TransAlta Corporation

May 2019 Investor Presentation

Forward Looking Statements

This presentation includes forward-looking statements or information (collectively referred to herein as "forward-looking statements") within the meaning of applicable securities legislation. All forward-looking statements are based on the beliefs of TransAlta Corporation ("TransAlta" or the "Company") as well as assumptions based on available information and on management's experience and perception of historical trends, current conditions, and expected future developments, as well as other factors deemed appropriate in the circumstances. Forward-looking statements are not facts, but only predictions and generally can be identified by the use of statements that include phrases such as "may", "will", "can", "believe", "expect", "anticipate", "intend", "plan", "project", "forecast", "estimate", "foresee", "potential", "enable", "continue", or other comparable terminology. These statements are not guarantees of our future performance and are subject to risks, uncertainties, and other important factors that could cause actual performance, results or outcomes to be materially different from those set forth in the forward-looking statements. In particular, this presentation contains, but is not limited to, forward-looking statements and assumptions pertaining to: our business and strategy, including our strategy pertaining to the growth of TransAlta Renewables and coal-to-gas conversions and the potential for a "hybrid" conversion; hydro upside following 2021; executing behind the fence generation projects in Alberta; benefits of coal-to-gas conversions, including additional operating life, avoiding emission costs, lower operating and capital costs, reliability of converted units and outage timing; forecast 2019 EBITDA and cash available for distribution of TransAlta Renewables; drop-downs to TransAlta Renewables; timing, size and capital costs of projects under construction, including as it pertains to Big Level, Antrim, Windrise and Skookumchuk; the potential drop-down of assets to TransAlta Renewables, including Windrise and Skookumchuk; the closing of the acquisition of the Skookumchuk wind project; contributions to EBITDA from 2019 to 2020 from the Pioneer Pipeline, Skookumchuck, Windrise, Big Level and Antrim; capital investment of approximately $850 million in growth projects; the continued growth in TransAlta Renewables; and the lower cost of capital for TransAlta Renewables. The material factors and assumptions used in the preparation of the forward-looking statements contained herein, which may prove to be incorrect, include, but are not limited to, the Company's ability to successfully defend against any existing or potential legal actions or regulatory proceedings, including by Mangrove Partners; the closing of the second tranche of the Brookfield investment occurring and other risks to the Brookfield investment not materializing; no significant changes to regulatory, securities, credit or market environments; the anticipated Alberta capacity market framework in the future; the Alberta hydro assets achieving their anticipated future value, cash flows and adjusted EBITDA; the anticipated benefits and financial results generated on the coal-to-gas conversions and the Company's other growth strategies; assumptions contained in our press release dated December 17, 2018; and the assumptions set forth herein and in management's discussion and analysis and the Company's annual information form dated as of February 26, 2019.

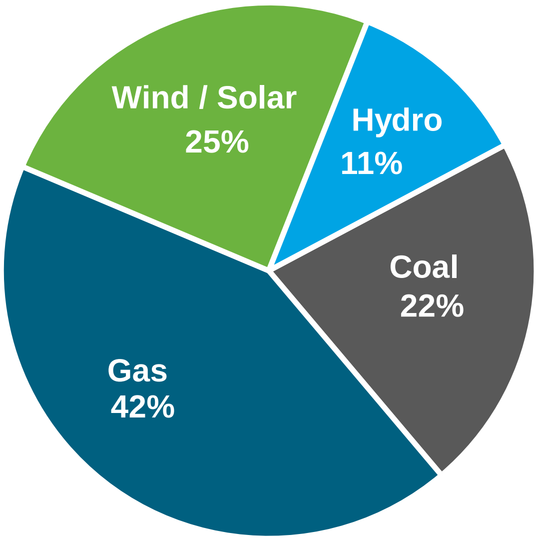
These statements are subject to a number of risks and uncertainties that may cause actual results to differ materially from those contemplated by the forward-looking statements. Some of the factors that could cause such differences include: the failure of the second tranche of the Brookfield investment to close; the outcomes of existing or potential legal actions or regulatory proceedings not being as anticipated, including those pertaining to the Brookfield investment; changes in our relationships with Brookfield and its affiliated entities or our other shareholders; our Alberta hydro assets not achieving their anticipated value, cash flows or adjusted EBITDA; the Brookfield investment not resulting in the expected benefits for the Company and its shareholders; the inability to complete share buy-backs within the timeline or on the terms anticipated or at all; fluctuations in demand, market prices and the availability of fuel supplies required to generate electricity; changes in the current or anticipated legislative, regulatory and political environments in the jurisdictions in which we operate; environmental requirements and changes in, or liabilities under, these requirements; operational risks involving our facilities; changes in market prices where we operate; unplanned outages at generating facilities and the capital investments required; equipment failure and our ability to carry out repairs in a cost effective and timely manner; the effects of weather; disruptions in the source of fuels, water or wind required to operate our facilities; energy trading risks; failure to obtain necessary regulatory approvals in a timely fashion; negative impact to our credit ratings; legislative or regulatory developments and their impacts, including as it pertains to the capacity market being developed in Alberta; increasingly stringent environmental requirements and their impacts; increased competition; global capital markets activity (including our ability to access financing at a reasonable cost); changes in prevailing interest rates; currency exchange rates; inflation levels and commodity prices; general economic conditions in the geographic areas where TransAlta operates; and other risks and uncertainties discussed in the Company's materials filed with the Canadian securities regulatory authorities from time to time and as also set forth in the Company's MD&A and Annual Information Form for the year ended December 31, 2018. In light of these risks, uncertainties, and assumptions, the forward-looking events might occur to a different extent or at a different time than we have described, or might not occur at all. We cannot assure readers that projected results or events will be achieved. Readers are urged to consider these factors carefully in evaluating the forward-looking statements and are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements included in this document are made only as of the date hereof and we do not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise, except as required by applicable laws.

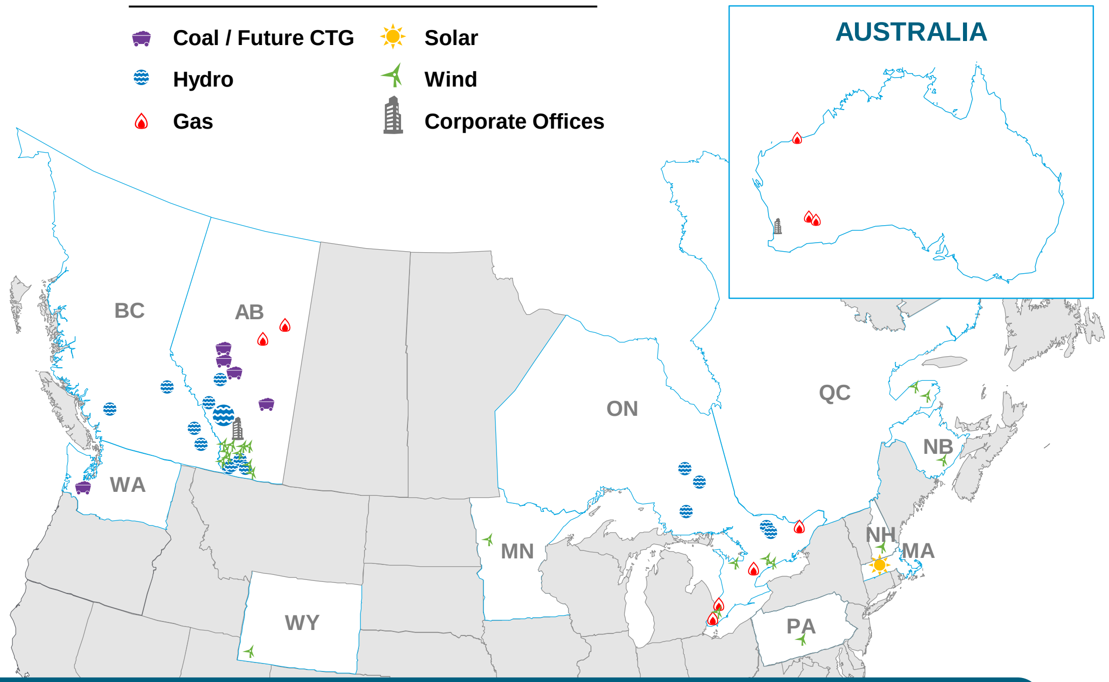
The Company evaluates its performance and the performance of our business segments using a variety of measures. Certain financial information contained in this presentation, including Free Cash Flow ("FCF") and Cash Available for Distribution ("CAFD"), are not standard measures defined under International Financial Reporting Standards ("IFRS") and may not be comparable to similar measures presented by other entities. These measures have no standardized meaning under IFRS and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS. Non-IFRS measures are presented to provide management and investors with a proxy for the amount of cash expected to be generated from operating activities, including with respect to income from subsidiaries of the Company in which it has an economic interest. For further information on non-IFRS financial measures we use and reconciliations to the most directly comparable IFRS measures, see the section entitled "Reconciliation of Non-IFRS Measures" contained in our most recent Management's Discussion and Analysis, filed with Canadian securities regulators on www.sedar.com and the Securities and Exchange Commission on www.edgar.com.

Unless otherwise specified, all dollar amounts are expressed in Canadian dollars.

TransAlta Today

2018 SEGMENTED CASH FLOW FROM THE BUSINESS [1]





Significant generator with 7,900 MW of capacity

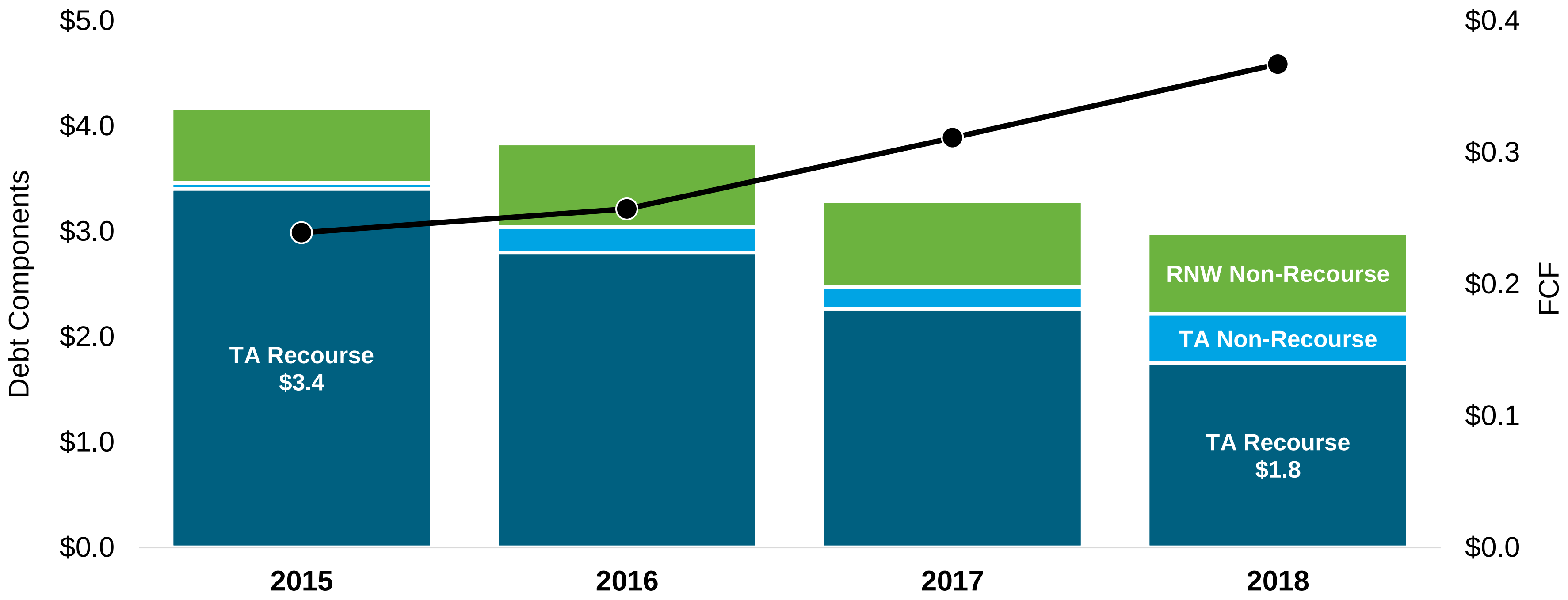
Diversified operations with 72 facilities in three countries

Highly contracted (69%) with upside to Alberta market

[1] Comparable EBITDA less sustaining capital productivity capital expenditures, reclamation costs, and provisions. It also excludes non-cash mark-to-market gains or losses as well as Energy Marketing and Corporate Segments. Adjusted to exclude the $157 million received during the first quarter of 2018 related to the Sundance B and C PPA termination payment.

Track Record

DEBT COMPONENTS AND FCF[1] ($ BILLIONS)



Generated Record Free Cash Flow in 2018

- FCF of $367 million, or $1.29 per share after adjusting for the one-time PPA termination payment

Strengthened the Balance Sheet

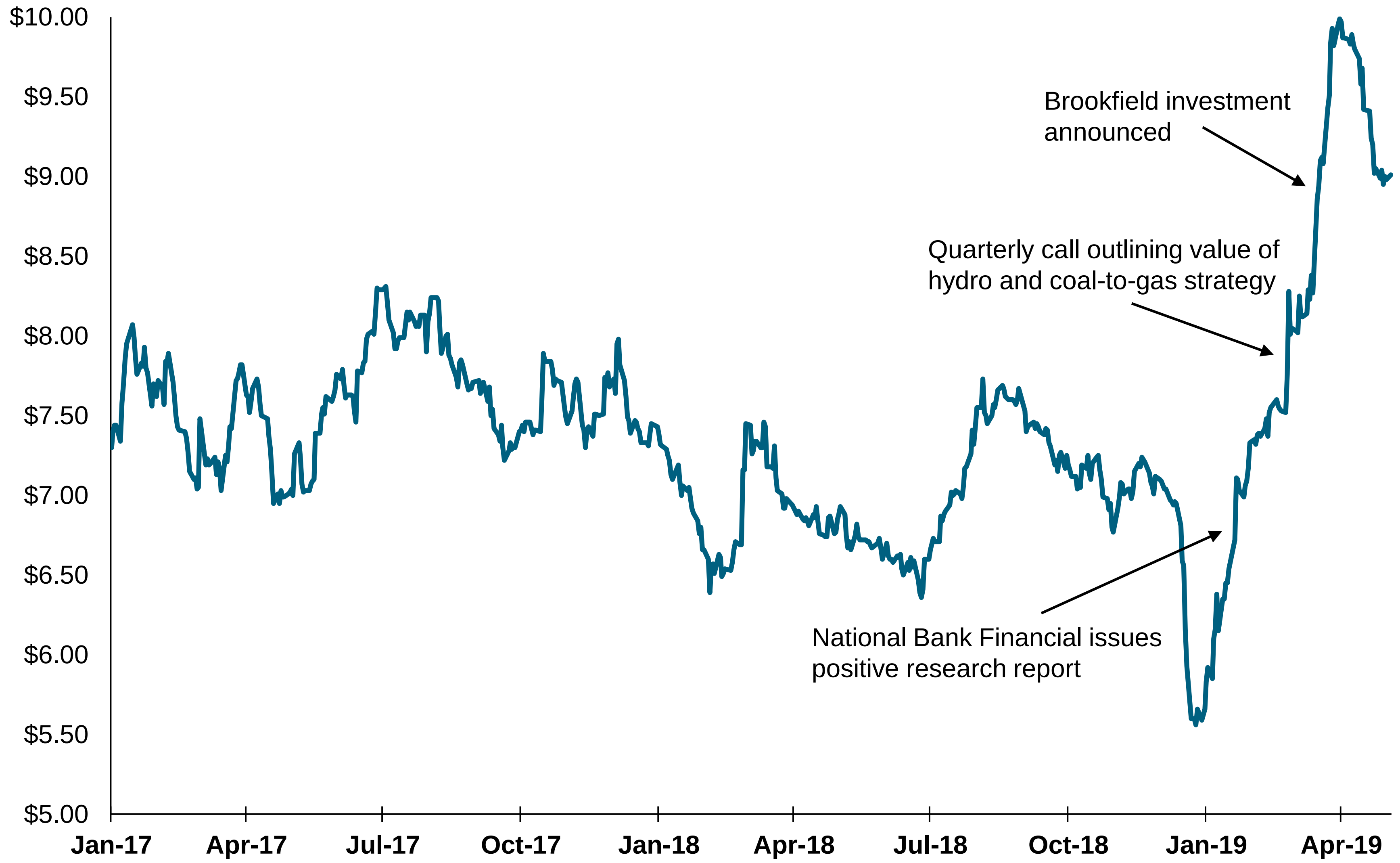
- $1.1 billion reduction in net debt since 2015
- One of the strongest balance sheets in the industry
- Strong credit supported by highly contracted and low risk assets

Built Financial Flexibility

- Raised $750 million through Brookfield transaction to finish transition

1. Adjusted to exclude the $157 million received during the first quarter of 2018 related to the Sundance B and C PPA termination payment and the $34 million OEFC settlement payment received in the first quarter of 2017.

TransAlta Share Price



Source: FactSet

Executing on Strategy

Coal to Gas Conversions

- Deploying capital in existing assets to extend life and increase capacity
- Coal to gas conversions on track - first outage in 2020
- Evaluating hybrid option
- Pioneer pipeline is ahead of schedule – COD expected Q2 2019

Hydro

- Strategic partnership with Brookfield adds extensive operating expertise
- Significant upside potential post PPA expiry (2021+)
- Continues to be a key asset for TransAlta

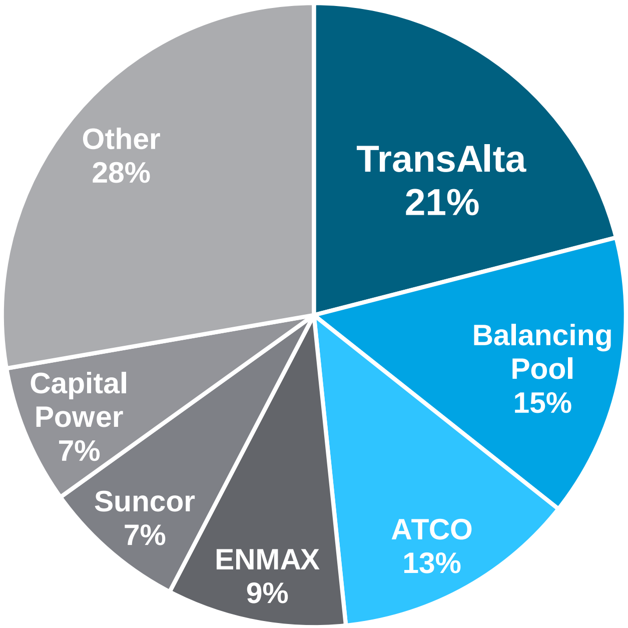
Grow TransAlta Renewables

- Continue to diversify and grow contracted asset base
- Develop existing and potential drop-down projects
- RNW's lower cost of capital and debt capacity support further growth

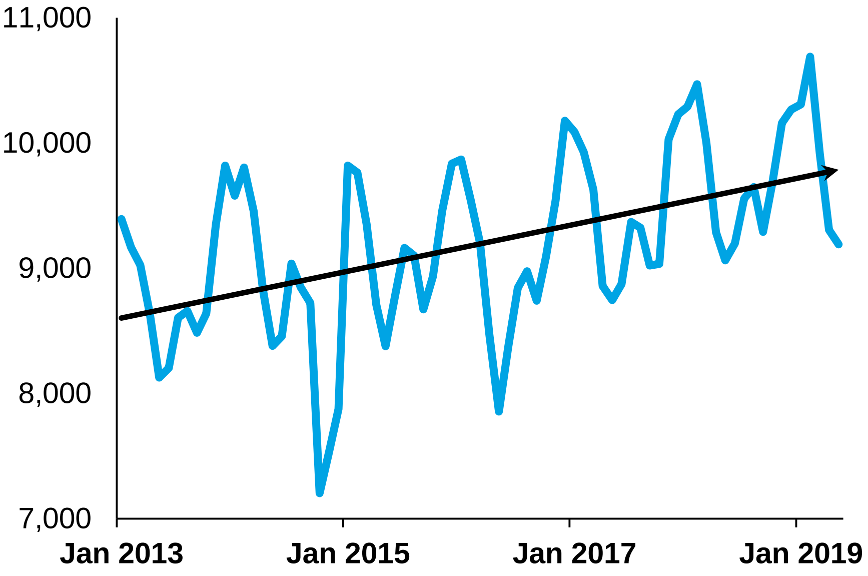
Alberta Market – TransAlta's Dominant Position

- Average demand growth in Alberta was 3.3% in 2018 and AESO load forecast growth is ~1%
- TransAlta is the largest incumbent in the province
- Significant potential opportunity from hybrid repowering of coal units
- Expect to announce Cogen and other behind the fence generation projects in the near future

ALBERTA MARKET PARTICIPANTS OFFER CONTROL



ALBERTA AVERAGE ELECTRICITY DEMAND (MWH)



Source: AESO, MSA

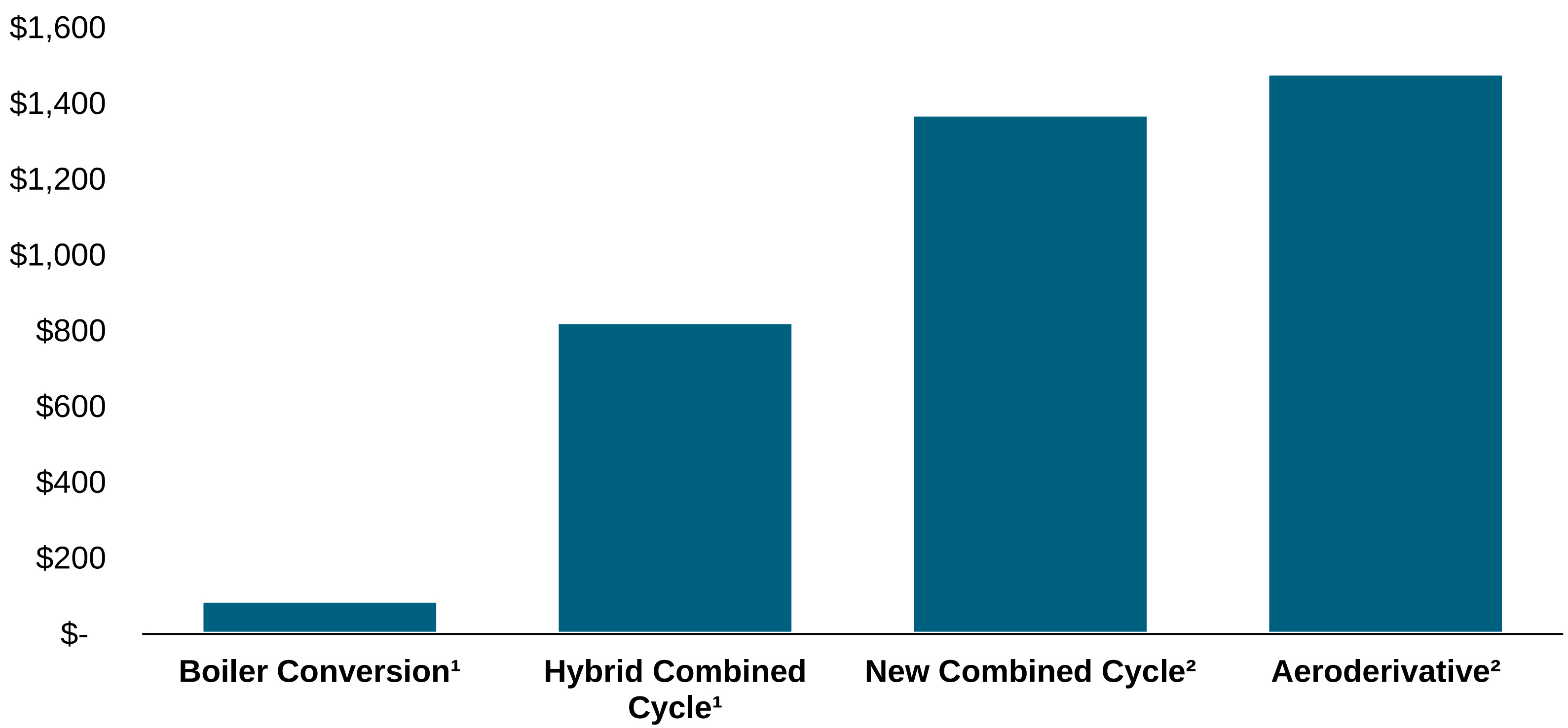
Coal to Gas Conversions

Modest Investment to Significantly Extend the Life of the Assets	• Coal units must retire between end of 2026 and 2029 if not converted • Conversion extends the assets out to 2034 – 2039 • Conversion costs of less than $90/KW
Avoids Cost to Reduce NOX/SOX Emissions	• NOx & SOx regulations would require investment in low-NOX burners and for dry sorbent injection, without extending the life of the assets • Conversion to gas avoids these costs, avoiding over $300 million in capital and operating costs
Significantly Lower Operating and Capital Costs	• Fixed and sustaining capital costs expected to decline by ~$130 million per year on average • Carbon costs significantly lower • Abundant supply of natural gas in Western Canada, resulting in very attractive prices at times
More Flexible and Reliable Operations	• Units expected to be more reliable on natural gas • Able to respond quicker to changes in market demand
Proven	• Coal-to-gas conversions have been successfully completed in other jurisdictions • Low risk execution as outage time is expected to be only 8 weeks

Modest Investment to Significantly Extend Asset Life

- Conversion extends the assets life out to 2034 – 2039
- Investment significantly lower by utilizing our existing infrastructure

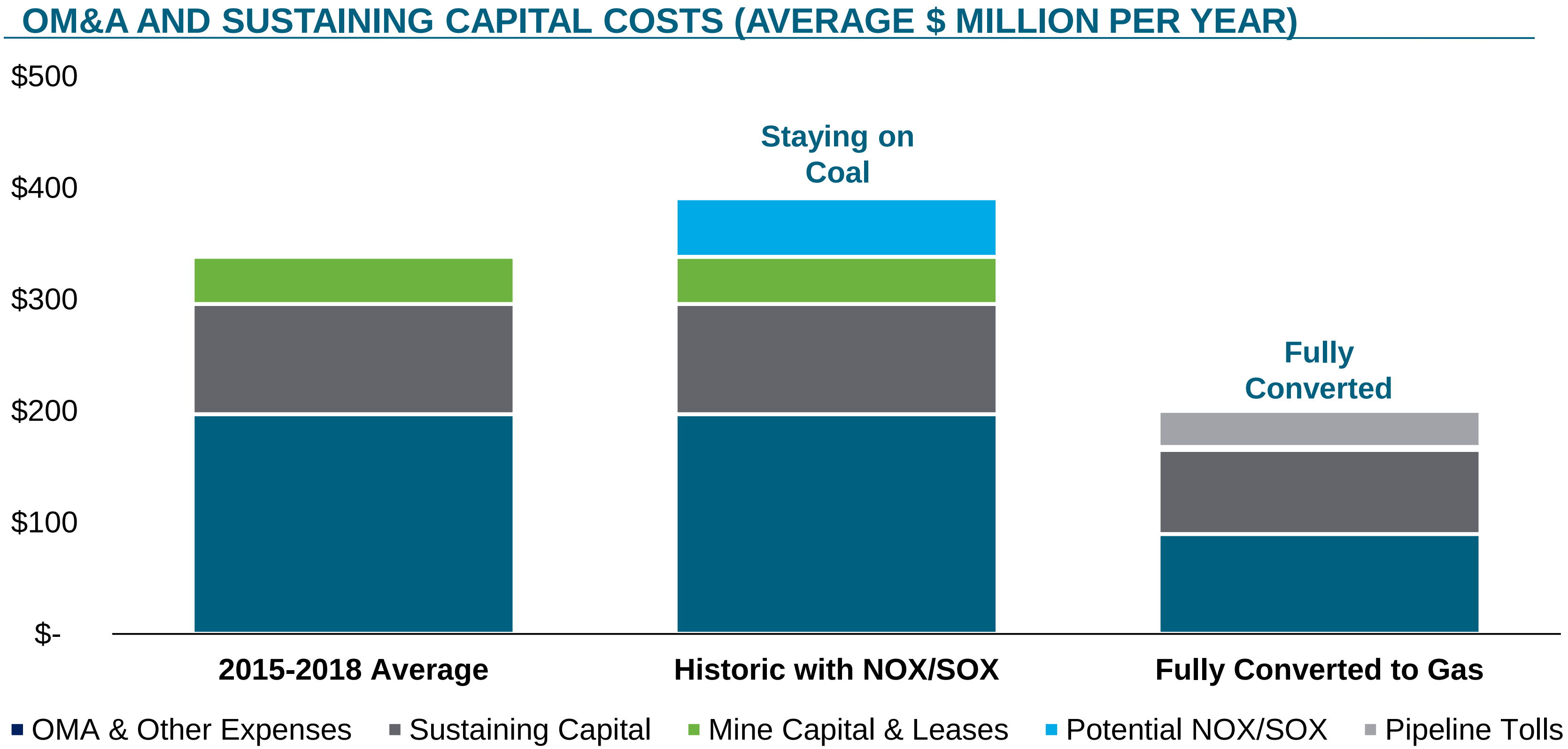
CAPITAL COST ($/KW)



(1)TransAlta and Sargent & Lundy
(2) Brattle Group and Sargent & Lundy Cost of New Entrant Study for AESO, Sept, 2018

Conversions Result in Significantly Lower Costs

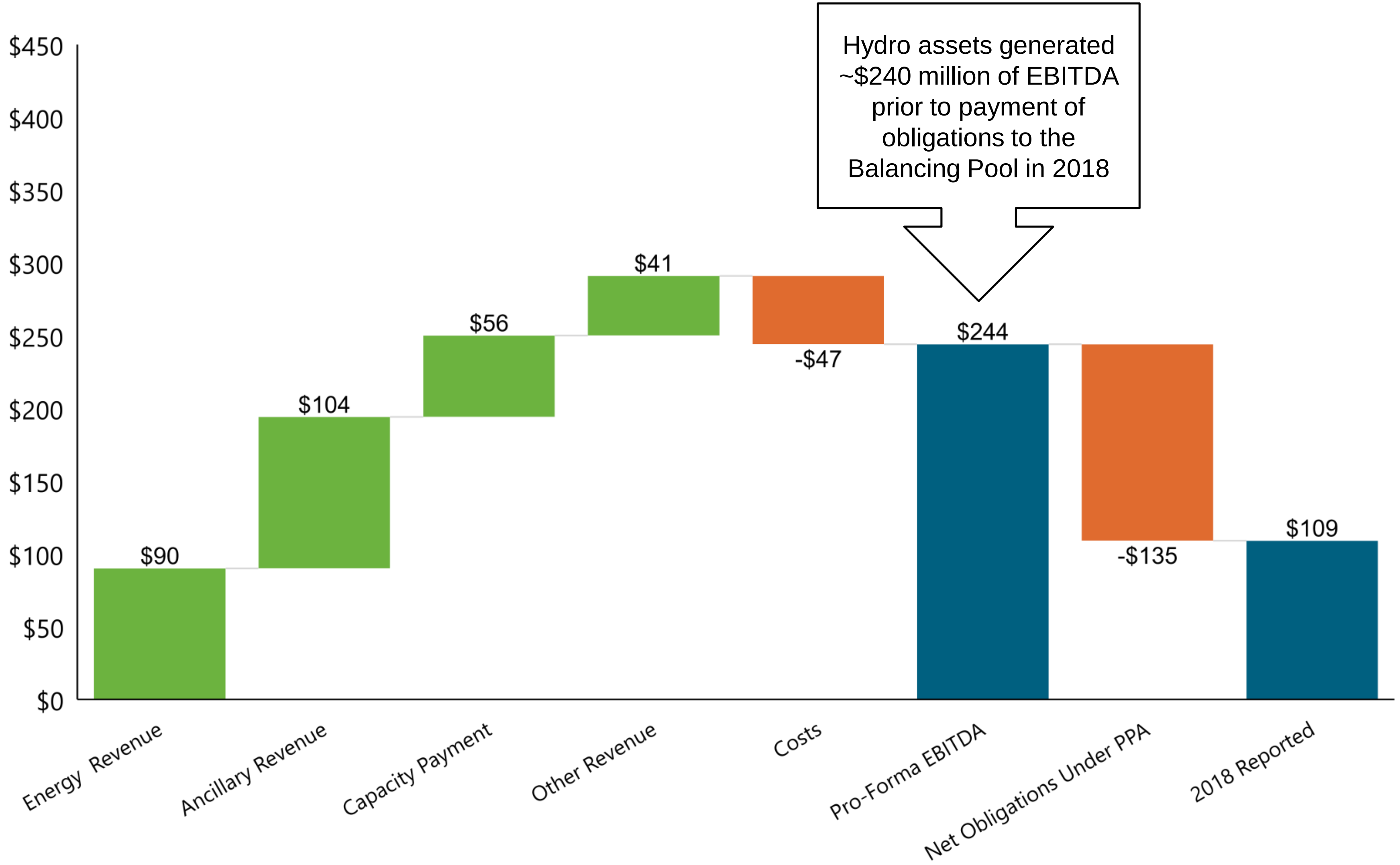
- In addition to longer asset life, operating and capital costs are significantly lower once the units are fully converted to gas
- Staying on coal would result in significantly higher costs in order to meet provincial NOx and SOx regulations



Notes: Charts do not include mine reclamation which would also be lower over the long-term once the units are converted. Fully Converted bar includes pipeline tolls but a significant portion of those would be recovered by TransAlta through its 50% ownership of the Pioneer Pipeline. Fully Converted chart assumes TransAlta's wholly-owned and joint venture units are converted to gas

EBITDA Currently Generated by TransAlta Hydro

2018 HYDRO BRIDGE ($ MILLIONS)



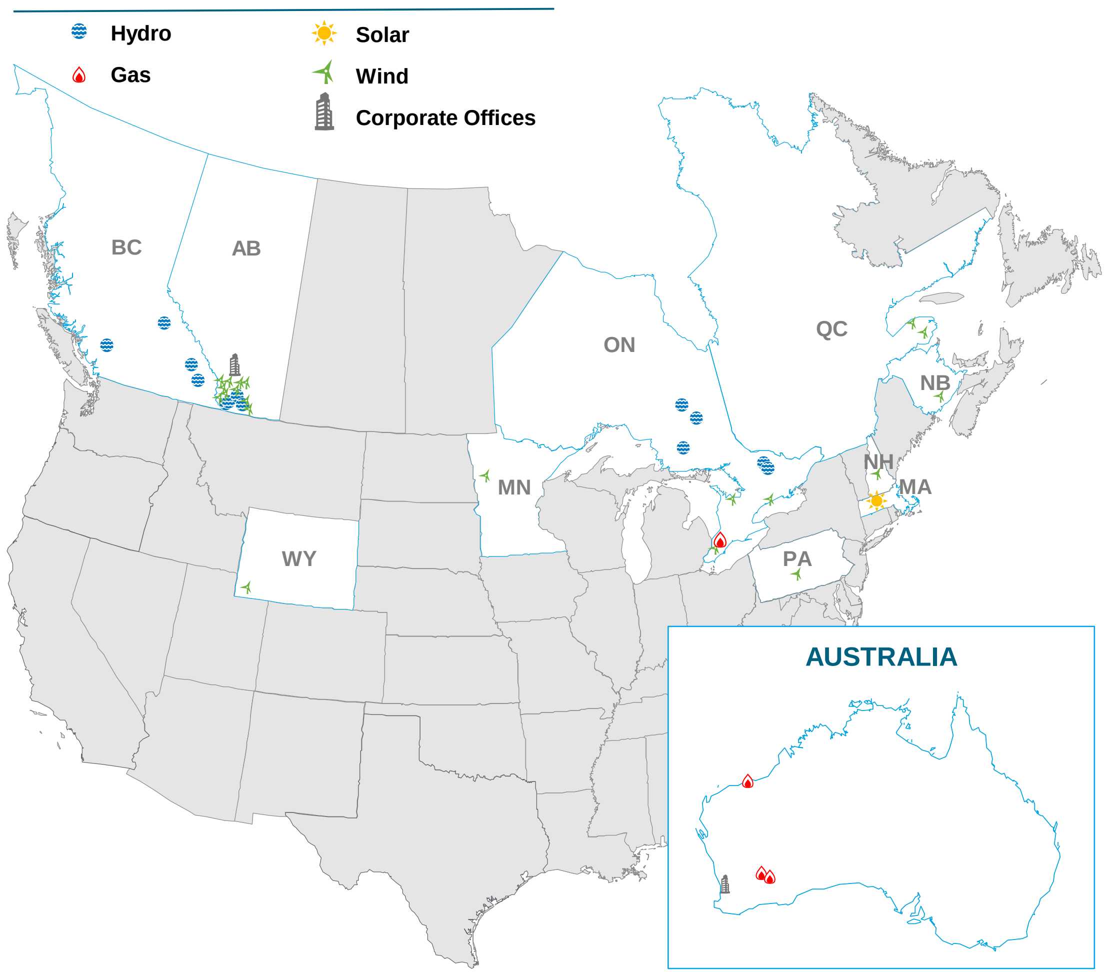
Assumptions: Other Revenue includes revenues from other hydro assets, transmission assets, and other services provided by the hydro facilities.

Investment in TransAlta Renewables

Company Highlights	
Enterprise Value[1]	$4.6 Billion
Market Cap.[1]	$3.6 Billion
Dividend Yield	6.9%
TransAlta's Ownership	61%
2019E EBITDA (guidance)	$425M - $455M
2019E CAFD (guidance)	$270M - $300M

Diversified Asset Base

	# of Assets	Owned MW	Percent of Generation Cash Flow
Wind	21	1,332	46%
Natural Gas	7	949	47%
Hydro	13	112	5%
Solar	1	21	2%
Total	42	2,414	100%

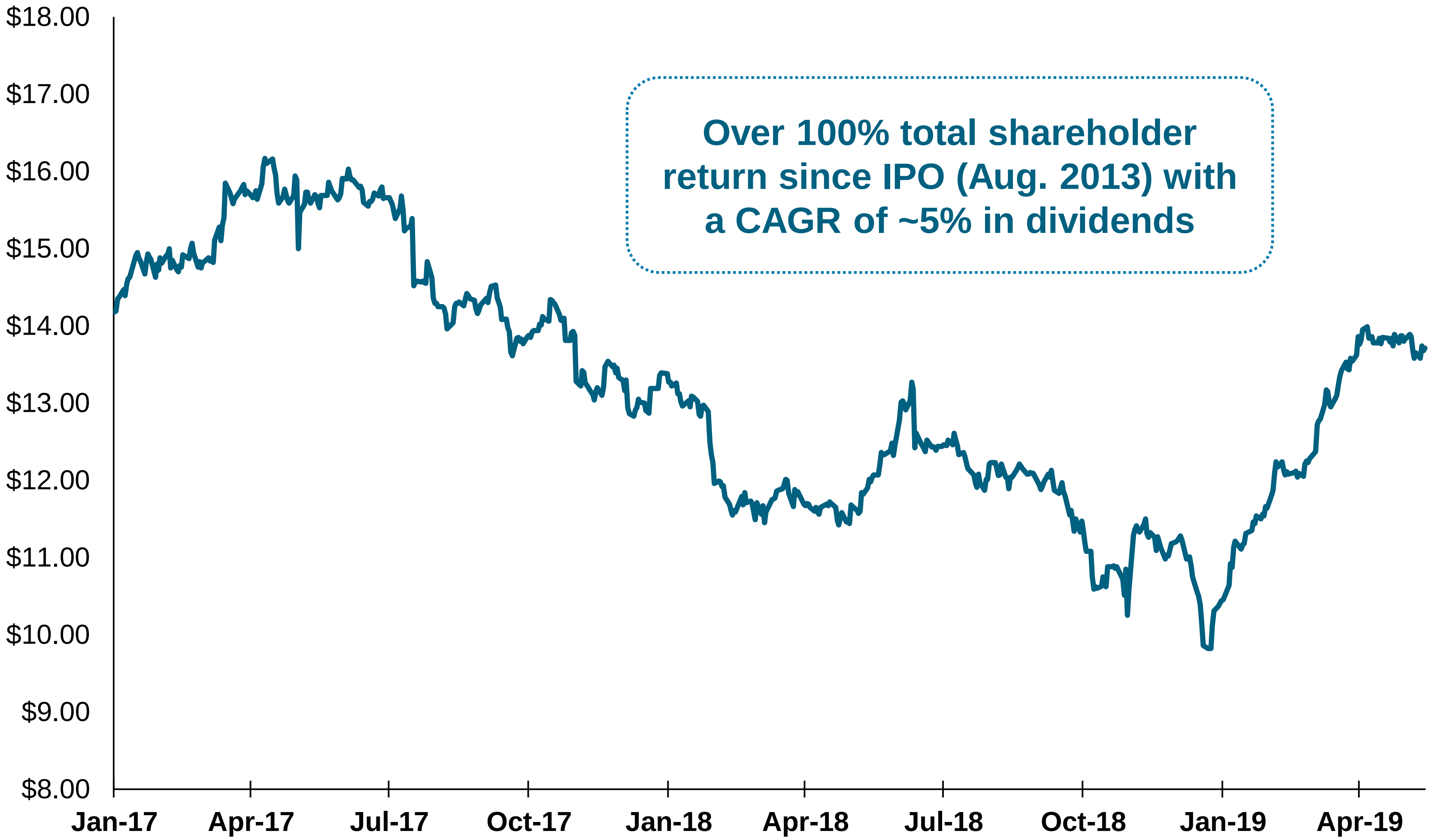


[1] *Based on closing price on the Toronto Stock Exchange as of May 15, 2019. Balance sheet data as at March 31, 2019.*

TransAlta Renewables Investment Highlights

Highly Diversified	• 42 facilities across multiple regions and spanning various technologies
Highly Contracted Portfolio	• ~11 year weighted average contract life
Strong Balance Sheet and Access to Competitive Capital	• 2.1x Net Debt/EBITDA • Strategic use of low cost project debt • $500 million syndicated credit facility
Proven Track Record of Growth and Value Creation	• $3.0 billion of acquisitions since IPO in 2013 • Over 100% total shareholder return since IPO
Cash Flows to TransAlta	• Approximately $150 million annually in dividends • Opportunity to monetize cash flows from contracted assets through drop-downs

TransAlta Renewables Share Price



TransAlta Corp is the majority owner of RNW (~61%)

Source: FactSet

Current Development Projects For TA and RNW

Big Level - 90 MW
Pennsylvania project

- 15-year PPA with Microsoft
- Capital cost of ~US$175 million
- Commercial operation expected in Q3 2019
- Funded in TransAlta Renewables

Antrim - 29 MW
New Hampshire project

- 20-year PPAs with Partners HealthCare (75%) and New Hampshire Electric Cooperative (25%)
- Capital cost of ~US$75 million
- Commercial operation expected in Q3 2019
- Funded in TransAlta Renewables

Windrise - 207 MW
Alberta REP project

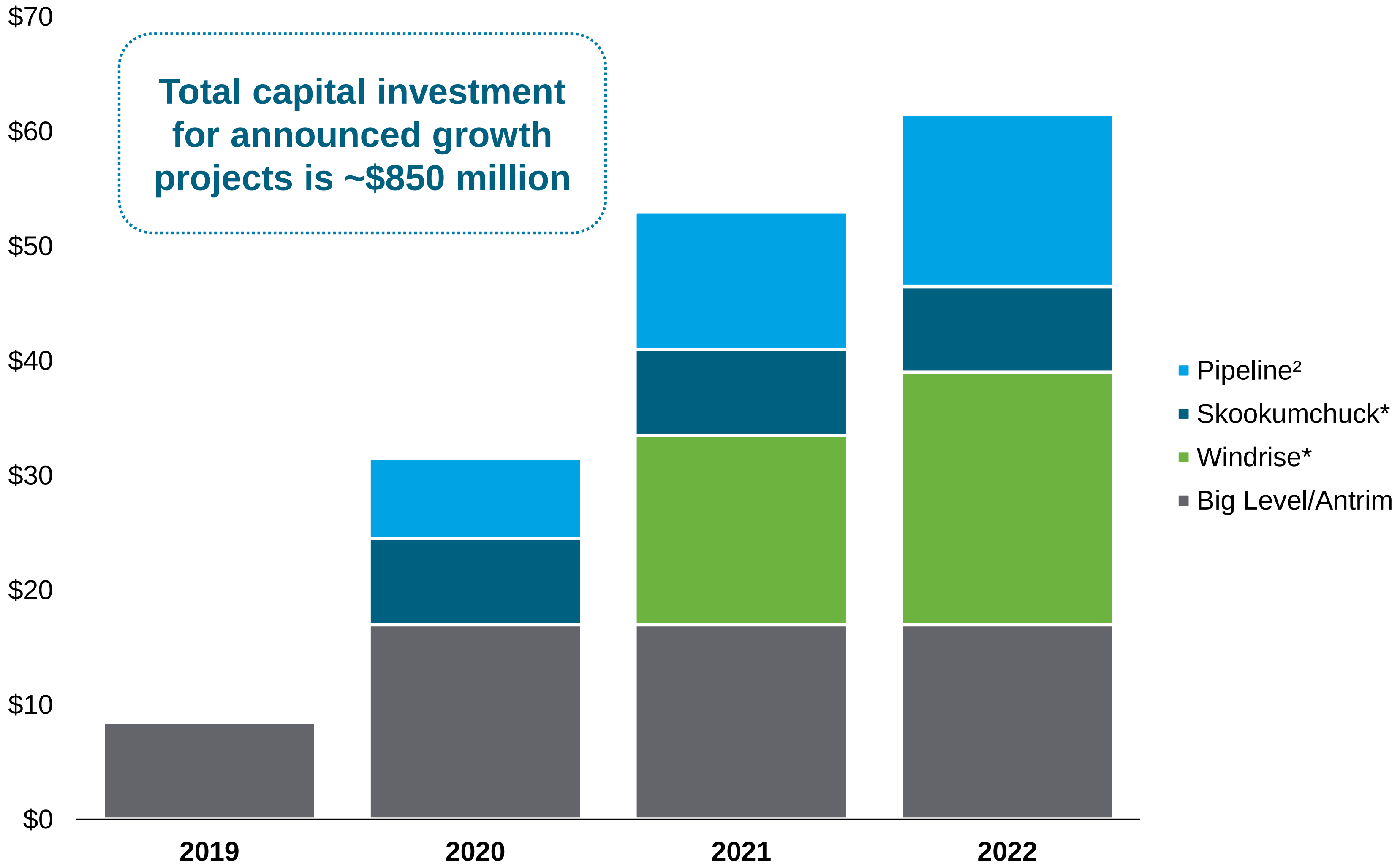
- 20-year contract with the AESO
- Capital cost of ~$270 million
- Commercial operation expected in Q2 2021
- Potential drop-down asset to TransAlta Renewables

Skookumchuck – Net 67 MW
Washington project

- 49% interest in the project
- 20-year PPA with an investment grade counterparty
- Capital cost of ~US$120 million
- Commercial operation expected in December 2019
- Potential drop-down asset to TransAlta Renewables

Growth Projects EBITDA

EBITDA[1] GENERATED BY NEW ASSETS ($ MILLIONS)



(1) Excludes tax equity Production Tax Credits (PTC).
(2) Pipeline EBITDA subject to throughput volumes
** Windrise and Skookumchuck are potential drop-down candidates to TransAlta Renewables*

Why Invest in TransAlta

1. Diversified portfolio with upside in Alberta
2. Growing cash flows from investments in coal to gas conversions
3. Growing cash flows from Alberta hydro assets
4. Strength from ownership position in TransAlta Renewables

Visit us at the Investor Centre on TransAlta.com

Investor_relations@transalta.com
1-800-387-3598

TransAlta™ CLEAN POWER