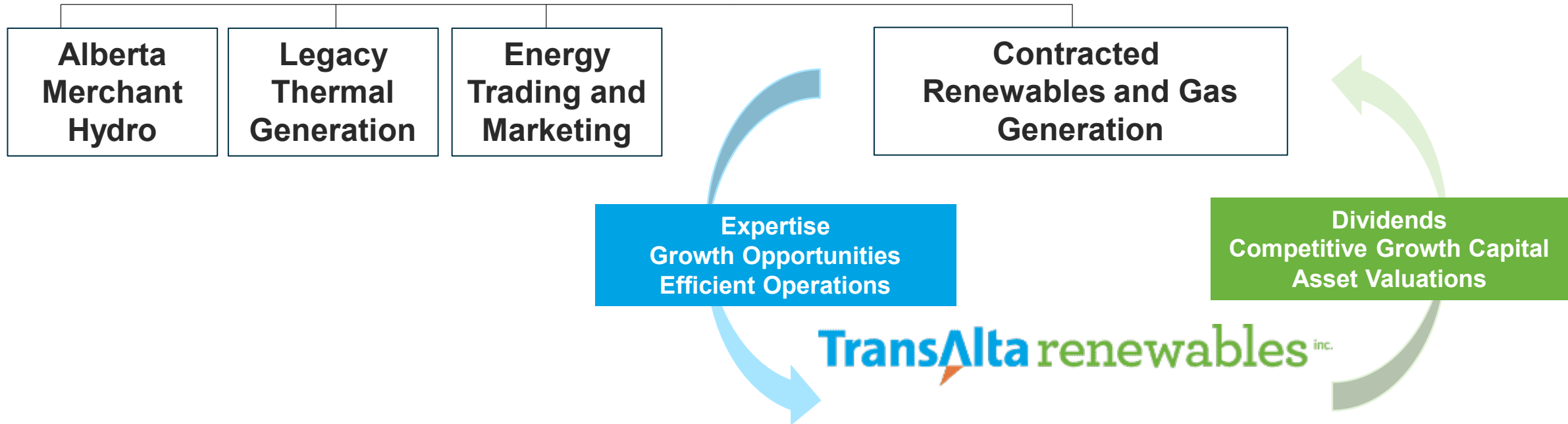
- Customer Needs
- Operational Excellence
- People
- Shareholder Value



OUR VALUES

- Safety
- Innovation
- Sustainability
- Respect
- Integrity

One Team Driving Operational and Financial Synergies



Diversified and reliable generation with world-class trading and optimization teams

Clean Energy Transition Ahead of Plan

CLEAN ENERGY GROWTH

- ✓ Over 400 MW of renewables and storage added, including first utility-scale storage
- ✓ Established ~3 GW wind and solar pipeline
- ✓ Established Canadian, US and Australian growth teams

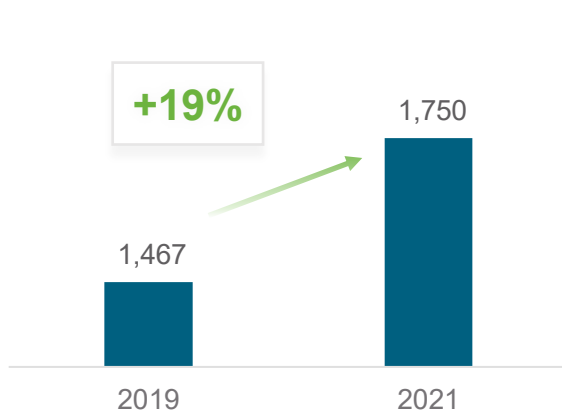
CARBON TRANSITION

- ✓ 1,600 MW of coal generation retired by end of 2021
- ✓ 1,660 MW of conversions completed by end of 2021
- ✓ Ceased active mining operations by end of 2021
- ✓ Pioneer gas pipeline completed and sold

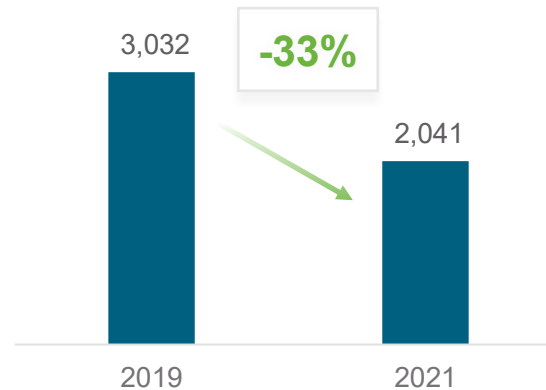
EMISSIONS REDUCTIONS

- ✓ CO₂ emissions reduced by 61% from 2005
- ✓ Targeting 70% below 2005 levels by 2030
- ✓ Carbon neutrality by 2050

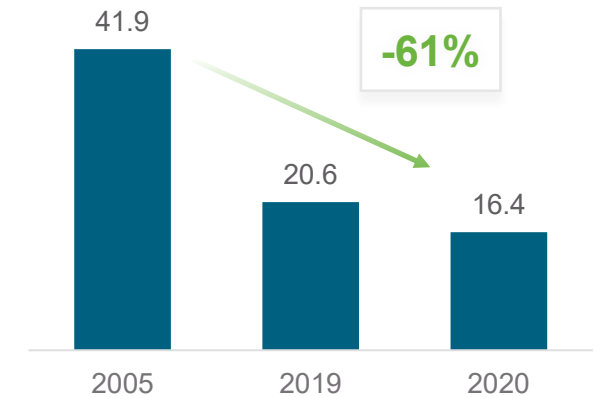
RENEWABLE CAPACITY (MW)



ALBERTA THERMAL CAPACITY (MW)



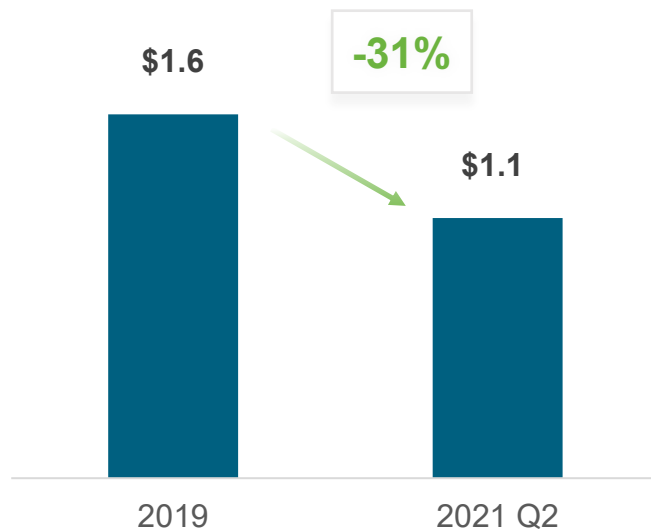
EMISSIONS REDUCTIONS (MM T CO₂)



Strategic Accomplishments Led to Dramatic Evolution

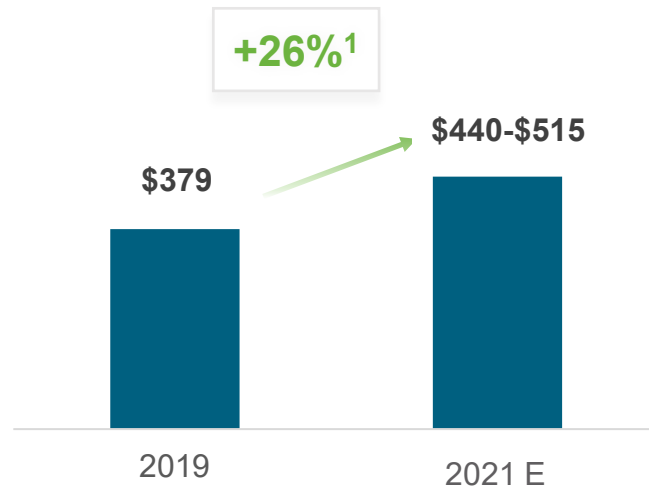
SENIOR CORPORATE DEBT

(\$ billion)



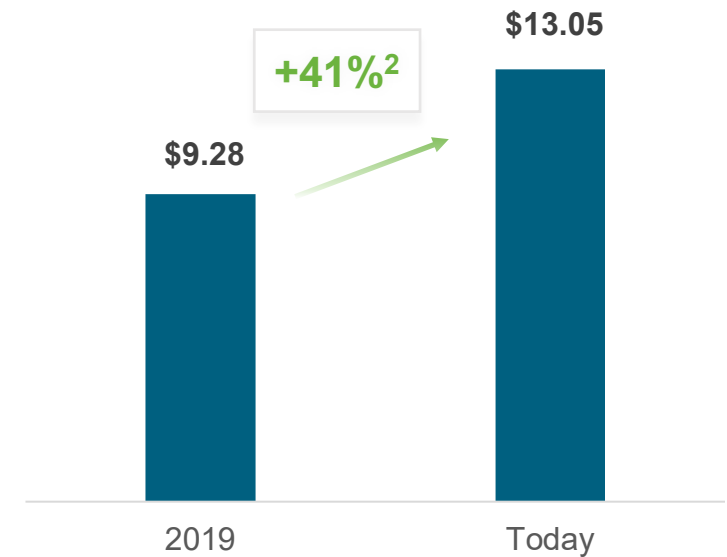
FREE CASH FLOW

(\$ million)



SHARE PRICE

(\$ / share)



8% annual dividend increase since 2019

The Global Race to Decarbonize is On



Global efforts to **decarbonize** are accelerating at a rapid pace
Strong **political support** gaining momentum with explicit net zero goals



Technology cost of renewables and energy storage **declining rapidly** and competing with fossil fuel generation



Corporations are **delivering leadership** by committing to net zero goals
Investors are **ramping up** clean investments towards net zero push



SIGNIFICANT **INVESTMENT** REQUIRED TO MEET THE CHALLENGE

\$0.8 trillion – \$1.8 trillion per year
2.5x to 6x higher than today



505 GW
OF NEW WIND PER YEAR



455 GW
OF NEW SOLAR PER YEAR



245 GW
OF NEW STORAGE PER YEAR

Canada's Emissions Challenge

Ambitious Canadian Targets

- Commitment to reduce GHG emissions 40 – 45% below 2005 levels by 2030
- GHG emissions down only 1% between 2005 and 2019
- Only nine years to achieve significant energy and economic transition

Policy Action

- Escalating carbon price to \$170 / tonne by 2030
- Strong fiscal support for energy transition
- Proposed Clean Electricity Standard to achieve net zero grid by 2035
- 100% zero emissions light vehicle sales mandate by 2035

Uncertainty for Thermal Generation

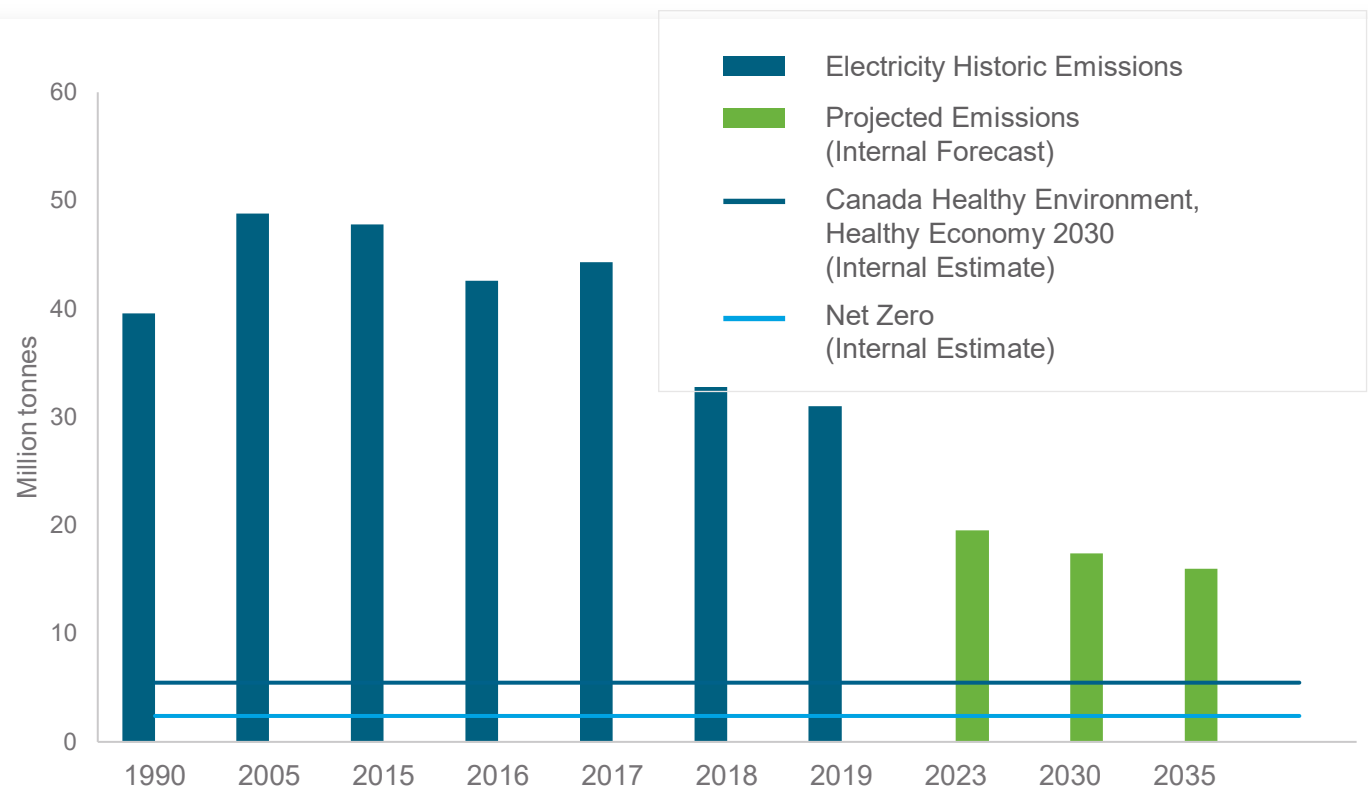
- ✗ Increasing environmental stringency
- ✗ Policy uncertainty
- ✗ Reduced societal and business demand
- ✗ Decreasing investment

Positive for Renewables Generation and Storage

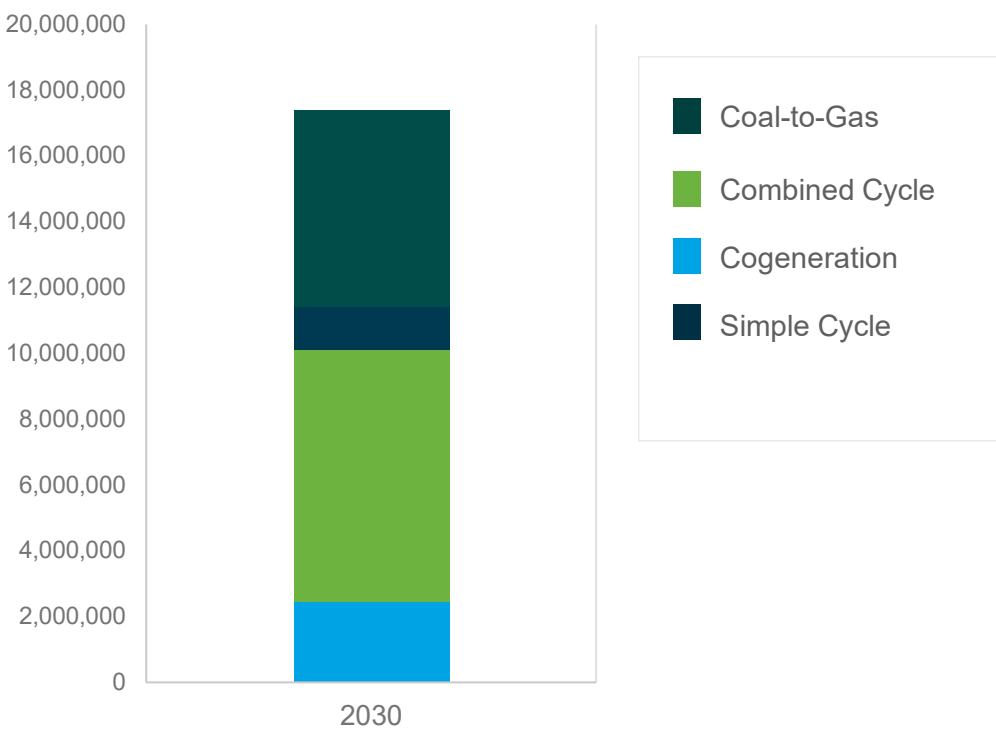
- ✓ Increasingly supportive government policy
- ✓ Increasing societal and business demand
- ✓ Increasing investment

Alberta's Gap to Net Zero Generation is Significant

CURRENT ELECTRICITY EMISSIONS PATHWAY IN ALBERTA



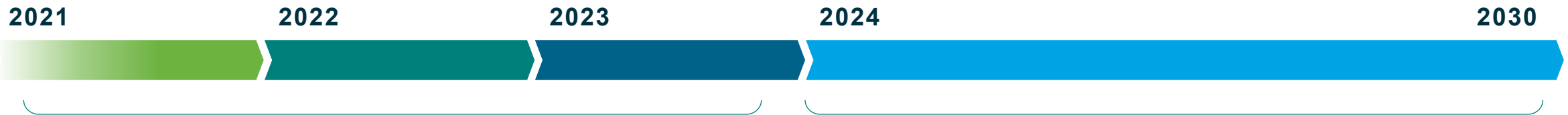
2030 ELECTRICITY EMISSIONS BY SOURCE



Tremendous opportunities for TransAlta

Alberta Merchant Market is Evolving

- Load growth moderating
- Strong customer demand for renewables and storage
- Cost of carbon emissions increasing
- CCS/CCUS solutions costly and uncertain
- Significant supply additions
 - ~8,500 MW of gas, wind and solar planned or under construction
 - ~2,500 MW of storage planned or under construction



HIGHER AVERAGE PRICING

Moderate Volatility

- Baseload Generation
- Merchant exposure
- Optimization

LOWER AVERAGE PRICING

Higher Volatility

- Fleet diversity
- Low carbon footprint
- Peaking generation
- Hedging and optimization
- Ancillary services

Alberta Thermal Fleet Decisions

CONTEXT

- Regulatory **uncertainty** around Clean Electricity Standard and net zero aspirations
- Carbon pricing and performance standard **uncertainty**
- Mid-to-late decade pricing and capacity factor uncertainty stemming from **supply/demand** imbalance
- Carbon capture solutions cost and technology **uncertainty**

ACTIONS

- Suspend Sundance 5 Repowering (2021)
- Retire Keephills Unit 1 (2021)
- Retire Sundance Unit 4 (2022)

Redeploying capital to growth

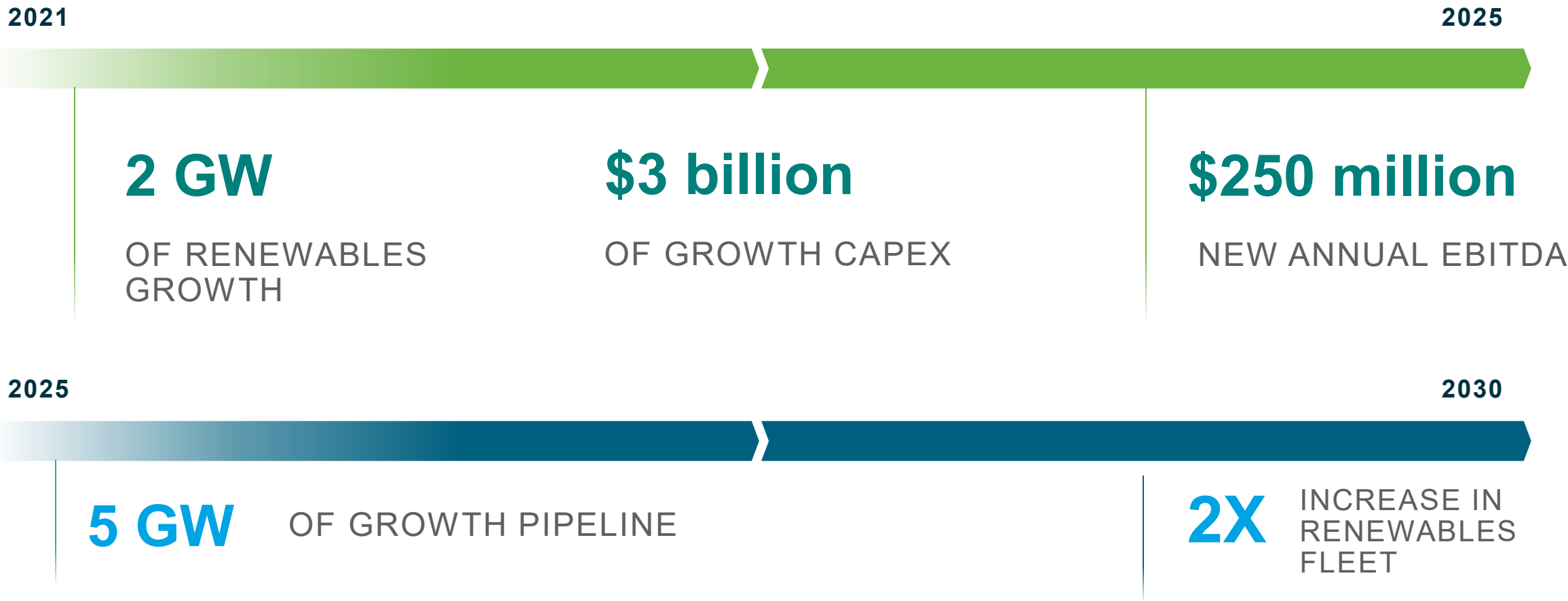


Strategic Priorities to 2025

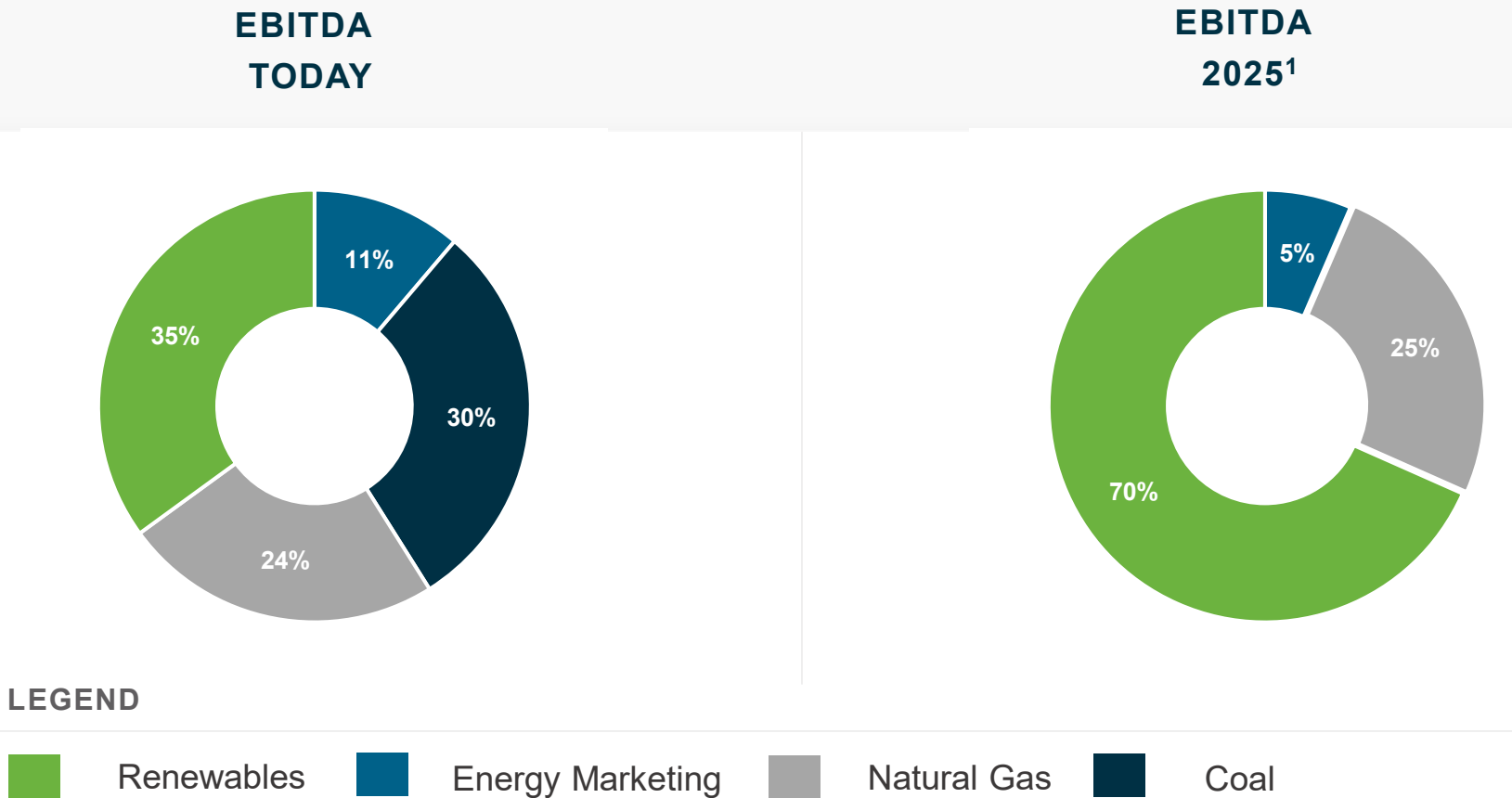
Clean Electricity Growth Plan

- 1 Accelerate growth into customer-centred renewables and storage
- 2 Targeted approach to diversification
- 3 Maintain financial strength and capital allocation discipline
- 4 Define next generation of power solutions
- 5 Lead in ESG policy development
- 6 Successfully navigate through COVID-19 pandemic

Accelerating Renewables Growth: 2021 to 2030



Our Clean Energy Evolution



EBITDA attributable to renewables will reach 70% by end of 2025

Our Investment Focus: 2021 to 2025



RENEWABLES AND STORAGE

- Expand core focus of onshore wind in North America with customer-centred greenfield development
- Establish position in solar targeting the United States, Canada and Australia markets through acquisition
- Establish position in storage, targeting Alberta to meet future grid stability requirements
- Establish position in hybrid solutions in Alberta and Australia with customer-centred focus
- Optimize legacy Alberta Hydro assets and maximize cash flow from fleet



GAS GENERATION

- Optimize existing gas generation to maximize value and cash flows to support renewables and storage growth



PARALLEL NEW INVESTMENTS

- Assess parallel ESG or new industry sectors such as water treatment, transmission/distribution and car charging
- Monitor new technologies such as storage, hydrogen and carbon capture technologies for deployment post-2025

~3 GW of development and three advanced-stage wind projects

Our Competitive Advantage: Foundations for Growth

- **Extensive** North American renewables fleet
- Extensive full lifecycle development, optimization and operational **excellence**
- Robust balance sheet and **competitive** cost of capital with TransAlta Renewables



Sustainability Target Highlights



ENVIRONMENTAL GOALS

- End coal generation by 2021 in Canada and 2025 in US
- Reduce GHG emissions by 70% from 2005 levels by 2030
- Carbon neutral by 2050



SOCIAL GOALS

- Support Indigenous communities
- Reduce safety incidents
- Reclaim mined land in Alberta and Washington State



GOVERNANCE GOALS

- 50% female representation on the Board by 2030
- 40% female employment across the company by 2030
- Equal pay for women in equivalent roles as men
- Remove systemic barriers across the organization
- Demonstrate leadership on ESG reporting within financial disclosures

Our sustainability goals and targets support the long-term success of our business

Leader in Sustainability and ESG since 1994

“ TransAlta Corporation received a A- which is in the Leadership band.
This is (...) higher than the thermal power generation sector average of B.”



“ Good forward-looking long-term goals for carbon and year over year performance trends on emissions, effluents, waste, etc.



“

The company clearly acknowledges climate change and states its commitment to reduce greenhouse gas emissions.”



Ranked 14th overall



Leading Decarbonization and ESG

Kerry O'Reilly Wilks

Executive Vice President
Legal, Commercial and External Affairs

Our Broad Sustainability Framework



ENVIRONMENT



WATER



LAND



WASTE



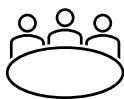
SOCIAL



SAFETY



EQUAL EDUCATION



INDIGENOUS AWARENESS TRAINING



GOVERNANCE



REPRESENTATION



EQUAL PAY



ESG DISCLOSURE

Our Emissions Reduction Initiatives to 2030



Coal Retirement



End coal generation by end of 2021 in Canada and by end of 2025 in the US



Coal-to-Gas Conversions



Complete conversions of coal plants to gas



Growth in Renewables



Grow our contracted wind and solar generation



New Technology

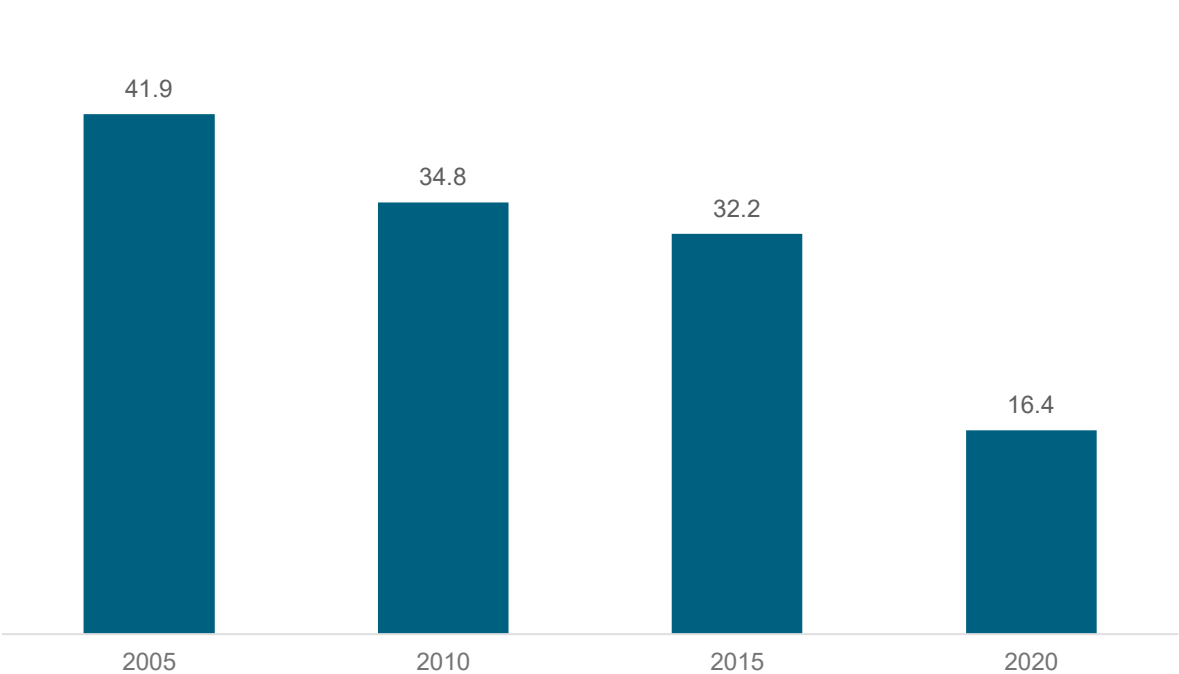


Grow our battery storage business

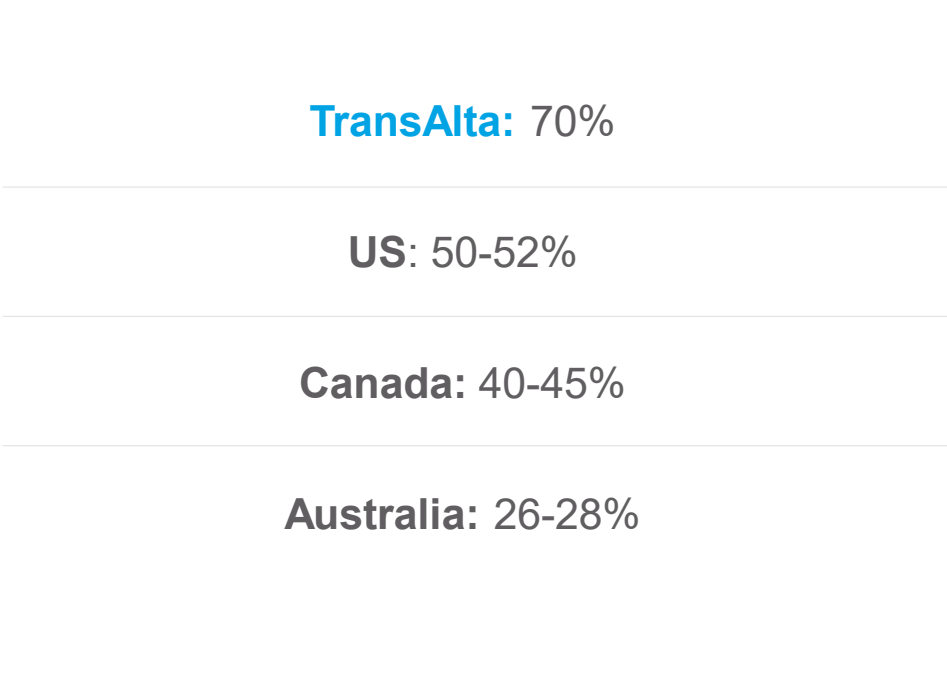


Leading Carbon Reduction Trajectory to 2030

TRANSALTA EMISSIONS (MILLION TONNES CO₂)

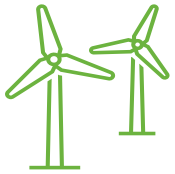


EMISSIONS REDUCTIONS TARGETS¹ BY 2030



¹All 2030 targets emissions reductions from 2005

Pathway to Achieve Carbon Neutrality by 2050



New
Wind/Solar

2021+



Long-duration
Battery

2025+



Large Scale
Energy Storage

2030+

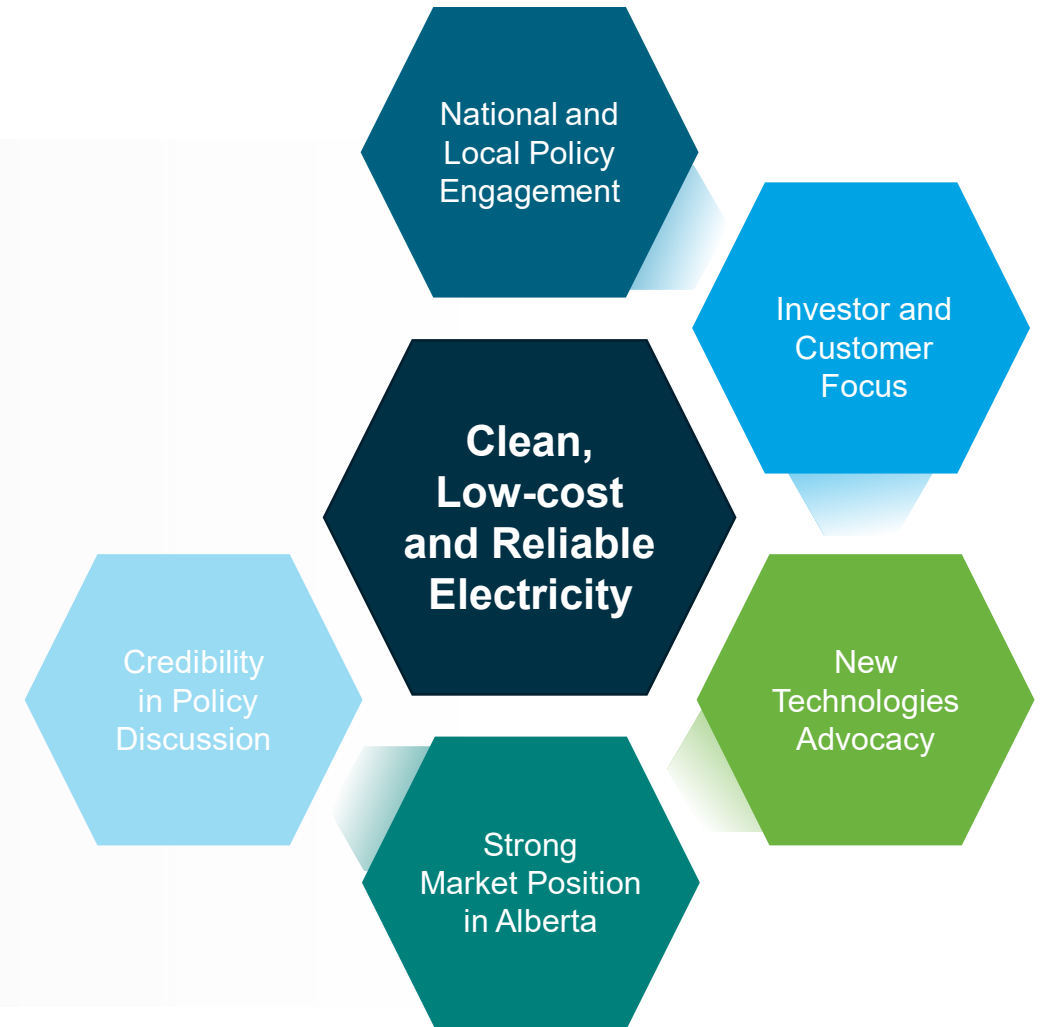


Hydrogen

2030+

Robust Carbon and Regulatory Policy Engagement

- Predictable regulations and market designs that enable an **orderly energy transition**
- Maintaining competitive costs and reliability for our **customers**
- Government support for our **technology roadmap**












Alberta and Federal Emissions Standards

Electricity Sector Emissions Intensity Standards

Generation Resource	Alberta TIER	Federal OBPS
Existing Gas	0.37 t/MWh	0.37 t/MWh
Coal/Coal-to-Gas	0.37 t/MWh	0.8 t/MWh in 2019 declines straight line to 0.37 t/MWh in 2030
New Gas (including repowering)	0.37 t/MWh	>50MW 0.37 t/MWh in 2020 declines to 0 t/MWh in 2030
Renewables (crediting)	0.37 t/MWh	No crediting
All Emitting Generation		Net zero by 2035¹

CTG more competitive than a repower with increasing stringency for emitting generation

Increasing Policy Risk to Thermal Generation

	COAL-TO-GAS CONVERSIONS	NEW COMBINED CYCLE GAS	RENEWABLES
Emissions Performance Standards			
Carbon Price			
Risk from Net Zero Policies			

Legend

 Low Risk

 Moderate Risk

 High Risk

Key Takeaways

High Shareholder Value in a Low Carbon Future

- 1 Diverse and inclusive organization with a broad set of ESG metrics reducing risk and positioning us to thrive
- 2 Leading carbon reduction trajectory
 - Reduced CO₂ emissions by 61% since 2005
 - Clear path to reach 70% reduction from 2005 levels by 2030
 - Technology roadmap to achieve our carbon neutrality goal
 - Expertise to help our customers on their ESG journeys
- 3 Strong policy tailwinds supporting our growth strategy
- 4 Legacy gas assets well-positioned to fit within a net zero future

Accelerating Clean Growth Strategy

Aron Willis

Executive Vice President
Growth

Positioned to Accelerate our Growth

**~3
GW**

**800
MW**



Development
pipeline in
our core
geographies

2021 announced
projects and
advanced-stage
development

Teams established
in each key
geography and
focused on
delivery

Accelerating Our Clean Growth: Targets



DEVELOP AND ACQUIRE NEW ASSETS

- Add new assets totaling 2 GW of capacity by 2025
- Total capital investment of ~\$3 billion
- Deliver an incremental \$250 million in annual EBITDA from these new assets



GROW OUR DEVELOPMENT PIPELINE

- Increase the size of our development pipeline to 5 GW by 2025
- Sustain pipeline at that level going forward

Focused on customer-centred renewables growth

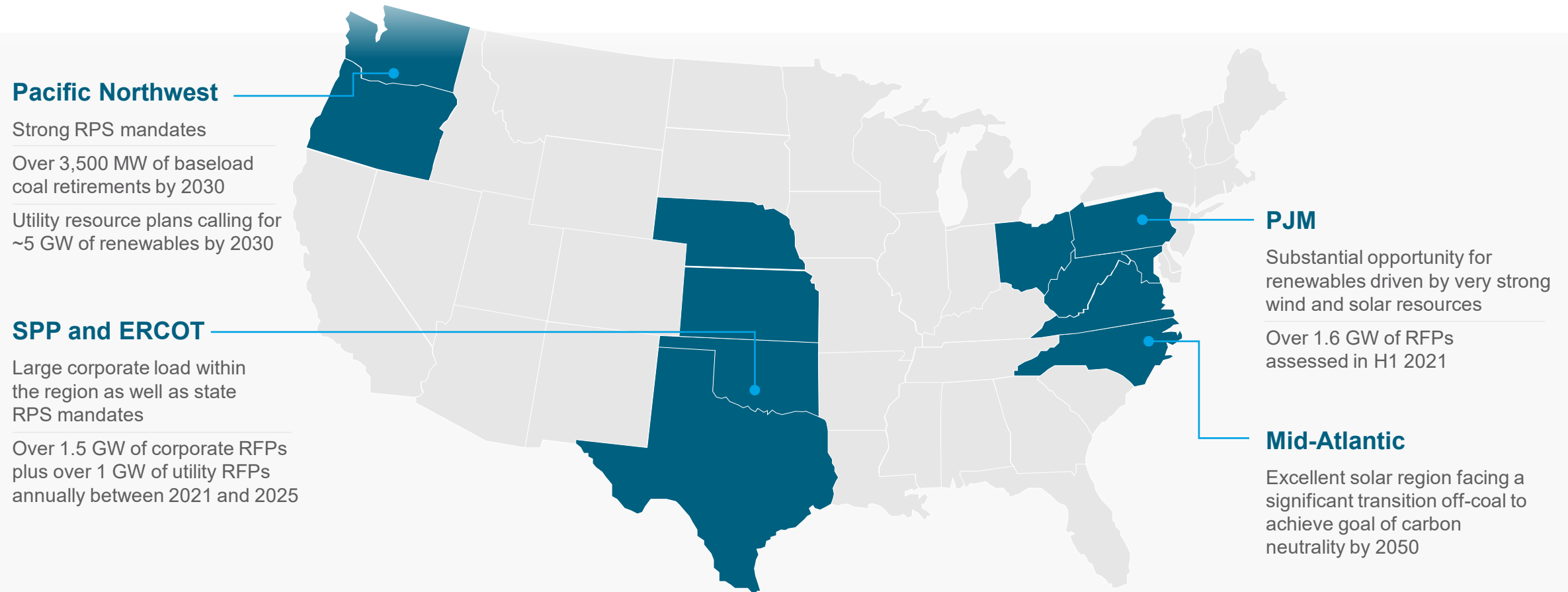
Customer Competition: Our Difference

- Experienced in **delivering customer-focused power solutions** across multiple technologies
- **Full capabilities** to prospect, develop, construct, acquire, operate and optimize assets
- **Extensive wind** platform to drive economies of scope and scale through procurement, remote operations and shared services



Targeted Market Diversification and Investments

UNITED STATES



Targeted Market Diversification and Investments

CANADA

Alberta

The only open and competitive electricity market in Canada

Excellent wind and solar resources support competitive pricing

Planned transition off-coal generation coupled with carbon pricing policy is supporting a significant turnover in the province's generating fleet by 2030

ESG driving demand for industrial PPAs

Ontario

Hybrid market design consisting of both contracted assets and a competitive energy market

High retail pricing is a strong motivator for industrial customers to look at "behind the fence" solutions as well as energy storage options for peak load reduction

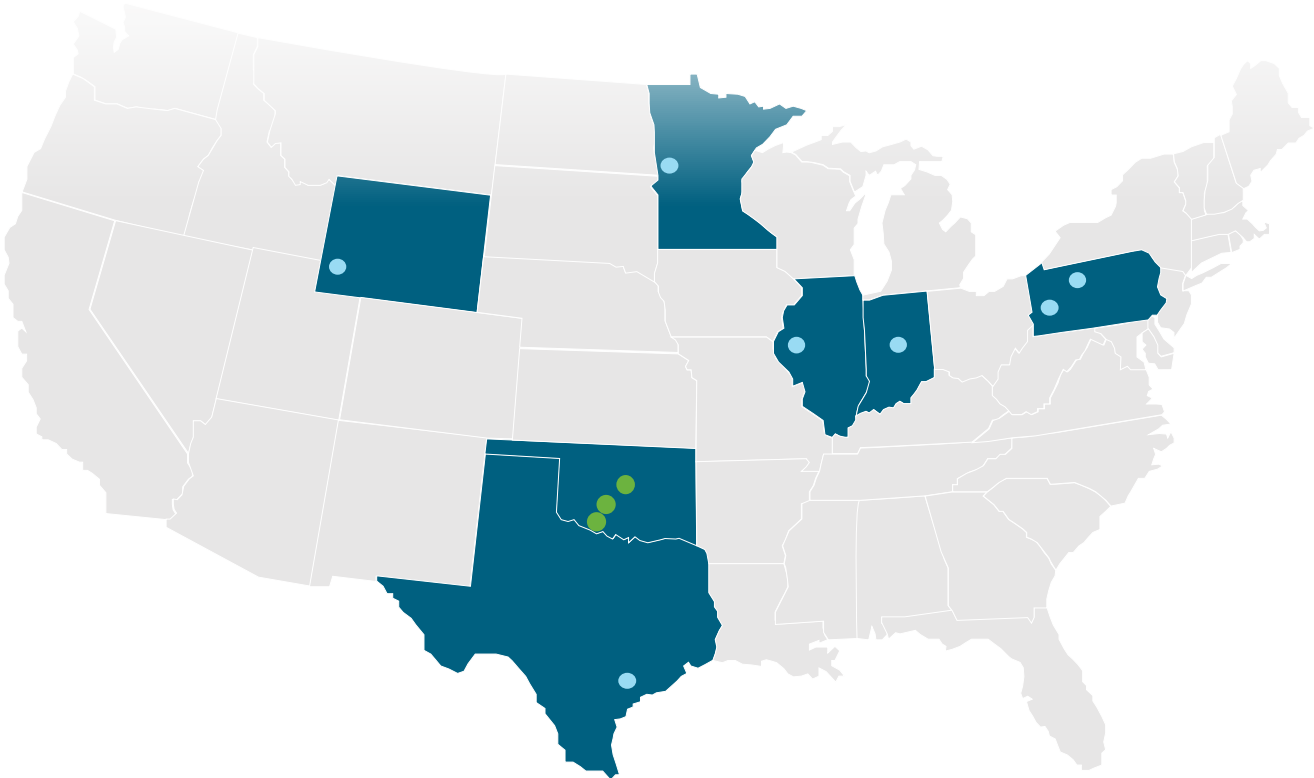
Targeted Market Diversification and Investments

AUSTRALIA



Development Pipeline

UNITED STATES



LEGEND

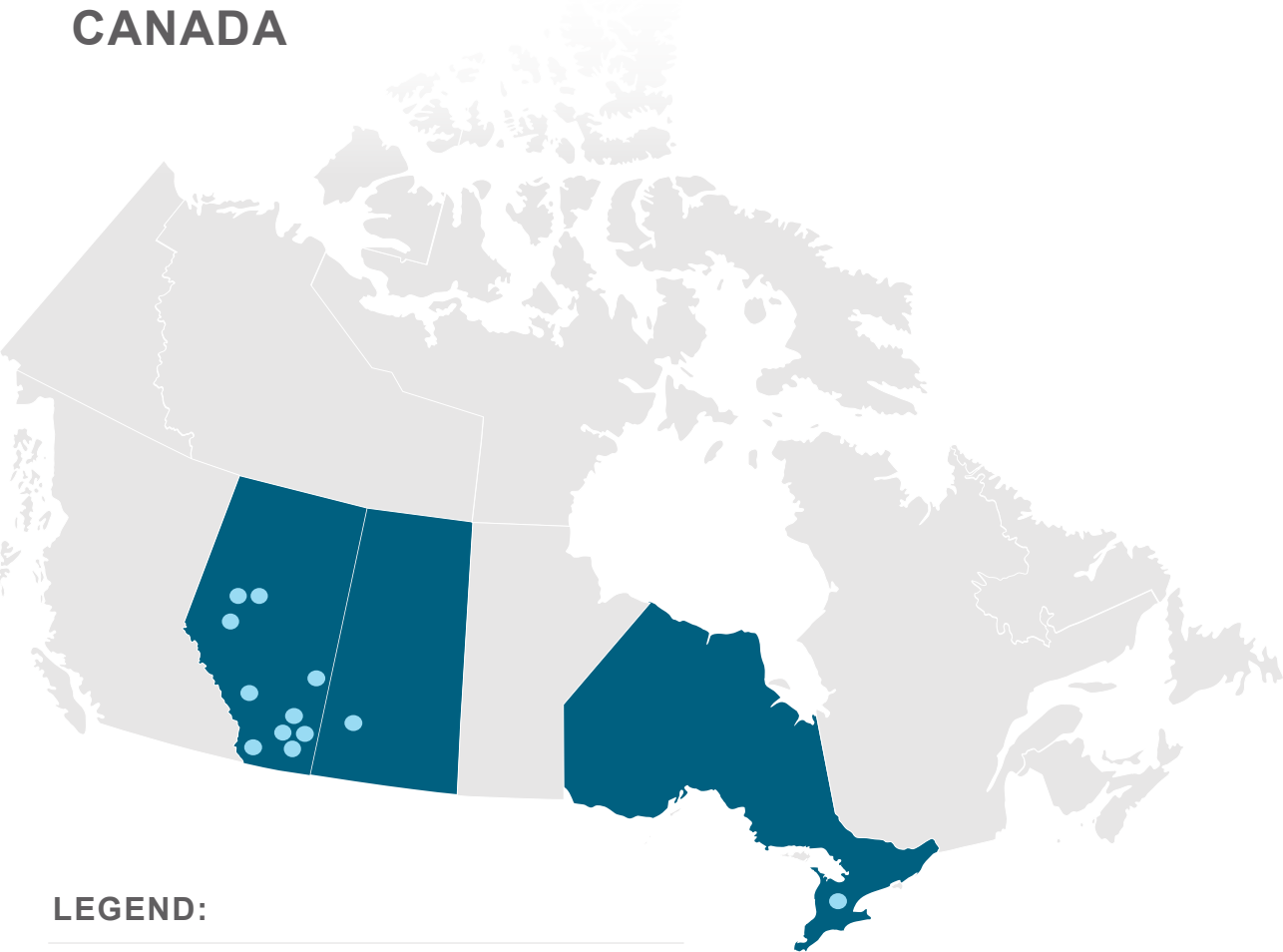
- ADVANCED-STAGE DEVELOPMENT SITE
- EARLY-STAGE DEVELOPMENT SITE

Total All Stages: 1,195 MW

PROJECT	MW	FUEL	LOCATION	STAGE	COD RANGE
Horizon Hill	200	Wind	OK	<div></div>	2023
White Rock East	200	Wind	OK	<div></div>	2023
White Rock West	100	Wind	OK	<div></div>	2023
Prairie Violet	185	Wind	IL	<div></div>	2024-2025
Big Timber	50	Wind	PA	<div></div>	2024-2025
Wild Waters	40	Wind	MN	<div></div>	2024-2025
Coolspring	120	Wind	PA	<div></div>	2025-2026
Wyoming Exp.	100	Wind	WY	<div></div>	2024-2025
Chisholm	100	Solar	TX	<div></div>	2025-2026
Big Blue River	100	Solar	IN	<div></div>	TBD

Development Pipeline

CANADA



LEGEND:

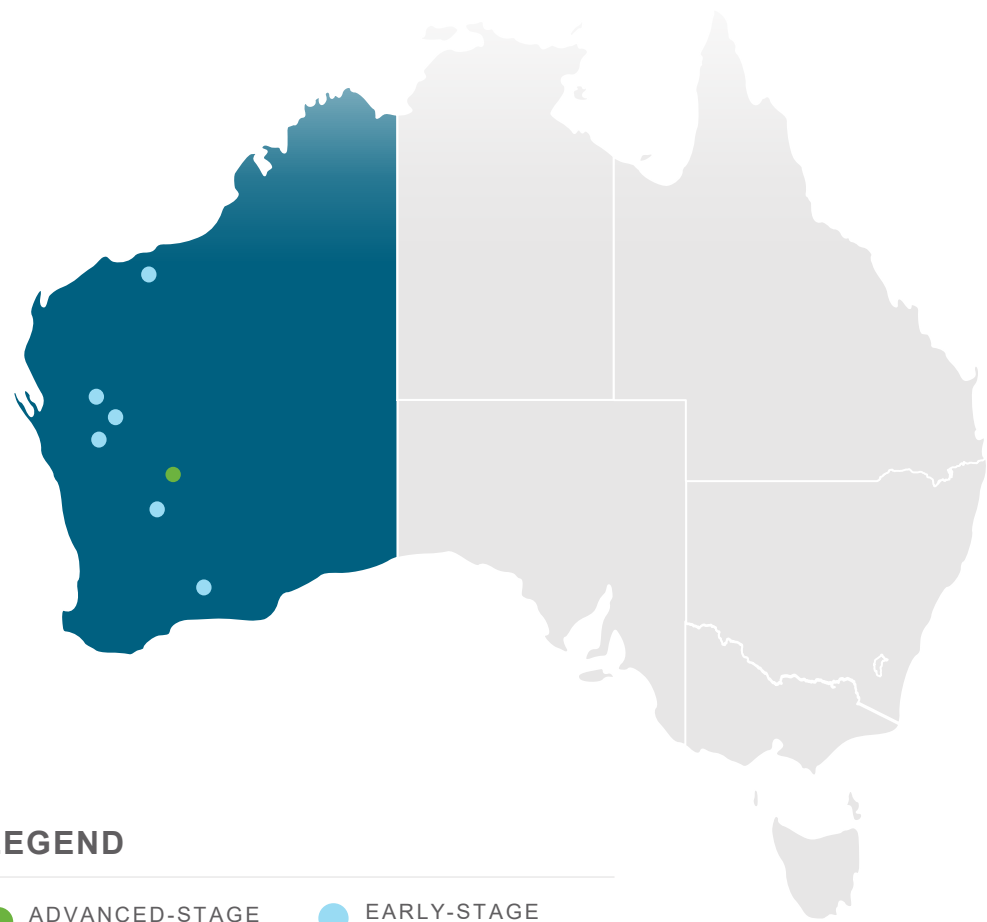
- ADVANCED-STAGE DEVELOPMENT SITE
- EARLY-STAGE DEVELOPMENT SITE

Total All Stages: 1,385 – 2,000 MW

PROJECT	MW	FUEL	LOCATION	STAGE	COD RANGE
Riplinger	300	Wind	AB	<div></div>	2024-2025
Willow Creek 1	70	Wind	AB	<div></div>	2024
Willow Creek 2	70	Wind	AB	<div></div>	2024
Tempest	90	Wind	AB	<div></div>	2024
Alberta Cogen	15-30	Gas	AB	<div></div>	2023
Ontario Cogen	20	Gas	ON	<div></div>	2023
WaterCharger	100	Battery	AB	<div></div>	2023
SunHills Solar	85	Solar	AB	<div></div>	2023
Alberta Solar	85	Solar	AB	<div></div>	2024
Antelope Coulee	200	Wind	SK	<div></div>	TBD
Red Rock	50	Wind	AB	<div></div>	TBD
Brazeau Pumped Storage	300-900	Hydro	AB	<div></div>	2032

Development Pipeline

AUSTRALIA



LEGEND

- ADVANCED-STAGE DEVELOPMENT SITE
- EARLY-STAGE DEVELOPMENT SITE

Total All Stages: 210 – 270 MW

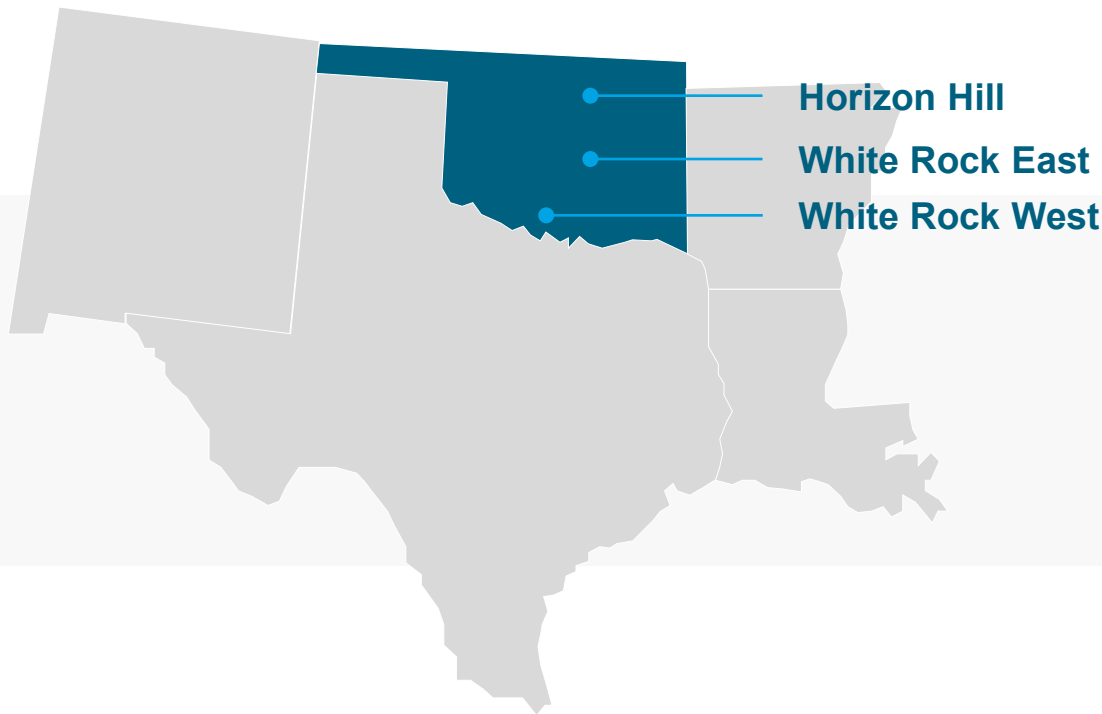
PROJECT	MW	FUEL	LOCATION	STAGE	COD RANGE
Mt Keith Capacity Additions	25 - 50	Gas	WA	<div></div>	2023
New Mine Supply	25	Gas	WA	<div></div>	2024
SCE North Wind	25 - 60	Wind	WA	<div></div>	2023
Higginsville Supply	-	Transmission Line	WA	<div></div>	2024
South Hedland Solar	50	Solar	WA	<div></div>	2022
New Mine Supply	85	Gas	WA	<div></div>	2025

Oklahoma Advanced Development Sites

500 MW
total capacity
across 3 high
quality wind sites

**~US
\$750 million**
investment opportunity

2023
Target COD



	Horizon Hill 200 MW	White Rock East 200 MW	White Rock West 100 MW
Site Control	●	●	●
Permitting and Environmental	●	●	●
Engineering / Geotechnical	●	●	●
Interconnection Agreements	●	○	○
Turbine Supply	○	○	○
EPC	○	○	○
Offtake Status	○	○	○

● EXECUTION COMPLETE ○ EXECUTION PENDING ○ ADVANCED NEGOTIATIONS

Garden Plain

Project Highlights

Location	Hanna, Alberta	Contracted	77%
Size	130 MW	Customer	Pembina
Technology	Siemens Gamesa SG5.0-145	Term	18 years
COD	H2 2022	EBITDA	\$14-\$18 million

Alberta Utilities Commission permits have been secured for the wind and interconnection facilities

Detailed engineering ongoing with full geotechnical complete

Advanced negotiations underway for the remaining 30 MW capacity

Our 11th wind facility in Alberta



Construction work packages out for bid



Northern Goldfields Solar

Major equipment orders have been placed

Project Highlights

Location	Western Australia	Contracted	100%
Size	48.2 MW	Customer	BHP
Technology	Solar PV + Li-ion Battery	Term	16.3 years
COD	H2 2023	EBITDA	\$8-\$9 million

EPC agreement executed with juwi Renewable Energy Pty Ltd

Construction to commence in Q1 2022 with PV panel and battery deliveries beginning in Q2 2022

Project team established and owner's engineer selected

One of the largest off-grid hybrid solutions supporting remote mining

BHP Nickel West Case Study



BHP Nickel West defines need to solve complex challenge

TransAlta and BHP Nickel West define optimal solution

TransAlta team builds and commissions

TransAlta powers BHP Nickel West mines with clean, low-cost and reliable electricity



Key Takeaways

- 1 2 GW of new capacity by 2025
- 2 Investment of \$3 billion from 2021 to 2025
- 3 Delivering renewable power solutions to support customer ESG objectives
- 4 3 GW of identified growth opportunities
5 GW pipeline by 2025
- 5 Teams established in core geographies

Optimizing and Maintaining Competitive Advantage in Alberta

Blain van Melle

Executive Vice President

Alberta Business

Alberta Business

MAXIMIZE

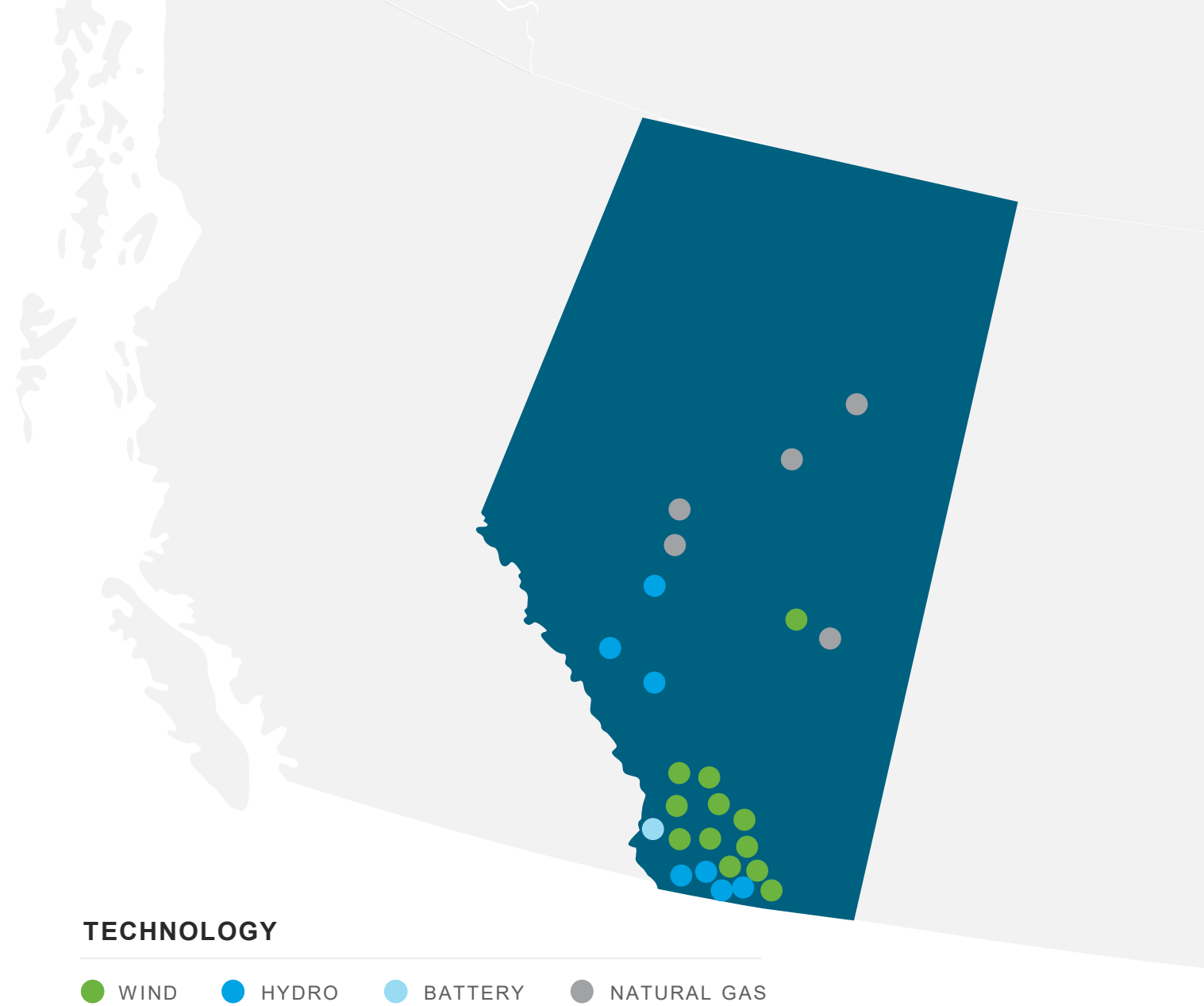
shareholder returns through
active management of our
diversified merchant **portfolio**

PROVIDE

dynamic, cost-effective and low
carbon **solutions** to meet **customer**
power demand and **ESG** goals

IDENTIFY

and evaluate market and technological
sources for **long-term growth**



Our Fleet Characteristics

HYDRO



- Low variable cost
- Water is a finite, storable resource
- Optimization of flows
- Super-peak capacity, must-run, ancillary market products
- Produces EPCs

WIND



- Low variable cost
- Price-taker
- Not correlated to event/weather driven pricing
- Produces EPCs

GAS CONVERSIONS



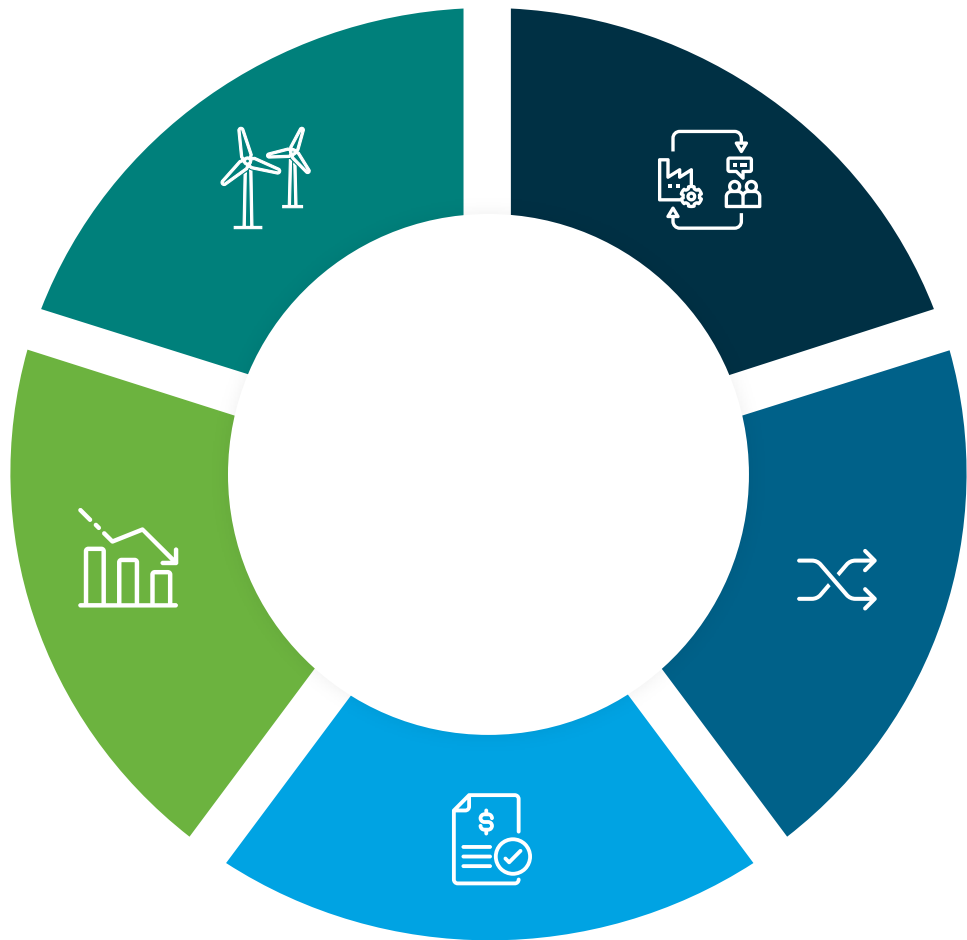
- Fully converted by end of 2021
- Higher variable cost
- Low capital investment
- Baseload and peak capacity
- More competitive than new combined cycle gas turbine plants under proposed carbon pricing by 2028

BATTERY STORAGE



- Fast frequency response
- Time-shift wind and hydro output
- Serves ancillary markets

Alberta Evolving Market Dynamics



Supply and Demand Fundamentals



Carbon Policy and Pricing Evolution



Corporate PPA Demand



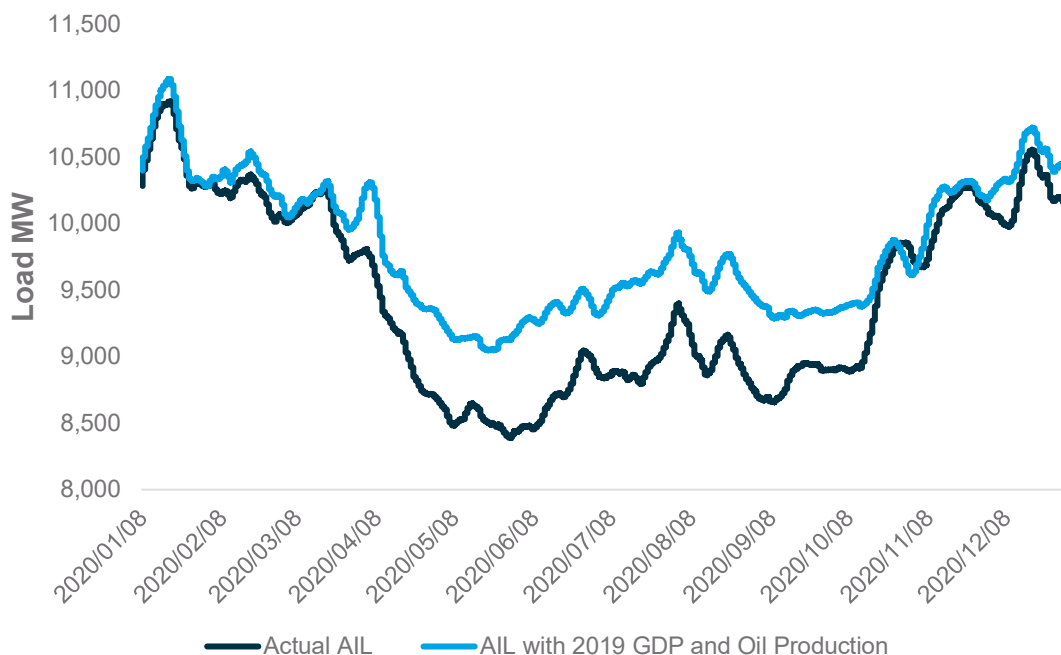
Declining Cost of Renewables



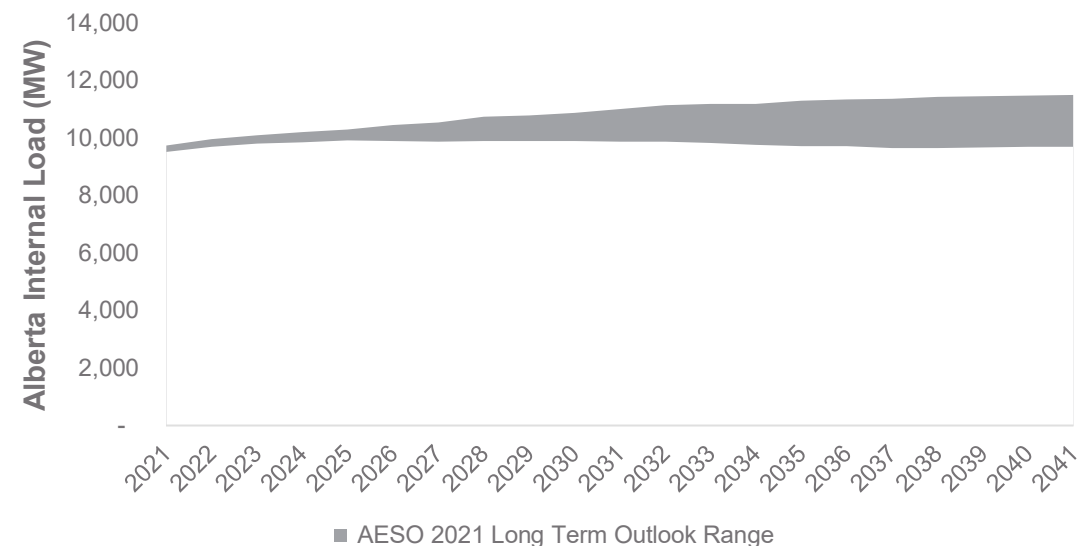
Desire for Lower Carbon Emissions

Modest Demand Growth Expected

2020 ALBERTA LOAD RECOVERY

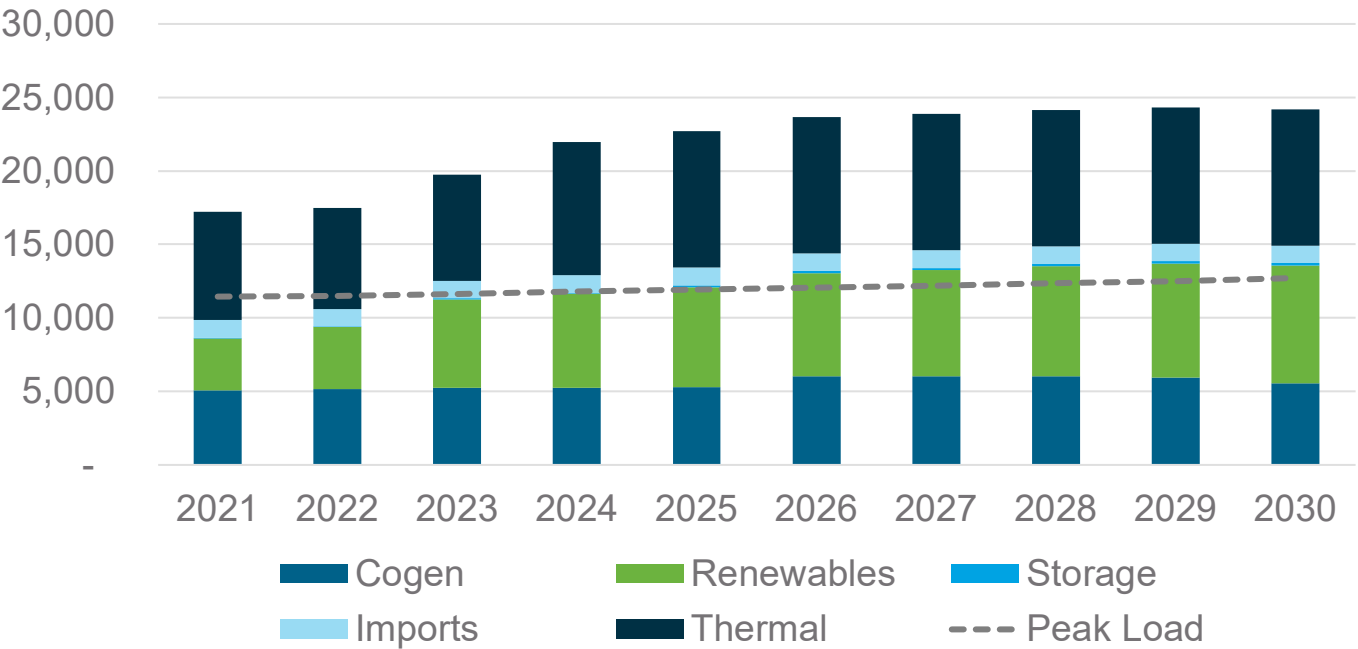


AESO LOAD GROWTH FORECAST¹



Significant Supply Growth Expected

ALBERTA CAPACITY AND LOAD (MW)



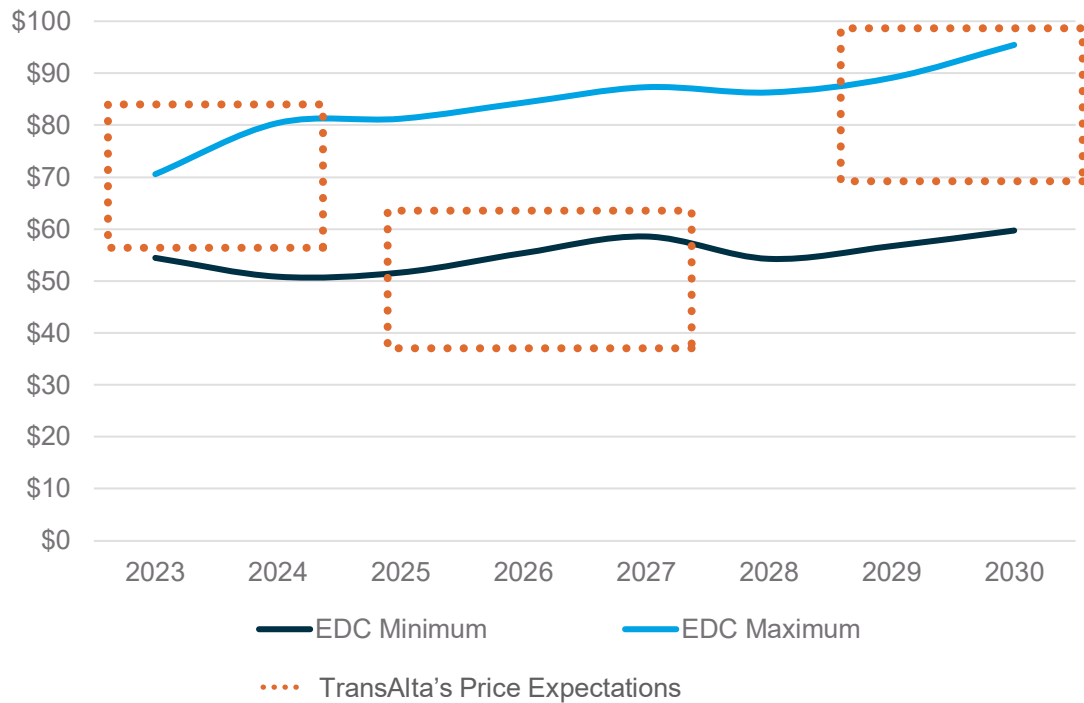
Expected Renewables Growth 2021 to 2025

~150%

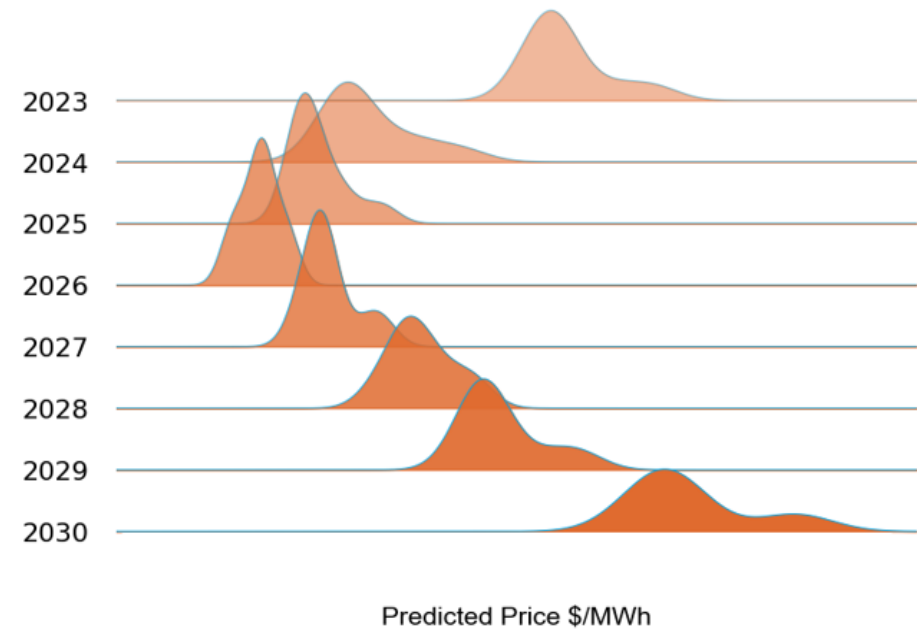
Large portion of load will be served by cogeneration, wind and solar all priced at \$0 in the merit order

Price Outlooks

ALBERTA POOL PRICE FORECAST¹ (\$ / MWh)



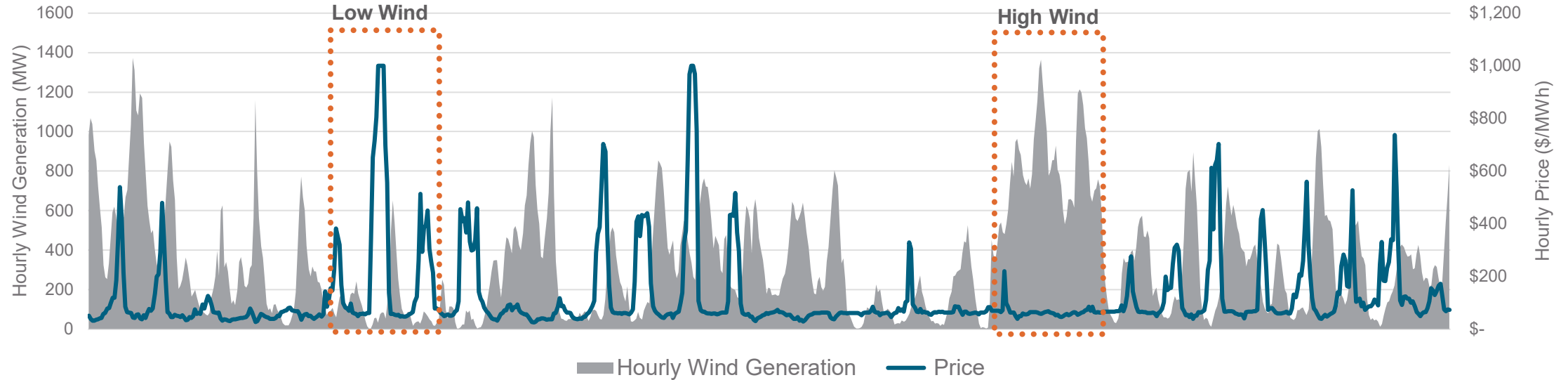
PRICE FORECAST DISTRIBUTIONS



Pricing headwinds in the middle part of the decade

Intermittency Expected to Drive Increase in Volatility

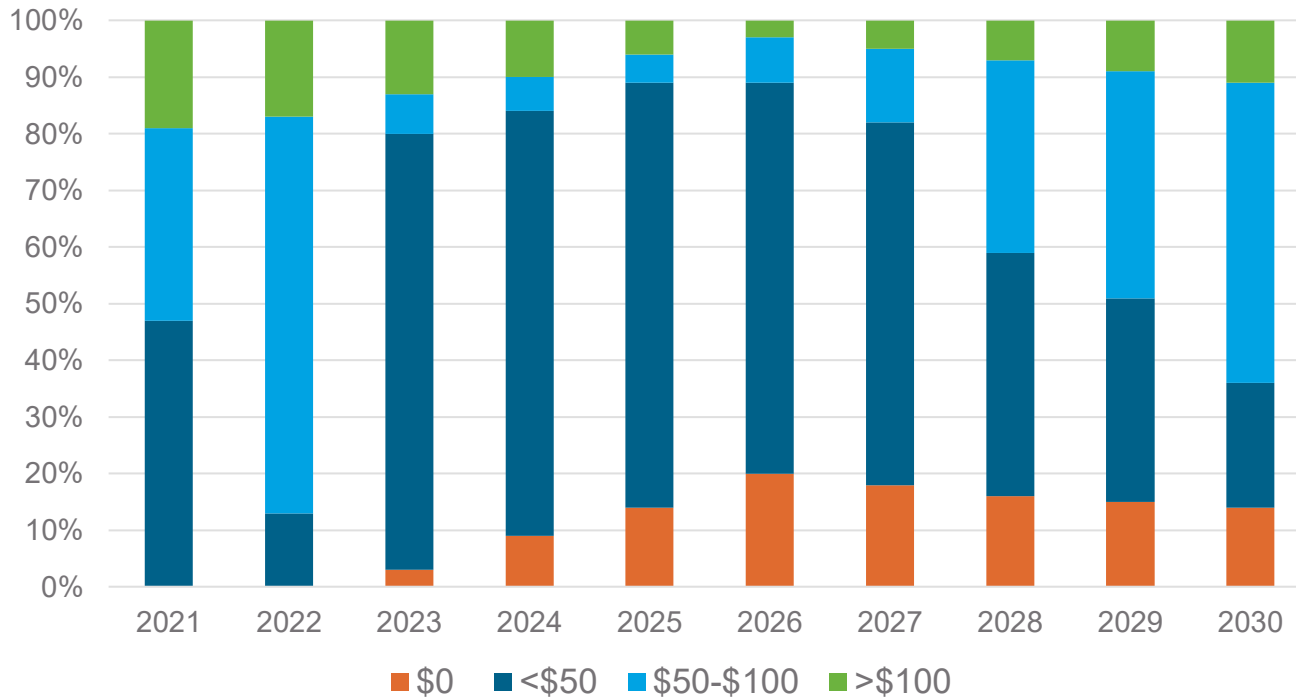
JULY 2021 WIND GENERATION AND PRICE VOLATILITY



Renewables build-out driven by carbon and ESG focus will add further volatility

Price Volatility Expected to Increase

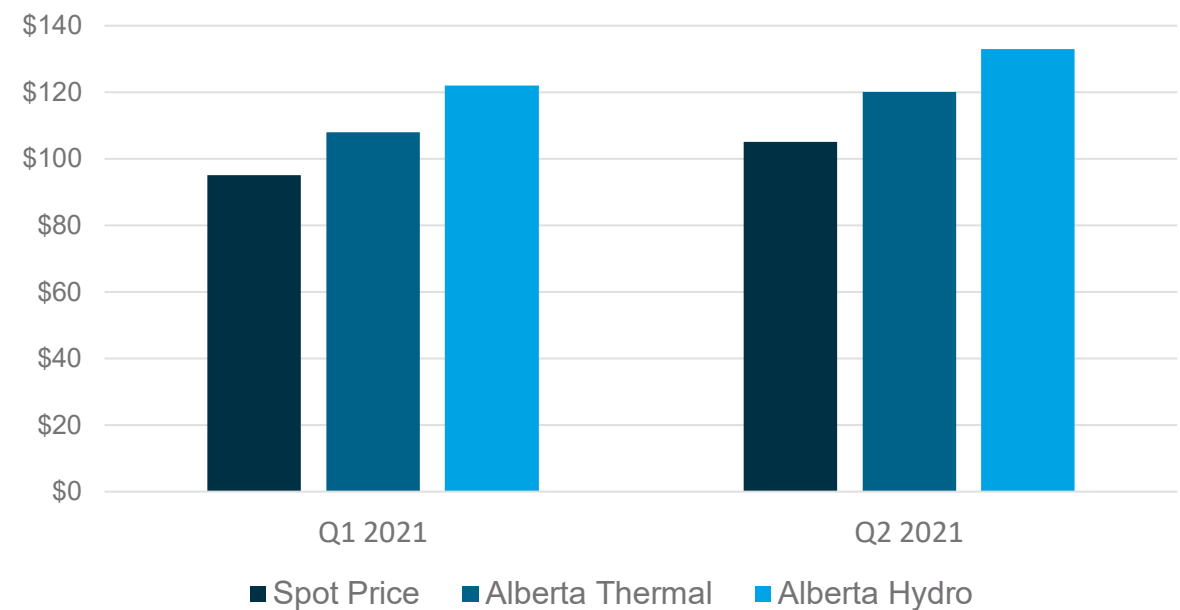
FORECASTED POWER PRICE LEVELS (\$ / MWH)



- Number of \$0 hours expected to increase
- TransAlta well-positioned to compete in \$50+ zone

Hydro and Unhedged Thermal Realized Prices in Alberta

2021 UNHEDGED REALIZED PRICES (\$ / MWH)



28%

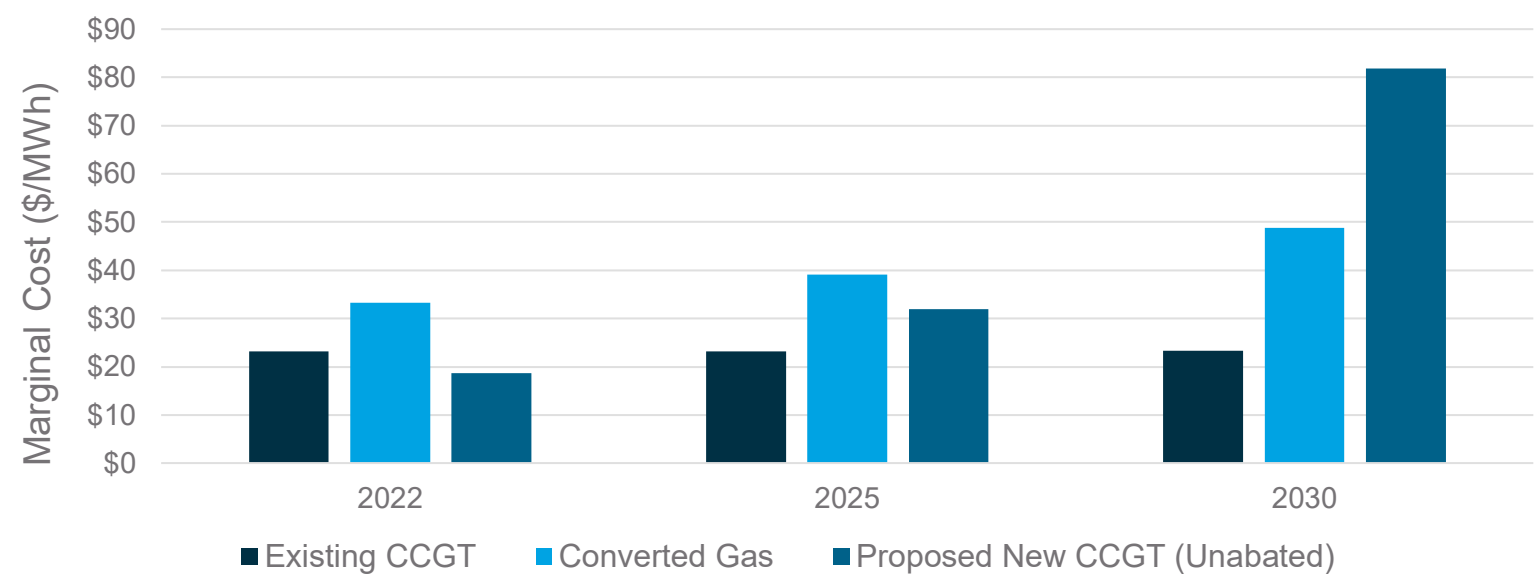
ALBERTA HYDRO
AVERAGE PREMIUM

14%

ALBERTA THERMAL
AVERAGE PREMIUM

Performance Standard Change Makes CTG More Competitive

MARGINAL COST UNDER EVOLVING PERFORMANCE STANDARD



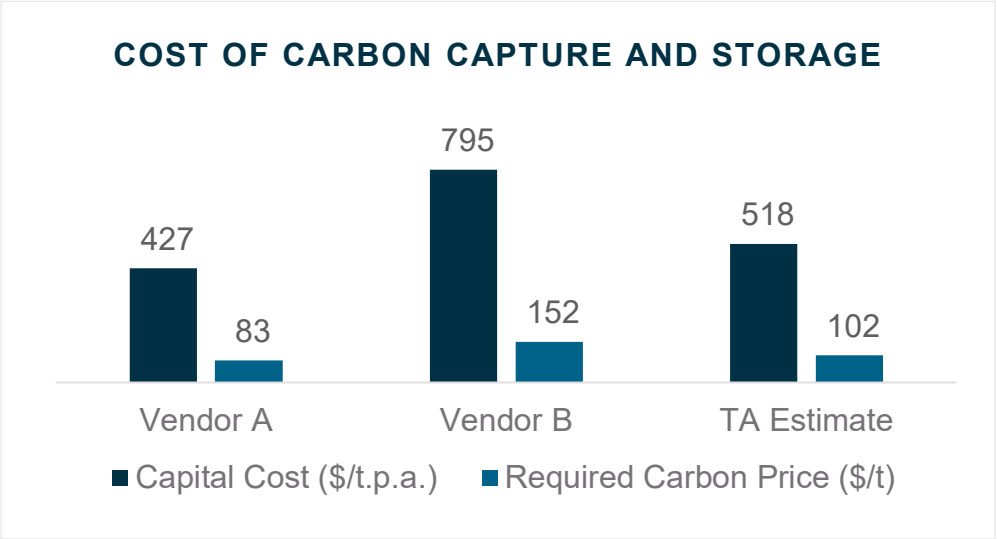
Converted gas (CTG) to have lower variable costs under more stringent policy

Alberta Thermal Actions

INVESTMENT RISKS	SUNDANCE 5 REPOWER	SUNDANCE 4	KEEPHILLS 1
Capital Cost	<div></div>	<div></div>	<div></div>
Oversupply in Market	<div></div>	<div></div>	<div></div>
Regulatory Uncertainty	<div></div>	<div></div>	<div></div>
Asset Competitiveness	<div></div>	-	-
CCS Cost	<div></div>	-	-
CCS Technology	<div></div>	-	-
Decision	Suspend	Retire	Retire

LEGEND

HIGH RISK
 MODERATE RISK

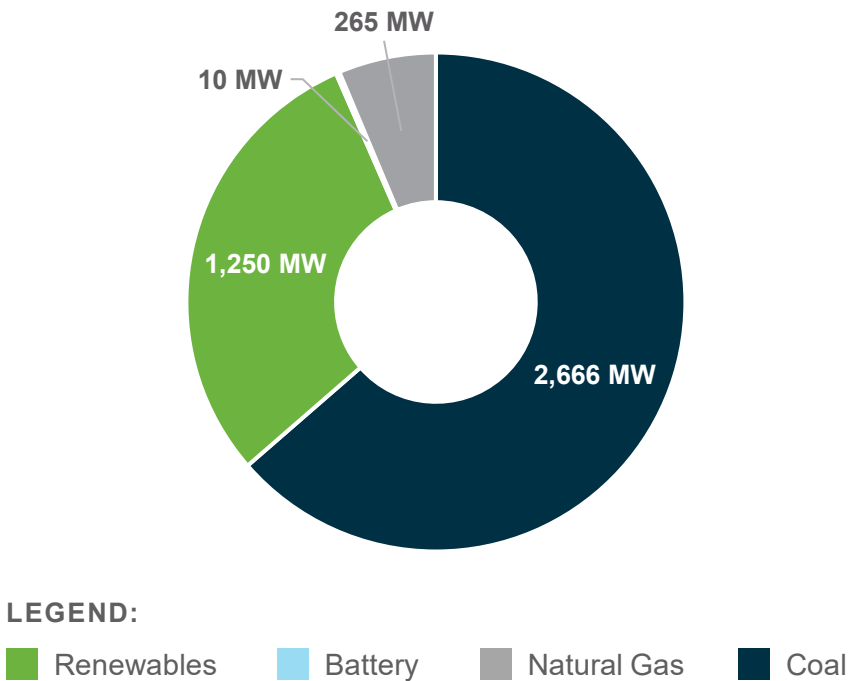


Cost of CCS on Sundance 5 upwards of \$1 billion

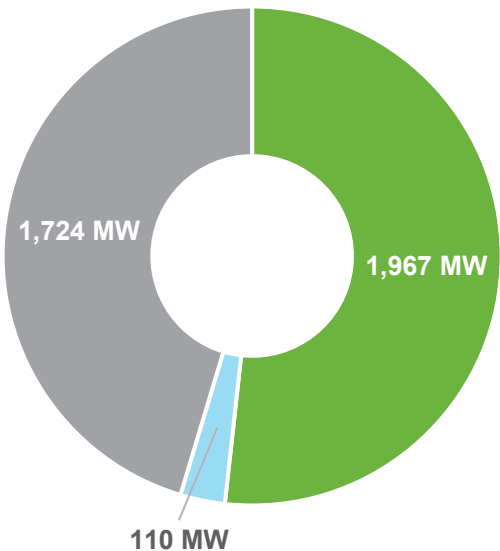
Redeploy capital to renewables

Our Evolving Position in the Alberta Market

2020 REPORTED



2025 WITH GROWTH¹ AND RETIREMENTS²

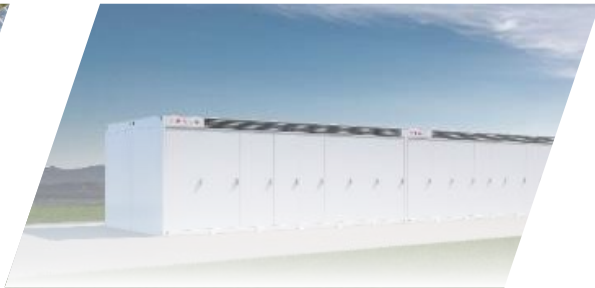


Well-positioned to perform in energy-only market

¹Growth includes Windrise, Garden Plain, Riplinger, SunHills Solar and Watercharger

²Includes the suspension of Sundance Unit 5 and the retirements of Sundance Unit 4 and Keephills Unit 1

Alberta Opportunities



Riplinger Wind Farm

SunHills Solar Park

Watercharger

Project Type	Wind	Solar	Battery
Location	Waterton	Parkland County	Alberta Hydro
Capital Cost	~\$480 M	~\$115 M	~\$120 M
Capacity	300 MW	80 MW	100 MW / 200 MWh
Status / COD	Early Development / 2025	Early Development / 2023	Early Development / Late 2023

Customer Competition: Our Advantage

- 110-year extensive **operating expertise**
- Exceptional **in-house forecasting** and **analytical capabilities**
- Integrated **asset optimization** and operations to ensure portfolio **value maximization**





Key Takeaways

- 1 Suspend Sundance 5 repowering
- 2 Retire Sundance Unit 4 and Keephills Unit 1
- 3 Optimize generation portfolio
- 4 Advance customer-centred renewables projects
- 5 Advance grid reliability product opportunities
- 6 Assess new technologies for post-2025 deployment

Delivering Operational Excellence

Mike Novelli

Executive Vice President
Generation

OneGeneration: Our Advantage

- Focused on **exceeding customer expectations** while supporting their ESG goals
- **Maximize operational efficiencies** through **bottom-up innovation** and shared services to ultimately benefit our customers and shareholders
- Strive to deliver **leading culture** on safety, organizational health and Equity, Diversity and Inclusion



Fleet Overview



Wind and Solar

27 Facilities



Hydro

27 Facilities



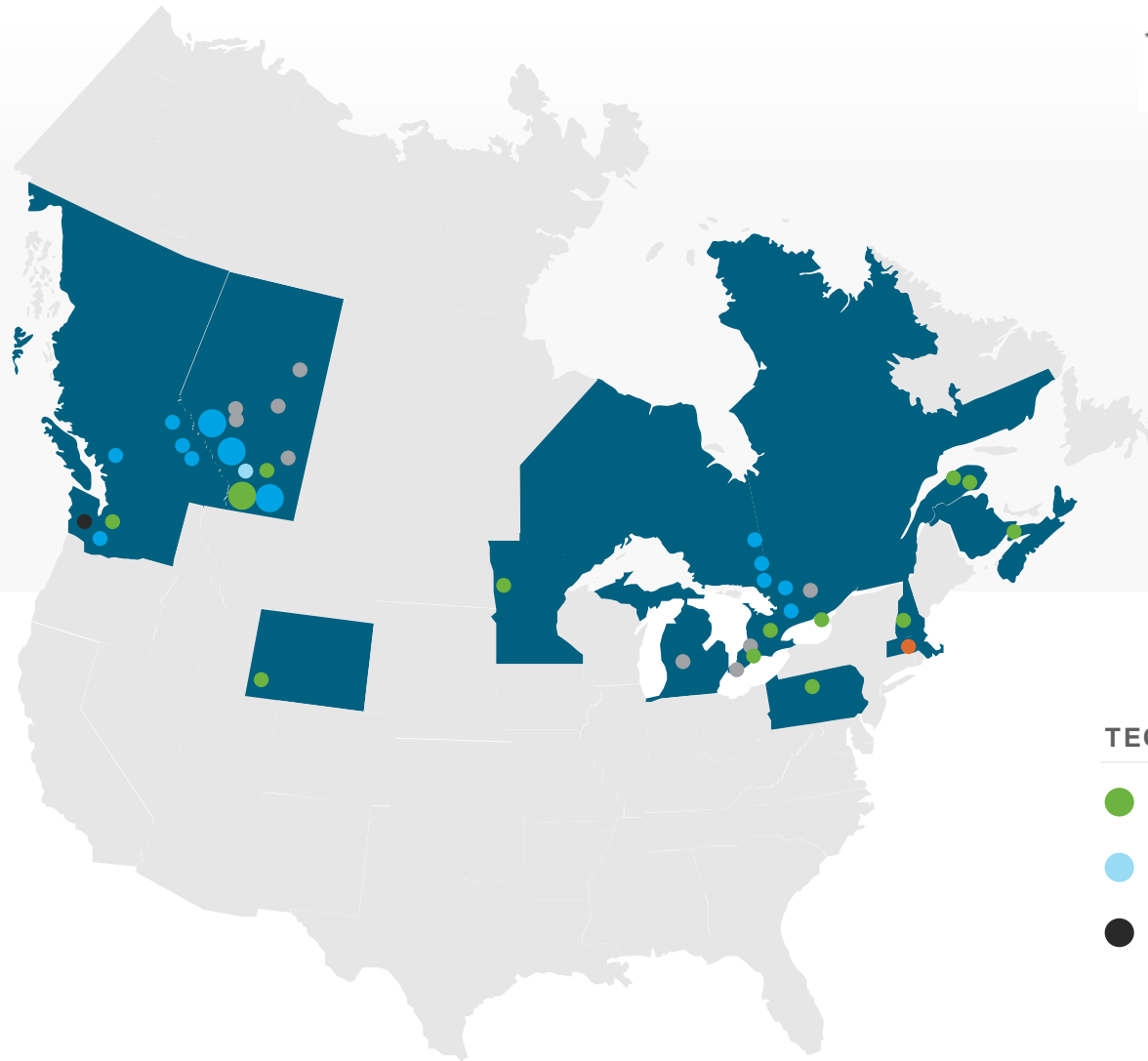
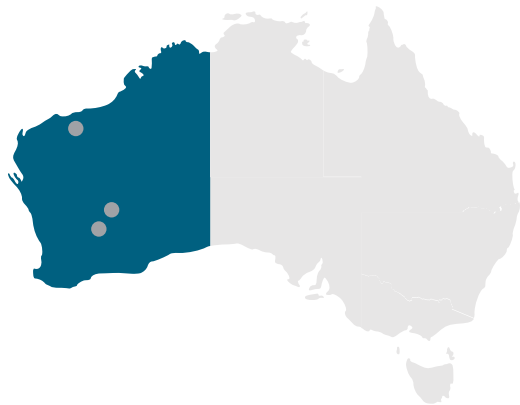
Coal

1 Facility



Natural Gas¹

15 Facilities

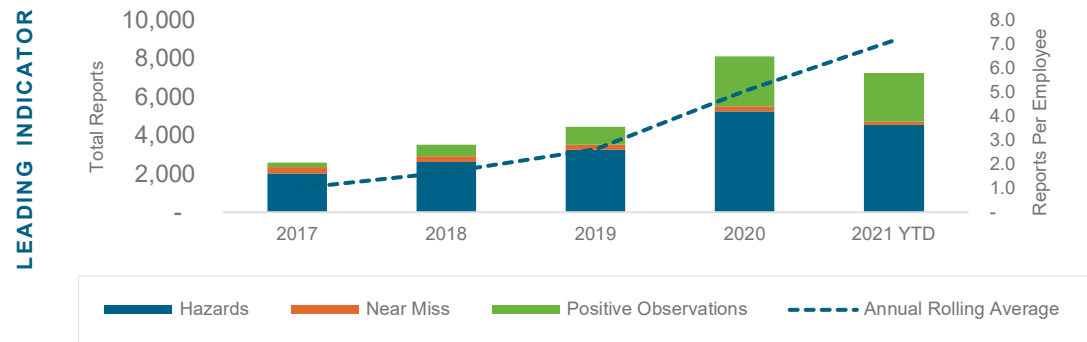


TECHNOLOGY



Operational Excellence: Safety, Org Health, Diversity

TOTAL SAFETY REPORT FREQUENCY



ORGANIZATIONAL HEALTH

2016
Bottom Quartile

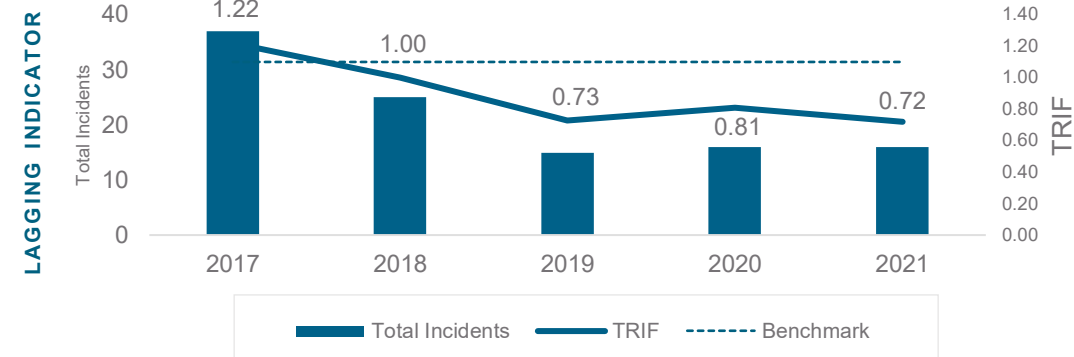
37



2020
Second Quartile

72

TOTAL RECORDABLE INCIDENT FREQUENCY (TRIF)



GENDER DIVERSITY

2021

23%

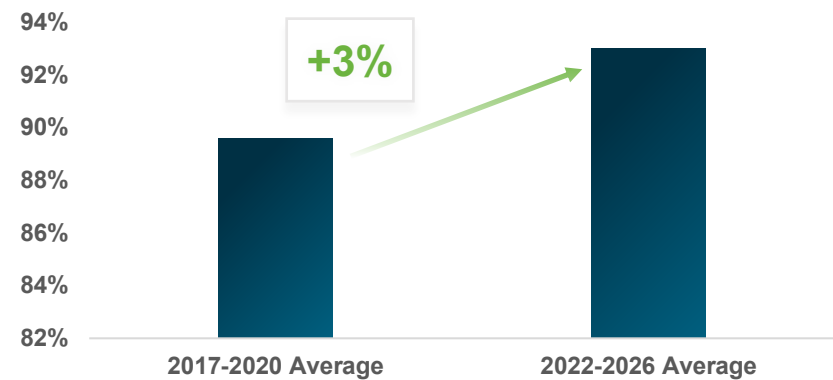


2030

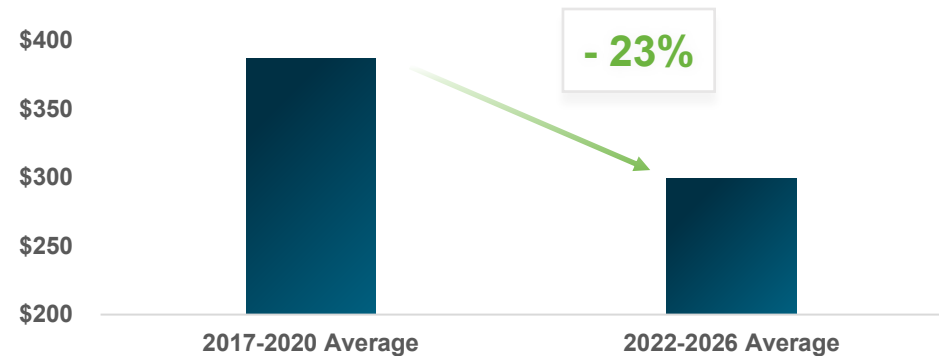
40%

Operational Excellence: Where We Are Going

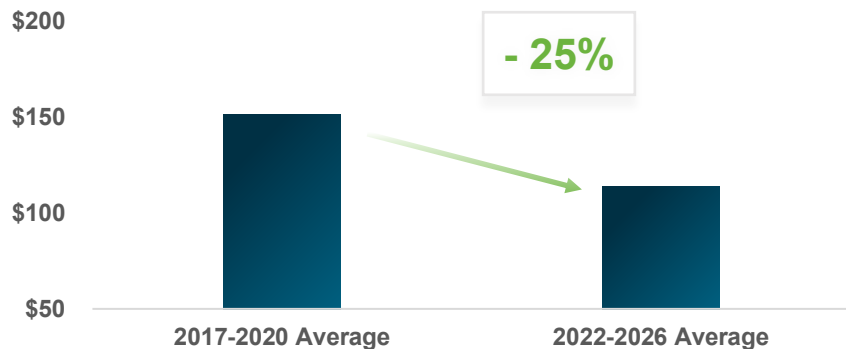
AVAILABILITY



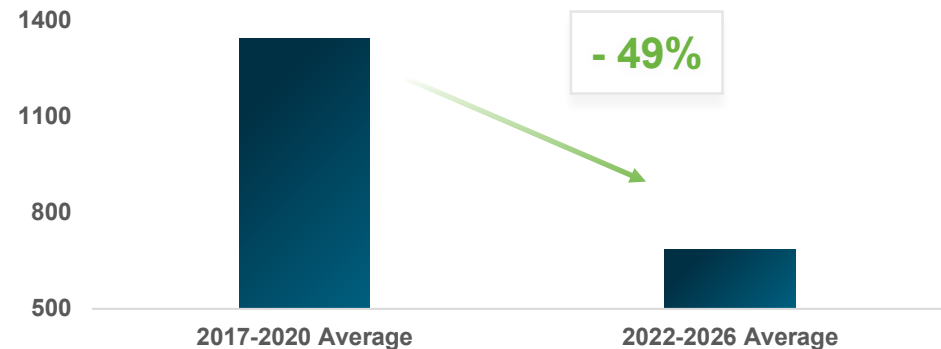
GENERATION OM&A



SUSTAINING CAPEX



GENERATION STAFFING LEVELS



Committed to Successful Stewardship



Whitewood Mine and Wabamun Plant



Mississauga



Centralia Mine



SunHills Mine

Proven track record of delivering historical and ongoing reclamation activities with manageable annual costs

Near-Term Commercial Focus

Facilities with contracts expiring before 2025

CUSTOMER/FACILITY	CONTRACT RENEGOTIATIONS	CONTRACT EXPIRATION
BHP Nickel West	●	2038
Sarnia Cogeneration Plant	○	2022 / 2025
Pingston and Upper Mamquam Hydro	○	2023 / 2025
McBride Lake Wind Farm	○	2024

LEGEND



Execution complete



In negotiations

Sarnia is our near-term re-contracting priority

- **4** industrial customers support this facility
- **1** PPA extension signed with significant customer
- **3** remaining customers in advanced negotiations





Key Takeaways

- 1 Business as usual operations and turnarounds during COVID-19 pandemic
- 2 5 Coal-to-Gas conversions and cessation of mining at SunHills
- 3 Successful Alberta merchant transition
- 4 Contract extensions and integration of new assets
- 5 Operational excellence - sustainable improvements in all key performance and customer indicators

Enhancing Value with Energy Marketing

Todd Stack

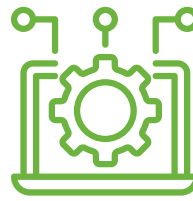
Executive Vice President, Finance
and Chief Financial Officer

President, TransAlta Renewables Inc.

Energy Marketing Fulfills Key Roles



**Manages commodity
risk for owned assets**

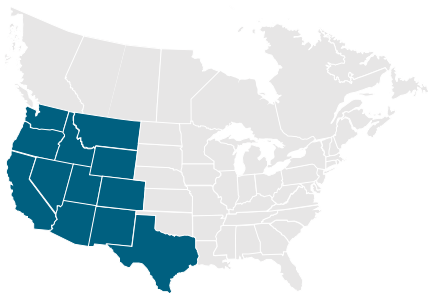


**Provides market
insights for growth**

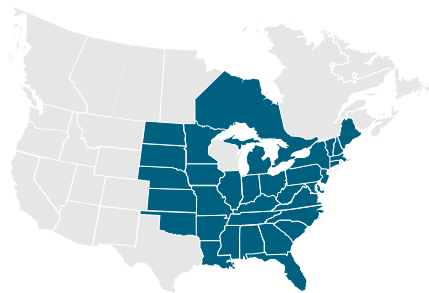


**Generates strong
segment free cash flow**

A Leading Trading Platform



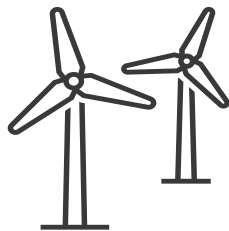
Western US



Eastern US
and Ontario



Natural Gas



Emissions

FRONT OFFICE

trading, origination, scheduling and analysis

MID OFFICE

risk, credit, trade confirms and trading compliance

BACK OFFICE

finance, settlements and legal

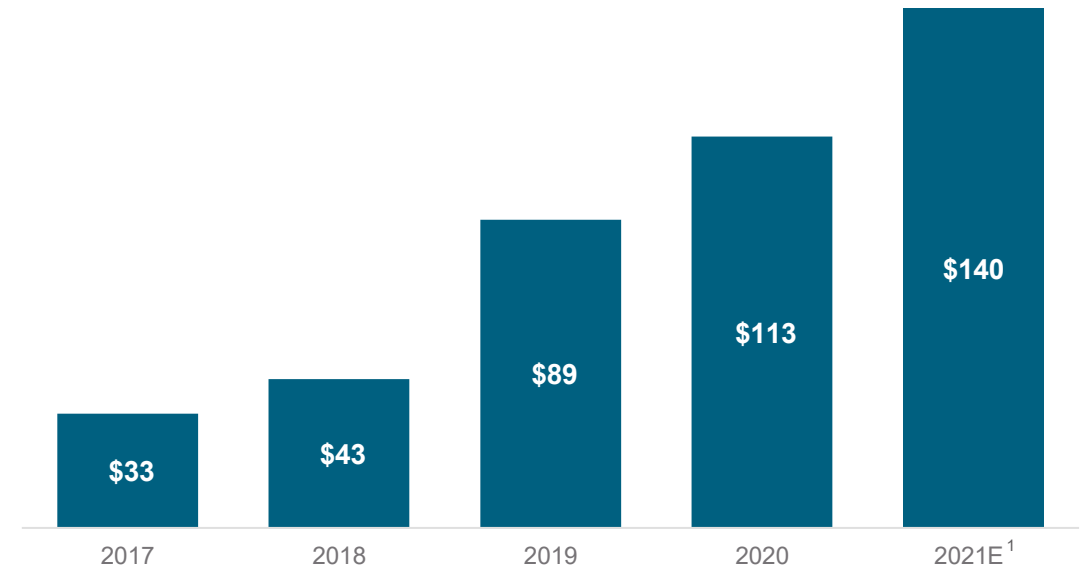
How Energy Marketing Makes Money

	WESTERN US	EASTERN US AND ONTARIO	NATURAL GAS	EMISSIONS
Markets	Northwest, CAISO, Southwest, SPP and ERCOT	IESO, ISO-NE, NYISO, PJM, MISO, Southeast and SPP	Canada and US	Canada and US
Execution for TransAlta and Third-Party Assets	○	○	○	○
Real Time Trading	○	○	○	-
Term Trading	○	○	○	○
Congestion Trading	○	○	-	-
Transmission / Transportation	○	○	○	-
Options	○	○	○	○
Origination and Structured Products	○	○	○	○

Significant EBITDA Contribution

EBITDA CONTRIBUTION

- Marketing team positioned to deliver value in all market conditions and supported by product and market diversification
- Recent performance is among strongest delivered since start of the business
- Tightly managed risk profile with lower-than-average value-at-risk metrics



Talented Energy Marketing team driving exceptional results



Key Takeaways

1

Delivers value across the fleet

2

Provides industry intelligence and insights in support of growth

3

Generates strong segment free cash flow

Financial Strategy and Plan

Todd Stack

Executive Vice President, Finance
and Chief Financial Officer

President, TransAlta Renewables Inc.

Positioned for Growth



FINANCIAL TRANSITION COMPLETE

- Senior debt targets achieved
- Realizing merchant potential of Alberta Hydro
- CTG transition lowers operating and capex intensity



EXCEPTIONALLY WELL-POSITIONED TO FUND ACCELERATED RENEWABLES GROWTH

- Strong balance sheet
- Over \$600 million¹ of cash available
- Generating significant cash flow from 2021 to 2025



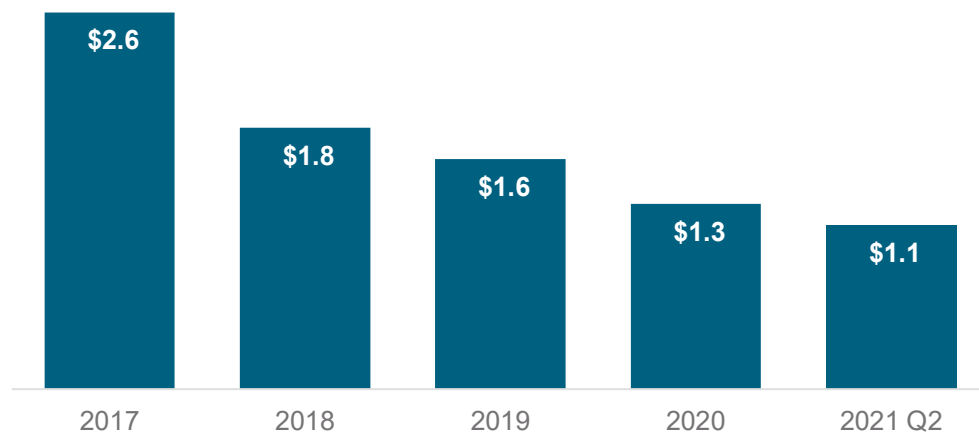
PRUDENT CAPITAL ALLOCATION MAXIMIZES SHAREHOLDER VALUE

- Deliver value to shareholders through growth + dividend + share buybacks
- Clear focus on renewables expansion will enhance shareholder value
- Disciplined target investment returns

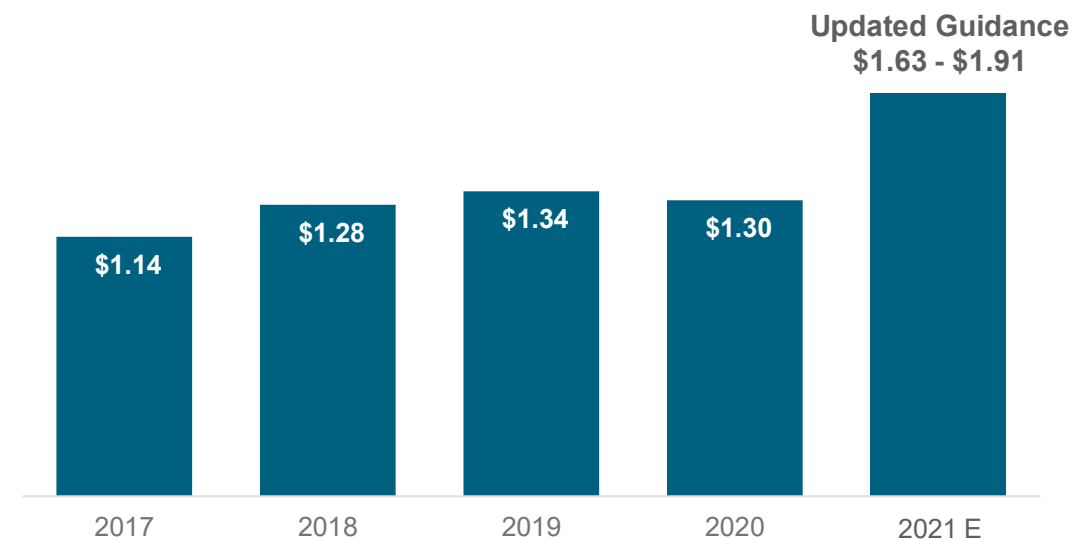
Financial strength enables customer-centred renewables growth

Financial Transformation Complete

SENIOR CORPORATE DEBT (\$ BILLION)



FCF PER SHARE



8% *annual dividend increase since 2019*

Disciplined Capital Allocation

Factors Impacting Risk Premium

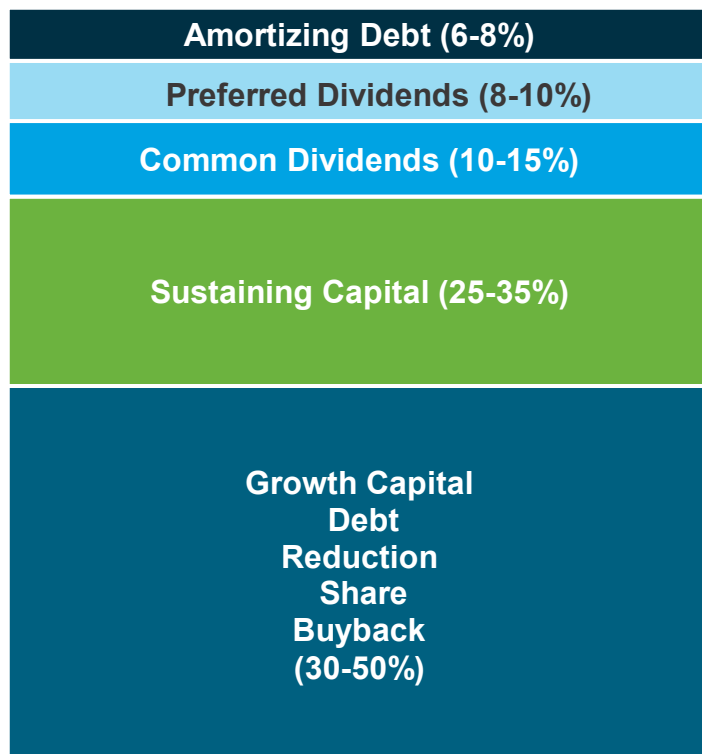
Project Development
Technology
Economies of Scale
Future Business Synergies
Operational Synergies
Counterparty Quality
Contract Tenor
Merchant Exposure
Geography
Regulatory Exposure
Inflation Exposure
Capital Recovery



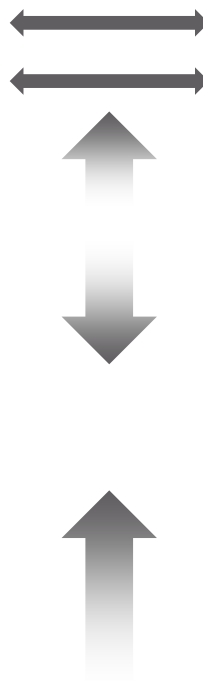
Our ability to identify and capture value drives enhanced portfolio returns

Prudent Capital Allocation

DECONSOLIDATED FFO¹



5-YEAR TREND



Improving performance provides increased allocation to:



Growth



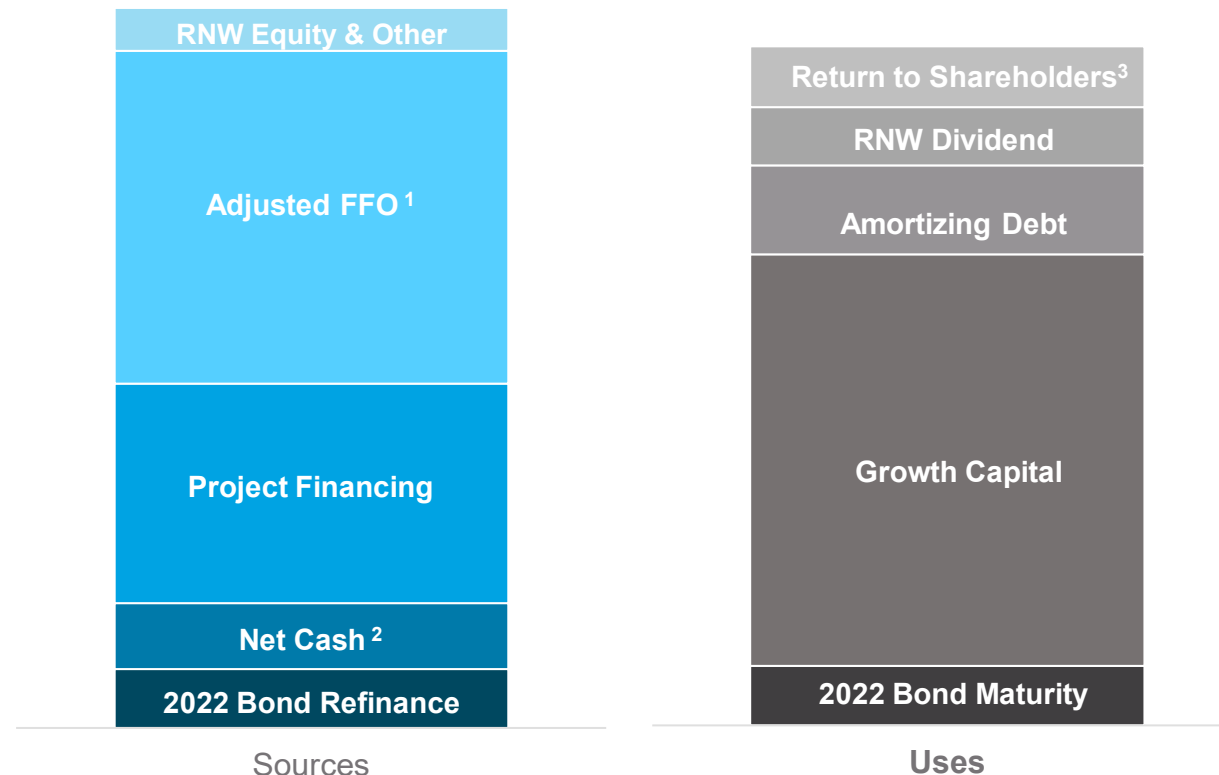
Dividends



Share Buybacks

Growth Plan is Fully Funded

CONSOLIDATED SOURCES AND USES 2021-2025



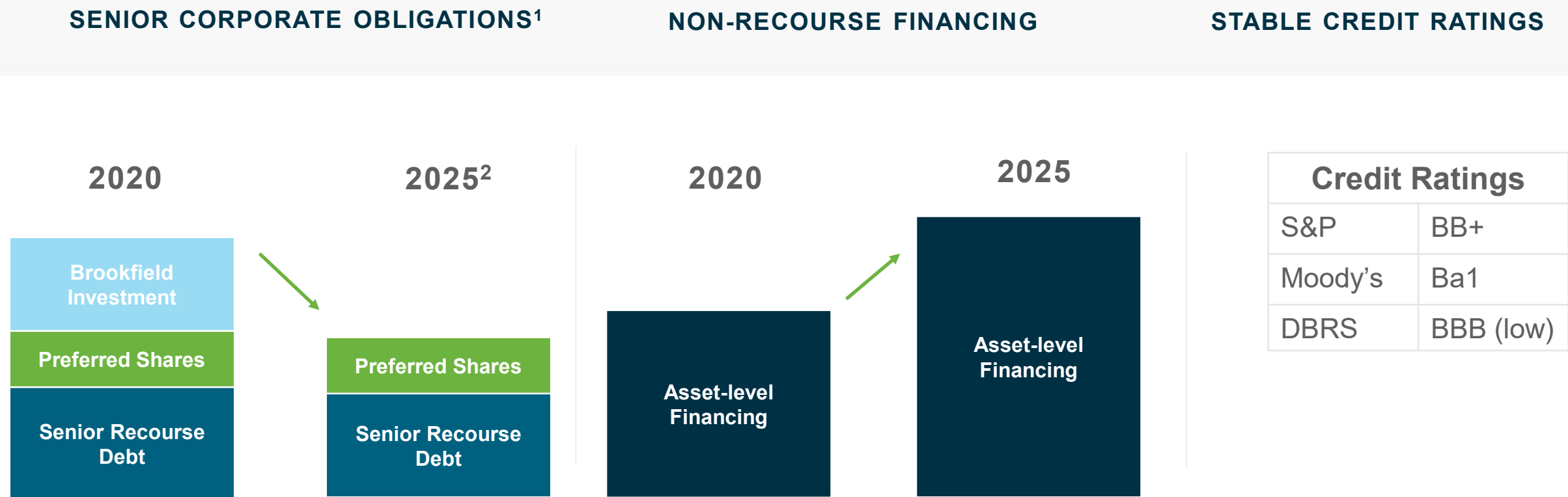
2 GW growth plan fully funded with cash flow and asset-level financing

¹Adjusted FFO is equal to FFO, less sustaining capital, lease obligations and distributions to NCI (excluding RNW public NCI).

²Net Cash is equal to cash less credit facility as of December 31, 2020

³Includes common share dividend, dividend on preferred shares and share buybacks

Senior Debt Levels Remain Unchanged



Asset-level financing at investment-grade credit metrics

83

¹Preferred share obligations included at 50%

²Assumes conversion of Brookfield investment



Key Takeaways

- 1 Plan in place to fund \$3 billion in renewables growth
- 2 Maintain disciplined capital allocation and targeted investment returns
- 3 Balance sheet well-positioned to support growth strategy
- 4 Focus on growing shareholder value

Our People and Culture

Jane Fedoretz

Executive Vice President

People, Talent and Transformation

2021 Culture Framework

Our Culture Goal: What we are working towards



Purpose

A leader in safe low-cost, reliable clean electricity – Improving our communities



Learning

Spark creativity and power human potential



Results

Execute our corporate strategy and deliver strong results

Organizational Health: How we behave, how we feel, how we belong and how we work together to get the job done



Policies & Practices

Aligning strategy and culture through programs, policies and practices.



Operational Safety

Everyone goes home safe everyday.



Equity, Diversity & Inclusion

It is our collective mission to ensure that every single employee feels a sense of inclusion and belonging and can show up to work as their true authentic self.



Leadership

Living our core values, leading by example, developing high-performance teams and being one per cent better everyday.



TransAlta Brand Strategy

Telling our story, living our values and our vision

Safety • Innovation • Sustainability • Respect • Integrity

Our People

CREATING A DYNAMIC, HIGH-PERFORMING CULTURE

ED&I strategy focused on “belonging and inclusion” create a company where people want to work



PROFESSIONAL DEVELOPMENT AND SUCCESSION

Develop talent pipeline through Career and Succession Planning

Provide cross functional development opportunities

Develop in-house expertise

Deliver leadership programs that aligns with the future of work



RETENTION

Offer flexibility through Full-time and Hybrid Remote Work Programs

Sustain low voluntary turnover rate of 6.3% by enhancing employee experience



PAY AND RECOGNITION

Review market data annually to ensure compensation structure is competitive and equitable

Timely recognition through Quarterly Recognition Program



Our people are our greatest asset, and our employee experience is important

Closing Remarks Q&A

John Kousinioris

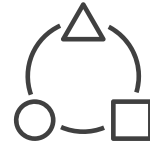
President and Chief Executive Officer

Strategic Priorities to 2025

Clean Electricity Growth Plan

- 1 Accelerate growth into customer-centred renewables and storage
- 2 Targeted approach to diversification
- 3 Maintain financial strength and capital allocation discipline
- 4 Define next generation of power solutions
- 5 Lead in ESG policy development
- 6 Successfully navigate through COVID-19 pandemic

Our Value Proposition



**Diversified and
resilient fleet**

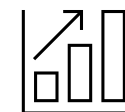


**Clean power leader
with ESG focus**

**~3 GW
growth pipeline**



**Strong
financial position**



Questions & Answers

Visit us at: www.transalta.com

Investor_Relations@TransAlta.com

