TransAlta Corporation

November 2019 Investor Presentation

TransAlta™

Powering Economies and Communities

Forward Looking Statements and Non-GAAP Measures

This presentation includes "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"). All forward-looking statements are based on our beliefs as well as assumptions based on information available at the time the assumption was made and on management's experience and perception of historical trends, current conditions, results 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"; "could", "would", "shall", "believe", "expect", "estimate", "anticipate", "intend", "plan", "forecast" "foresee", "potential", "enable", "continue" or other comparable terminology. These statements are not guarantees of our future performance, events or results and are subject to a number of significant risks, uncertainties and other important factors that could cause our actual performance, events or results to be materially different from that set out in the forward-looking statements. In particular, this presentation contains forward-looking statements including, but not limited to, statements relating to: TransAlta’s strategies, ongoing objectives and outlook for 2019 and subsequent periods, including the guidance provided on 2019 EBITDA and free cash flow (“FCF”); the amount of dividends payable from TransAlta Renewables to TransAlta; key strategic priorities, including delivery of $800 million of announced renewable growth, advancing our on-site generation business and increasing our presence in the U.S.; projects under development or construction, including the expected capital investment, returns and commercial operation dates; the potential drop-down of assets to TransAlta Renewables; target conversion plans, including the boiler conversions and re-powering of Sundance Unit 5; the benefits of converting to gas, including life extension and reduction in operating, capital and carbon costs; the pay-back period for converting to gas; the projects under development and construction, consisting of the SemCAMS Alberta Cogen project, Big Level project, the Antrim project, the Skookumchuck project, the WindCharger project and the Windrise project; the capital costs, expected commercial operation dates and forecasted EBITDA for such projects; the funding plan for TransAlta Renewables; capital allocation and dividend policies, including the allocation of 10% to 15% of deconsolidated funds from operations (“FFO”) to common share dividends; target of $1.2 billion of net senior recourse debt expected to be reached in 2020; debt metrics, including the post Hydro-PPA deconsolidated debt/EBITDA of less than or equal to 3-times; deconsolidated sources and uses from 2020 to 2023; and the implied value of TransAlta’s common shares and the potential uplift in share price.

The forward-looking statements contained in this presentation are based on many assumptions including, but not limited to, the following material assumptions: no significant changes to applicable laws in the markets in which we operate; assumptions referenced in our 2019 guidance; our Alberta hydro assets achieving their anticipated value, cash flows and EBITDA once the applicable power purchase arrangements have expired; maintaining the existing relationship with TransAlta Renewables and no material decline in the dividends expected to be received from TransAlta Renewables Inc.; the expected life extension of the coal fleet and anticipated financial results generated on conversion; the construction of additional cogeneration in Alberta; assumptions regarding the ability of the converted units to successfully compete in the expected Alberta energy-only market; and assumptions regarding our current strategy and priorities, including as it pertains to our coal-to-gas conversions. The material 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 assumptions set forth herein and in management's discussion and analysis (“MD&A”) and TransAlta's Annual Information Form dated as of February 26, 2019. By their nature, forward-looking statements are not guarantees of future performance, events, results or actions and are subject to a number of significant risks, uncertainties, assumptions and factors that could cause our actual plans, performance, results or outcomes to differ materially from the forward-looking statement. Factors that may adversely impact what is expressed or implied by forward-looking statements contained in this presentation include, but are not limited to, risks relating to: 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 and the South Hedland power station; 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 inability to complete share buy-backs within the timeline or on the terms anticipated; 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; delays in construction and/or cost overruns; 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; 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 TransAlta's materials filed with the Canadian securities regulatory authorities from time to time and as also set forth in the TransAlta's MD&A and Annual Information Form for the year ended December 31, 2018. Readers are urged to consider these factors carefully in evaluating the forward-looking statements and are cautioned not to place undue reliance on them, which reflect TransAlta's expectations only as of the date hereof. In addition, forward-looking statements, including 2019 guidance, are provided for the purpose of providing information about management’s current expectations and plans relating to the future. Readers are cautioned that reliance on such information may not be appropriate for other purposes. The forward-looking statements included in this presentation 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. In light of these risks, uncertainties and assumptions, the forward-looking statements might occur to a different extent or at a different time than we have described or might not occur at all. We cannot assure that projected results or events will be achieved.

Certain financial information contained in this presentation, including EBITDA, FFO and FCF, on a consolidated or deconsolidated basis, are not standard measures defined under International Financial Reporting Standards (“IFRS”) and may not be comparable to similar measures presented by other entities. TransAlta’s deconsolidated FFO and deconsolidated Debt to EBITDA are non-IFRS measures and a reconciliation back to IFRS measures is included in the Management Discussion and Analysis for the third quarter 2019. These measures should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS. Presenting these items from period to period provides management and investors with the ability to evaluate earnings and cash flow trends more readily in comparison with prior periods’ results and, in the case of the deconsolidated FFO and Debt/EBITDA, it allows shareholders to understand how the dividend at TransAlta Renewables is being either returned or invested for TransAlta shareholders. For further information on non-IFRS financial measures we use, see our most recently filed MD&A, filed with Canadian securities regulators on www.sedar.com and the Securities and Exchange Commission on www.edgar.com.

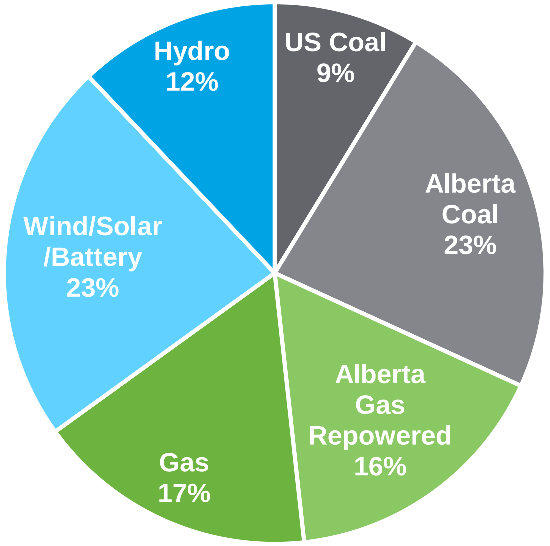
TransAlta Summary

Corporate Snapshot

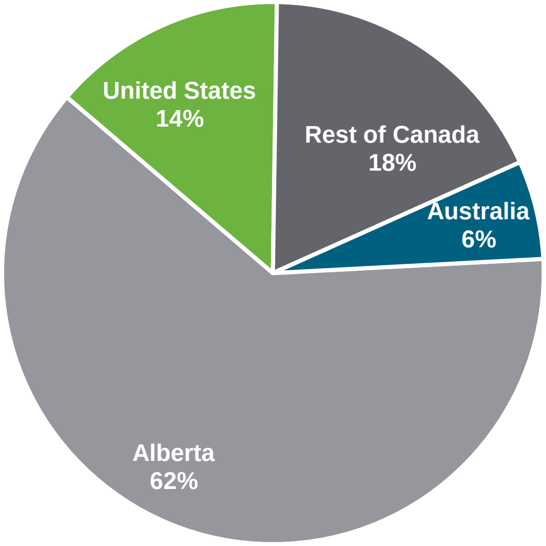
Enterprise Value[1]	$8.0 Billion
Market Capitalization[1]	$2.4 Billion
Dividend Yield[1]	2.0%
2019E EBITDA (guidance)	$875M - $975M
2019E FCF[2] (guidance)	$300M - $340M

70 generating facilities with 7,938 MW of capacity spanning multiple technologies and regions

TECHNOLOGY DIVERSITY IN 2021[3]



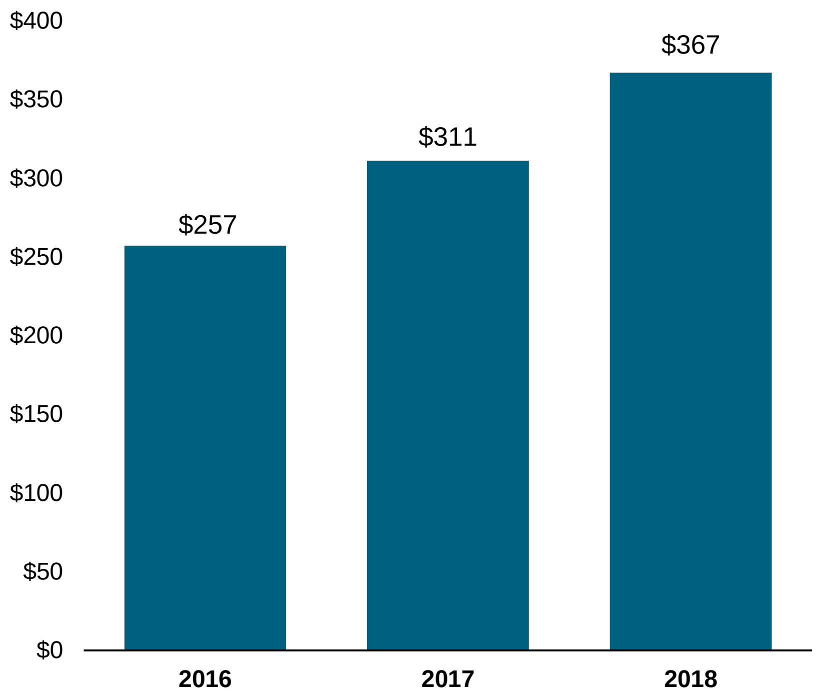
GEOGRAPHIC DIVERSITY IN 2021[3]



1) Price as at November 7, 2019. Non-Controlling Interest of TransAlta Renewables based on market value. 2) Free cash flow (FCF) is an important metric as it represents the amount of cash that is available to invest in growth initiatives, make scheduled principal repayments on debt, repay maturing debt, pay common share dividends, or repurchase common shares. 3) Based on MW of owned capacity. Includes projects under construction and excludes one of the Centralia coal units as it is retiring at the end of 2020.

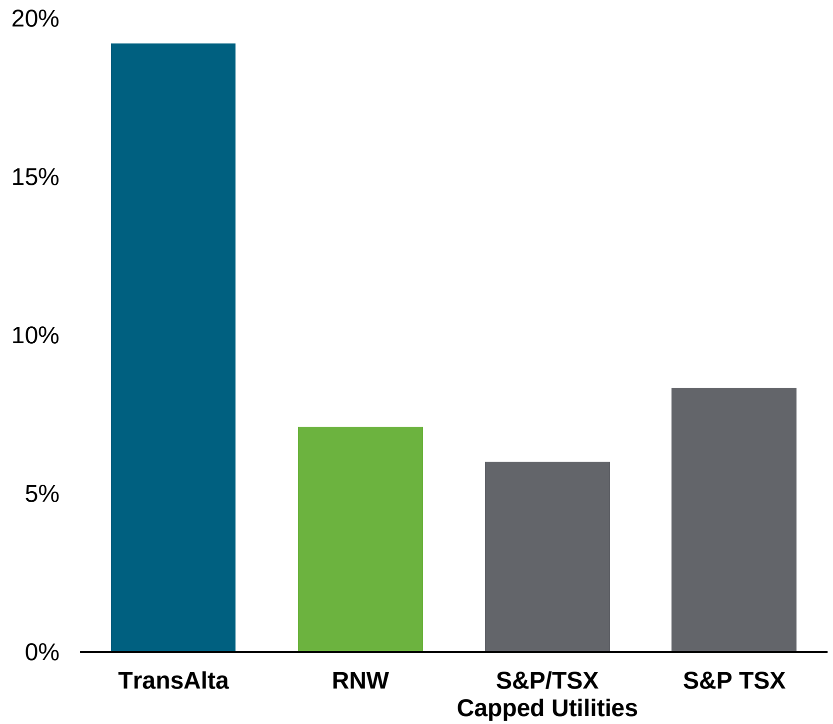
Strong Financial and Market Performance

CONSOLIDATED FREE CASH FLOW[1] ($ MILLIONS)



FCF per share	$0.89	$1.08	$1.28

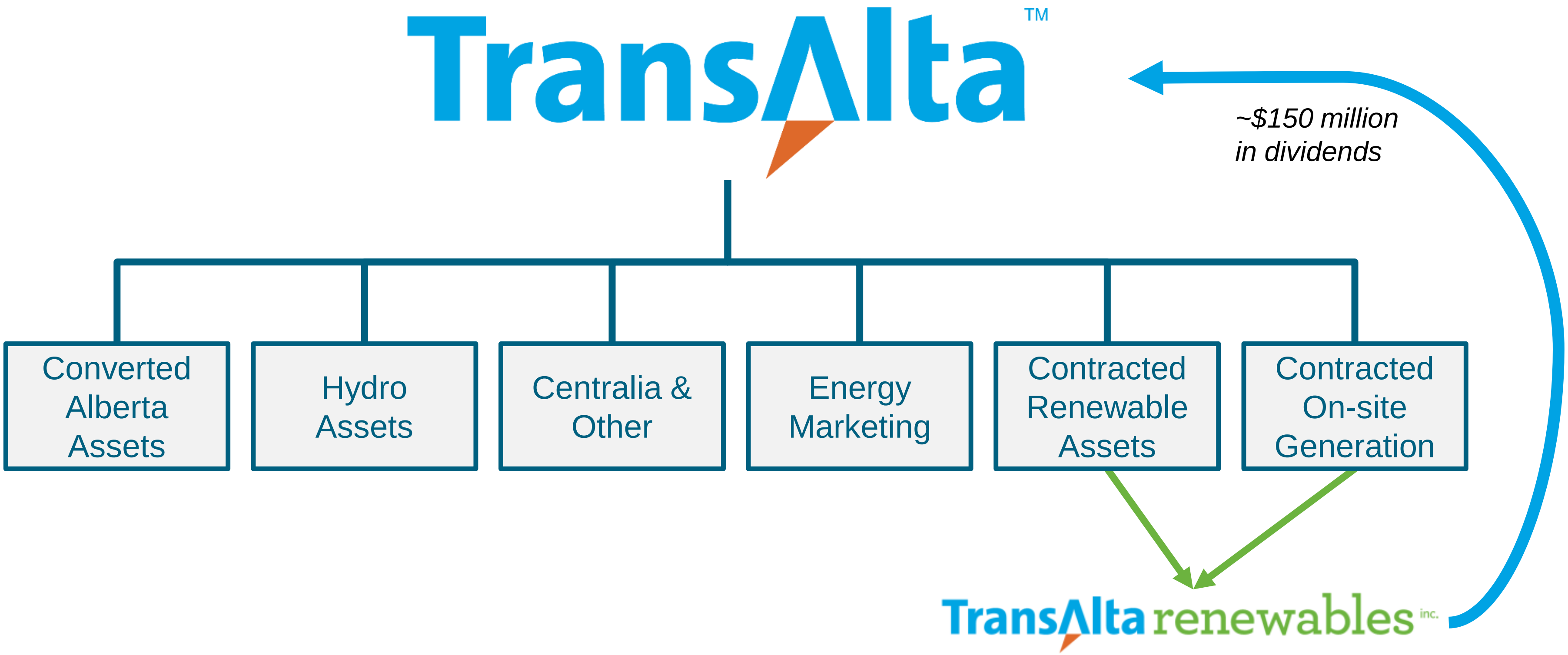
AVERAGE ANNUAL TOTAL SHAREHOLDER RETURN FOR LAST THREE YEARS[2]



Strong free cash flow performance delivering shareholder value

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. 2) Price as at November 7, 2019. Total shareholder return includes return from dividend and share appreciation.

Investment in TransAlta Renewables



Portfolio run by a single leadership team
Provides operational and financial synergies driving competitive advantage

ESG Leadership at TransAlta

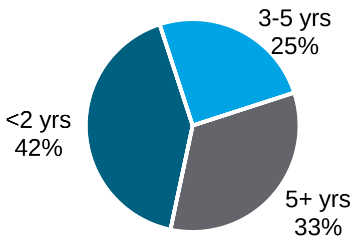
Four years of voluntary integrated reporting

- Empirical evidence shows that Environmental, Social and Governance (ESG) performance is correlated with financial performance

Diversified Board and senior management team

- Board average tenure of less than five years
- Board and Workplace Diversity Policy in place since 2015

BOARD TENURE



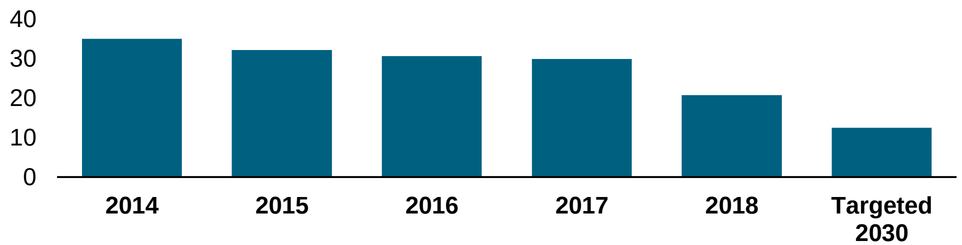
BOARD AND EXECUTIVE TEAM DIVERSITY

	TransAlta	Industry Average
Women on executive team	40%	25%
Women on Board	33%	31%

Substantial decrease in GHG emissions

- Reduced total GHG emissions by 14.2 million tonnes since 2014
- Targeting a 40% decrease in emissions by 2030
- No coal generation past end of 2025

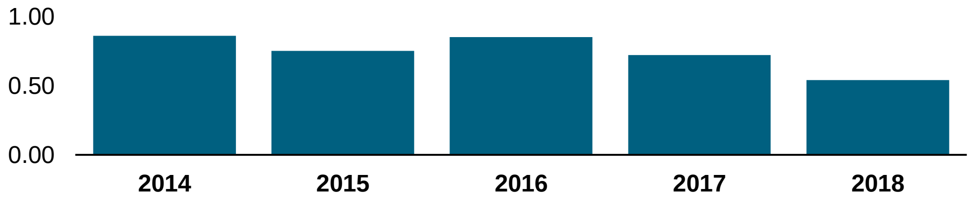
GHG EMISSIONS (MILLION TONNES CO_2E)



Safety performance

- 37% reduction on Injury Frequency Rate[1] over five years (0.54 vs 0.86)
- Target Zero – aspirational goal to have zero accidents

INJURY FREQUENCY RATE (IFR)



1) The injury frequency rate (IFR) measures work-related medical aid and lost-time injuries per 200,000 hours worked. IFR is calculated using a combination of actual and estimated exposure hours.

ESG Rankings and Recognition

CDP DRIVING SUSTAINABLE ECONOMIES	**Carbon Disclosure Project Indices**	• Voluntary reporting since 2010 • Industry and North American leader on climate change management, performance and disclosure • Current Score: B (Management) • Industry and North American Average Score: C (Awareness)
TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES	**Task Force on Climate-related Financial Disclosures**	• Voluntary aligned climate change disclosure since 2016
Canadian Council for ABORIGINAL BUSINESS United Way Calgary and Area	**Community Engagement**	• Silver level PAR (Progressive Aboriginal Relations) • United Way “Thanks a Million Award” recipient since 2001 • Supporter of Calgary Stampede since 1938

TransAlta has reported on sustainability for over 25 years

Key Strategic Priorities

Successfully execute conversion strategy

Deliver $800 million of announced renewables growth

Advance and expand our on-site generation business

Increase our presence in the US renewables market

Maintain a strong financial position

Significant Growth Underway

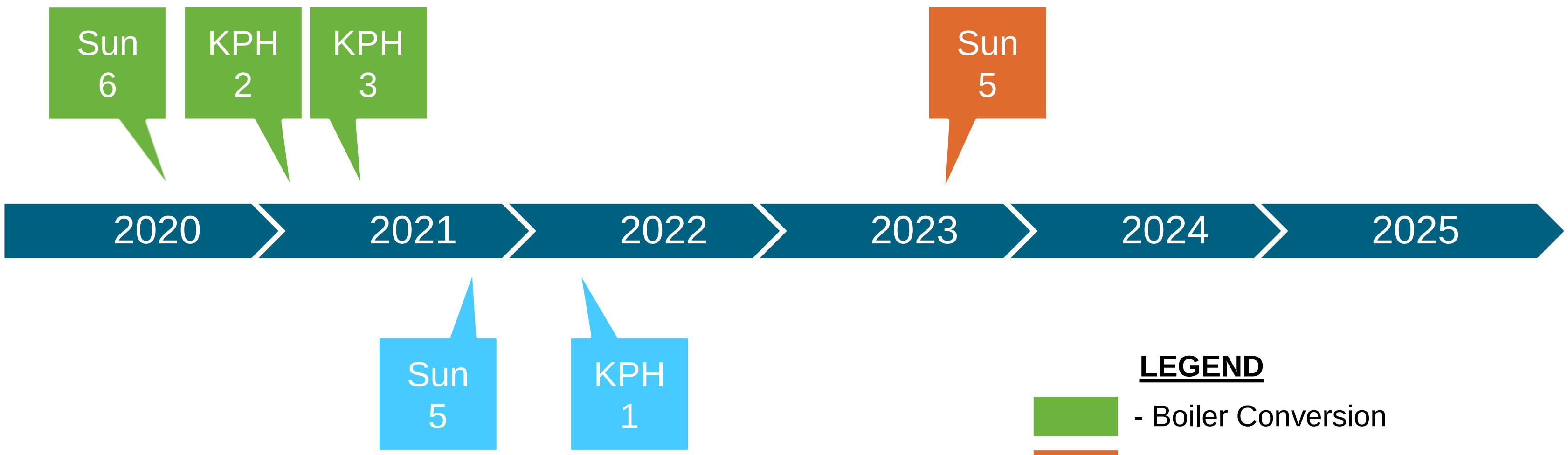
	Projects	Owned MW	Capital Invested[6] (CAD$ millions)	Expected Returns	Expected COD
RNW	**Big Level Wind**	90	$225 - $240	High single digit	Q4 2019
	Antrim Wind	29	$100 - $110	High single digit	Q4 2019
Potential RNW Drop- Down	**Skookumchuck Wind[1]**	67	$150 - $160	High single digit	H1 2020
	Windrise Wind	207	$270 - $285	High single digit	H1 2021
	WindCharger Battery[2]	10	$7 - $8	Low/Mid teens	H1 2020
	SemCams Cogen[3]	40	$105 - $115	Low/Mid teens	H2 2021
TA	**Boiler Conversions[4]**	1,260 to 2,430	$100 - $200	50+%	Late 2020 – 2023
	Repowering[5]	730	$750 - $770	Double digit	2023
		Total	**$1,707 - $1,888**		

Expect to invest up to $1.9 billion in TransAlta and TransAlta Renewables in high returning projects

1) Represents TransAlta's ownership of 49 per cent. 2) Capital investment represents TransAlta portion. 3) Capital investment represents total costs. SemCAMS has a 50% buy-in option at COD. 4) Boiler conversions include Sundance and Keephills units and excludes Sheerness units. 5) Keephills 1 Unit remains a candidate for repowering, but would most likely occur after the 2023 timeframe shown in the table. 6) Expected capital spend to the end of 2023.

Targeted Conversion Plans

- Base plan involves three boiler conversions in the 2020 to 2021 period, and one unit repowered into combined cycle
  - Sundance 5, the future repowered combined cycle unit, will either co-fire until repowered or potentially be converted to 100% gas via a boiler conversion, as the carbon savings are significant
  - Options for Sundance 3 and 4 will be evaluated in the 2020/2021 timeframe and be based on long-term market fundamentals
  - The plan presented assumes there are no delays in securing 100% of natural gas supply requirements that may result from regulatory or other constraints



LEGEND

- Boiler Conversion

- Repowered Combined Cycle

- Co-fire or Boiler Conversion

Note: Option to repower the Keephills 1 unit to a combined cycle unit or to convert the unit to gas via a boiler conversion at a later date, depending in each case on market fundamentals

Significant Benefits from Converting to Gas

Benefits

- Attractive investment returns
- Significantly extends life of the fleet
- Significantly lowers operating, capital and carbon costs
- Natural gas is in abundant supply and competitively priced
- Avoids significant expenditures on NO_X and SO_X
- Low capital and outage time for boiler conversions
- The brownfield repowered combined cycle has a capital cost 40 – 50% lower than greenfield combined cycle or cogen
- Removes complex and expensive mining operations

Achieved Milestones

- ✓ Issued FNTP for Sundance 6 Unit
- ✓ Issued LNTP for Keephills 2 Unit
- ✓ K3/G3 non-operating interest swap
- ✓ Transported first gas on Pioneer Pipeline with firm contract beginning November 1st
- ✓ Advanced repowering strategy with Kineticor transaction

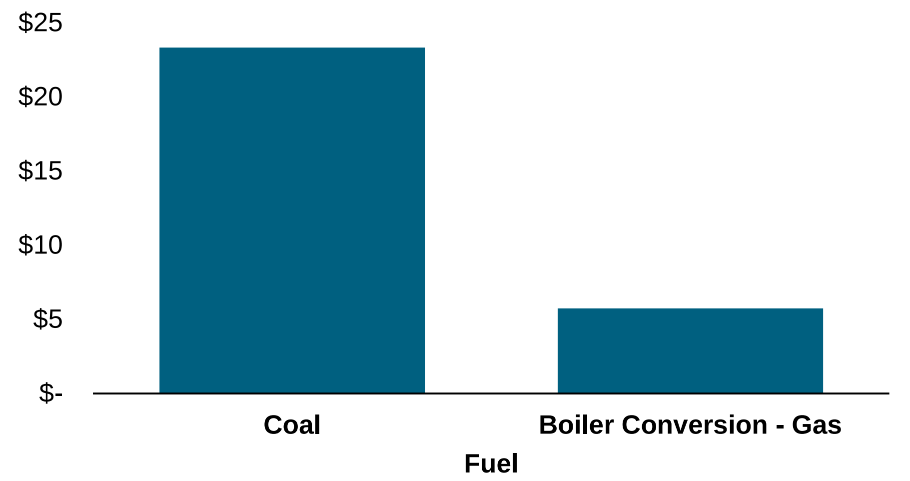
Next Milestones

- Expect to issue FNTP on Keephills 2 Unit by year-end
- Expect to issue LNTP for Keephills 3 Unit by year-end

Emission Savings Pay for Boiler Conversions in < 1.5 Years

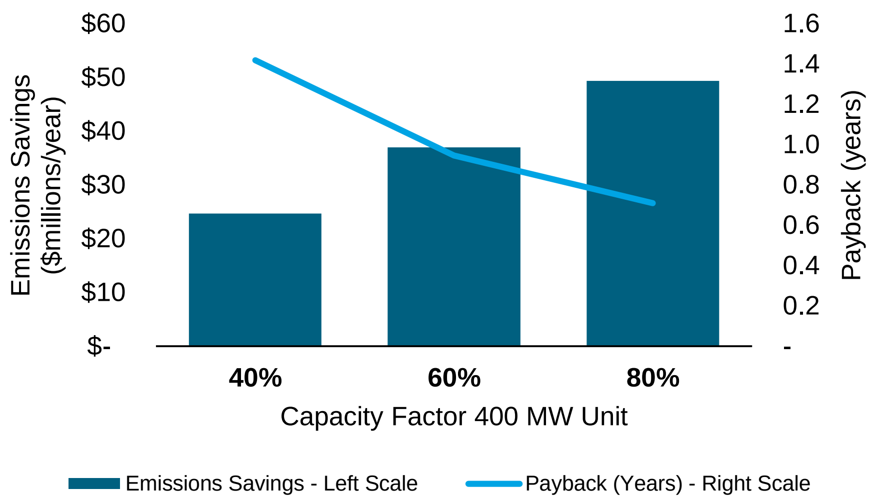
- ~$18/MWh CO2, NOx, SOx and mercury savings from converting from coal to gas

EMISSION COSTS PER MWH



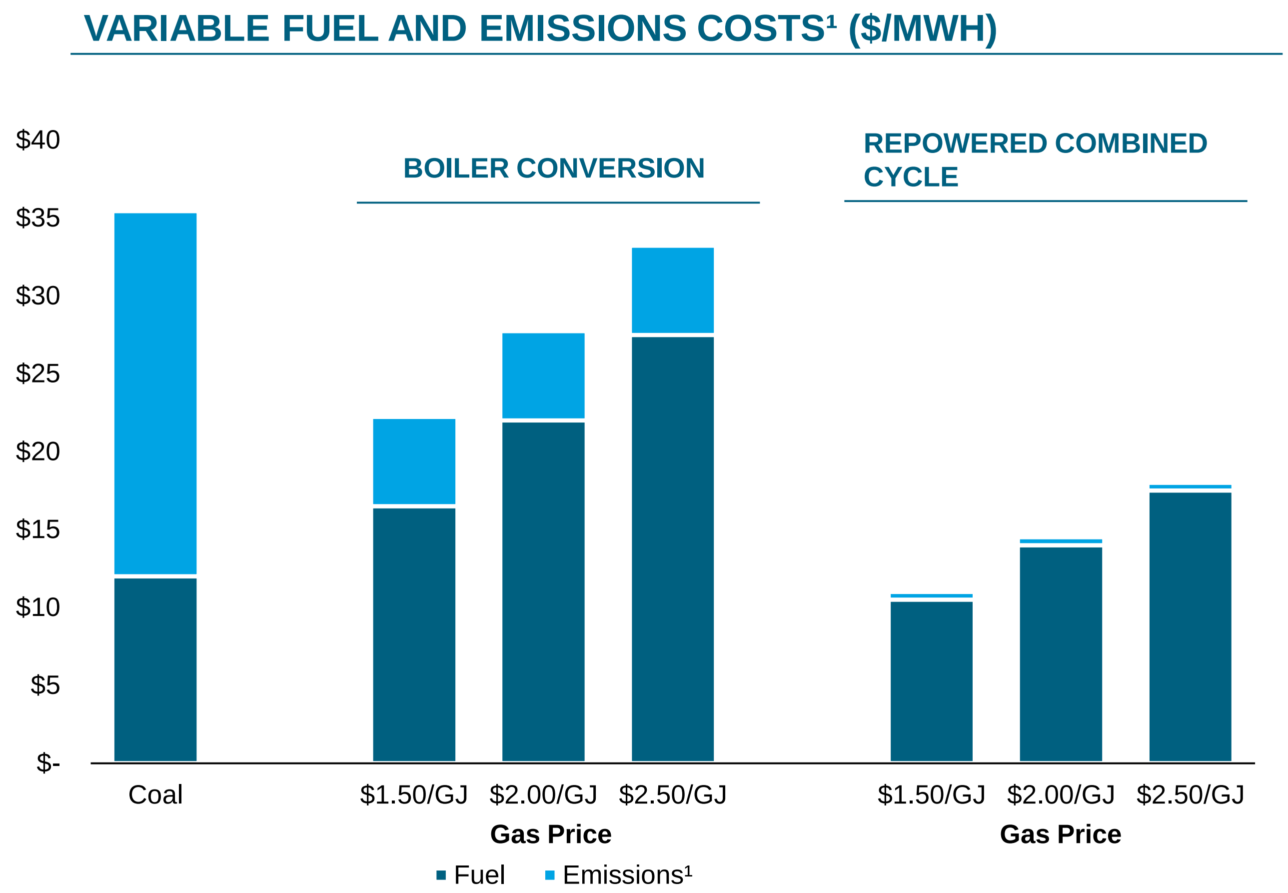
- $25 to $50 million per year in emission cost savings for a 400 MW unit
- Savings pay off the capital costs to convert in less than 1.5 years
- Lower operating & capital costs going forward and avoids ~$40 million in NOx/SOx compliance capital

EMISSION SAVINGS AND PAYBACK – 400 MW UNIT



Competitive Variable Costs

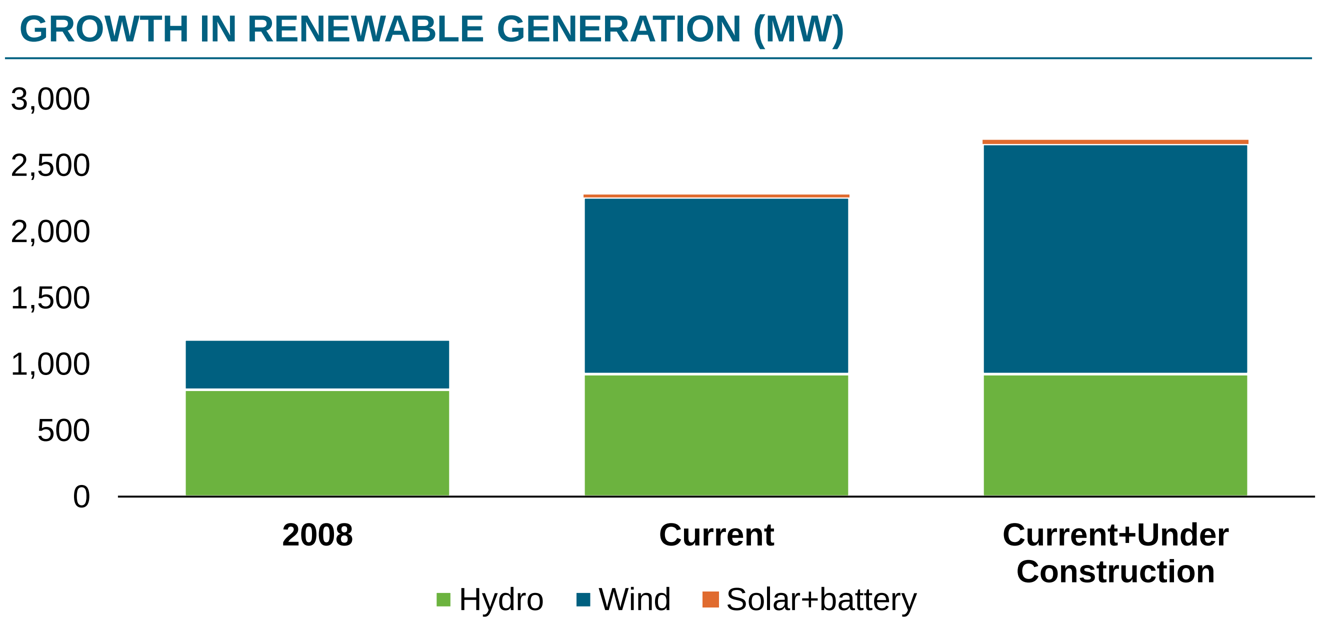
- TransAlta's conversion strategy will result in a highly competitive fleet



1) Analysis based on a sub-critical unit, $30 per tonne carbon price, and 0.37 CO_2 tonne/MWh performance standard. Emission costs include carbon and, in the case of Coal, mercury, NOx and SOx. Analysis will vary by unit depending on heat rate and capacity factors.

Positioned for Future in Renewables

- TransAlta/TransAlta Renewables has more than doubled its renewable fleet since 2008
- Our existing presence and expertise position us well to participate in the growing demand for renewable energy



	2008	Current	Current+Under Construction
Annual EBITDA Generated by Renewable Assets	$98M	$322M[1]	$367M
Percentage of EBITDA[2]	10%	33%	38%

Nearly a 300% increase in EBITDA from renewable assets since 2008

1) Current Annual EBITDA represents 2018 full year. 2) Percentage of EBITDA Adjusted to exclude the $157 million received during the first quarter of 2018 related to the Sundance B and C PPA termination payment

RNW Growth Focus

On-Site and Cogeneration

Expand our fleet of on-site generation projects in Canada, the U.S. and Australia

- Extensive history of on-site generation extends back to the early '90s
- Our experience and our team make us a strong partner as an on-site generation owner/operator
- Strong pipeline in place
- Leverage existing relationships to grow with our customers

Current Pipeline under evaluation – 900 MW

Renewables

Focus our renewables growth efforts on the U.S. corporate market

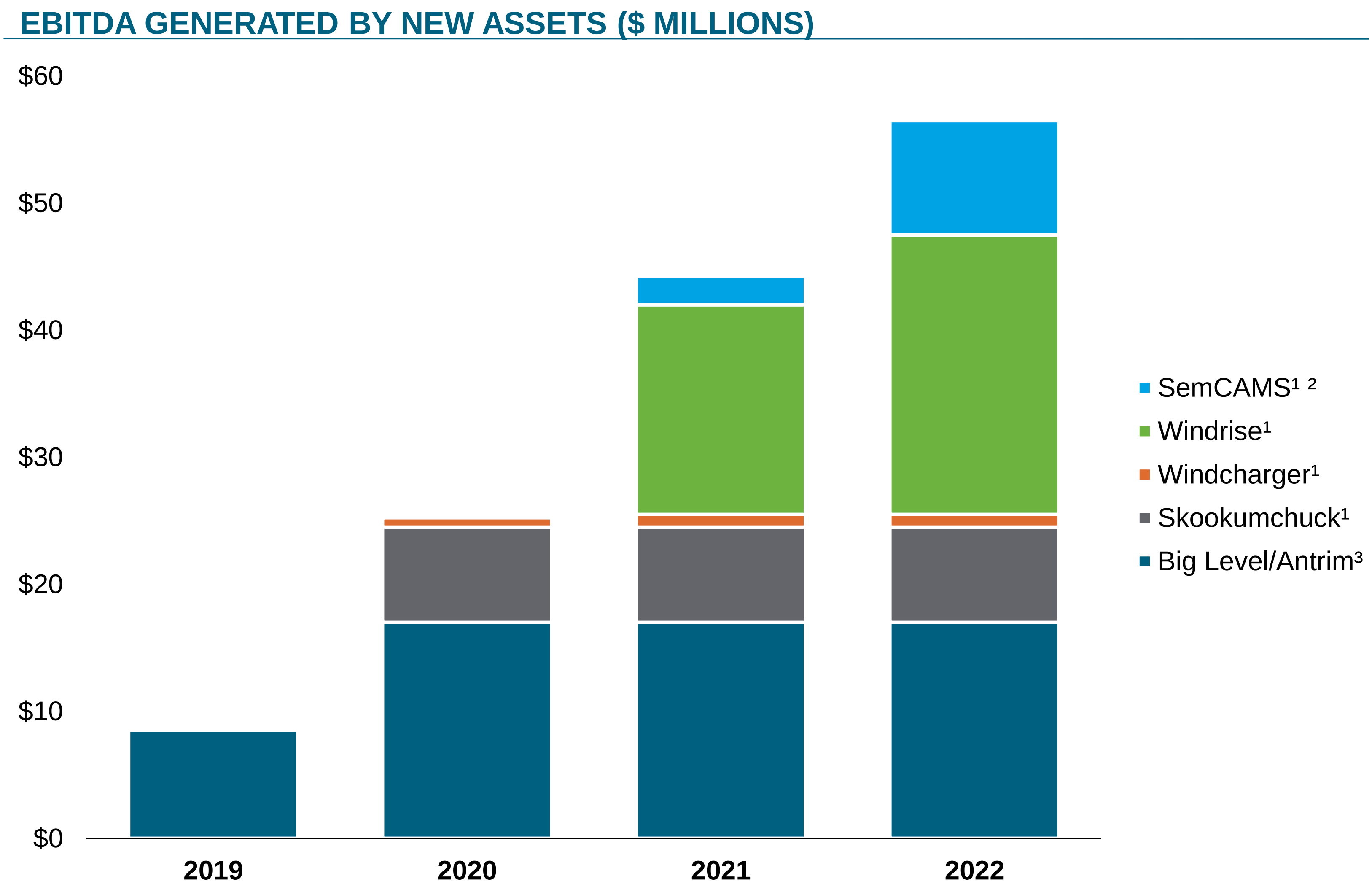
- Added five wind farms and a solar farm in the U.S. over the last five years
- Demand for new wind in the U.S. expected to grow ~10 GW per year in the near term and ~5 GW onwards
- Focus on growing and broadening corporate PPA market
- Continuously evaluate opportunistic acquisitions

Current Pipeline under evaluation – 2,000 MW

Focus on Customers

Building relationships through direct contracts to supply an identified need

Growth Projects EBITDA



1) Potential drop-down candidates to TransAlta Renewables. 2) Reflects 50% of total project EBITDA as SemCAMS has 50% option to buy-in at COD 3) Antrim / Big Level EBITDA excludes tax equity Production Tax Credits (PTCs).

Funding Plan – TransAlta Renewables

New projects supported by project-level debt

Tax equity will be utilized for U.S. projects that have tax credits

Opportunity to raise debt against currently unencumbered assets

Additional sources of capital include:

- **Excess cash flows**
- **DRIP**
- **Partnerships**

Prudent Capital Allocation and Dividend Policy

Deconsolidated FFO[1]

- 25 – 35%: **Sustaining & Productivity Capital[2]**
- 6 – 8%: **Amortizing Debt**
- 8 – 10%: **Preferred Share Dividends**
- 10 – 15%: **Common Share Dividends**
- 30 – 50%:
  - **Clean energy investments**
  - **Debt Reduction**
  - **Share Buyback**

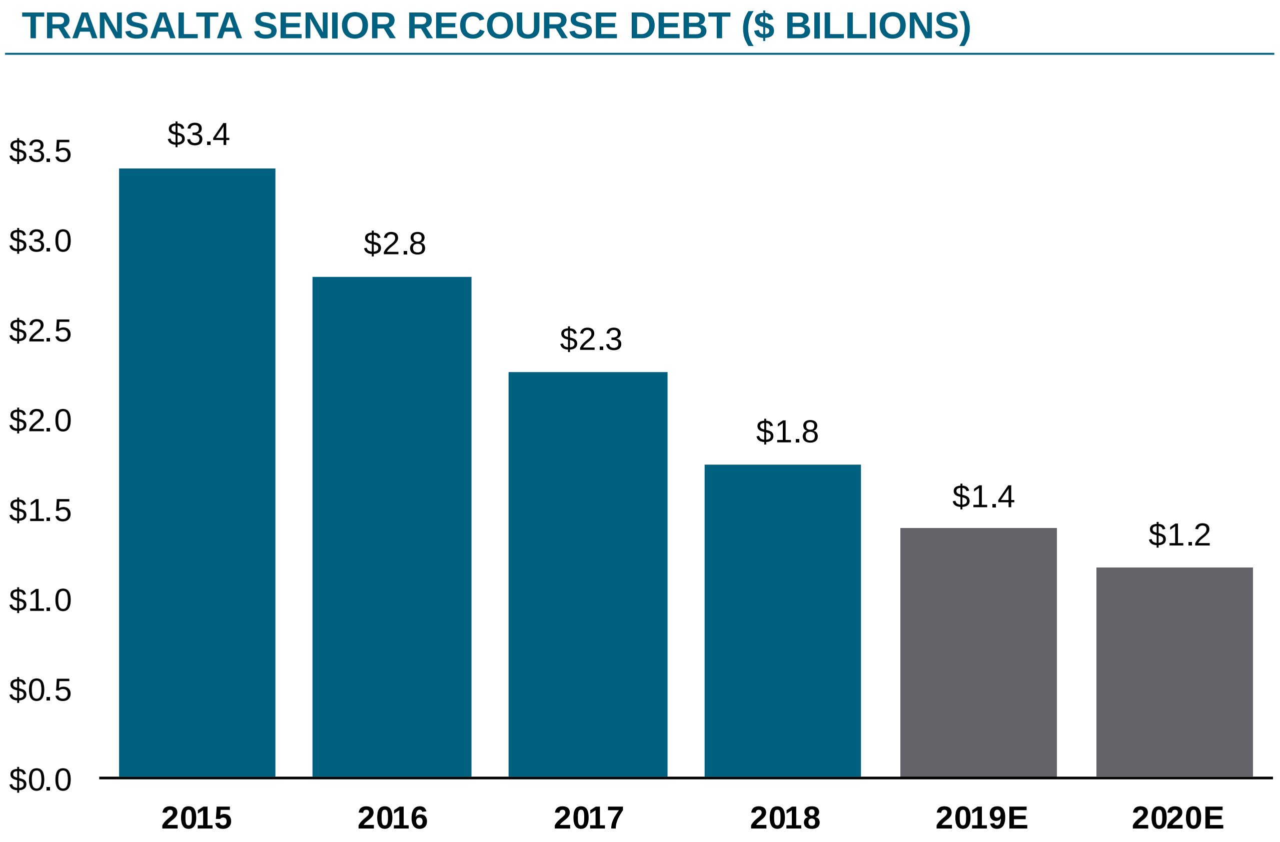
New dividend policy

Dividend policy of 10 to 15% of TA deconsolidated FFO

1) Refer to Forward Looking Statements (slide 2)

Success in Reducing Senior Recourse Debt

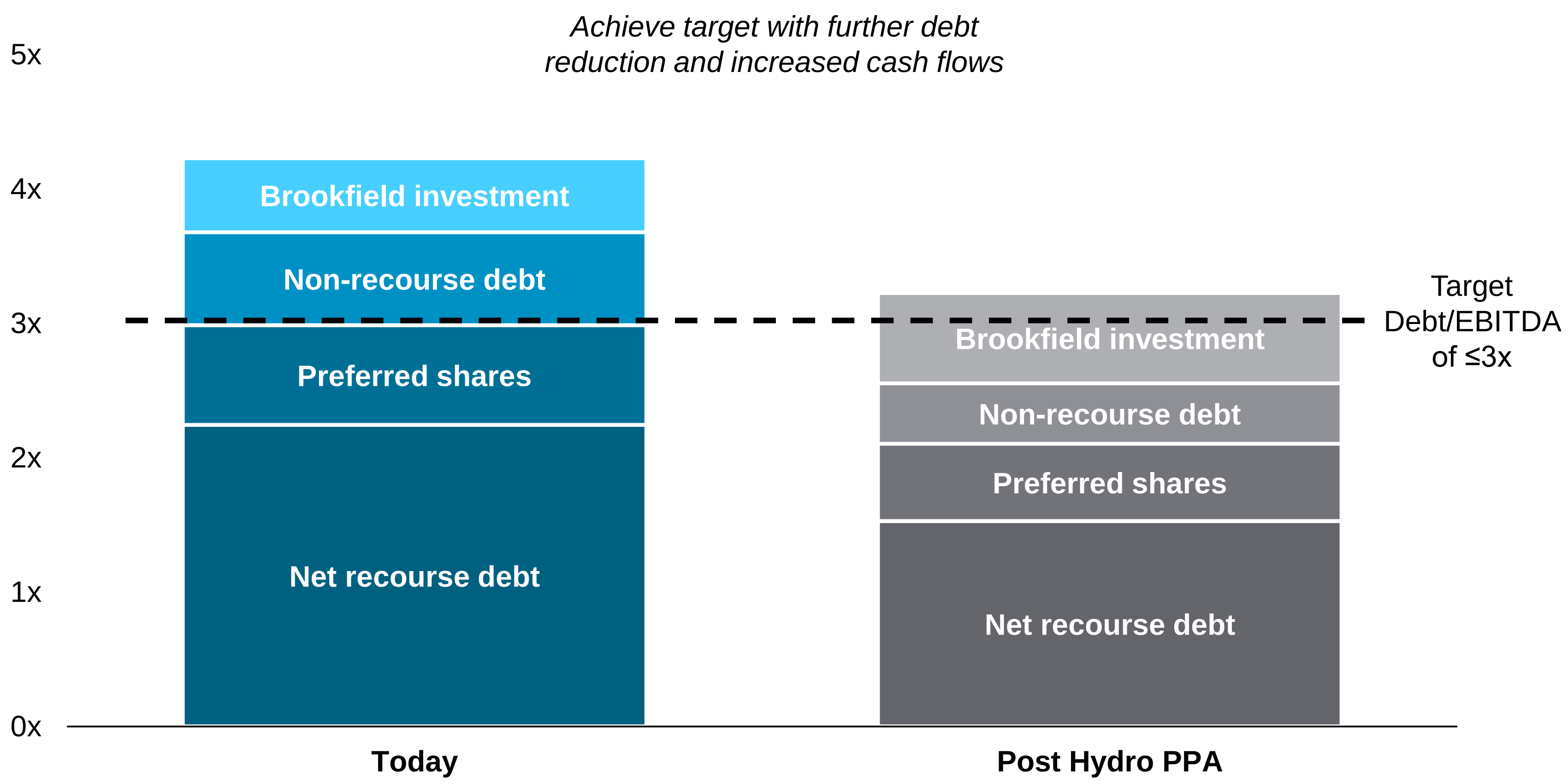
- Targeted $1.2 billion of net senior recourse debt expected to be reached in 2020



Deconsolidated Balance Sheet - Debt Metrics

- Debt/EBITDA target of ≤3.0x achieved post PPA

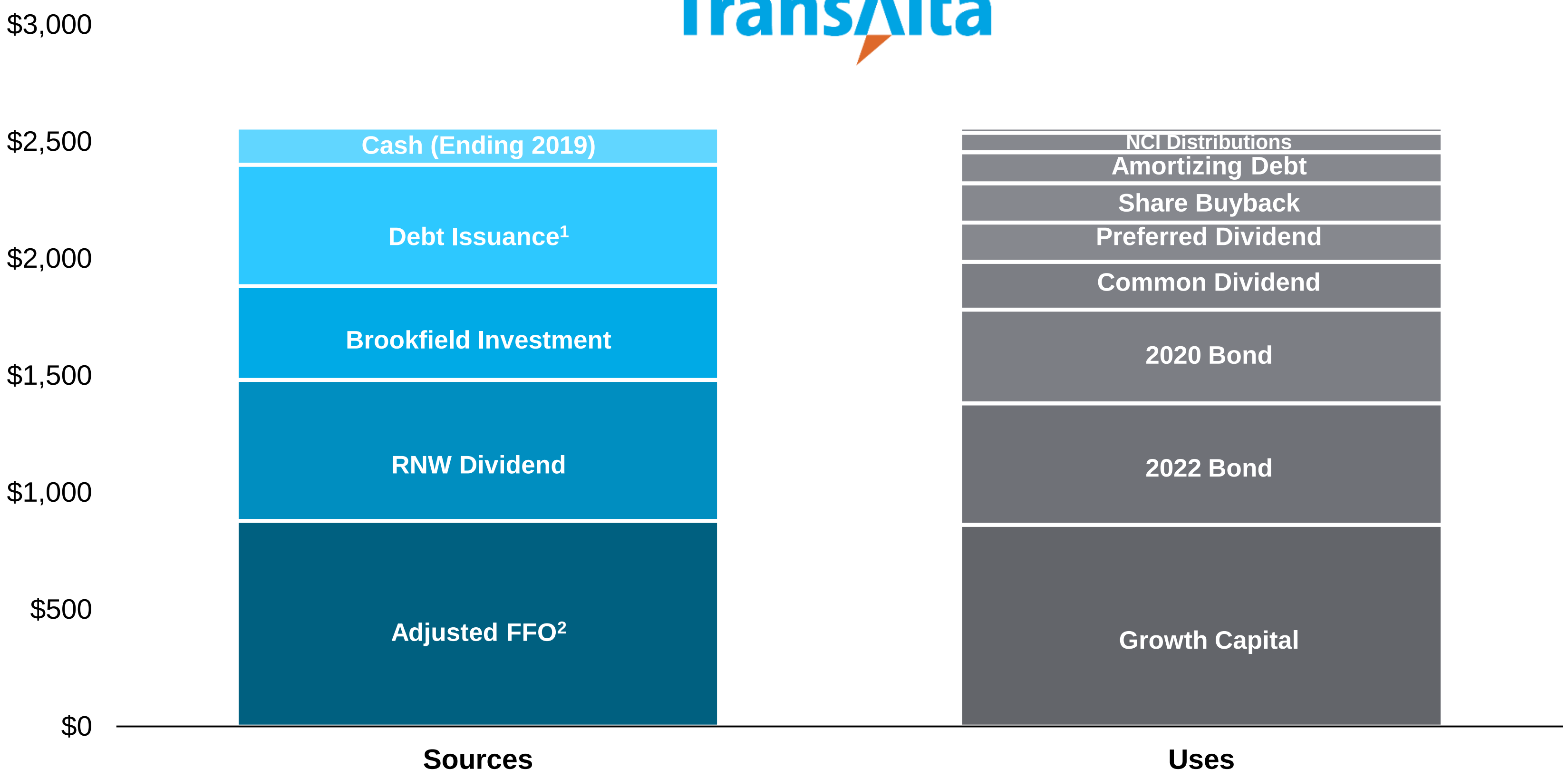
TAC DECONSOLIDATED DEBT/EBITDA METRIC[1]



1) Refer to Forward Looking Statements (slide 2). TransAlta's deconsolidated EBITDA can be calculated by subtracting the midpoint of TransAlta Renewables' 2019 EBITDA guidance from the midpoint of TransAlta's 2019 EBITDA guidance.

Deconsolidated Sources and Uses

DECONSOLIDATED SOURCES AND USES 2020-2023 ($ MILLIONS)



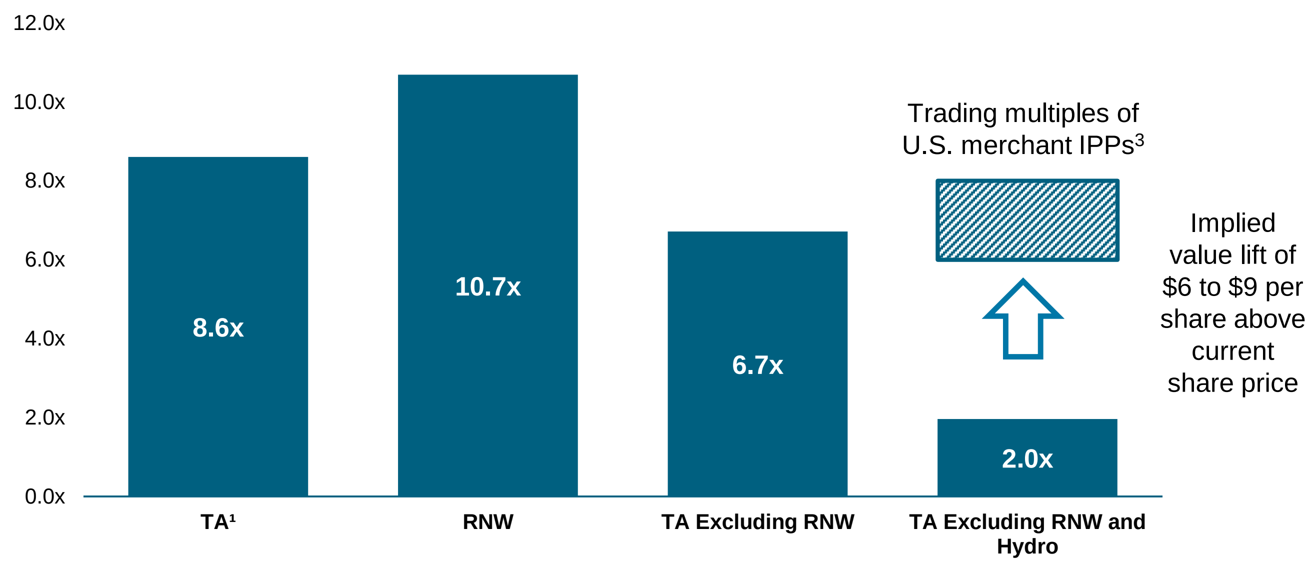
Plan is fully funded

1) Assumes refinancing of 2022 debt. 2) Adjusted FFO is equal to deconsolidated FFO less sustaining and productivity capital.

Attractive Equity Entry Point

- Market is assigning a very low multiple to TransAlta's thermal fleet based on the current market prices for TransAlta Renewables and value of TransAlta's Hydro assets
- Merchant U.S. power companies trade closer to 6 – 8x EBITDA, implying a significant uplift in TransAlta's current share price

TEV/2019E EBITDA MULTIPLES



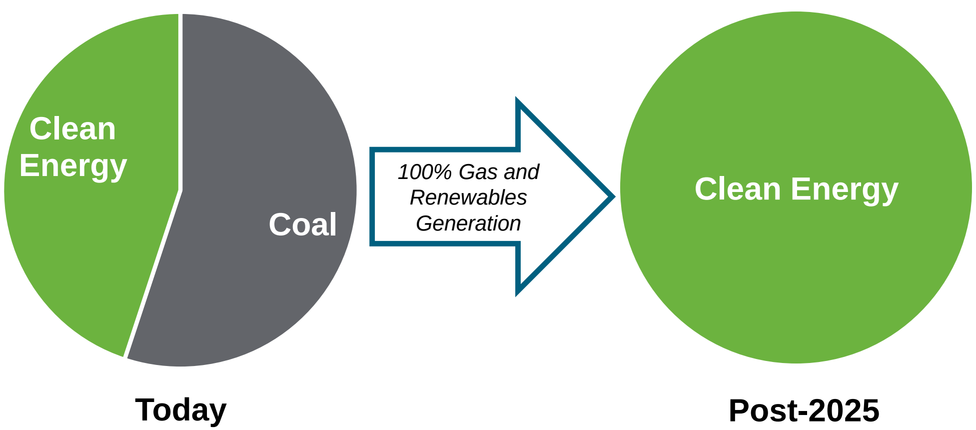
Annual EBITDA[2] ($Millions)	$925	$440	$485	$385

Note: Priced as at November 7, 2019. Balance sheet numbers reflect Q3 2019 value. Hydro value assumed to be $2.5 billion. 1) Includes market value of TransAlta Renewables and book value of TA Cogen. 2) Annualized EBITDA represents mid-point of 2019 Outlook for RNW and TA, and historical 5-year average hydro EBITDA of $100 million. 3) U.S. Merchant IPP peers include NRG Energy and Vistra Energy.

Why Invest in TransAlta

- Strategy of 100% Clean Energy unchanged – execution well underway
- Strong cash flows with significant upside potential
- TransAlta's fleet will be a competitive low-cost generator in the Alberta energy-only market
- TransAlta Renewables well positioned to fund and participate in growing demand for renewables and on-site generation
- Balance sheet, cash flow and capital available to fund current growth plans
- Strong culture focused on safety, operational and financial excellence
- Attractive equity entry point

PORTFOLIO TRANSFORMATION WELL UNDERWAY



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