

Management's Discussion and Analysis

This Management's Discussion and Analysis ("MD&A") contains forward-looking statements. These statements are based on certain estimates and assumptions and involve risks and uncertainties. Actual results may differ materially. See the Forward-Looking Statements section of this MD&A for additional information.

This MD&A should be read in conjunction with the unaudited interim condensed consolidated financial statements of TransAlta Corporation as at and for the three months ended March 31, 2020 and 2019, and should also be read in conjunction with the audited annual consolidated financial statements and MD&A contained within our 2019 Annual Integrated Report. In this MD&A, unless the context otherwise requires, "we", "our", "us", the "Corporation", and "TransAlta" refers to TransAlta Corporation and its subsidiaries. Our unaudited interim condensed consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") International Accounting Standards ("IAS") 34 *Interim Financial Reporting* for Canadian publicly accountable enterprises as issued by the International Accounting Standards Board ("IASB") and in effect at March 31, 2020. All tabular amounts in the following discussion are in millions of Canadian dollars unless otherwise noted. This MD&A is dated May 11, 2020. Additional information respecting TransAlta, including its Annual Information Form, is available on SEDAR at www.sedar.com, on EDGAR at www.sec.gov, and on our website at www.transalta.com. Information on or connected to our website is not incorporated by reference herein.

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Highlights

Consolidated Financial Highlights

	3 months ended March 31	
	2020	2019
Revenues	606	648
Fuel, carbon compliance and purchased power	238	366
Operations, maintenance and administration	128	104
Net earnings (loss) attributable to common shareholders	27	(65)
Cash flow from operating activities	214	82
Comparable EBITDA ^(1,2)	220	221
Funds from operations ⁽¹⁾	172	169
Free cash flow ⁽¹⁾	109	95
Net earnings (loss) per share attributable to common shareholders, basic and diluted	0.10	(0.23)
Funds from operations per share ⁽¹⁾	0.62	0.59
Free cash flow per share ⁽¹⁾	0.39	0.33
Dividends declared per common share	0.0425	—
Dividends declared per preferred share ⁽³⁾	0.2562	—
As at	March 31, 2020	Dec. 31, 2019
Total assets	9,442	9,508
Total consolidated net debt ^(1,4)	3,145	3,110
Total long-term liabilities	4,205	4,329

(1) These items are not defined and have no standardized meaning under IFRS. Presenting these items from period to period provides management and investors with the ability to evaluate earnings trends more readily in comparison with prior periods' results. Refer to the Discussion of Consolidated Financial Results section of this MD&A for further discussion of these items, including, where applicable, reconciliations to measures calculated in accordance with IFRS. See also the Additional IFRS measures and Non-IFRS Measures section of this MD&A.

(2) Comparable earnings before interest, taxes, depreciation and amortization ("comparable EBITDA").

(3) Weighted average of the Series A, B, C, E and G preferred share dividends declared. Dividends declared vary year over year due to timing of dividend declarations.

(4) Total consolidated net debt includes long-term debt, including current portion, amounts due under credit facilities, exchangeable securities, US tax equity financing and lease obligations, net of available cash and cash equivalents, the principal portion of restricted cash in TransAlta OCP LP and the fair value of economic hedging instruments on debt. See the table in the Financial Capital section of this MD&A for more details on the composition of total consolidated net debt.

Free cash flow ("FCF"), one of the Corporation's key financial metrics, totalled \$109 million for the three months ended March 31, 2020, an increase of \$14 million compared to the same period last year. This was primarily as a result of continued strong operational results from our segments, realized foreign exchange gains and lower distributions paid to subsidiaries' non-controlling interests. Significant changes in segmented cash flows are highlighted in the Segmented Comparable Results within this MD&A.

Revenues during the first quarter of 2020 were \$606 million, a decrease of \$42 million compared to the same period in 2019, mainly as a result of lower production, resulting in lower revenue, at our Canadian Coal and Canadian Gas segments. Overall, lower merchant production was partially due to lower demand resulting from the novel coronavirus ("COVID-19") pandemic, higher wind resources in Alberta as well as warmer weather in Ontario during the first quarter of 2020. Contract production was also lower at Canadian Coal as we had a planned outage for the Sheerness dual-fuel conversion. In addition, revenue was lower from our Energy Marketing segment compared to the same period in 2019 due to very strong performance by this segment in the first quarter of 2019. This was partially offset by higher revenues from our Wind and Solar segment as a result of Big Level and Antrim commencing operations in December 2019 and higher wind resources.

Fuel, carbon compliance and purchased power costs decreased by \$128 million in the first quarter of 2020 compared to the same period in 2019. This decrease was mainly due to lower costs at our US Coal segment as a result of dispatch optimization and our ability to purchase low priced power to fulfill our contractual obligations, whereas in the first quarter of 2019 we produced more when power prices were higher and we purchased high priced power to fulfill our contractual obligations during an unplanned outage. We also saw lower fuel costs at our Canadian Coal segment as a result of lower production and our ability to co-fire with natural gas. Co-firing, when economical, allows us to produce fewer greenhouse gas ("GHG") emissions than coal combustion, which lowers our GHG compliance costs. In addition, our Canadian Gas segment had lower costs due to lower merchant production resulting from lower market demand.

Operations, maintenance and administration ("OM&A") expense for the three months ended March 31, 2020, increased by \$24 million compared to the same period in 2019. This increase in OM&A is largely due to realized gains and losses from the total return swap in our Corporate segment. A portion of the settlement cost of our share-based payment plans is fixed by entering into total return swaps, which are cash settled every quarter.

Net earnings attributable to common shareholders for the three months ended March 31, 2020, was \$27 million, compared to a loss of \$65 million in the same period in the prior year. Strong earnings from our US Coal and Wind and Solar segments and a reduction in the Centralia mine decommissioning provision due to changes in discount rates were partially offset by higher Corporate OM&A costs, foreign exchange losses due to the weakening of the Canadian dollar relative to the US dollar and lower earnings attributable to non-controlling interests.

Comparable EBITDA for the three months ended March 31, 2020, was consistent with the same period in 2019. Strong performance at the US Coal and Wind and Solar segments was offset by lower comparable EBITDA at the Canadian Coal and Energy Marketing segments as well as higher Corporate costs. Significant changes in segmented comparable EBITDA are highlighted in the Segmented Comparable Results within this MD&A.

Adjusted Availability and Production

Adjusted availability for the three months ended March 31, 2020 was 92.8 per cent compared to 89.4 per cent for the same period in 2019. This increase was largely due to fewer unplanned outages and derates at US Coal, Canadian Gas and Australian Gas, partially offset by the planned outage at Canadian Coal for the Sheerness dual-fuel conversion.

Production for the three months ended March 31, 2020 was 6,486 gigawatt hours ("GWh") compared to 8,125 GWh for the same period in 2019. This decrease in production was primarily due the planned outage and curtailments at Canadian Coal and a significantly lower price environment in the Pacific Northwest during the first quarter of 2020, which resulted in dispatch optimization at US Coal.

Significant and Subsequent Events

Updates and developments impacting the Clean Energy Investment Plan can be found in the Corporate Strategy section of this MD&A.

COVID-19

The World Health Organization ("WHO") declared a Public Health Emergency of International Concern relating to COVID-19 on Jan. 30, 2020, which they subsequently declared, on March 11, 2020, as a global pandemic. The outbreak of COVID-19 has resulted in governments worldwide enacting emergency measures to constrain the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods, self-isolation, physical and social distancing and the closure of non-essential business, have caused significant disruption to businesses globally which has resulted in an uncertain and challenging economic environment.

The Corporation formally implemented its business continuity plan on March 9, 2020, which is focused on ensuring that: (i) employees that can work remotely do so; and (ii) employees operating and maintaining our facilities, and who are not able to work remotely, are able to work safely and in a manner that ensures they remain healthy. This plan includes health screening, enhanced cleaning arrangements, travel bans, revised work schedules, contingent work teams and the reorganization of processes and procedures to limit contact with other employees and contractors on-site.

Currently, all of our facilities remain fully operational and capable of meeting our customers' needs. We have modified our operating procedures and implemented restrictions to non-essential access to our facilities to support continued operations through the pandemic. The Corporation continues to work and serve all of our customers and counterparties under the terms of their contracts. We have not experienced interruptions to service requirements. Electricity and steam supply continue to remain a critical service requirement to all of our customers and have been deemed an essential service in our jurisdictions.

Brookfield Investment Agreement

Under the terms of the strategic investment agreement with Brookfield and their affiliates, announced on March 25, 2019, Brookfield committed to purchase TransAlta common shares on the open market to increase its share ownership in TransAlta to not less than nine per cent. During the first quarter of 2020, Brookfield acquired, through its affiliates, common shares in the capital of TransAlta on the Toronto Stock Exchange, which resulted in Brookfield owning or having control over an aggregate of 30,388,645 common shares, representing approximately 11.0 per cent of the issued and outstanding common shares, calculated on an undiluted basis, as at March 31, 2020. As at May 11, 2020, Brookfield owned 31,959,883 common shares.

Normal Course Issuer Bid

On May 27, 2019, the Corporation announced that the TSX accepted the notice filed by the Corporation to implement a Normal Course Issuer Bid ("NCIB") for a portion of its common shares. During the three months ended March 31, 2020, the Corporation purchased and cancelled a total of 1,297,000 common shares at an average price of \$6.73 per common share, for a total cost of \$9 million.

Board of Director Changes

On April 21, 2020, we announced that the Board appointed John P. Dielwart as Chair of the Board, upon his re-election as an independent director at TransAlta's annual shareholder meeting. As previously announced, Ambassador Gordon Giffin, the previous Chair of the Board, retired from the Board after serving as Chair since 2011.

Mr. Dielwart has served as an independent director on the Board since 2014, and has served as the Chair of the Governance, Safety and Sustainability Committee. He previously served on the Investment Performance Committee and the Audit, Finance and Risk Committee of the Board. Mr. Dielwart is a founder and director of ARC Resources Ltd. from 1996 to present and served as Chief Executive Officer of ARC Resources Ltd. from 2001 to 2013. Mr. Dielwart earned a Bachelor of Science (Distinction) in Civil Engineering from the University of Calgary, is a member of the Association of Professional Engineers and Geoscientists of Alberta and a Past-Chairman of the Board of Governors of the Canadian Association of Petroleum Producers. Mr. Dielwart is also a director and former Co-Chair of the Calgary and Area Child Advocacy Centre. In 2015, Mr. Dielwart was inducted into the Calgary Business Hall of Fame.

Refer to Note 4 of the audited annual 2019 consolidated financial statements within our 2019 Annual Integrated Report and Note 3 of our unaudited interim condensed consolidated financial statements for the three months ended March 31, 2020 for significant events impacting both prior and current year results.

Corporate Strategy

Our corporate strategy continues to focus on investing in a range of clean and renewable technologies such as wind, hydro, solar, battery and thermal (natural gas-fired and cogeneration) that produce electricity for industrial customers and communities to deliver returns to our shareholders. On Sept. 16, 2019, TransAlta announced its Clean Energy Investment Plan to further its strategy and announced near-term objectives on Jan. 16, 2020. During the first quarter of 2020, the following developments have occurred impacting those objectives:

Successfully execute our coal-to-gas conversions. We continued to advance our coal-to-gas conversion projects. We are on-track to complete the conversion of Sundance Unit 6 in the second half of 2020. The Corporation continues to advance conversion of its Keephills Unit 2 and Unit 3 in 2021, but expects that these projects could be delayed by two to three months due to delays in procuring certain equipment as a result of COVID-19 supply chain disruptions. During the first quarter of 2020, we received regulatory approval from the Alberta Utilities Commission for the repowering of Sundance Unit 5 and Keephills Unit 1 into combined cycle units. The Corporation is still waiting for approval from Alberta Environment and Parks. We are still on track to issue full notice to proceed in 2021 for Sundance Unit 5, with an expected commercial operation date in 2023.

On March 12, 2020, we announced that TransAlta, with its partner Tidewater Midstream & Infrastructure Ltd. ("Tidewater"), had entered into a Letter of Intent to sell the Pioneer Pipeline to NOVA Gas Transmission Ltd. ("NGTL"), a wholly-owned subsidiary of TC Energy, for a purchase price of \$255 million. As part of the transaction, NGTL intends to integrate the Pioneer Pipeline into its natural gas pipeline infrastructure in Alberta. The completion of this transaction will provide TransAlta with access to NGTL's highly liquid natural gas network and gas trading hub, greater access to a broad and diversified group of gas producers and resource basins, additional flexibility for natural gas delivery to the Corporation's power stations and cash proceeds that can be used to fund the Clean Energy Investment Plan.

As part of the transaction, TransAlta will enter into long-term delivery transportation agreements with NGTL, bringing the total of new and existing natural gas pipeline transportation service to the Corporation's generating facilities to 400 terajoules ("TJ") per day by 2023, more than doubling TransAlta's current access to natural gas from Tidewater and NGTL. TransAlta's current commitments, including its 139 TJ/day supply arrangement with Tidewater, will remain in place until the closing of the transaction. The transaction is subject to entering into a Purchase and Sale Agreement, and customary regulatory approvals.

Expand our renewables fleet. We continue to expand our renewables platform and were able to advance the WindCharger Battery Project and the Windrise Wind Project into construction in early 2020. The following significant developments on our renewables projects occurred during the first quarter of 2020:

- WindCharger construction started in late March 2020 after TransAlta put in place the necessary safety procedures to protect the construction team during the COVID-19 pandemic. The project is on track and is expected to achieve commercial operations in July 2020.
- Construction was started on our Windrise Project in April 2020, again with all appropriate procedures in place to protect the construction team during the COVID-19 pandemic. Our turbine supplier has notified us of a delay at their manufacturing facilities in China due to the COVID-19 pandemic. The TransAlta project team has modified the construction program to reflect this delay and expect the project to be fully commissioned in the second half of 2021.
- The Skookumchuck Wind Project remains under construction and TransAlta's right to invest occurs at the commercial operations date ("COD"). The project owner has notified TransAlta that construction has been delayed due to weather and other factors and, as a result, the project is expected to be completed and reach full COD in the second half of 2020.

Advance and expand our on-site generation and cogeneration business and expand our presence in the US renewables market. As part of our business strategy, we are focused on growing our on-site generation and cogeneration asset base. As part of that strategy, we announced on March 17, 2020, the acquisition of a contracted cogeneration asset from two private companies for a purchase price of approximately US\$27 million, subject to working capital adjustments. The asset is a 29 MW cogeneration facility in Michigan which is contracted under a long-term power purchase agreement ("PPA") and steam sale agreement for approximately six years with high quality counterparties. The acquisition is expected to close in the second quarter of 2020.

The Corporation continues to advance the Kaybob Cogeneration Project with commercial operations scheduled to commence in the second half of 2021; however, due to COVID-19 and the economic conditions in Alberta, the Corporation will continue to monitor market conditions to determine if any adjustments to plans are necessary. During the first quarter of 2020, we executed agreements for the purchase of the reciprocating engine generator and generator step up transformers and in early April 2020 we obtained Alberta Energy Regulator permit approval.

Growth and coal-to-gas conversion expenditures

TransAlta announced our Clean Energy Investment Plan at our 2019 Investor Day and we now have the activities supporting that plan fully underway. In addition to the \$337 million spent on the Big Level and Antrim wind projects and the \$100 million spent on the Pioneer Pipeline, the following major projects are in progress and represent our remaining spend under our Clean Energy Investment Plan:

Project	Total project		Remaining estimated spend in 2020	Target completion date ⁽²⁾	Details
	Estimated spend	Spent to date ⁽¹⁾			
Skookumchuck wind project ^(3,4)	150 - 160	—	84	H2 2020	Option to purchase a 49 per cent ownership in the 136.8 MW wind project with a 20-year PPA
Windrise wind project ⁽⁴⁾	270 - 285	55	218	H2 2021	207 MW wind project with a 20-year Renewable Electricity Support Agreement with AESO
WindCharger battery ^(4,5)	7 - 8	2	5	H2 2020	10 MW/20 MWh utility-scale storage project
Boiler conversions ⁽⁶⁾	120 - 200	33	57	2020 to 2023	Coal-to-gas conversions at Canadian Coal
Repowering	750 - 770	86	19	2023	Repower the steam turbines at Sundance Unit 5
Kaybob cogeneration project ⁽⁴⁾	105 - 115	24	42	H2 2021	40 MW cogeneration project with SemCAMS under a 13-year fixed price contract
Total	1,402 - 1,538	200	425		

(1) Represents cumulative amounts spent as of March 31, 2020.

(2) H2 is defined as the second half of the year.

(3) The estimated spend in 2020 assumes the project will receive tax equity financing for the remainder of the total project spend.

(4) These projects could potentially be dropped down to TransAlta Renewables Inc.

(5) Net of expected government reimbursements.

(6) Total estimated spend includes the Sheerness dual-fuel conversion.

For full details on the Clean Energy Investment Plan, refer to our 2019 annual MD&A within our 2019 Annual Integrated Report.

Forward-Looking Statements

This MD&A 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 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 risks, uncertainties and other important factors that could cause our actual performance, events or results to be materially different from that set out in or implied by the forward-looking statements.

In particular, this MD&A contains forward-looking statements including, but not limited to: our coal-to-gas conversion projects, including the completion of the conversion of Sundance Unit 6 by the second half of 2020, the conversion of Keephills Unit 2 and Unit 3 in 2021, the repowering of Sundance Unit 5 and Keephills Unit 1 into combined cycle units and the expected commercial operation date for the repowering of Sundance Unit 5; the sale of the Pioneer Pipeline to NOVA Gas Transmission Ltd. and the anticipated benefits of such sale, including access to NGTL's highly liquid natural gas network and gas trading hub and additional flexibility for natural gas delivery; utilizing the proceeds from the sale of the Pioneer Pipeline to fund the Corporation's Clean Energy Investment Plan; entering into long-term delivery transportation agreements with NOVA Gas Transmission to bring the total new and existing natural gas pipeline transportation service to 400 TJ per day by 2023; the growth of the renewables fleet, including the WindCharger Project, Windrise Wind Project and Skookumchuck Wind Project, including the timing of commercial operations; expansion of the on-site generation and cogeneration business, including closing of the acquisition of a cogeneration facility in Michigan and achieving commercial operations of the Kaybob Cogeneration Project in the second half of 2021; growth and coal-to-gas conversion expenditures under the Clean Energy Investment Plan, including the total estimated spend and target completion dates; the 2020 financial outlook, including comparable EBITDA, free cash flow and annualized dividend in 2020; Alberta spot and Mid-C spot power prices; sustaining and productivity capital in 2020, including routine capital, planned major maintenance and mine capital; lost production due to planned major maintenance; forecasted reduction in Alberta power demand and merchant power price during 2020; expected impact on power prices in Alberta, Ontario and the Pacific Northwest due to COVID-19 and the collapse in oil prices; the cyclicity of the business, including maintenance costs, production, electricity prices and loads; our financial capital, including closing the second tranche of the \$400 million investment by Brookfield; utilizing existing cash and credit facilities to repay the debt maturing in 2020; refinancing the debt maturing in 2022; Alberta market design and that no changes are expected after our Alberta PPAs expire at the end of 2020; the impact of COVID-19 on regulatory and environmental processes; the trial dates for the disputes with Fortescue Metals Group Ltd. and Mangrove Partners Master Fund Ltd. ("Mangrove"); the appeal of the Keephills 1 stator force majeure claim; potential impacts of COVID-19 on the business and affairs of the Corporation, and actions to be taken in response to the pandemic; and the Corporation continuing to maintain a strong financial position and significant liquidity with our existing committed credit facilities.

The forward-looking statements contained in this MD&A are based on many assumptions including, but not limited to, the following: the impacts arising from COVID-19 not becoming significantly more onerous on the Corporation, which includes the Corporation being able to continue to operate as an essential service; no significant changes to applicable laws and regulations, including any tax and regulatory changes in the markets in which we operate; no material adverse impacts to the long-term investment and credit markets; Alberta spot power price being equal to \$45 to \$53 per megawatt hours ("MWh") in 2020; Mid-C spot power prices equal to US\$25 to US\$35 per MWh in 2020; sustaining capital in 2020 being between \$170 million and \$200 million; productivity capital of \$10 million to \$15 million; discount rates; our proportionate ownership of TransAlta Renewables Inc. ("TransAlta Renewables") not changing materially; no decline in the dividends to be received from TransAlta Renewables; the expected life extension of the coal fleet and anticipated financial results generated on conversion or repowering; assumptions regarding the ability of the converted units to successfully compete in the Alberta energy market; and assumptions regarding our current strategy and priorities, including as it pertains to our current priorities relating to the coal-to-gas conversions, growing TransAlta Renewables and being able to realize the full economic benefit from the capacity, energy and Ancillary Services from our Alberta hydro assets once the applicable PPA has expired; our being successful in defending against the claims alleged by Mangrove; the second \$400 million tranche of the Brookfield investment closing as anticipated in the fourth quarter of 2020; and the Brookfield investment and its related arrangements having the expected benefits to the Corporation. Forward-looking statements are subject to a number of significant risks, uncertainties and assumptions that could cause actual plans, performance, results or outcomes to differ materially from current expectations. Factors that may

adversely impact what is expressed or implied by forward-looking statements contained in this MD&A include risks relating to the impact of COVID-19, the general economic decline and the collapse of the oil and gas market, the impact of which on the Corporation will largely depend on the overall severity and duration of COVID-19 and the general economic downturn, which cannot currently be predicted, and which present risks including, but not limited to: more restrictive directives of government and public health authorities; reduced labour availability and ability to continue to staff our operations and facilities; successful completion of our growth and expansion projects, including our ability to secure necessary equipment and to obtain regulatory approvals on the expected timelines or at all; our ability to maintain our credit ratings; our ability to maintain adequate internal controls in the event that our employees are restricted from accessing our regular offices for a significant period of time; restricted access to capital and increased borrowing costs; a further decrease in short-term and/or long-term electricity demand and lower merchant pricing in Alberta and Mid-C; further reductions in production; increased costs resulting from our efforts to mitigate the impact of COVID-19; deterioration of worldwide credit and financial markets that could limit our ability to obtain external financing to fund our operations and growth expenditures; a higher rate of losses on our accounts receivable due to credit defaults; further disruptions to our supply chain; impairments and/or write-downs of assets; and adverse impacts on our information technology systems and our internal control systems as a result of the need to increase remote work arrangements, including increased cyber security threats. The forward-looking statements are also subject to other risk factors that include, but are not limited to: fluctuations in market prices; changes in demand for electricity and capacity and our ability to contract our generation for prices that will provide expected returns and replace contracts as they expire; changes to the legislative, regulatory and political environments in the jurisdictions in which we operate; environmental requirements and changes in, or liabilities under, these requirements; changes in general economic or market conditions including interest rates; operational risks involving our facilities, including unplanned outages at such facilities; disruptions in the transmission and distribution of electricity; the effects of weather and other climate-change related risks; unexpected increases in cost structure; disruptions in the source of fuels, including natural gas required for the conversions and repowering, as well as the extent of water, solar or wind resources required to operate our facilities; failure to meet financial expectations; natural and man-made disasters, including those resulting in dam or dyke failures; the threat of domestic terrorism and cyberattacks; equipment failure and our ability to carry out or have completed the repairs in a cost-effective manner or timely manner or at all; commodity risk management and energy trading risks, including the effectiveness of the Corporation's risk management tools associated with hedging and trading procedures to protect against significant losses, including the effect of unforeseen price variances from historical behavior; impact of unavailability or disruption of power transmission or commodity transportation facilities; industry risk and competition; the need to engage or rely on certain stakeholder groups and third parties; fluctuations in the value of foreign currencies and foreign political risks; the need for and availability of additional financing; structural subordination of securities; counterparty credit risk; changes in credit and market conditions; changes to our relationship with, or ownership of, TransAlta Renewables; risks associated with development projects and acquisitions, including capital costs, permitting, labour and engineering risks, and delays in the construction or commissioning of projects or delays in the closing of acquisitions; increased costs or delays in the conversion of coal-fired generating units to gas-fired generating units; increased costs or delays in the construction or commissioning of pipelines to converted units; changes in expectations in the payment of future dividends, including from TransAlta Renewables; inadequacy or unavailability of insurance coverage; downgrades in credit ratings; our provision for income taxes; legal, regulatory and contractual disputes and proceedings involving the Corporation, including as it pertains to establishing commercial operations at the South Hedland facility and in relation to the Mangrove litigation; reliance on key personnel; and labour relations matters. The foregoing risk factors, among others, are described in further detail in the and other risks and uncertainties contained in the Corporation's Management Proxy Circular dated March 9, 2020 and its Annual Information Form and Management's Discussion and Analysis for the year ended Dec. 31, 2019, filed under the Corporation's profile with the Canadian securities regulators on www.sedar.com and the US Securities and Exchange Commission ("SEC") on www.sec.gov.

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 the Corporation's expectations only as of the date hereof. 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. 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.

2020 Financial Outlook

Refer to the 2020 Financial Outlook section in our 2019 annual MD&A within our 2019 Annual Integrated Report for full details on our 2020 Financial Outlook and related assumptions.

The following table outlines our expectations on key financial targets and related assumptions for 2020:

Measure	Target
Comparable EBITDA ⁽¹⁾	\$925 million to \$1,000 million
Free cash flow ⁽¹⁾	\$325 million to \$375 million
Dividend	\$0.17 per share annualized

(1) These items are not defined and have no standardized meaning under IFRS. Presenting these items from period to period provides management and investors with the ability to evaluate earnings trends more readily in comparison with prior periods' results. Refer to the Discussion of Consolidated Financial Results section of this MD&A for further discussion of these items, including, where applicable, reconciliations to measures calculated in accordance with IFRS. See also the Additional IFRS measures and Non-IFRS Measures section of this MD&A.

Range of key power price assumptions	Original Expectations	Updated Expectations
Market	Power Prices (\$/MWh)	Power Prices (\$/MWh)
Alberta Spot	\$53 to \$63	\$45 to \$53
Mid-C Spot (US\$)	\$25 to \$35	No change

Other assumptions relevant to the 2020 financial outlook

Sustaining capital	\$170 million to \$200 million
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Our overall performance for the quarter is in line with expectations and based on the outlook for the balance of the year, the Corporation is currently tracking to achieve free cash flow at the mid-point of the guidance provided in the 2019 annual MD&A. Our current forecast includes a reduction in Alberta power demand and expectations of a corresponding drop in the merchant power price from our initial forecasts.

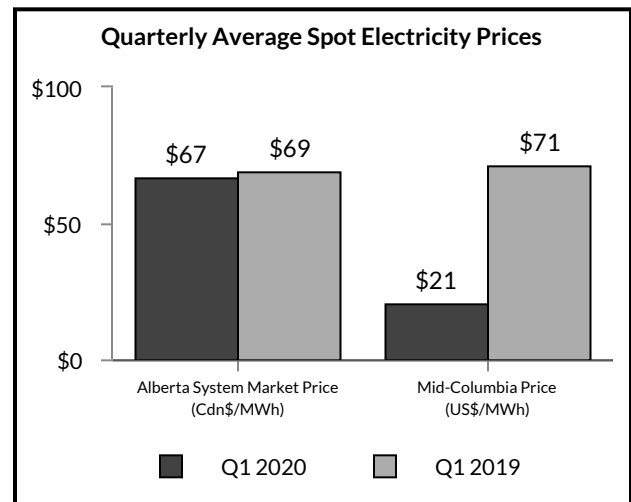
Operations

The following provides updates to our original assumptions included in the 2020 Financial Outlook.

Market Pricing

For the three months ended March 31, 2020, the average spot electricity price in Alberta decreased marginally compared to the same period in 2019. In both years, there were periods when the province experienced significantly below average temperatures. For the remainder of 2020, power prices in Alberta are at risk for being lower than 2019, due to lower demand resulting from the impacts of the COVID-19 pandemic and the collapse in oil prices.

Power prices were significantly lower in the Pacific Northwest in the three months ended March 31, 2020 compared to the same period in 2019, mainly due to extremely high power prices in February and March of 2019. Pacific Northwest power prices for the remainder of 2020 are expected to be lower than 2019, due to expectations of higher hydro generation in the second quarter and risk to demand from COVID-19 into the summer. Similarly, Ontario power prices are now expected to be lower than 2019 prices due to the impact related to COVID-19.



Sustaining and Productivity Capital Expenditures

Our estimate for total sustaining and productivity capital is allocated among the following:

Category	Description	Spent to date ⁽¹⁾	Expected spend in 2020
Routine capital ⁽²⁾	Capital required to maintain our existing generating capacity	6	60 - 80
Planned major maintenance	Regularly scheduled major maintenance	22	100 - 110
Mine capital	Capital related to mining equipment and land purchases	1	10 - 10
Total sustaining capital		29	170 - 200
Productivity capital	Projects to improve power production efficiency and corporate improvement initiatives	—	10 - 15
Total sustaining and productivity capital		29	180 - 215

(1) As at March 31, 2020.

(2) Includes hydro life extension expenditures.

Significant planned major outages at TransAlta's operated units for the remainder of 2020 include the following:

- One outage for major maintenance at Sundance Unit 6 within our Canadian Coal segment during the third and fourth quarters of 2020. This work will be undertaken in parallel with the coal-to-gas conversion of this unit;
- Distributed planned maintenance expenditures across the entire hydro fleet; and
- Distributed expenditures across our wind fleet, focusing on planned component replacements.

Lost production as a result of planned major maintenance, excluding planned major maintenance for US Coal, which is scheduled during a period of dispatch optimization, is estimated as follows for 2020:

	Coal	Gas and renewables	Total	Lost to date ⁽¹⁾
GWh lost	700 - 800	450 - 500	1,150 - 1,300	235

(1) As at March 31, 2020.

Additional IFRS Measures and Non-IFRS Measures

An additional IFRS measure is a line item, heading or subtotal that is relevant to an understanding of the consolidated financial statements but is not a minimum line item mandated under IFRS, or the presentation of a financial measure that is relevant to an understanding of the consolidated financial statements but is not presented elsewhere in the consolidated financial statements. We have included line items entitled gross margin and operating income (loss) in our Consolidated Statements of Earnings (Loss) for the three months ended March 31, 2020 and 2019. Presenting these line items provides management and investors with a measurement of ongoing operating performance that is readily comparable from period to period.

We evaluate our performance and the performance of our business segments using a variety of measures to provide management and investors with an understanding of our financial position and results. Certain financial measures discussed in this MD&A are not defined under IFRS, are not standard measures under IFRS and, therefore, should not be considered in isolation or as an alternative to or to be more meaningful than net earnings attributable to common shareholders or cash flow from operating activities, as determined in accordance with IFRS, when assessing our financial performance or liquidity. These measures may not be comparable to similar measures presented by other issuers and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS. Comparable EBITDA, deconsolidated comparable EBITDA, Funds from Operations ("FFO"), deconsolidated FFO, FCF, total net debt, total consolidated net debt, adjusted net debt, deconsolidated net debt and segmented cash flow generated by the business, all as defined below, are non-IFRS measures that are presented in this MD&A. See the Discussion of Consolidated Financial Results, Segmented Comparable Results, Selected Quarterly Information, Key Financial Ratios and Financial Capital sections of this MD&A for additional information, including a reconciliation of such non-IFRS measures to the most comparable IFRS measure.

Discussion of Consolidated Financial Results

Each business segment assumes responsibility for its operating results measured to comparable EBITDA and cash flows generated by the business. Gross margin is also a useful measure as it provides management and investors with a measurement of operating performance that is readily comparable from period to period.

Comparable EBITDA

EBITDA is a widely adopted valuation metric and an important metric for management that represents our core business profitability. Interest, taxes, depreciation and amortization are not included, as differences in accounting treatments may distort our core business results. In addition, under comparable EBITDA we reclassify certain transactions to facilitate the discussion of the performance of our business:

- To be more comparable with other companies in the industry, comparable EBITDA is adjusted to exclude the impact of unrealized mark-to-market gains or losses.
- Any gains or losses on asset sales or foreign exchange gains or losses are not included as these are not part of operating income.
- Certain assets we own in Canada are fully contracted and recorded as finance leases under IFRS. We believe it is more appropriate to reflect the payments we receive under the contracts as a capacity payment in our revenues instead of as finance lease income and a decrease in finance lease receivables. We depreciate these assets over their expected lives.
- We also reclassify the depreciation on our mining equipment from fuel, carbon compliance and purchased power to reflect the actual cash cost of our business in our comparable EBITDA.
- On the commissioning of the South Hedland facility in July 2017, we prepaid approximately \$74 million of electricity transmission and distribution costs. Interest income is recorded on the prepaid funds. We reclassify this interest income as a reduction in the transmission and distribution costs expensed each period to reflect the net cost to the business.
- Asset impairment charges (reversals) are removed to calculate comparable EBITDA as these are accounting adjustments that impact depreciation and amortization and do not reflect business performance.

A reconciliation of net earnings (loss) attributable to common shareholders to comparable EBITDA results is set out below:

	3 months ended March 31	
	2020	2019
Net earnings (loss) attributable to common shareholders	27	(65)
Net earnings attributable to non-controlling interests	7	35
Preferred share dividends	10	—
Net earnings (loss)	44	(30)
<i>Adjustments to reconcile net income to comparable EBITDA</i>		
Income tax expense	2	17
Foreign exchange loss	19	1
Net interest expense	62	50
Depreciation and amortization	156	145
<i>Comparable reclassifications</i>		
Decrease in finance lease receivables	4	6
Mine depreciation included in fuel cost	28	29
Australian interest income	1	1
Unrealized mark-to-market (gains) losses	(55)	2
<i>Adjustments to earnings to arrive at comparable EBITDA</i>		
Asset impairment reversal ⁽¹⁾	(41)	—
Comparable EBITDA	220	221

(1) The asset impairment reversal for 2020 primarily includes the \$41 million decrease for the decommissioning and restoration liability at the Centralia mine and Sundance Units 1 & 2 as a result of a substantial increase in TransAlta's credit spread due to the COVID-19 crisis causing increased credit spreads across most entities, which was partially offset by decreases in the benchmark rates.

Funds from Operations and Free Cash Flow

FFO is an important metric as it provides a proxy for cash generated from operating activities before changes in working capital and provides the ability to evaluate cash flow trends in comparison with results from prior periods. 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. Changes in working capital are excluded so FFO and FCF are not distorted by changes that we consider temporary in nature, reflecting, among other things, the impact of seasonal factors and timing of receipts and payments. FFO per share and FCF per share are calculated using the weighted average number of common shares outstanding during the period.

The table below reconciles our cash flow from operating activities to our FFO and FCF:

	3 months ended March 31	
	2020	2019
Cash flow from operating activities	214	82
Change in non-cash operating working capital balances	(50)	80
Cash flow from operations before changes in working capital	164	162
Adjustments		
Decrease in finance lease receivable	4	6
Other	4	1
FFO	172	169
Deduct:		
Sustaining capital	(29)	(25)
Productivity capital	—	(2)
Dividends paid on preferred shares ⁽¹⁾	(10)	(10)
Distributions paid to subsidiaries' non-controlling interests	(19)	(32)
Payments on lease obligations	(5)	(5)
FCF	109	95
Weighted average number of common shares outstanding in the period	277	285
FFO per share	0.62	0.59
FCF per share	0.39	0.33

(1) Dividends paid on preferred shares for the three months ended March 31, 2019 have been adjusted to include the April 1, 2019 payment as this relates to dividends payable in the first quarter of 2019.

The table below bridges our comparable EBITDA to our FFO and FCF:

	3 months ended March 31	
	2020	2019
Comparable EBITDA	220	221
Provisions and other	5	4
Interest expense	(47)	(42)
Current income tax expense	(9)	(7)
Realized foreign exchange gain (loss)	15	(5)
Decommissioning and restoration costs settled	(4)	(7)
Other cash and non-cash items	(8)	5
FFO	172	169
Deduct:		
Sustaining capital	(29)	(25)
Productivity capital	—	(2)
Dividends paid on preferred shares ⁽¹⁾	(10)	(10)
Distributions paid to subsidiaries' non-controlling interests	(19)	(32)
Payments on lease obligations	(5)	(5)
FCF	109	95

(1) Dividends paid on preferred shares for the three months ended March 31, 2019 have been adjusted to include the April 1, 2019 payment as this relates to dividends payable in the first quarter of 2019.

Segmented Comparable Results

Segmented cash flow generated by the business measures the net cash generated by each of our segments after sustaining and productivity capital expenditures, reclamation costs, payments on lease obligations and provisions. This is the cash flow available to pay our interest and cash taxes, make distributions to our non-controlling partners and pay dividends to our preferred shareholders, grow the business, pay down debt and return capital to our shareholders.

The table below shows the segmented cash flow generated by the business by each of our segments:

	3 months ended March 31	
	2020	2019
Segmented cash flow⁽¹⁾		
Canadian Coal	22	41
US Coal	28	(12)
Canadian Gas	29	24
Australian Gas	28	30
Wind and Solar	72	66
Hydro	23	24
Generation segmented cash flow	202	173
Energy Marketing	18	24
Corporate	(33)	(11)
Total segmented cash flow	187	186

(1) Segmented cash flow is a non-IFRS measure and has no standardized meaning under IFRS. Refer to the Additional IFRS Measures and Non-IFRS Measures section for further details.

Segmented cash flow generated by the business was up \$1 million in the three months ended March 31, 2020 compared to the same period in 2019, mainly due to strong results from our US Coal and Wind and Solar segments, partially offset by the planned outage and lower demand at Canadian Coal and the impact of the realized gains and losses on the total return swap in the Corporate segment. In the three months ended March 31, 2020, we realized a loss of \$11 million from the total return swap on our share-based payment plans, whereas in the same period last year we realized a net gain of \$13 million.

Canadian Coal

	3 months ended March 31	
	2020	2019
Availability (%)	88.8	91.3
Contract production (GWh)	1,538	2,062
Merchant production (GWh)	1,435	1,657
Total production (GWh)	2,973	3,719
Gross installed capacity (MW) ⁽¹⁾	3,229	3,231
Revenues	192	235
Fuel, carbon compliance and purchased power	121	146
Comparable gross margin	71	89
Operations, maintenance and administration	33	33
Taxes, other than income taxes	4	3
Net other operating income	(10)	(10)
Comparable EBITDA	44	63
Deduct:		
Sustaining capital:		
Routine capital	1	3
Mine capital	1	5
Planned major maintenance	14	3
Total sustaining capital expenditures	16	11
Productivity capital	–	2
Total sustaining and productivity capital	16	13
Provisions	–	1
Payments on lease obligations	4	4
Decommissioning and restoration costs settled	2	4
Canadian Coal cash flow	22	41

(1) 2019 & 2020 - includes 774 MW for Sundance Units 3 and 5, which are temporarily mothballed. 2020 - the Keephills 3 and Genesee 3 asset swap resulted in a net 2 MW reduction of capacity.

Availability for the three months ended March 31, 2020, was lower compared to the same period in 2019, due to the planned dual-fuel conversion outage at our Sheerness joint venture plant, whereas there were no planned outages during the first quarter of 2019. Our remaining fleet performed as expected at high availabilities.

Production for the three months ended March 31, 2020, decreased 746 GWh compared to the same period in 2019, primarily due to the planned dual-fuel conversion outage at Sheerness, lower contract production as a result of curtailments and lower merchant production in the coal fleet resulting from additional wind resources supplying power to the market and lower demand resulting from COVID-19 and reduced oil production in the province in March.

Revenue for the three months ended March 31, 2020, decreased by \$43 million compared to the same period in 2019, mainly due to lower merchant volumes and higher PPA penalties related to the Sheerness planned outage.

Revenue per MWh of production rose to approximately \$65 per MWh for the three months ended March 31, 2020, from \$63 per MWh for the same period in 2019, primarily due to higher realized prices and fixed capacity revenues with lower contracted production.

Fuel, carbon compliance and purchased power costs per MWh were higher in the three months ended March 31, 2020, compared to the same period in 2019. Costs per MWh of production rose to approximately \$41 per MWh in 2020 from \$39 per MWh in 2019. Higher gas prices and fixed coal costs spread over less volume resulted in increased costs per MWh. Consequently, comparable gross margin per MWh for the three months ended March 31, 2020, was consistent with the same period in 2019.

We continued to co-fire with natural gas, when economical. Natural gas combustion produces fewer GHG emissions than coal combustion, which lowers our overall fuel and GHG compliance costs.

OM&A costs for the three months ended March 31, 2020, were consistent with the same period in 2019, which was in line with expectations.

Comparable EBITDA for the three months ended March 31, 2020, decreased \$19 million compared to the same period in 2019. This largely reflects lower merchant production and associated revenue.

For the three months ended March 31, 2020, sustaining capital expenditures increased by \$5 million compared to the same period in 2019, mainly due to higher spend on planned major maintenance. In 2019, there were no planned major outages, while during 2020 there was the planned dual-fuel conversion outage at the Sheerness plant.

Canadian Coal's cash flow for the three months ended March 31, 2020, decreased by \$19 million compared to the same period in 2019, mainly due to planned outage work and the associated lost revenue and higher capital expenditures.

US Coal

	3 months ended March 31	
	2020	2019
Availability (%)	76.2	76.9
Adjusted availability (%) ⁽¹⁾	93.2	76.9
Contract sales volume (GWh)	830	820
Merchant sales volume (GWh)	1,271	2,174
Purchased power (GWh)	(995)	(969)
Total production (GWh)	1,106	2,025
Gross installed capacity (MW)	1,340	1,340
Revenues	118	159
Fuel and purchased power	68	154
Comparable gross margin	50	5
Operations, maintenance and administration	16	14
Taxes, other than income taxes	1	1
Comparable EBITDA	33	(10)
Deduct:		
Sustaining capital:		
Routine capital	1	–
Planned major maintenance	2	–
Total sustaining capital expenditures	3	–
Decommissioning and restoration costs settled	2	2
US Coal cash flow	28	(12)

(1) Adjusted for dispatch optimization.

Adjusted availability for the three months ended March 31, 2020, was up compared to the same period in 2019 due to lower derates in 2020. In the first quarter of 2019, Centralia operated with a derate due to blocked precipitator hoppers. In 2020, both units were taken out of service earlier than the prior year as a result of lower than seasonal prices.

Production decreased by 919 GWh in the three months ended March 31, 2020, compared to the same period in 2019, due mainly to lower merchant pricing in the first quarter of 2020 and timing of dispatch optimization. In 2019, both Centralia units remained in service into April due to higher prices in the Pacific Northwest, whereas in 2020, due to seasonally lower prices, both Centralia units were taken out of service throughout February and March.

OM&A costs for the three months ended March 31, 2020, were higher compared with the same period in 2019, mainly due to community fund disbursements and the strengthening of the US dollar relative to the Canadian dollar.

Comparable EBITDA returned to more normalized levels in the three months ended March 31, 2020, increasing by \$43 million compared to the same period in 2019, primarily due to the impacts of an isolated and extreme pricing event in March 2019 during which Centralia was unable to commit one of its units to physical production for day-ahead supply due to an unplanned forced outage repair. In addition, comparable EBITDA in the first quarter of 2020 benefited from the strengthening of the US dollar relative to the Canadian dollar.

Sustaining capital expenditures for the three months ended March 31, 2020, were \$3 million higher than the same period in 2019, mainly due to increased planned outage work in 2020, during times of dispatch optimization.

US Coal's cash flow for the three months ended March 31, 2020, increased by \$40 million compared to the the same period in 2019, mainly due to higher comparable EBITDA, partially offset by higher sustaining capital spend.

Canadian Gas

	3 months ended March 31	
	2020	2019
Availability (%)	101.3	99.5
Contract production (GWh)	457	437
Merchant production (GWh) ⁽¹⁾	–	159
Total production (GWh)	457	596
Gross installed capacity (MW) ⁽²⁾	945	945
Revenues	56	72
Fuel and purchased power	14	31
Comparable gross margin	42	41
Operations, maintenance and administration	12	11
Taxes, other than income taxes	1	–
Comparable EBITDA	29	30
Deduct:		
Sustaining capital:		
Routine capital	–	5
Planned major maintenance	–	1
Total sustaining capital expenditures	–	6
Canadian Gas cash flow	29	24

(1) Includes purchased power, which is used for dispatch optimization, when economical.

(2) Includes production capacity for the Fort Saskatchewan facility, which prior to November 2019 was accounted for as a finance lease. Includes the portion we own of the Poplar Creek facility as a part of gross capacity measures.

Availability for the three months ended March 31, 2020, increased compared to the same period in 2019, primarily due to lower unplanned outages at our Sarnia, Fort Saskatchewan and Ottawa facilities. We were able to achieve higher than 100 per cent availability due to colder weather, which allows the facilities to produce more than the nameplate capacity.

Production for the three months ended March 31, 2020, decreased by 139 GWh compared to the same period in 2019, mainly due to lower market demand, which was partially offset by lower unplanned outages. Due to the nature of our contracts, changes in production do not have a significant financial impact as our contracts are structured as capacity payments with customer supplied fuel or a passthrough of fuel costs.

Comparable EBITDA for the three months ended March 31, 2020, was consistent with the same period in 2019, which was in line with expectations as the impact of lower merchant production and revenue at Sarnia was largely offset by lower fuel costs.

Sustaining capital decreased by \$6 million in the three months ended March 31, 2020, compared to the same period in 2019, mainly due to purchases of parts in the first quarter of 2019 for the Sarnia overhaul in the second quarter of 2019.

Cash flow at Canadian Gas increased by \$5 million for the three months ended March 31, 2020, compared to the same period in 2019, mainly due to lower sustaining capital expenditures.

Australian Gas

	3 months ended March 31	
	2020	2019
Availability (%)	91.9	81.3
Contract production (GWh)	471	466
Gross installed capacity (MW)	450	450
Revenues	39	41
Fuel and purchased power	2	1
Comparable gross margin	37	40
Operations, maintenance and administration	7	10
Comparable EBITDA	30	30
Deduct:		
Sustaining capital:		
Planned major maintenance	2	—
Total sustaining capital expenditures	2	—
Australian Gas cash flow	28	30

Availability for the three months ended March 31, 2020, increased compared to the same period in 2019, mainly due to an unplanned outage in the first quarter of 2019.

Production for the three months ended March 31, 2020, was consistent with the same period in 2019. Due to the nature of our contracts, changes in production do not have a significant financial impact as our contracts are structured as capacity payments with customer supplied fuel or a passthrough of fuel costs.

Comparable EBITDA for the three months ended March 31, 2020, was consistent with the same period in 2019, as the weakening of the Australian dollar relative to the Canadian dollar was offset by lower costs due to cost-saving initiatives.

Sustaining capital for the three months ended March 31, 2020, increased by \$2 million compared to the same period in 2019, mainly due to planned major maintenance at our Southern Cross facility in the first quarter of 2020.

Cash flow at Australian Gas decreased by \$2 million in the three months ended March 31, 2020, mainly due to higher sustaining capital expenditures.

Wind and Solar

	3 months ended March 31	
	2020	2019
Availability (%)	95.3	95.0
Contract production (GWh)	795	757
Merchant production (GWh)	341	214
Total production (GWh)	1,136	971
Gross installed capacity (MW) ⁽¹⁾	1,495	1,382
Revenues	94	87
Fuel and purchased power	5	4
Comparable gross margin	89	83
Operations, maintenance and administration	13	12
Taxes, other than income taxes	2	2
Comparable EBITDA	74	69
Deduct:		
Sustaining capital:		
Planned major maintenance	2	2
Total sustaining capital expenditures	2	2
Decommissioning and restoration costs settled	—	1
Wind and Solar cash flow	72	66

(1) The 2020 gross installed capacity includes the addition of Big Level and Antrim in late December, partially offset by the reduction of wind turbines due to tower fires at Wyoming Wind and Summerview.

Availability for the three months ended March 31, 2020, was comparable to the same period in 2019, which was in line with our expectations.

Production for the three months ended March 31, 2020, increased by 165 GWh compared to the same period in 2019, mainly due the Big Level and Antrim wind facilities commencing commercial operations in December 2019, higher wind resources in Alberta and in the United States, partially offset by lower wind resources in Eastern Canada.

Comparable EBITDA for the three months ended March 31, 2020, increased by \$5 million compared with the same period in 2019, primarily due to the timing of environmental attributes sales, higher production, partially offset by lower pricing in Alberta.

Wind and Solar's cash flow for the three months ended March 31, 2020, increased by \$6 million compared to the same period in 2019, mainly due to higher comparable EBITDA.

Hydro

	3 months ended March 31	
	2020	2019
Production		
Energy contracted		
Alberta Hydro PPA assets (GWh) ⁽¹⁾	306	318
Other hydro energy (GWh) ⁽¹⁾	32	27
Energy merchant		
Other hydro energy (GWh)	5	3
Total energy production (GWh)	343	348
Ancillary service volumes (GWh) ⁽²⁾	872	781
Gross installed capacity (MW)	926	926
Revenues		
Alberta Hydro PPA assets energy	24	29
Alberta Hydro PPA assets ancillary	36	29
Capacity payments received under Alberta Hydro PPA ⁽³⁾	15	14
Other revenue ⁽⁴⁾	6	5
Total gross revenues	81	77
Net payment relating to Alberta Hydro PPA ⁽⁵⁾	(43)	(40)
Revenues	38	37
Fuel and purchased power	2	1
Comparable gross margin	36	36
Operations, maintenance and administration	9	8
Taxes, other than income taxes	1	1
Comparable EBITDA	26	27
Deduct:		
Sustaining capital:		
Routine capital	1	1
Planned major maintenance	2	2
Total sustaining capital expenditures	3	3
Decommissioning and restoration costs settled	—	—
Hydro cash flow	23	24

(1) Alberta Hydro PPA assets include 13 hydro facilities on the Bow and North Saskatchewan river systems included under the PPA legislation. Other hydro facilities include our hydro facilities in BC, Ontario and the hydro facilities in Alberta not included in the legislated PPA.

(2) Ancillary Services as described in the AESO Consolidated Authoritative Document Glossary.

(3) Capacity payments include the annual capacity charge as described in the Power Purchase Arrangements Determination Regulation AR 175/2000, available from Alberta Queen's Printer. The Alberta Hydro PPA expires on Dec. 31, 2020.

(4) Other revenue includes revenues from our non-PPA hydro facilities, our transmission business and other contractual arrangements including the flood mitigation agreement with the Alberta government and black start services.

(5) The net payment relating to the Alberta Hydro PPA represents the Corporation's financial obligations for notional amounts of energy and Ancillary Services in accordance with the Alberta Hydro PPA which expires on Dec. 31, 2020.

Production for the three months ended March 31, 2020, was consistent with the same period in 2019, which was in line with expectations.

Total gross revenues for the three months ended March 31, 2020, increased by \$4 million compared to the same period in 2019, as the Hydro business optimizes its revenue through a combination of energy sales and Ancillary Services, which allows us to maintain consistent revenues year-over-year.

Comparable EBITDA for the three months ended March 31, 2020, was consistent with the same period in 2019, as higher Ancillary Services revenues were offset by lower energy revenues and higher net payments relating to the Alberta Hydro PPA.

Hydro's cash flow for the three months ended March 31, 2020, was consistent with the same period in 2019 and consistent with expectations.

Energy Marketing

	3 months ended March 31	
	2020	2019
Revenues and comparable gross margin	22	28
Operations, maintenance and administration	9	9
Comparable EBITDA	13	19
Deduct:		
Provisions and other	(5)	(5)
Energy Marketing cash flow	18	24

Comparable EBITDA for the three months ended March 31, 2020, decreased by \$6 million compared to the same period in 2019, which was in line with expectations as we had particularly strong performance from the US Western desk in the first quarter of 2019.

Energy Marketing's cash flows for the three months ended March 31, 2020, decreased by \$6 million compared to the same period in 2019, mainly due to lower comparable EBITDA.

Corporate

	3 months ended March 31	
	2020	2019
Operations, maintenance, and administration	29	7
Deduct:		
Sustaining capital:		
Routine capital	3	3
Total sustaining capital expenditures	3	3
Provisions	—	—
Payments on lease obligations ⁽¹⁾	1	1
Corporate cash flow	(33)	(11)

(1) On implementation of IFRS 16 in 2019, we have included principal payments on lease obligations as a separate line.

Our Corporate overhead costs for the three months ended March 31, 2020, were \$29 million, an increase of \$22 million compared to \$7 million in the same period in 2019, primarily due to realized gains and losses from the total return swap. A portion of the settlement cost of our share-based payment plans is fixed by entering into total return swaps, which are cash settled every quarter. In the three months ended March 31, 2020, we realized a loss of \$11 million from the total return swap on our share-based payment plans, whereas in the same period last year we realized a net gain of \$13 million.

Supplemental disclosure	3 months ended March 31	
	2020	2019
Corporate cash flow	(33)	(11)
Total return swap	11	(13)
Adjusted Corporate cash flow	(22)	(24)

Excluding the impact of the total return swap, Corporate costs have decreased by \$2 million, mainly due to lower salary costs.

Selected Quarterly Information

Our results are seasonal due to the nature of the electricity market and related fuel costs. Higher maintenance costs are often incurred in the spring and fall when electricity prices are expected to be lower, as electricity prices generally increase in the peak winter and summer months in our main markets due to increased heating and cooling loads. Margins are also typically impacted in the second quarter due to the volume of hydro production resulting from spring runoff and rainfall in the Pacific Northwest, which impacts production at US Coal. Typically, hydro facilities generate most of their electricity and revenues during the spring months when melting snow starts feeding watersheds and rivers. Inversely, wind speeds are historically greater during the cold winter months and lower in the warm summer months.

	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Revenues	497	593	609	606
Comparable EBITDA	215	305	243	220
FFO	155	244	189	172
Net earnings (loss) attributable to common shareholders	–	51	66	27
Net earnings (loss) per share attributable to common shareholders, basic and diluted ⁽¹⁾	–	0.18	0.24	0.10
	Q2 2018	Q3 2018	Q4 2018	Q1 2019
Revenues	446	593	622	648
Comparable EBITDA	248	252	265	221
FFO	188	204	217	169
Net earnings (loss) attributable to common shareholders	(105)	(86)	(122)	(65)
Net earnings (loss) per share attributable to common shareholders, basic and diluted ⁽¹⁾	(0.36)	(0.30)	(0.43)	(0.23)

(1) Basic and diluted earnings per share attributable to common shareholders and comparable earnings per share are calculated each period using the weighted average common shares outstanding during the period. As a result, the sum of the earnings per share for the four quarters making up the calendar year may sometimes differ from the annual earnings per share.

Reported net earnings, comparable EBITDA and FFO are generally higher in the first and fourth quarters due to higher demand associated with the cold winter months in the markets in which we operate and lower planned outages.

Net earnings attributable to common shareholders has also been impacted by the following variations and events:

- Significant foreign exchange losses in the first quarter of 2020;
- Gains relating to the Keephills 3 and Genesee 3 swap in the fourth quarter of 2019;
- Effects of impairment charges and reversals during the first quarter of 2020, third and fourth quarters of 2019 and impairment charges during the second, third and fourth quarters of 2018;
- Effects of changes in useful lives of certain assets during the third quarter of 2019;
- Change in income tax rates in Alberta in the second quarter of 2019;
- Lower scheduled payments commencing in January 2019 from the Poplar Creek finance lease; and
- Recognition of the \$56 million received on winning the arbitration against the Balancing Pool in the third quarter of 2019.

Key Financial Ratios

The methodologies and ratios used by rating agencies to assess our credit rating are not publicly disclosed. We have developed our own definitions of ratios and targets to help evaluate the strength of our financial position. These metrics and ratios are not defined and have no standardized meaning under IFRS and may not be comparable to those used by other entities or by rating agencies.

Funds from Operations before Interest to Adjusted Interest Coverage

For the twelve months ended	March 31, 2020	Dec. 31, 2019
FFO ⁽¹⁾	760	757
Less: PPA Termination Payments	(56)	(56)
Add: Interest on debt, exchangeable securities and leases, net of interest income and capitalized interest	175	166
FFO before interest	879	867
Interest on debt, exchangeable securities and leases, net of interest income	181	172
Add: 50 per cent of dividends paid on preferred shares	20	20
Adjusted interest	201	192
FFO before interest to adjusted interest coverage (times)	4.4	4.5

(1) See the Discussion of Consolidated Financial Results section in this MD&A for the reconciliation of cash flow from operating activities to FFO for the three months ended March 31, 2020 and 2019. These amounts are used to calculate the twelve months ended FFO by taking the current year-to-date FFO plus the 2019 FFO minus the prior year-to-date FFO. See also the IFRS Measures and Non-IFRS Measures section for further details.

Our target for FFO before interest to adjusted interest coverage is four to five times. While both periods are within our target range, the ratio decreased slightly in 2020 compared to 2019, mainly due to higher adjusted interest.

Adjusted FFO to Adjusted Net Debt

As at	March 31, 2020	Dec. 31, 2019
FFO ^(1,2)	760	757
Less: PPA Termination Payments ⁽¹⁾	(56)	(56)
Less: 50 per cent of dividends paid on preferred shares ⁽¹⁾	(20)	(20)
Adjusted FFO⁽¹⁾	684	681
Period-end long-term debt ⁽³⁾	3,179	3,212
Exchangeable securities	327	326
Less: Cash and cash equivalents	(338)	(411)
Less: Principal portion of TransAlta OCP restricted cash	—	(10)
Add: 50 per cent of issued preferred shares	471	471
Fair value asset of hedging instruments on debt ⁽⁴⁾	(23)	(7)
Adjusted net debt	3,616	3,581
Adjusted FFO to adjusted net debt (%)	18.9	19.0

(1) Last 12 months.

(2) Refer to the Discussion of Consolidated Financial Results section of this MD&A for the the reconciliation of cash flow from operating activities to FFO for the three months ended March 31, 2020 and 2019. These amounts are used to calculate the twelve months ended FFO by taking the current year-to-date FFO plus the 2019 FFO minus the prior year-to-date FFO. See also the IFRS Measures and Non-IFRS Measures section for further details.

(3) Includes lease obligations and tax equity financing.

(4) Included in risk management assets and/or liabilities on the consolidated financial statements as at March 31, 2020 and Dec. 31, 2019.

Our target range for adjusted FFO to adjusted net debt is 20 to 25 per cent. Our adjusted FFO to adjusted net debt declined due to higher adjusted net debt compared with 2019.

Adjusted Net Debt to Comparable EBITDA

As at	March 31, 2020	Dec. 31, 2019
Period-end long-term debt ⁽¹⁾	3,179	3,212
Exchangeable securities	327	326
Less: Cash and cash equivalents	(338)	(411)
Less: Principal portion of TransAlta OCP restricted cash	—	(10)
Add: 50 per cent of issued preferred shares	471	471
Fair value asset of hedging instruments on debt ⁽²⁾	(23)	(7)
Adjusted net debt	3,616	3,581
Comparable EBITDA ⁽³⁾	983	984
Less: PPA Termination Payments ⁽³⁾	(56)	(56)
Adjusted comparable EBITDA⁽³⁾	927	928
Adjusted net debt to adjusted comparable EBITDA (times)	3.9	3.9

(1) Includes lease obligations and tax equity financing.

(2) Included in risk management assets and/or liabilities on the consolidated financial statements as at March 31, 2020 and Dec. 31, 2019.

(3) Last 12 months.

Our target for adjusted net debt to comparable EBITDA is 3.0 to 3.5 times. Our adjusted net debt to comparable EBITDA ratio was consistent with 2019, which was expected.

Deconsolidated Net Debt to Deconsolidated Comparable EBITDA

In addition to reviewing fully consolidated ratios and results, management reviews net debt to adjusted comparable EBITDA on a deconsolidated basis to highlight TransAlta's financial flexibility, balance sheet strength and leverage excluding the portion of TransAlta Renewables and TA Cogen that are not owned by TransAlta. These metrics and ratios are not defined under IFRS, and may not be comparable to those used by other entities or by rating agencies. See also the IFRS Measures and Non-IFRS Measures section of this MD&A for further details.

As at	March 31, 2020	Dec. 31, 2019
Period-end long-term debt ⁽¹⁾	3,179	3,212
Exchangeable securities	327	326
Less: Cash and cash equivalents	(338)	(411)
Less: Principal portion of TransAlta OCP restricted cash	—	(10)
Add: 50 per cent of issued preferred shares	471	471
Fair value asset of hedging instruments on debt ⁽²⁾	(23)	(7)
Less: TransAlta Renewables long-term debt	(857)	(961)
Less: US tax equity financing ⁽³⁾	(155)	(145)
Deconsolidated net debt	2,604	2,475
Comparable EBITDA ⁽⁴⁾	983	984
Less: PPA Termination Payments ⁽⁴⁾	(56)	(56)
Less: TransAlta Renewables comparable EBITDA ⁽⁴⁾	(440)	(438)
Less: TA Cogen comparable EBITDA ⁽⁴⁾	(72)	(80)
Add: Dividend from TransAlta Renewables ⁽⁴⁾	151	151
Add: Dividend from TA Cogen ⁽⁴⁾	23	37
Deconsolidated comparable EBITDA⁽⁴⁾	589	598
Deconsolidated net debt to deconsolidated comparable EBITDA⁽⁴⁾ (times)	4.4	4.1

(1) Includes lease obligations and tax equity financing.

(2) Included in risk management assets and/or liabilities on the consolidated financial statements as at March 31, 2020 and Dec. 31, 2019.

(3) Relates to assets where TransAlta Renewables has economic interests.

(4) Last 12 months.

Our target for deconsolidated net debt to deconsolidated comparable EBITDA is 2.5 to 3.0 times. Our deconsolidated net debt to deconsolidated comparable EBITDA ratio increased compared with 2019, mainly as a result of lower cash and foreign exchange impacts on our US-denominated debt.

Deconsolidated FFO

The Corporation has a dividend policy that aims to return 10 to 15 per cent of TransAlta's deconsolidated FFO to shareholders as it aligns shareholder returns to the assets held directly at TransAlta. This metric is not defined and has no standardized meaning under IFRS, and may not be comparable to those used by other entities or by rating agencies. See also the IFRS Measures and Non-IFRS Measures section of this MD&A for further details.

	3 months ended March 31, 2020			3 months ended March 31, 2019		
	TransAlta Consolidated	TransAlta Renewables	TransAlta Deconsolidated	TransAlta Consolidated	TransAlta Renewables	TransAlta Deconsolidated
Cash flow from operating activities	214	82		82	131	
Change in non-cash operating working capital balances	(50)	(18)		80	(41)	
Cash flow from operations before changes in working capital	164	64		162	90	
<i>Adjustments:</i>						
Decrease in finance lease receivable	4	—		6	—	
Finance and interest income - economic interests	—	(8)		—	(26)	
Adjusted FFO - economic interests	—	40		—	37	
Other	4	—		1	—	
FFO	172	96	76	169	101	68
Dividend from TransAlta Renewables			38			38
Distributions to TA Cogen's Partner			(1)			(15)
Deconsolidated TransAlta FFO			113			91

Financial Position

The following table provides a summary of account balances derived from the unaudited interim condensed consolidated statements of financial position as at March 31, 2020 and Dec. 31, 2019:

As at	March 31, 2020	Dec. 31, 2019	Increase (decrease)
Assets			
Cash and cash equivalents	338	411	(73)
Trade and other receivables	431	462	(31)
Prepaid expenses	53	19	34
Risk management assets (current and long-term)	954	806	148
Property, plant, and equipment, net	6,076	6,207	(131)
Others ⁽¹⁾	1,590	1,603	(13)
Total assets	9,442	9,508	(66)
Liabilities and equity			
Credit facilities, long-term debt, and lease obligations (current and long-term)	3,179	3,212	(33)
Decommissioning and other provisions (current and long-term)	446	546	(100)
Risk management liabilities (current and long-term)	147	110	37
Others ⁽²⁾	5,670	5,640	30
Total liabilities and equity	9,442	9,508	(66)

(1) Includes restricted cash, inventory, long-term portion of finance lease receivables, right of use assets, intangible assets, goodwill, deferred income tax assets and other assets.

(2) Includes accounts payable and accrued liabilities, income taxes payable, dividends payable, exchangeable securities, contract liabilities, defined benefit obligation and other long-term liabilities, equity attributable to shareholders and non-controlling interests.

Significant changes in TransAlta's unaudited interim condensed consolidated statements of financial position were as follows:

- See the cash flow section of this MD&A for details on the change in cash during the period.
- Trade and other receivables decreased largely due to lower collateral payments and timing of customer receipts.
- Prepaid expenses increased due to a prepayment (\$12 million) paid to transfer agent in advance to settle dividends payable on April 1, 2020, annual property tax and insurance payments (\$10 million) and higher cash advances to joint venture partners (\$9 million).
- Risk management assets, net of liabilities increased primarily due to changes in market prices and foreign exchange rates, partially offset by contract settlements.
- Property, plant and equipment ("PP&E") decreased due to depreciation (\$167 million) and revisions to decommissioning provisions as a result of changes in discount rates (\$84 million), which was partially offset by additions (\$72 million) relating assets under construction for the coal-to-gas conversions, the Windrise wind facility, the Kaybob cogeneration facility, land and planned major maintenance expenditures. Our PP&E was also impacted significantly due to changes in foreign exchange rates (\$47 million).
- Credit facilities, long-term debt and lease obligations decreased due to lower drawings on the credit facilities (\$101 million) and debt repayments (\$17 million), partially offset by changes in outstanding balances as a result of the strengthening of the US dollar (\$90 million).
- Decommissioning and other provisions have decreased mainly due to changes in discount rates (\$125 million), partially offset by the strengthening of the US dollar (\$19 million).

Cash Flows

The following reconciles TransAlta's opening cash and cash equivalents to closing cash and cash equivalents:

	3 months ended March 31		Increase (decrease)
	2020	2019	
Cash and cash equivalents, beginning of period	411	89	322
Provided by (used in):			
Operating activities	214	82	132
Investing activities	(95)	(53)	(42)
Financing activities	(196)	(9)	(187)
Translation of foreign currency cash	4	—	4
Cash and cash equivalents, end of period	338	109	229

Cash provided by operating activities for the three months ended March 31, 2020, increased compared with the same period in 2019, largely due to:

- \$74 million in stronger net earnings, which was offset by \$75 million in lower non-cash and non-operating items such as depreciation and amortization, accretion of provisions, unrealized changes in fair value of financial instruments, unrealized changes in foreign exchange rates, changes in provisions and changes in deferred taxes; and
- \$130 million in changes in working capital due to the timing of receivables, prepaids and payables.

Cash used in investing activities for the three months ended March 31, 2020, increased compared with the same period in 2019, largely due to:

- \$38 million higher additions to PP&E, primarily for the construction related to the coal-to-gas conversions, the Windrise wind facility, the Kaybob cogeneration facility, land and planned major maintenance expenditures; and
- \$70 million lower non-cash working capital related to the timing of construction payables for the PP&E additions.
- Offset by less cash spent on the Antrim acquisition (\$32 million) and the note receivable related to the Pioneer Pipeline (\$50 million), which occurred during the first quarter of 2019.

Cash used in financing activities for the three months ended March 31, 2020, increased compared with the same period in 2019, largely due to:

- \$160 million in higher debt repayments, mainly related to lower drawings under the credit facilities (\$172 million), offset by lower scheduled principal repayments on project debt (\$12 million); and
- \$13 million in lower distributions paid to the non-controlling shareholders.

Financial Capital

Capital Structure

Our capital structure consists of the following components as shown below:

As at	March 31, 2020		Dec. 31, 2019	
	\$	%	\$	%
TransAlta Corporation				
Recourse debt - CAD debentures	648	9	647	9
Recourse debt - US senior notes	981	14	905	13
Exchangeable securities	327	5	326	5
Credit facilities	—	—	—	—
Other	8	—	9	—
Less: cash and cash equivalents	(298)	(4)	(348)	(5)
Less: principal portion of restricted cash on TransAlta OCP	—	—	(10)	—
Less: fair value asset of economic hedging instruments on debt	(23)	(1)	(7)	—
Net recourse debt, excluding US tax equity financing	1,643	23	1,522	22
US tax equity financing	155	2	145	2
Non-recourse debt	413	6	426	6
Lease obligations	117	2	119	2
Total net debt - TransAlta Corporation	2,328	33	2,212	32
TransAlta Renewables				
Credit facility	118	2	220	3
Less: cash and cash equivalents	(40)	(1)	(63)	(1)
Net recourse debt	78	1	157	2
Non-recourse debt	716	10	718	10
Lease obligations	23	—	23	—
Total net debt - TransAlta Renewables	817	11	898	12
Total consolidated net debt	3,145	44	3,110	44
Non-controlling interests	1,105	15	1,101	15
Equity attributable to shareholders				
Common shares	2,960	41	2,978	42
Preferred shares	942	13	942	13
Contributed surplus, deficit and accumulated other comprehensive income	(910)	(13)	(959)	(14)
Total capital	7,242	100	7,172	100

The Corporation continues to maintain a strong financial position in part due to our long-term contracts and hedged positions. The Corporation is scheduled to receive \$400 million from the second tranche of financing from the Brookfield investment in the fourth quarter of 2020 and we have access to additional capital through potential project financing of existing assets that are currently unencumbered. Between 2020 and 2022, we have \$1,244 million of debt maturing, comprised of approximately \$966 million of recourse debt, with the balance mainly related to scheduled non-recourse debt repayments. For the debt maturing in 2020, we expect to utilize our existing cash and credit facilities and we expect to refinance the debt maturing in 2022. We currently have access to \$1.7 billion in liquidity including \$338 million in cash.

The Corporation's credit facilities are summarized in the table below:

As at March 31, 2020	Facility size	Utilized		Available capacity	Maturity date
		Outstanding letters of credit ⁽¹⁾	Actual drawings		
TransAlta Corporation					
Committed syndicated bank facility ⁽²⁾	1,250	420	–	830	Q2 2023
Canadian committed bilateral credit facilities	240	229	–	11	Q2 2021
TransAlta Renewables					
Committed credit facility ⁽²⁾	700	93	119	488	Q2 2023
Total	2,190	742	119	1,329	

(1) We have obligations to issue letters of credit and cash collateral to secure potential liabilities to certain parties, including those related to potential environmental obligations, commodity risk management and hedging activities, pension plan obligations, construction projects and purchase obligations. At March 31, 2020, we provided cash collateral of \$17 million.

(2) TransAlta has letters of credit of \$123 million and TransAlta Renewables has letters of credit of \$93 million issued from uncommitted demand facilities, these obligations are backstopped and reduce the available capacity on the committed credit facilities.

The strengthening of the US dollar has increased our long-term debt balances by \$90 million as at March 31, 2020. Almost all our US-denominated debt is hedged either through financial contracts or net investments in our US operations. During the period, these changes in our US-denominated debt were offset as follows:

	March 31, 2020
Effects of foreign exchange on carrying amounts of US operations (net investment hedge)	41
Foreign currency economic cash flow hedges on debt	16
Economic hedges and other	20
Unhedged	13
Total	90

Share Capital

The following tables outline the common and preferred shares issued and outstanding:

As at	May 11, 2020	March 31, 2020	Dec. 31, 2019
	Number of shares (millions)		
Common shares issued and outstanding, end of period	275.7	275.7	277.0
Preferred shares			
Series A	10.2	10.2	10.2
Series B	1.8	1.8	1.8
Series C	11.0	11.0	11.0
Series E	9.0	9.0	9.0
Series G	6.6	6.6	6.6
Preferred shares issued and outstanding, end of period	38.6	38.6	38.6

Non-Controlling Interests

As of March 31, 2020, we own 60.3% per cent (March 31, 2019 – 60.8 per cent) of TransAlta Renewables. Our ownership percent decreased due to common shares issued under TransAlta Renewables' Dividend Reinvestment Plan. We do not participate in this plan.

We also own 50.01 per cent of TA Cogen, which owns, operates or has an interest in four natural-gas-fired facilities (Mississauga, Ottawa, Windsor and Fort Saskatchewan) and one coal-fired generating facility.

Reported earnings attributable to non-controlling interests for the three months ended March 31, 2020, decreased by \$28 million to \$7 million compared to the same period in 2019. Earnings decreased at TransAlta Renewables for the three months ended March 31, 2020 compared to the same period in 2019, mainly due to the change in the fair value of investments in subsidiaries of TransAlta, lower finance income from subsidiaries of TransAlta and foreign exchange losses due to the weakening of the Australian dollar. Earnings from TA Cogen for the three months ended March 31, 2020 were consistent with the same period in 2019.

Returns to Providers of Capital

Net Interest Expense

The components of net interest expense are shown below:

	March 31, 2020	March 31, 2019
Interest on debt	43	41
Interest on exchangeable securities	7	–
Interest income	(3)	(2)
Capitalized interest	(1)	(1)
Interest on finance lease obligations	2	1
Credit facility fees, bank charges, and other interest	4	3
Other	1	2
Accretion of provisions	9	6
Net interest expense	62	50

Net interest expense was higher in the three months ended March 31, 2020, primarily due to interest on the exchangeable securities and and the interest on debt due to the additional US tax equity financing obtained in December 2019.

Regulatory Updates

Refer to the Policy and Legal Risks discussion in our 2019 annual MD&A for further details that supplement the recent developments as discussed below:

Post-PPA Alberta Electricity Market

The Alberta government concluded its review of the market power mitigation measures in Alberta's electricity market and determined that no additional mitigation is required to be introduced into Alberta's existing market design. The government's announcement reduces regulatory uncertainty and provides market stability for the new investment as the PPAs expire at the end of 2020.

COVID-19 Impact on Regulatory Processes and Environmental Reporting

As a result of COVID-19, all North American integrated electricity market system operators and the Federal Energy Regulatory Commission have moved staff to work from home structures with the exception of their system operations staff. Planned in-person consultation processes have been cancelled and these and other stakeholder processes have been rescheduled to telephone or virtual formats and/or delayed. These actions are expected to result in delays or potential cancellation of regulatory changes and other market operation working groups' activities. Standard market activities have not been impacted.

Due to the current situation, the Alberta and Canadian federal government have also provided options to delay environmental reporting, including options to delay compliance reporting for their respective large GHG emitters programs. Facilities can still submit on the regular compliance dates.

Other Consolidated Analysis

Contingencies

For the current significant outstanding contingencies, refer to the Other Consolidated Analysis section of the 2019 Annual MD&A included in the 2019 Annual Integrated Report. Changes to these contingencies during the three months ended March 31, 2020 are included below:

I. FMG Disputes

The Corporation is currently engaged in two disputes with Fortescue Metals Group Ltd. ("FMG"). The first arose as a result of FMG's purported termination of the South Hedland PPA. TransAlta sued FMG, seeking payment of amounts invoiced and not paid under the South Hedland PPA, as well as a declaration that the PPA is valid and in force. FMG, on the other hand, seeks a declaration that the PPA was lawfully terminated. This matter has been re-scheduled to proceed to trial beginning May 3, 2021, instead of June 15, 2020, but it may be delayed further, depending on the extent of continued restrictions arising from the COVID-19 pandemic.

The second dispute involves FMG's claims against TransAlta related to the transfer of the Solomon facility to FMG. FMG claims certain amounts related to the condition of the facility while TransAlta claims certain outstanding costs that should be reimbursed. A trial date for this matter has not yet been scheduled but it will not occur until 2021 at the earliest.

II. Mangrove Claim

On April 23, 2019, Mangrove commenced an action in the Ontario Superior Court of Justice, naming TransAlta Corporation, the incumbent members of the Board of Directors of TransAlta Corporation on such date, and Brookfield BRP Holdings (Canada), as defendants. Mangrove is seeking to set aside the 2019 Brookfield transaction. TransAlta believes the claim is wholly lacking in merit and is taking all steps to defend against the allegations. This matter was scheduled to proceed to trial beginning Sept. 14, 2020 but will be adjourned to a new date, likely in 2021, as a result of the COVID-19 pandemic.

III. Keephills 1 Stator Force Majeure

The Balancing Pool and ENMAX Energy Corporation ("ENMAX") are seeking to set aside an arbitration award on the basis that they did not receive a fair hearing. The Alberta Court of Queen's Bench ("ABQB") dismissed the Balancing Pool and ENMAX's allegations of unfairness on June 26, 2019. The Balancing Pool and ENMAX, however, sought leave to appeal the ABQB's decision at the Court of Appeal, which was granted on Feb. 13, 2020. We expect the appeal to be heard sometime in early 2021. TransAlta believes that the Court of Appeal will affirm the ABQB decision that the arbitration proceeding was not unfair.

Critical Accounting Policies and Estimates

The preparation of unaudited interim condensed consolidated financial statements requires management to make judgments, estimates and assumptions that could affect the reported amounts of assets, liabilities, revenues, expenses and disclosures of contingent assets and liabilities during the period. These estimates are subject to uncertainty. Actual results could differ from those estimates due to factors such as fluctuations in interest rates, foreign exchange rates, inflation and commodity prices, and changes in economic conditions, legislation and regulations.

The duration and impact of the COVID-19 pandemic are unknown at this time. Estimates to the extent to which the COVID-19 pandemic may, directly or indirectly impact the Corporation's operations, financial results and conditions in future periods are also subject to significant uncertainty. For a description of additional risks identified as a result of the pandemic, refer to Note 10 of the unaudited interim condensed consolidated financial statements as at and for the three months ended March 31, 2020.

Actual results could differ from these estimates due to factors such as fluctuations in interest rates, foreign exchange rates, inflation and commodity prices, and changes in economic conditions, legislation and regulations.

Change in Estimates

Decommissioning and other provisions

As at March 31, 2020, there was a substantial change in the discount rates used for the decommissioning provision mainly due to a substantial increase in TransAlta's credit spread due to the COVID-19 crisis, which has caused increased credit spreads for most entities. The increase in the credit spread was partially offset by decreases in the benchmark rates. As a result, the Corporation decreased the decommissioning provision by \$125 million, of which \$84 million decreased the related assets included in property, plant and equipment and \$41 million was reflected as an impairment reversal on the statement of earnings as it relates to the Centralia mine and Sundance Units 1 & 2, which are no longer operating and reached the end of their useful lives.

Accounting Changes

Current Accounting Changes

The accounting policies adopted in the preparation of the unaudited interim condensed consolidated financial statements are consistent with those followed in the preparation of the Corporation's annual consolidated financial statements for the year ended Dec. 31, 2019, except for the adoption of new standards effective as of Jan. 1, 2020. The Corporation has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

I. Amendments to IAS 1 and IAS 8 *Definition of Material*

The Corporation adopted the amendments to IAS 1 and IAS 8 as of Jan. 1, 2020. The amendments provide a new definition of material that states "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity."

The amendments clarify that materiality will depend on the nature or magnitude of information, either individually or in combination with other information, in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. These amendments had no impact on the consolidated financial statements of, nor is there expected to be any future impact to the Corporation.

II. Amendments to IFRS 7 and 9 *Interest Rate Benchmark Reform*

In September 2019, the IASB issued *Interest Rate Benchmark Reform - Amendments to IFRS 9, IAS 39 and IFRS 7*. These amendments provide temporary relief during the period of uncertainty from applying specific hedge accounting requirements to hedging relationships directly affected by the on-going interest rate benchmark reforms. These amendments are mandatory for annual periods beginning on or after Jan. 1, 2020. The Corporation adopted these amendments as of Jan. 1, 2020. There were no hedging relationships that were directly affected on Jan. 1, 2020.

During the first quarter of 2020, the Corporation entered into cash flow hedges of interest rate risk associated with a future forecasted debt issuance using London Interbank Offered Rate ("LIBOR") based derivative instruments. As a temporary relief, provided by the IFRS 9 amendments, the Corporation has assumed that the LIBOR interest rate on which the cash flows of the interest rate swaps are based is not altered by interbank offered rates ("IBOR") reform when assessing if the hedge is highly effective.

For further details and changes in estimates relating to prior years, refer to Note 3 of the audited annual consolidated financial statements and Note 2 of the unaudited interim condensed consolidated financial statements.

Financial Instruments

Refer to Note 14 of the notes to the audited annual consolidated financial statements within our 2019 Annual Integrated Report and Note 9 and 10 of our unaudited interim condensed consolidated financial statements as at and for the three months ended March 31, 2020 for details on Financial Instruments.

We may enter into commodity transactions involving non-standard features for which observable market data is not available. These are defined under IFRS as Level III financial instruments. Level III financial instruments are not traded in an active market and fair value is, therefore, developed using valuation models based upon internally developed assumptions or inputs. Our Level III fair values are determined using data such as unit availability, transmission congestion, or demand profiles. Fair values are validated on a quarterly basis by using reasonably possible alternative assumptions as inputs to valuation techniques, and any material differences are disclosed in the notes to the financial statements.

At March 31, 2020, Level III instruments had a net asset carrying value of \$764 million (Dec. 31, 2019 - \$686 million). The increase during the period is primarily attributable to changes in market prices and foreign exchange rates, partially offset by contract settlements. Our risk management profile and practices have not changed materially from Dec. 31, 2019.

Governance and Risk Management

Refer to the Governance and Risk Management section of our 2019 Annual Integrated Report and Note 10 of our unaudited interim condensed consolidated financial statements for details on our risks and how we manage them. Our risk management profile and practices have not changed materially from Dec. 31, 2019.

We have adopted a number of risk mitigation measures in response to the COVID-19 pandemic, including the formal implementation of the Corporation's business continuity plan on March 9, 2020. The Board and management have been monitoring the development of the outbreak and are continually assessing its impact to the safety of the Corporation's employees, operations, supply chains and customers as well as, more generally, to the business and affairs of the Corporation and our existing growth projects. Potential impacts of the pandemic on the business and affairs of the Corporation include, but are not limited to: potential interruptions of production, supply chain disruptions, unavailability of employees, potential delays in growth projects, increased credit risk with counterparties and increased volatility in commodity prices as well as valuations of financial instruments. In addition, the broader impacts to the global economy and financial markets could have potential adverse impacts on the availability of capital for investment and the demand for power and commodity pricing.

To manage the risks resulting from COVID-19, we have, among other things:

Management Responses

- Formed a COVID-19 emergency team run by our Chief Operating Officer, reporting to our Chief Executive Officer;
- Regularly communicated with the Board of Directors in regard to the Corporation's response to COVID-19;
- Created a team to assess the implications of operating after the more stringent COVID-19 restrictions have been lifted and before a vaccination or cure has been distributed;
- Established a committee to consider and respond to any claims of force majeure that may be received as a result of COVID-19;
- Developed leadership plans, including contingent authorities;

Policy Changes

- Suspended all non-essential travel and require a 14 day restricted period for all employees returning from air, bus, train or ship travel. Employees will not be permitted on a TransAlta site during this restricted period;

Employee Changes

- Provided assurances to employees that their employment with the Corporation would not be impacted by the COVID-19 pandemic;
- Implemented flexible work arrangements and shift rotations to reduce the risk to employees working at or from TransAlta's generating facilities or critical workstations;
- Implemented health screening procedures (i.e., questionnaires and temperature tests), enhanced cleaning measures and strict work protocols at TransAlta generating facilities;
- Instructed all non-essential employees to work remotely from their homes;
- Sourced additional personal protective equipment ("PPE") for employees working in our generating facilities;
- Increased employee compensation for the months of April and May to reflect the incremental cost of grocery store curbside pick-up or home delivery;

Operational Changes

- Modified our operating procedures and implemented restrictions to non-essential access to our facilities to support continued operations through the pandemic;
- Reviewed the supply chain risk associated with all key power generation process inputs and implemented weekly monitoring for changes in risk;
- Reached out to key supply chain contacts to determine strategies and contingencies to ensure we are able to continue to progress our growth projects, wherever possible;
- Identified new cybersecurity risks associated with phishing emails and enhanced security protocols and increased awareness of potential threats;

Financial Oversight

- Maintained our hedge positions in Alberta, where we have 74 per cent of our thermal baseload merchant generation hedged at approximately \$52 per MWh for the remainder of 2020;
- Continued to monitor counterparties for changes in creditworthiness as well as monitor their ability to meet obligations; and
- Continued to monitor the situation and communicate with our key lenders on any foreseeable impacts and on our response to the crisis. We maintain a strong financial position and significant liquidity with our existing committed credit facilities.

Overall, we continue to actively monitor the situation and advice from public health officials with a view to responding to changing recommendations and adapting our response and approach as necessary.

Disclosure Controls and Procedures

Management is responsible for establishing and maintaining adequate internal control over financial reporting ("ICFR") and disclosure controls and procedures ("DC&P"). During the three months ended March 31, 2020, the majority of our workforce supporting and executing our ICFR and DC&P are working remotely. There has been minimal impact to the design and performance of our internal controls. Management has reviewed the changes as a result of changes implemented in response to COVID-19 and is reasonably assured that adjustments to process have not materially affected, or are reasonably likely to materially affect, our ICFR or DC&P.

ICFR is a framework designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with IFRS. Management has used the *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) in order to assess the effectiveness of the Corporation's ICFR.

DC&P refer to controls and other procedures designed to ensure that information required to be disclosed in the reports we file or submit under securities legislation is recorded, processed, summarized and reported within the time frame specified in applicable securities legislation. DC&P include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in our reports that we file or submit under applicable securities legislation is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding our required disclosure.

Together, the ICFR and DC&P frameworks provide internal control over financial reporting and disclosure. In designing and evaluating our ICFR and DC&P, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives and as such may not prevent or detect all misstatements, and management is required to apply its judgment in evaluating and implementing possible controls and procedures. Further, the effectiveness of ICFR is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may change.

Management has evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our ICFR and DC&P as of the end of the period covered by this report. Based on the foregoing evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as at March 31, 2020, the end of the period covered by this report, our ICFR and DC&P were effective.

Condensed Consolidated Statements of Earnings (Loss)

(in millions of Canadian dollars except per share amounts)

<i>Unaudited</i>	3 months ended March 31	
	2020	2019
Revenues (Note 4)	606	648
Fuel, carbon compliance and purchased power (Note 5)	238	366
Gross margin	368	282
Operations, maintenance and administration (Note 5)	128	104
Depreciation and amortization	156	145
Asset impairment reversal (Note 1(B))	(41)	–
Taxes, other than income taxes	9	7
Net other operating income	(10)	(10)
Operating income	126	36
Finance lease income	1	2
Net interest expense (Note 6)	(62)	(50)
Foreign exchange loss	(19)	(1)
Earnings (loss) before income taxes	46	(13)
Income tax expense (Note 7)	2	17
Net earnings (loss)	44	(30)
Net earnings (loss) attributable to:		
TransAlta shareholders	37	(65)
Non-controlling interests (Note 8)	7	35
	44	(30)
Net earnings (loss) attributable to TransAlta shareholders	37	(65)
Preferred share dividends (Note 15)	10	–
Net earnings (loss) attributable to common shareholders	27	(65)
Weighted average number of common shares outstanding in the period (millions)	277	285
Net earnings (loss) per share attributable to common shareholders, basic and diluted	0.10	(0.23)

See accompanying notes.

Condensed Consolidated Statements of Comprehensive Income (Loss)

(in millions of Canadian dollars)

Unaudited	3 months ended March 31	
	2020	2019
Net earnings (loss)	44	(30)
Other comprehensive income (loss)		
Net actuarial gains (losses) on defined benefit plans, net of tax ⁽¹⁾	6	(19)
Gains on derivatives designated as cash flow hedges, net of tax ⁽²⁾	9	3
Total items that will not be reclassified subsequently to net earnings	15	(16)
Gains (losses) on translating net assets of foreign operations, net of tax ⁽³⁾	96	(21)
Gains (losses) on financial instruments designated as hedges of foreign operations, net of tax ⁽³⁾	(41)	8
Gains (losses) on derivatives designated as cash flow hedges, net of tax ⁽⁴⁾	14	(51)
Reclassification of (gains) losses on derivatives designated as cash flow hedges to net earnings, net of tax ⁽⁵⁾	(25)	21
Total items that will be reclassified subsequently to net earnings	44	(43)
Other comprehensive income (loss)	59	(59)
Total comprehensive income (loss)	103	(89)
Total comprehensive income (loss) attributable to:		
TransAlta shareholders	78	(125)
Non-controlling interests (Note 8)	25	36
	103	(89)

(1) Net of income tax expense of \$2 million for the three months ended March 31, 2020 (2019 - \$7 million recovery).

(2) Net of income tax expense of \$1 million for the three months ended March 31, 2020 (2019 - nil).

(3) No income tax expense was recorded for the three months ended March 31, 2020 or 2019.

(4) Net of income tax expense of \$5 million for the three months ended March 31, 2020 (2019 - \$14 million recovery).

(5) Net of reclassification of income tax expense of \$7 million for the three months ended March 31, 2020 (2019 - \$6 million recovery).

See accompanying notes.

Condensed Consolidated Statements of Financial Position

(in millions of Canadian dollars)

<i>Unaudited</i>	March 31, 2020	Dec. 31, 2019
Cash and cash equivalents	338	411
Restricted cash	16	32
Trade and other receivables	431	462
Prepaid expenses	53	19
Risk management assets (Note 9 and 10)	265	166
Inventory	263	251
	1,366	1,341
Long-term portion of finance lease receivables	172	176
Risk management assets (Note 9 and 10)	689	640
Property, plant and equipment (Note 11)		
Cost	13,548	13,395
Accumulated depreciation	(7,472)	(7,188)
	6,076	6,207
Right of use assets	144	146
Intangible assets	313	318
Goodwill	465	464
Deferred income tax assets	27	18
Other assets	190	198
Total assets	9,442	9,508
Accounts payable and accrued liabilities	413	413
Current portion of decommissioning and other provisions	55	58
Risk management liabilities (Note 9 and 10)	102	81
Current portion of contract liabilities	1	1
Income taxes payable	17	14
Dividends payable (Note 14 and 15)	38	37
Current portion of long-term debt and lease obligations (Note 12)	514	513
	1,140	1,117
Credit facilities, long-term debt and lease obligations (Note 12)	2,665	2,699
Exchangeable securities (Note 13)	327	326
Decommissioning and other provisions (Note 1(B))	391	488
Deferred income tax liabilities	471	472
Risk management liabilities (Note 9 and 10)	45	29
Contract liabilities	14	14
Defined benefit obligation and other long-term liabilities	292	301
Equity		
Common shares (Note 14)	2,960	2,978
Preferred shares	942	942
Contributed surplus	28	42
Deficit	(1,433)	(1,455)
Accumulated other comprehensive income	495	454
Equity attributable to shareholders	2,992	2,961
Non-controlling interests (Note 8)	1,105	1,101
Total equity	4,097	4,062
Total liabilities and equity	9,442	9,508

Significant and subsequent events (Note 3)

Commitments and contingencies (Note 16)

See accompanying notes.

Condensed Consolidated Statements of Changes in Equity

(in millions of Canadian dollars)

Unaudited

3 months ended March 31, 2020	Common shares	Preferred shares	Contributed surplus	Deficit	Accumulated other comprehensive income	Attributable to shareholders	Attributable to non-controlling interests	Total
Balance, Dec. 31, 2019	2,978	942	42	(1,455)	454	2,961	1,101	4,062
Net earnings (loss)	—	—	—	37	—	37	7	44
Other comprehensive income (loss):								
Net gains on translating net assets of foreign operations, net of hedges and of tax	—	—	—	—	55	55	—	55
Net losses on derivatives designated as cash flow hedges, net of tax	—	—	—	—	(2)	(2)	—	(2)
Net actuarial gains on defined benefits plans, net of tax	—	—	—	—	6	6	—	6
Intercompany FVOCI investments	—	—	—	—	(18)	(18)	18	—
Total comprehensive income (loss)	—	—	—	37	41	78	25	103
Common share dividends	—	—	—	(12)	—	(12)	—	(12)
Preferred share dividends	—	—	—	(10)	—	(10)	—	(10)
Shares purchased under NCIB	(14)	—	—	5	—	(9)	—	(9)
Changes in non-controlling interests in TransAlta Renewables (Note 8)	—	—	—	2	—	2	5	7
Effect of share-based payment plans	(4)	—	(14)	—	—	(18)	—	(18)
Distributions paid, and payable, to non-controlling interests (Note 8)	—	—	—	—	—	—	(26)	(26)
Balance, March 31, 2020	2,960	942	28	(1,433)	495	2,992	1,105	4,097

3 months ended March 31, 2019	Common shares	Preferred shares	Contributed surplus	Deficit	Accumulated other comprehensive income	Attributable to shareholders	Attributable to non-controlling interests	Total
Balance, Dec. 31, 2018	3,059	942	11	(1,496)	481	2,997	1,137	4,134
Impact of change in accounting policy	—	—	—	3	—	3	—	3
Adjusted balance as at Jan. 1, 2019	3,059	942	11	(1,493)	481	3,000	1,137	4,137
Net earnings (loss)	—	—	—	(65)	—	(65)	35	(30)
Other comprehensive income (loss):								
Net losses on translating net assets of foreign operations, net of hedges and tax	—	—	—	—	(13)	(13)	—	(13)
Net losses on derivatives designated as cash flow hedges, net of tax	—	—	—	—	(27)	(27)	—	(27)
Net actuarial losses on defined benefits plans, net of tax	—	—	—	—	(19)	(19)	—	(19)
Intercompany FVOCI investments	—	—	—	—	(1)	(1)	1	—
Total comprehensive income (loss)	—	—	—	(65)	(60)	(125)	36	(89)
Changes in non-controlling interests in TransAlta Renewables (Note 8)	—	—	—	—	1	1	6	7
Effect of share-based payment plans	—	—	1	—	—	1	—	1
Distributions paid, and payable, to non-controlling interests (Note 8)	—	—	—	—	—	—	(39)	(39)
Balance, March 31, 2019	3,059	942	12	(1,558)	422	2,877	1,140	4,017

See accompanying notes.

Condensed Consolidated Statements of Cash Flows

(in millions of Canadian dollars)

<i>Unaudited</i>	3 months ended March 31	
	2020	2019
Operating activities		
Net earnings (loss)	44	(30)
Depreciation and amortization (Note 17)	184	174
Accretion of provisions	9	6
Decommissioning and restoration costs settled	(4)	(7)
Deferred income tax expense (recovery) (Note 7)	(7)	10
Unrealized (gain) loss from risk management activities	(53)	2
Unrealized foreign exchange (gains) losses	26	(1)
Provisions	–	2
Asset impairment reversal (Note 1(B))	(41)	–
Other non-cash items	6	6
Cash flow from operations before changes in working capital	164	162
Change in non-cash operating working capital balances	50	(80)
Cash flow from operating activities	214	82
Investing activities		
Additions to property, plant and equipment (Note 11)	(72)	(34)
Additions to intangibles	(2)	(3)
Restricted cash	17	35
Acquisitions, net of cash acquired	–	(32)
Note receivable to fund project development costs	–	(50)
Proceeds on sale of property, plant and equipment	–	1
Realized losses on financial instruments	3	3
Decrease in finance lease receivable	4	6
Other	3	(1)
Change in non-cash investing working capital balances	(48)	22
Cash flow used in investing activities	(95)	(53)
Financing activities		
Net increase (decrease) in borrowings under credit facilities (Note 12)	(101)	71
Repayment of long-term debt (Note 12)	(17)	(29)
Dividends paid on common shares (Note 14)	(11)	(11)
Dividends paid on preferred shares (Note 15)	(10)	–
Repurchase of common shares under NCIB (Note 14)	(9)	–
Realized losses on financial instruments	(10)	–
Distributions paid to subsidiaries' non-controlling interests (Note 8)	(19)	(32)
Decrease in lease obligations (Note 12)	(5)	(5)
Change in non-cash financing working capital balances	(14)	(3)
Cash flow used in financing activities	(196)	(9)
Cash flow from (used in) operating, investing, and financing activities	(77)	20
Effect of translation on foreign currency cash	4	–
Increase (decrease) in cash and cash equivalents	(73)	20
Cash and cash equivalents, beginning of period	411	89
Cash and cash equivalents, end of period	338	109
Cash income taxes paid	12	8
Cash interest paid	39	32

See accompanying notes.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

(Tabular amounts in millions of Canadian dollars, except as otherwise noted)

1. Accounting Policies

A. Basis of Preparation

These unaudited interim condensed consolidated financial statements have been prepared in accordance with International Accounting Standard ("IAS") 34 Interim Financial Reporting using the same accounting policies as those used in TransAlta Corporation's ("TransAlta" or the "Corporation") most recent annual consolidated financial statements, except as outlined in Note 2. These unaudited interim condensed consolidated financial statements do not include all of the disclosures included in the Corporation's annual consolidated financial statements. Accordingly, they should be read in conjunction with the Corporation's most recent annual consolidated financial statements which are available on SEDAR at www.sedar.com and on EDGAR at www.sec.gov.

The unaudited interim condensed consolidated financial statements include the accounts of the Corporation and the subsidiaries that it controls.

The unaudited interim condensed consolidated financial statements have been prepared on a historical cost basis, except for certain financial instruments, which are stated at fair value.

These unaudited interim condensed consolidated financial statements reflect all adjustments which consist of normal recurring adjustments and accruals that are, in the opinion of management, necessary for a fair presentation of results. TransAlta's results are partly seasonal due to the nature of the electricity market and related fuel costs. Higher maintenance costs are ordinarily incurred in the second and third quarters when electricity prices are expected to be lower, as electricity prices generally increase in the winter months in the Canadian market.

These unaudited interim condensed consolidated financial statements were authorized for issue by the Audit, Finance and Risk Committee on behalf of the Board of Directors on May 11, 2020.

B. Use of Estimates and Significant Judgments

The preparation of these unaudited interim condensed consolidated financial statements in accordance with IAS 34 requires management to use judgment and make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses, and disclosures of contingent assets and liabilities. These estimates are subject to uncertainty. Refer to Note 2(Y) of the Corporation's most recent annual consolidated financial statements for further details.

The outbreak of the novel strain of coronavirus ("COVID-19") has resulted in governments worldwide enacting emergency measures to constrain the spread of the virus. These measures, which include the implementation of travel bans, self-imposed quarantine periods, self-isolation, physical and social distancing and the closure of non-essential business, have caused significant disruption to businesses globally which has resulted in an uncertain and challenging economic environment. The duration and impact of the COVID-19 pandemic are unknown at this time. Estimates to the extent to which the COVID-19 pandemic may, directly or indirectly impact the Corporation's operations, financial results and conditions in future periods are also subject to significant uncertainty. For a description of additional risks identified as a result of the pandemic, refer to Note 10.

Actual results could differ from these estimates due to factors such as fluctuations in interest rates, foreign exchange rates, inflation and commodity prices, and changes in economic conditions, legislation and regulations.

Change in Estimates

Decommissioning and other provisions

As at March 31, 2020, there was a substantial change in the discount rates used for the decommissioning provision mainly due to a substantial increase in TransAlta's credit spread due to the COVID-19 crisis, which has caused increased credit spreads for most entities. The increase in the credit spread was partially offset by decreases in the benchmark rates. As a result, the Corporation decreased the decommissioning provision by \$125 million, of which \$84 million decreased the related assets included in property, plant and equipment and \$41 million was reflected as an impairment reversal on the statement of earnings as it relates to the Centralia mine and Sundance Units 1 & 2, which are no longer operating and reached the end of their useful lives.

2. Significant Accounting Policies

A. Current Accounting Changes

The accounting policies adopted in the preparation of the interim condensed consolidated financial statements are consistent with those followed in the preparation of the Corporation's annual consolidated financial statements for the year ended Dec. 31, 2019, except for the adoption of new standards effective as of Jan. 1, 2020. The Corporation has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective.

I. Amendments to IAS 1 and IAS 8 *Definition of Material*

The Corporation adopted the amendments to IAS 1 and IAS 8 as of Jan. 1, 2020. The amendments provide a new definition of material that states "information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity."

The amendments clarify that materiality will depend on the nature or magnitude of information, either individually or in combination with other information, in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. These amendments had no impact on the consolidated financial statements of, nor is there expected to be any future impact to the Corporation.

II. Amendments to IFRS 7 and 9 *Interest Rate Benchmark Reform*

In September 2019, the IASB issued *Interest Rate Benchmark Reform - Amendments to IFRS 9, IAS 39 and IFRS 7*. These amendments provide temporary relief during the period of uncertainty from applying specific hedge accounting requirements to hedging relationships directly affected by the on-going interest rate benchmark reforms. These amendments are mandatory for annual periods beginning on or after Jan. 1, 2020. The Corporation adopted these amendments as of Jan. 1, 2020. There were no hedging relationships that were directly affected on Jan. 1, 2020.

During the first quarter of 2020, the Corporation entered into cash flow hedges of interest rate risk associated with a future forecasted debt issuance using London Interbank Offered Rate ("LIBOR") based derivative instruments. As a temporary relief, provided by the IFRS 9 amendments, the Corporation has assumed that the LIBOR interest rate on which the cash flows of the interest rate swaps are based is not altered by interbank offered rates ("IBOR") reform when assessing if the hedge is highly effective.

B. Comparative Figures

Certain comparative figures have been reclassified to conform to the current period's presentation. These reclassifications did not impact previously reported net earnings.

3. Significant and Subsequent Events

A. Global Pandemic

The World Health Organization ("WHO") declared a Public Health Emergency of International Concern relating to COVID-19 on Jan. 30, 2020, which they subsequently declared, on March 11, 2020, as a global pandemic.

The Corporation formally implemented its business continuity plan on March 9, 2020, which is focused on ensuring that: (i) employees that can work remotely do so; and (ii) employees operating and maintaining our facilities, who are not able to work remotely, are able to work safely and in a manner that ensures they remain healthy. This plan includes health screening, enhanced cleaning arrangements, travel bans, revised work schedules, contingent work teams and the reorganization of processes and procedures to limit contact with other employees and contractors on-site.

Currently all of our facilities remain fully operational and capable of meeting our customers' needs. We have modified our operating procedures and implemented restrictions to non-essential access to our facilities to support continued operations through the pandemic. The Corporation continues to work and serve all of our customers and counterparties under the terms of their contracts. We have not experienced interruptions to service requirements. Electricity and steam supply continue to remain a critical service requirement to all of our customers and have been deemed an essential service in our jurisdictions.

The Corporation continues to maintain a strong financial position due in part to the long-term contracts and hedged positions. The Corporation is scheduled to receive \$400 million from the second tranche of financing from Brookfield investment in the fourth quarter of 2020 and the Corporation has access to additional capital through potential project financing of existing assets that are currently unencumbered. We currently have access to \$1.7 billion in liquidity including \$338 million in cash and have sufficient liquidity to meet the upcoming debt maturity due November 2020. The next major debt repayment is scheduled for November 2022.

The Corporation has approximately 50 per cent of its baseload merchant generation in Alberta hedged in the \$52 per MWh range for the remainder of 2020.

The Board and management have been monitoring the development of the outbreak and are continually assessing its impact to the safety of the Corporation's employees, operations, supply chains and customers as well as, more generally, to the business and affairs of the Corporation and our existing capital projects. Potential impacts of the pandemic on the business and affairs of the Corporation include, but are not limited to: potential interruptions of production, supply chain disruptions, unavailability of employees, potential delays in capital projects, increased credit risk with counterparties and increased volatility in commodity prices as well as valuations of financial instruments. In addition, the broader impacts to the global economy and financial markets could have potential adverse impacts on the availability of capital for investment and the demand for power and commodity pricing.

B. Normal Course Issuer Bid

On May 27, 2019, the Corporation announced that the TSX accepted the notice filed by the Corporation to implement a Normal Course Issuer Bid ("NCIB") for a portion of its common shares. During the three months ended March 31, 2020, the Corporation purchased and cancelled a total of 1,297,000 common shares at an average price of \$6.73 per common share, for a total cost of \$9 million.

C. Acquisition of a Contracted Cogeneration Asset in Michigan

On March 17, 2020, the Corporation announced the acquisition of a contracted natural gas-fired cogeneration facility from two private companies. The purchase price was approximately US\$27 million, subject to working capital adjustments. The asset is a 29 MW cogeneration facility in Michigan which is contracted under long-term PPA and steam sale agreements for approximately six years with high quality counterparties. This acquisition aligns with TransAlta's strategy of growing the on-site generation business, diversifying the Corporation's cogeneration portfolio and increasing the pipeline of assets for potential future drop-downs into TransAlta Renewables Inc. The acquisition is expected to close in the second quarter of 2020.

D. Letter of Intent to sell the Pioneer Pipeline

On March 12, 2020, TransAlta announced that the Corporation, with its partner Tidewater Midstream & Infrastructure Ltd. ("Tidewater"), entered into a Letter of Intent to sell the Pioneer Pipeline to NOVA Gas Transmission Ltd. ("NGTL"), a wholly-owned subsidiary of TC Energy, for a purchase price of \$255 million. As part of the transaction, NGTL intends to integrate the Pioneer Pipeline into its natural gas pipeline infrastructure in Alberta.

Under the terms of the agreement, TransAlta will enter into long-term delivery transportation agreements with NGTL, bringing the total of new and existing natural gas pipeline transportation service to 400 TJ/day by 2023. TransAlta's current commitments, including the 139 TJ/day with Tidewater, will remain in place until the closing of the transaction. The transaction is subject to entering into a Purchase and Sale Agreement and customary regulatory approvals.

4. Revenue

A. Disaggregation of Revenue

The majority of the Corporation's revenues are derived from the sale of physical power, capacity and environmental attributes, leasing of power facilities, and from energy marketing and trading activities, which the Corporation disaggregates into the following groups for the purpose of determining how economic factors affect the recognition of revenue.

3 months ended March 31, 2020	Canadian Coal	US Coal	Canadian Gas	Australian Gas	Wind and Solar	Hydro	Energy Marketing	Corporate	Total
Revenues from contracts with customers	77	4	50	21	71	36	—	—	259
Revenue from leases ⁽¹⁾	13	—	—	15	—	—	—	—	28
Revenue from derivatives	2	99	1	—	11	—	28	2	143
Government incentives	—	—	—	—	1	—	—	—	1
Revenue from other ⁽²⁾	114	39	—	3	22	2	—	(5)	175
Total revenue	206	142	51	39	105	38	28	(3)	606

Revenues from contracts with customers

Timing of revenue recognition

At a point in time	5	4	—	—	4	—	—	—	13
Over time	72	—	50	21	67	36	—	—	246
Total revenue from contracts with customers	77	4	50	21	71	36	—	—	259

(1) Total rental income, including contingent rent related to certain PPAs and other long-term contracts that meet the criteria of operating leases.

(2) Includes merchant revenue and other miscellaneous.

3 months ended March 31, 2019	Canadian Coal	US Coal	Canadian Gas	Australian Gas	Wind and Solar	Hydro	Energy Marketing	Corporate	Total
Revenues from contracts with customers	107	2	59	22	75	35	—	—	300
Revenue from leases ⁽¹⁾	16	—	—	17	—	—	—	—	33
Revenue from derivatives	(33)	(38)	5	—	2	—	46	—	(18)
Government incentives	—	—	—	—	2	—	—	—	2
Revenue from other ⁽²⁾	135	182	1	2	10	2	—	(1)	331
Total revenue	225	146	65	41	89	37	46	(1)	648

Revenues from contracts with customers

Timing of revenue recognition

At a point in time	8	2	—	—	6	—	—	—	16
Over time	99	—	59	22	69	35	—	—	284
Total revenue from contracts with customers	107	2	59	22	75	35	—	—	300

(1) Total rental income, including contingent rent related to certain PPAs and other long-term contracts that meet the criteria of operating leases.

(2) Includes merchant revenue and other miscellaneous.

5. Expenses by Nature

Expenses classified by nature are as follows:

	3 months ended March 31			
	2020		2019	
	Fuel and purchased power	Operations, maintenance and administration	Fuel and purchased power	Operations, maintenance and administration
Fuel	159	—	214	—
Purchased power	39	—	104	—
Mine depreciation	28	—	29	—
Salaries and benefits	12	67	19	49
Other operating expenses	—	61	—	55
Total	238	128	366	104

6. Net Interest Expense

The components of net interest expense are as follows:

	3 months ended March 31	
	2020	2019
Interest on debt	43	41
Interest on exchangeable securities	7	—
Interest income	(3)	(2)
Capitalized interest	(1)	(1)
Interest on finance lease obligations	2	1
Credit facility fees, bank charges and other interest	4	3
Other	1	2
Accretion of provisions	9	6
Net interest expense	62	50

7. Income Taxes

The components of income tax expense are as follows:

	3 months ended March 31	
	2020	2019
Current income tax expense	9	7
Deferred income tax recovery related to the origination and reversal of temporary differences	(10)	(9)
Deferred income tax expense arising from the writedown of deferred income tax assets ⁽¹⁾	3	19
Income tax expense	2	17

	3 months ended March 31	
	2020	2019
Current income tax expense	9	7
Deferred income tax expense (recovery)	(7)	10
Income tax expense	2	17

(1) During the three months ended March 31, 2020, the Corporation recorded a writedown of deferred tax assets of \$3 million (March 31, 2019 - \$19 million writedown). The deferred income tax assets mainly relate to the tax benefits of losses associated with the Corporation's directly owned US operations. The Corporation evaluates at each period end, whether it is probable that sufficient future taxable income would be available from the Corporation's directly owned US operations to utilize the underlying tax losses. The Corporation wrote these assets off as it is no longer considered probable that sufficient future taxable income will be available from the Corporation's directly owned US operations to utilize the underlying tax losses.

8. Non-Controlling Interests

The Corporation's subsidiaries with significant non-controlling interests are TransAlta Renewables and TransAlta Cogeneration L.P. The net earnings, distributions, and equity attributable to TransAlta Renewables' non-controlling interests include the 17 per cent non-controlling interest in Kent Hills Wind LP, which owns the 167 MW Kent Hills wind farm located in New Brunswick.

The Corporation's share of ownership and equity participation in TransAlta Renewables has changed as follows:

Period ⁽¹⁾	Percentage
Jan. 1, 2019 to March 31, 2019	60.8
Apr. 1, 2019 to June 30, 2019	60.6
July 1, 2019 to Sept. 30, 2019	60.5
Oct. 1, 2019 to Dec. 31, 2019	60.4
Jan. 1, 2020 to March 31, 2020	60.3

(1) Changes in these periods are a result of TransAlta Renewables' Dividend Reinvestment Plan ("DRIP"), which allows investors to reinvest their dividends into common shares. As a result of the DRIP, the ownership percentage changes every month. The Corporation does not participate in the DRIP.

	3 months ended March 31	
	2020	2019
Net earnings		
TransAlta Cogeneration L.P.	3	4
TransAlta Renewables	4	31
	7	35
Total comprehensive income		
TransAlta Cogeneration L.P.	3	4
TransAlta Renewables	22	32
	25	36
Cash distributions paid to non-controlling interests		
TransAlta Cogeneration L.P.	1	15
TransAlta Renewables	18	17
	19	32

As at	March 31, 2020	Dec. 31, 2019
Equity attributable to non-controlling interests		
TransAlta Cogeneration L.P.	163	160
TransAlta Renewables	942	941
	1,105	1,101
Non-controlling interests share (per cent)		
TransAlta Cogeneration L.P.	49.99	49.99
TransAlta Renewables	39.7	39.6

9. Financial Instruments

A. Financial Assets and Liabilities – Measurement

Financial assets and financial liabilities are measured on an ongoing basis at fair value, or amortized cost.

B. Fair Value of Financial Instruments

I. Level I, II, and III Fair Value Measurements

The Level I, II, and III classifications in the fair value hierarchy utilized by the Corporation are defined below. The fair value measurement of a financial instrument is included in only one of the three levels, the determination of which is based on the lowest level input that is significant to the derivation of the fair value.

a. Level I

Fair values are determined using inputs that are quoted prices (unadjusted) in active markets for identical assets or liabilities that the Corporation has the ability to access at the measurement date.

b. Level II

Fair values are determined, directly or indirectly, using inputs that are observable for the asset or liability.

c. Level III

Fair values are determined using inputs for the assets or liabilities that are not readily observable.

For assets and liabilities that are recognized at fair value on a recurring basis, the Corporation determines whether transfers have occurred between levels in the hierarchy by re-assessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period.

There were no changes in the Corporation's valuation processes, valuation techniques, and types of inputs used in the fair value measurements during the period. For additional information, refer to Note 14 of the 2019 Audited Annual Consolidated Financial Statements.

Information on risk management contracts or groups of risk management contracts that are included in Level III measurements and the related unobservable inputs and sensitivities, is as follows, and excludes the effects on fair value of certain unobservable inputs such as liquidity and credit discount (described as "base fair values"), as well as inception gains or losses. Sensitivity ranges for the base fair values are determined using reasonably possible alternative assumptions for the key unobservable inputs, which may include forward commodity prices, commodity volatilities and correlations, delivery volumes and shapes.

As at

March 31, 2020

Description	Base fair value	Sensitivity	Valuation technique	Unobservable input	Range	Reasonable possible change
Long-term power sale - US	830	+49 -148	Long-term price forecast	Illiquid future power prices (per MWh)	US\$22 to US\$28	Price decrease of US\$3 or price increase of US\$9
Structured products - Eastern US	10	+2 -2	Option valuation techniques, historical bootstrap and historical price regression analysis	Basis relationship Non-standard shape factors	95% to 112% 63% to 116%	5.0% to 7.0% 4.0% to 10.0%
Full requirements - Eastern US	20	+4 -4	Historical bootstrap	Volume Cost of supply		(+/-) 5% (+/-) US\$0.80 per MWh
Long-term wind energy sale - Eastern US	(23)	+25 -25	Long-term price forecast	Illiquid future power prices (per MWh) Illiquid future REC prices (per unit)	US\$38 to US\$60 US\$7	US\$6 US\$1
Others	(3)	+6 -5				

As at		Dec. 31, 2019				
Description	Base fair value	Sensitivity	Valuation technique	Unobservable input	Range	Reasonable possible change
Long-term power sale – US	737	+46 -139	Long-term price forecast	Illiquid future power prices (per MWh)	US\$20 to US\$28	Price decrease of US\$3 or a price increase of US\$9
Structured products – Eastern US	7	+2 -2	Option valuation techniques, historical bootstrap and historical price regression analysis	Basis relationship	91% to 112%	4.0% to 6.0%
				Non-standard shape factors	63% to 116%	4.0% to 10.0%
Full requirements – Eastern US	10	+3 -3	Historical bootstrap	Volume		(+/-) 5%
				Cost of supply		(+/-) US\$1 per MWh
Long-term wind energy sale – Eastern US	(28)	+20 -20	Long-term price forecast	Illiquid future power prices (per MWh)	US\$38 to US\$60	US\$6
				Illiquid future REC prices (per unit)	US\$9	US\$1
Others ⁽¹⁾	(6)	+8 -8				

(1) The Corporation has entered into fewer unit contingent power purchases and it is no longer material to separately disclose and these are now included in the 'Others' category. Accordingly, the Dec. 31, 2019 amounts have been reclassified for consistency.

i. Long-Term Power Sale – US

The Corporation has a long-term fixed price power sale contract in the US for delivery of power at the following capacity levels: 380 MW through Dec. 31, 2024, and 300 MW through Dec. 31, 2025. The contract is designated as an all-in-one cash flow hedge.

The contract is denominated in US dollars. With the strengthening of the US dollar relative to the Canadian dollar from Dec. 31, 2019 to March 31, 2020, the base fair value and the sensitivity values have increased by approximately \$64 million and \$11 million, respectively.

ii. Structured Products – Eastern US

The Corporation has fixed priced power in the eastern United States, where the Corporation has agreed to buy or sell power at non-liquid locations or during non-standard hours.

iii. Full Requirements – Eastern US

The Corporation has a portfolio of full requirement service contracts, whereby the Corporation agrees to supply specific utility customer needs for a range of products that may include electrical energy, capacity, transmission, ancillary services, renewable energy credits and Independent System Operator costs.

iv. Long-Term Wind Energy Sale – Eastern US

In relation to the Big Level wind project, the Corporation has a long-term contract for differences whereby the Corporation receives a fixed price per MWh and pays the prevailing real-time energy market price per MWh as well as the physical delivery of renewable energy credits ("RECs") based on proxy generation. Commercial operation of the facility was achieved in December 2019, with the contract commencing on July 1, 2019, and extending for 15 years after the commercial operation date. The contract is accounted for at FVTPL.

II. Commodity Risk Management Assets and Liabilities

Commodity risk management assets and liabilities include risk management assets and liabilities that are used in the energy marketing and generation businesses in relation to trading activities and certain contracting activities. To the extent applicable, changes in net risk management assets and liabilities for non-hedge positions are reflected within earnings of these businesses.

Commodity risk management assets and liabilities classified by fair value levels as at March 31, 2020, are as follows: Level I – \$1 million net asset (Dec. 31, 2019 – \$3 million net liability), Level II – \$29 million net asset (Dec. 31, 2019 – \$9 million net asset) and Level III – \$764 million net asset (Dec. 31, 2019 – \$686 million net asset).

Significant changes in commodity net risk management assets and liabilities during the three months ended March 31, 2020, are primarily attributable to changes in market prices and foreign exchange rates, partially offset by contract settlements.

The following tables summarize the key factors impacting the fair value of the Level III commodity risk management assets and liabilities by classification level during the three months ended March 31, 2020 and 2019, respectively:

	3 months ended March 31, 2020			3 months ended March 31, 2019		
	Hedge	Non-hedge	Total	Hedge	Non-hedge	Total
Opening balance	678	8	686	689	6	695
Changes attributable to:						
Market price changes on existing contracts	18	22	40	(21)	3	(18)
Market price changes on new contracts	—	5	5	—	5	5
Contracts settled	(23)	—	(23)	(17)	3	(14)
Change in foreign exchange rates	57	(1)	56	(12)	—	(12)
Net risk management assets, end of period	730	34	764	639	17	656
Additional Level III information:						
Gains recognized in other comprehensive income	75	—	75	(33)	—	(33)
Total gains (losses) included in earnings before income taxes	(23)	26	3	(17)	8	(9)
Unrealized gains included in earnings before income taxes relating to net assets held at period end	—	26	26	—	11	11

III. Other Risk Management Assets and Liabilities

Other risk management assets and liabilities primarily include risk management assets and liabilities that are used in managing exposures on non-energy marketing transactions such as interest rates, the net investment in foreign operations and other foreign currency risks. Hedge accounting is not always applied.

Other risk management assets and liabilities with a total net asset fair value of \$13 million as at March 31, 2020 (Dec. 31, 2019 – \$4 million net asset) are classified as Level II fair value measurements. The significant changes in other net risk management assets during the three months ended March 31, 2020, are primarily attributable to favourable foreign exchange rates and new contracts.

IV. Other Financial Assets and Liabilities

The fair value of financial assets and liabilities measured at other than fair value is as follows:

	Fair value ⁽¹⁾				Total carrying value ⁽¹⁾
	Level I	Level II	Level III	Total	
Exchangeable securities - March 31, 2020	—	268	—	268	327
Long-term debt - March 31, 2020	—	3,069	—	3,069	3,039
Exchangeable securities - Dec. 31, 2019	—	342	—	342	326
Long-term debt - Dec. 31, 2019	—	3,157	—	3,157	3,070

(1) Includes current portion.

The fair values of the Corporation's debentures, senior notes and exchangeable securities are determined using prices observed in secondary markets. Non-recourse and other long-term debt fair values are determined by calculating an implied price based on a current assessment of the yield to maturity. As at March 31, 2020, there was a substantial change in the fair value of the exchangeable securities mainly as a result of a substantial increase to TransAlta's credit spread due to the COVID-19 crisis, which has caused increased credit spreads for most entities. The increase in the credit spread was partially offset by decreases in the benchmark rates. The change in the fair value of the long-term debt balances was not as significant given a large portion of it is secured non-recourse debt and not impacted by changes in TransAlta's credit spreads.

The carrying amount of other short-term financial assets and liabilities (cash and cash equivalents, trade accounts receivable, collateral paid, accounts payable and accrued liabilities, collateral received and dividends payable) approximates fair value due to the liquid nature of the asset or liability. The fair values of the loan receivable and the finance lease receivables approximate the carrying amounts.

C. Inception Gains and Losses

The majority of derivatives traded by the Corporation are based on adjusted quoted prices on an active exchange or extend beyond the time period for which exchange-based quotes are available. The fair values of these derivatives are determined using inputs that are not readily observable. Refer to section B of this Note 9 above for fair value Level III valuation techniques used. In some instances, a difference may arise between the fair value of a financial instrument at initial recognition (the "transaction price") and the amount calculated through a valuation model. This unrealized gain or loss at inception is recognized in net earnings (loss) only if the fair value of the instrument is evidenced by a quoted market price in an active market, observable current market transactions that are substantially the same, or a valuation technique that uses observable market inputs. Where these criteria are not met, the difference is deferred on the Consolidated Statements of Financial Position in risk management assets or liabilities, and is recognized in net earnings (loss) over the term of the related contract. The difference between the transaction price and the fair value determined using a valuation model, yet to be recognized in net earnings, and a reconciliation of changes is as follows:

	3 months ended March 31	
	2020	2019
Unamortized net gain at beginning of period	9	49
New inception gains (losses)	2	–
Amortization recorded in net earnings during the period	(4)	(8)
Unamortized net gain at end of period	7	41

10. Risk Management Activities

The Corporation is exposed to market risk from changes in commodity prices, foreign exchange rates, interest rates, credit risk and liquidity risk. These risks affect the Corporation's earnings and the value of associated financial instruments that the Corporation holds. The Corporation's risk management strategy, policies and controls are designed to ensure that the risk it assumes comply with the Corporation's internal objectives and its risk tolerance. For additional information on the Corporation's Risk Management Activities refer to Note 15 of the 2019 Audited Annual Consolidated Financial Statements.

A. Net Risk Management Assets and Liabilities

Aggregate net risk management assets and (liabilities) are as follows:

As at March 31, 2020

	Cash flow hedges	Not designated as a hedge	Total
Commodity risk management			
Current	105	51	156
Long-term	624	14	638
Net commodity risk management assets	729	65	794
Other			
Current	7	–	7
Long-term	(3)	9	6
Net other risk management assets	4	9	13
Total net risk management assets	733	74	807

As at Dec. 31, 2019

	Cash flow hedges	Not designated as a hedge	Total
Commodity risk management			
Current	70	15	85
Long-term	606	1	607
Net commodity risk management assets	676	16	692
Other			
Current	—	—	—
Long-term	—	4	4
Net other risk management assets	—	4	4
Total net risk management assets	676	20	696

B. Nature and Extent of Risks Arising from Financial Instruments

I. Market Risk

a. Commodity Price Risk Management – Proprietary Trading

The Corporation's Energy Marketing segment conducts proprietary trading activities and uses a variety of instruments to manage risk, earn trading revenue and gain market information. VaR is used to determine the potential change in value of the Corporation's proprietary trading portfolio, over a three-day period within a 95 per cent confidence level, resulting from normal market fluctuations. Changes in market prices associated with proprietary trading activities affect net earnings in the period that the price changes occur. VaR at March 31, 2020, associated with the Corporation's proprietary trading activities was \$4 million (Dec. 31, 2019 - \$1 million).

ii. Commodity Price Risk – Generation

The generation segments utilize various commodity contracts to manage the commodity price risk associated with electricity generation, fuel purchases, emissions and byproducts, as considered appropriate. VaR at March 31, 2020, associated with the Corporation's commodity derivative instruments used in generation hedging activities was \$14 million (Dec. 31, 2019 - \$25 million). For positions and economic hedges that do not meet hedge accounting requirements or for short-term optimization transactions such as buybacks entered into to offset existing hedge positions, these transactions are marked to the market value with changes in market prices associated with these transactions affecting net earnings in the period in which the price change occurs. VaR at March 31, 2020, associated with these transactions was \$9 million (Dec. 31, 2019 - \$8 million).

II. Credit Risk

The Corporation uses external credit ratings, as well as internal ratings in circumstances where external ratings are not available, to establish credit limits for customers and counterparties. The following table outlines the Corporation's maximum exposure to credit risk without taking into account collateral held, including the distribution of credit ratings, as at March 31, 2020:

	Investment grade (Per cent)	Non-investment grade (Per cent)	Total (Per cent)	Total amount
Trade and other receivables ⁽¹⁾	87	13	100	431
Long-term finance lease receivable	100	—	100	172
Risk management assets ⁽¹⁾	99	1	100	954
Loan receivable ⁽²⁾	—	100	100	47
Total				1,604

(1) Letters of credit and cash and cash equivalents are the primary types of collateral held as security related to these amounts.

(2) The counterparty has no external credit rating.

Amidst the current economic conditions resulting from the COVID-19 pandemic, TransAlta has implemented the following additional measures to monitor its counterparties for changes in their ability to meet obligations:

- daily monitoring of events impacting counterparty creditworthiness and counterparty credit downgrades;
- daily oversight and follow-up, if applicable, of accounts receivables; and
- review and monitoring of key suppliers, counterparties and customers (i.e. off-takers).

As needed, additional risk mitigation tactics will be taken to reduce the risk to TransAlta. These risk mitigation tactics may include, but are not limited to, immediate follow-up on overdue amounts, adjusting payment terms to ensure a portion of funds are received sooner, requiring additional collateral, reducing transaction terms and working closely with impacted counterparties on negotiated solutions.

III. Liquidity Risk

TransAlta continues to be in a strong financial position with no liquidity issues. The company has sufficient existing liquidity available to meet the upcoming debt maturity which is due November 2020. The next major debt repayment is scheduled for November 2022. Our highly diversified asset portfolio, by both fuel type and operating region, provide stability in our cash flows and highlight the strength of our long-term contracted asset base.

Liquidity risk relates to the Corporation's ability to access capital to be used for proprietary trading activities, commodity hedging, capital projects, debt refinancing and general corporate purposes. A maturity analysis of the Corporation's financial liabilities as well as financial assets that are expected to generate cash inflows to meet cash outflows on financial liabilities, is as follows:

	2020	2021	2022	2023	2024	2025 and thereafter	Total
Accounts payable and accrued liabilities	413	—	—	—	—	—	413
Long-term debt ⁽¹⁾	475	99	670	272	106	1,451	3,073
Exchangeable securities ⁽²⁾	—	—	—	—	—	350	350
Commodity risk management assets	(133)	(116)	(142)	(149)	(146)	(108)	(794)
Other risk management (assets) liabilities	(9)	8	(18)	5	2	(1)	(13)
Lease obligations	14	14	9	6	4	93	140
Interest on long-term debt and lease obligations ⁽³⁾	150	137	128	98	91	707	1,311
Interest on exchangeable securities ^(2,3)	19	25	25	24	24	—	117
Dividends payable	38	—	—	—	—	—	38
Total	967	167	672	256	81	2,492	4,635

(1) Excludes impact of hedge accounting.

(2) Assumes the debentures will be exchanged on Jan. 1, 2025. Refer to Note 13 for further details.

(3) Not recognized as a financial liability on the Consolidated Statements of Financial Position.

IV. Interest Rate Risk

During the first quarter of 2020, the Corporation entered into interest rate derivatives with notional amounts of US \$150 million, AUD\$150 million and CAD\$75 million to hedge interest rate risks associated with forecasted debt issuances expected to occur between late 2020 and late 2022. The hedges have been designated as cash flow hedges. As a result of IBOR reform, the LIBOR is scheduled to be replaced with an alternative benchmark interest rate on Jan. 1, 2022. As a result, the Corporation is exposed to uncertainties about the amount of IBOR-based cash flows of the hedging items as some of the derivatives are based on LIBOR.

C. Collateral and Contingent Features in Derivative Instruments

Collateral is posted in the normal course of business based on the Corporation's senior unsecured credit rating as determined by certain major credit rating agencies. Certain of the Corporation's derivative instruments contain financial assurance provisions that require collateral to be posted only if a material adverse credit-related event occurs.

As at March 31, 2020, the Corporation had posted collateral of \$160 million (Dec. 31, 2019 – \$112 million) in the form of letters of credit on derivative instruments in a net liability position. Certain derivative agreements contain credit-risk contingent features, which if triggered could result in the Corporation having to post an additional \$83 million (Dec. 31, 2019 – \$51 million) of collateral to its counterparties.

11. Property, Plant and Equipment

During the three months ended March 31, 2020, the Corporation also had additions of \$72 million mainly relating to assets under construction for the coal-to-gas conversions, the Windrise wind facility, the Kaybob cogeneration facility, land and planned major maintenance expenditures. During the three months ended March 31, 2019, the Corporation acquired property, plant and equipment related to the Antrim wind development project for \$50 million and had additions of \$34 million, primarily related to the construction of Big Level and Antrim wind projects and other sustaining capital expenditures.

As at March 31, 2020, there was a substantial decrease in the decommissioning provision, which decreased the related assets included in property, plant and equipment by \$84 million. Refer to Note 1(B) for further details.

12. Credit Facilities, Long-Term Debt and Lease Obligations

The amounts outstanding are as follows:

As at	March 31, 2020			Dec. 31, 2019		
	Carrying value	Face value	Interest ⁽¹⁾	Carrying value	Face value	Interest ⁽¹⁾
Credit facilities ⁽²⁾	118	119	2.4%	220	220	3.5%
Debtentures	648	651	5.8%	647	651	5.8%
Senior notes ⁽³⁾	981	991	5.4%	905	914	5.4%
Non-recourse	1,129	1,142	4.4%	1,144	1,157	4.3%
Other ⁽⁴⁾	163	170	7.1%	154	162	7.1%
	3,039	3,073		3,070	3,104	
Finance lease obligations	140			142		
	3,179			3,212		
Less: current portion of long-term debt	(496)			(494)		
Less: current portion of finance lease obligations	(18)			(19)		
Total current long-term debt and finance lease obligations	(514)			(513)		
Total credit facilities, long-term debt and finance lease obligations	2,665			2,699		

(1) Interest is an average rate weighted by principal amounts outstanding before the effect of hedging.

(2) Composed of bankers' acceptances and other commercial borrowings under long-term committed credit facilities.

(3) US face value at March 31, 2020 - US\$0.7 billion (Dec. 31, 2019 - US\$0.7 billion).

(4) Includes US\$115 million at March 31, 2020 (Dec. 31, 2019 - US\$117 million) of tax equity financing.

As at March 31, 2020, the Corporation was in compliance with all debt covenants.

The strengthening of the US dollar has increased our US-denominated long-term debt balances, mainly the senior notes and tax equity financing, by \$90 million as at March 31, 2020. Almost all our US-denominated debt is hedged either through financial contracts or net investments in our US operations. During the period, these changes in our US-denominated debt were offset as follows:

	March 31, 2020
Effects of foreign exchange on carrying amounts of US operations (net investment hedge)	41
Foreign currency economic cash flow hedges on debt	16
Economic hedges and other	20
Unhedged	13
Total	90

13. Exchangeable Securities

A. \$350 Million Unsecured Subordinated Debentures

As at	March 31, 2020			Dec. 31, 2019		
	Carrying value	Face value	Interest	Carrying value	Face value	Interest
Exchangeable debentures – due May 1, 2039	327	350	7%	326	350	7%

B. Option to Exchange

As at	March 31, 2020		Dec. 31, 2019	
	Base fair value	Sensitivity	Base fair value	Sensitivity
Option to exchange – embedded derivative	–	+33 -25	–	+35 -27

The Investment Agreement allows Brookfield the Option to Exchange all of the outstanding exchangeable securities into an equity ownership interest of up to a maximum 49 per cent in an entity formed to hold TransAlta's Alberta Hydro Assets after Dec. 31, 2024. The fair value of the Option to Exchange is considered a Level III fair value measurement as there is no available market-observable data. It is therefore valued using a mark-to-forecast model with inputs that are based on historical data and changes in underlying discount rates only when it represents a long-term change in the value of the Option to Exchange.

Sensitivity ranges for the base fair value are determined using reasonably possible alternative assumptions for key unobservable inputs, which is mainly the change in the implied discount rate of the future cash flow. The sensitivity analysis has been prepared using the Corporation's assessment that a change in the implied discount rate of the future cash flow of 1 per cent is a reasonably possible change.

14. Common Shares

A. Issued and Outstanding

TransAlta is authorized to issue an unlimited number of voting common shares without nominal or par value.

	3 months ended March 31			
	2020		2019	
	Common shares (millions)	Amount	Common shares (millions)	Amount
Issued and outstanding, beginning of period	277.0	2,978	284.6	3,059
Purchased and cancelled under the NCIB	(1.3)	(14)	–	–
Effect of share-based payment plans	–	(4)	–	–
Issued and outstanding, end of period	275.7	2,960	284.6	3,059

B. NCIB Program

Shares purchased by the Corporation under the NCIB are recognized as a reduction to share capital equal to the average carrying value of the common shares. Any difference between the aggregate purchase price and the average carrying value of the common shares is recorded in deficit.

The following are the effects of the Corporation's purchase and cancellation of the common shares during the three months ended:

	March 31, 2020	March 31, 2019
Total shares purchased	1,297,000	—
Average purchase price per share	\$ 6.73	\$ —
Total cost	9	—
Weighted average book value of shares cancelled	14	—
Amount recorded in deficit	(5)	—

C. Dividends

On Jan. 16, 2020, the Corporation declared a quarterly dividend of \$0.0425 per common share, payable on April 1, 2020. On April 20, 2020, the Corporation declared a quarterly dividend of \$0.0425 per common share, payable on July 1, 2020.

There have been no other transactions involving common shares between the reporting date and the date of completion of these consolidated financial statements.

D. Stock Options

On March 3, 2020, the Board approved an increase in the number of common shares reserved for issuance under the Corporation's Stock Option Plan (the "Option Plan") to 16,500,000, subject to TSX approval. Shareholder approval was received on April 21, 2020. TransAlta last increased the share reserve in 2011 to 13,000,000 shares and has increased the number of common shares available under the Option Plan by 3,500,000 shares to continue to have sufficient shares available to grant options to eligible participants as part of the Corporation's overall compensation framework.

The stock options granted to executive officers of the Corporation during the three months ended March 31, 2020 and 2019 are as follows:

Grant month	Number of stock options granted (millions)	Exercise price	Vesting period (years)	Expiration length (years)
January 2020	0.7	\$ 9.28	3	7
January 2019 ⁽¹⁾	1.2	\$ 5.59	3	7

(1) Certain stock options were forfeited when an executive officer left the Corporation.

15. Preferred Shares

A. Dividends

The following table summarizes the value of preferred share dividends declared during the three months ended March 31, 2020 and 2019:

Series	Quarterly amounts	3 months ended March 31	
		2020	2019 ⁽¹⁾
A	0.16931	2	—
B ⁽²⁾	0.22949	—	—
C	0.25169	3	—
E	0.32463	3	—
G	0.31175	2	—
Total for the period		10	—

(1) No dividends were declared in the first quarter of 2019 as the quarterly dividend related to the period covering the first quarter of 2019 was declared in December 2018.

(2) Series B Preferred Shares pay quarterly dividends at a floating rate based on the 90-day Government of Canada Treasury Bill rate, plus 2.03 per cent.

On April 20, 2020 the Corporation declared a quarterly dividend of \$0.16931 per share on the Series A preferred shares, \$0.228 per share on the Series B preferred shares, \$0.25169 per share on the Series C preferred shares, \$0.32463 per share on the Series E preferred shares, and \$0.31175 per share on the Series G preferred shares, all payable on June 30, 2020.

16. Commitments and Contingencies

A. Contingencies

TransAlta is occasionally named as a party in various claims and legal and regulatory proceedings that arise during the normal course of its business. TransAlta reviews each of these claims, including the nature of the claim, the amount in dispute or claimed, and the availability of insurance coverage. There can be no assurance that any particular claim will be resolved in the Corporation's favour or that such claims may not have a material adverse effect on TransAlta. Inquiries from regulatory bodies may also arise in the normal course of business, to which the Corporation responds as required.

For the current significant outstanding contingencies, refer to Note 35 of the Annual Audited Consolidated Financial Statements. The changes to these contingencies during the three months ended March 31, 2020 are included below:

I. FMG Disputes

The Corporation is currently engaged in two disputes with Fortescue Metals Group Ltd. ("FMG"). The first arose as a result of FMG's purported termination of the South Hedland PPA. TransAlta sued FMG, seeking payment of amounts invoiced and not paid under the South Hedland PPA, as well as a declaration that the PPA is valid and in force. FMG, on the other hand, seeks a declaration that the PPA was lawfully terminated. This matter has been re-scheduled to proceed to trial beginning May 3, 2021, instead of June 15, 2020, but it may be delayed further, depending on the extent of continued restrictions arising from the COVID-19 pandemic.

The second dispute involves FMG's claims against TransAlta related to the transfer of the Solomon facility to FMG. FMG claims certain amounts related to the condition of the facility while TransAlta claims certain outstanding costs that should be reimbursed. A trial date for this matter has not yet been scheduled but it will not occur until 2021 at the earliest.

II. Mangrove Claim

On April 23, 2019, The Mangrove Partners Master Fund Ltd. ("Mangrove") commenced an action in the Ontario Superior Court of Justice, naming TransAlta Corporation, the incumbent members of the Board of Directors of TransAlta Corporation on such date, and Brookfield BRP Holdings (Canada), as defendants. Mangrove is seeking to set aside the 2019 Brookfield transaction. TransAlta believes the claim is wholly lacking in merit and is taking all steps to defend against the allegations. This matter was scheduled to proceed to trial beginning Sept. 14, 2020 but will be adjourned to a new date, likely in 2021, as a result of the COVID-19 pandemic.

III. Keephills 1 Stator Force Majeure

The Balancing Pool and ENMAX Energy Corporation ("ENMAX") are seeking to set aside an arbitration award on the basis that they did not receive a fair hearing. The Alberta Court of Queen's Bench ("ABQB") dismissed the Balancing Pool and ENMAX's allegations of unfairness on June 26, 2019. The Balancing Pool and ENMAX, however, sought leave to appeal the ABQB's decision at the Court of Appeal, which was granted on Feb. 13, 2020. We expect the appeal to be heard sometime in early 2021. TransAlta believes that the Court of Appeal will affirm the ABQB decision that the arbitration proceeding was not unfair.

17. Segment Disclosures

A. Reported Segment Earnings (Loss)

3 months ended March 31, 2020	Canadian Coal	US Coal	Canadian Gas	Australian Gas	Wind and Solar	Hydro	Energy Marketing	Corporate	Total
Revenues	206	142	51	39	105	38	28	(3)	606
Fuel, carbon compliance and purchased power	149	68	14	3	5	2	—	(3)	238
Gross margin	57	74	37	36	100	36	28	—	368
Operations, maintenance and administration	33	16	12	7	13	9	9	29	128
Depreciation and amortization	67	22	11	11	33	6	—	6	156
Asset impairment reversal (Note 1(B))	(4)	(37)	—	—	—	—	—	—	(41)
Taxes, other than income taxes	4	1	1	—	2	1	—	—	9
Net other operating income	(10)	—	—	—	—	—	—	—	(10)
Operating income (loss)	(33)	72	13	18	52	20	19	(35)	126
Finance lease income	—	—	1	—	—	—	—	—	1
Net interest expense									(62)
Foreign exchange loss									(19)
Earnings (loss) before income taxes									46

3 months ended March 31, 2019	Canadian Coal	US Coal	Canadian Gas	Australian Gas	Wind and Solar	Hydro	Energy Marketing	Corporate	Total
Revenues	225	146	65	41	89	37	46	(1)	648
Fuel, carbon compliance and purchased power	175	154	31	2	4	1	—	(1)	366
Gross margin	50	(8)	34	39	85	36	46	—	282
Operations, maintenance and administration	33	14	11	10	12	8	9	7	104
Depreciation and amortization	61	18	10	11	29	8	1	7	145
Taxes, other than income taxes	3	1	—	—	2	1	—	—	7
Net other operating income	(10)	—	—	—	—	—	—	—	(10)
Operating income (loss)	(37)	(41)	13	18	42	19	36	(14)	36
Finance lease income	—	—	2	—	—	—	—	—	2
Net interest expense									(50)
Foreign exchange loss									(1)
Earnings (loss) before income taxes									(13)

IV. Depreciation and Amortization on the Consolidated Statements of Cash Flows

The reconciliation between depreciation and amortization reported on the Consolidated Statements of Earnings (Loss) and the Consolidated Statements of Cash Flows is presented below:

	3 months ended March 31	
	2020	2019
Depreciation and amortization expense on the Consolidated Statements of Earnings (Loss)	156	145
Depreciation included in fuel and purchased power	28	29
Depreciation and amortization on the Consolidated Statements of Cash Flows	184	174

Exhibit 1

(Unaudited)

The information set out below is referred to as “unaudited” as a means of clarifying that it is not covered by the audit opinion of the independent registered public accounting firm that has audited and reported on the Annual Audited Consolidated Financial Statements.

To the Financial Statements of TransAlta Corporation

EARNINGS COVERAGE RATIO

The following selected financial ratio is calculated for the twelve months ended March 31, 2020:

Earnings coverage on long-term debt supporting the Corporation’s Shelf Prospectus

1.9 times

Earnings coverage on long-term debt on a net earnings basis is equal to net earnings before interest expense and income taxes, divided by interest expense including capitalized interest.

Supplemental Information

		March 31, 2020	Dec. 31, 2019
Closing market price (TSX) (\$)		7.36	9.28
Price range for the last 12 months (TSX) (\$)	High	11.23	10.14
	Low	5.32	5.50
FFO before interest to adjusted interest coverage ⁽²⁾ (times)		4.4	4.5
Adjusted FFO to adjusted net debt ⁽²⁾ (%)		18.9	19.0
Adjusted net debt to adjusted comparable EBITDA ^(1,2) (times)		3.9	3.9
Deconsolidated net debt to deconsolidated comparable EBITDA ^(1,2) (times)		4.4	4.1
Adjusted net debt to total capital ⁽¹⁾ (%)		49.9	49.9
Return on equity attributable to common shareholders ⁽²⁾ (%)		9.3	3.3
Return on capital employed ⁽²⁾ (%)		5.9	4.3
Earnings coverage ⁽²⁾ (times)		1.9	1.5
Dividend payout ratio based on FFO ^(1,2) (%)		6.6	6.6
Dividend coverage ⁽²⁾ (times)		21.6	18.6
Dividend yield ⁽²⁾ (%)		2.2	1.7

(1) These ratios incorporate items that are not defined under IFRS. None of these measurements should be used in isolation or as a substitute for the Corporation's reported financial performance or position as presented in accordance with IFRS. These ratios are useful complementary measurements for assessing the Corporation's financial performance, efficiency, and liquidity and are common in the reports of other companies but may differ by definition and application. For a reconciliation of the non-IFRS measures used in these calculations, refer to the Discussion of Financial Results section of this MD&A.

(2) Last 12 months.

Ratio Formulas

FFO before interest to adjusted interest coverage = FFO + interest on debt and lease obligations - interest income - capitalized interest / interest on debt and lease obligations + 50 per cent dividends paid on preferred shares - interest income

Adjusted FFO to adjusted net debt = FFO - 50 per cent dividends paid on preferred shares / period end long-term debt, lease obligations and exchangeable securities including current portion and fair value (asset) liability of hedging instruments on debt + 50 per cent issued preferred shares - cash and cash equivalents - principal portion of TransAlta OCP restricted cash

Adjusted net debt to comparable EBITDA = long-term debt, lease obligations and exchangeable securities including current portion and fair value (asset) liability of hedging instruments on debt + 50 per cent issued preferred shares - cash and cash equivalents - principal portion of TransAlta OCP restricted cash / comparable EBITDA

Deconsolidated net debt to deconsolidated comparable EBITDA = long-term debt, lease obligations and exchangeable securities including current portion and fair value (asset) liability of hedging instruments on debt + 50 per cent issued preferred shares - cash and cash equivalents - principal portion of TransAlta OCP restricted cash - TransAlta Renewables long-term debt and lease obligations including current portion - tax equity financing / comparable EBITDA - TransAlta Renewables comparable EBITDA - TA Cogen comparable EBITDA + dividends received from TransAlta Renewables + dividends received from TA Cogen

Adjusted net debt to total capital = long-term debt, lease obligations and exchangeable securities including current portion and fair value (asset) liability of hedging instruments on debt + 50 per cent issued preferred shares - cash and cash equivalents - principal portion of TransAlta OCP restricted cash / adjusted net debt + non-controlling interests + equity attributable to shareholders - 50 per cent issued preferred shares

Return on equity attributable to common shareholders = net earnings (loss) attributable to common shareholders / equity attributable to shareholders excluding AOCI - issued preferred shares

Return on capital employed = earnings (loss) before income taxes + net interest expense - net earnings (loss) attributable to non-controlling interests / invested capital excluding AOCI

Earnings coverage = net earnings (loss) attributable to shareholders + income taxes + net interest expense / interest on debt and lease obligations + 50 per cent dividends paid on preferred shares - interest income

Dividend payout ratio = dividends paid on common shares / FFO - 50 per cent dividends paid on preferred shares

Dividend coverage ratio based on comparable FFO = $\text{FFO} - 50 \text{ per cent dividends paid on preferred shares} / \text{dividends paid on common shares}$

Dividend yield = $\text{dividend paid per common share} / \text{current period's closing market price}$

Glossary of Key Terms

Alberta Hydro Assets

The Corporation's hydro assets located in Alberta consisting of the Barrier, Bearspaw, Cascade, Ghost, Horseshoe, Interlakes, Kananaskis, Pocaterra, Rundle, Spray, Three Sisters, Bighorn and Brazeau hydro generation facilities.

Alberta Power Purchase Arrangement (PPA)

A long-term arrangement established by regulation for the sale of electric energy from formerly regulated generating units to PPA buyers.

Ancillary Services

As defined by the *Electric Utilities Act*, Ancillary Services are those services required to ensure that the interconnected electric system is operated in a manner that provides a satisfactory level of service with acceptable levels of voltage and frequency.

Availability

A measure of time, expressed as a percentage of continuous operation 24 hours a day, 365 days a year, that a generating unit is capable of generating electricity, regardless of whether or not it is actually generating electricity.

Adjusted Availability

Availability is adjusted when economic conditions exist such that planned routine and major maintenance activities are scheduled to minimize expenditures. In high price environments, actual outage schedules would change to accelerate the generating unit's return to service.

Balancing Pool

The Balancing Pool was established in 1999 by the Government of Alberta to help manage the transition to competition in Alberta's electric industry. Their current obligations and responsibilities are governed by the *Electric Utilities Act* (effective June 1, 2003) and the Balancing Pool Regulation. For more information go to www.balancingpool.ca.

Boiler

A device for generating steam for power, processing or heating purposes, or for producing hot water for heating purposes or hot water supply. Heat from an external combustion source is transmitted to a fluid contained within the tubes of the boiler shell.

Capacity

The rated continuous load-carrying ability, expressed in megawatts, of generation equipment.

Cogeneration

A generating facility that produces electricity and another form of useful thermal energy (such as heat or steam) used for industrial, commercial, heating or cooling purposes.

Combined cycle

An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The exiting heat is routed to a conventional boiler or to a heat recovery steam generator for use by a steam turbine in the production of electricity. This process increases the efficiency of the electric generating unit.

Derate

To lower the rated electrical capability of a power generating facility or unit.

Dispatch optimization

Purchasing power to fulfill contractual obligations, when economical.

Force Majeure

Literally means "greater force." These clauses excuse a party from liability if some unforeseen event beyond the control of that party prevents it from performing its obligations under the contract.

Gigajoule (GJ)

A metric unit of energy commonly used in the energy industry. One GJ equals 947,817 British Thermal Units (Btu). One GJ is also equal to 277.8 kilowatt hours ("kWh").

Gigawatt (GW)

A measure of electric power equal to 1,000 megawatts.

Gigawatt hour (GWh)

A measure of electricity consumption equivalent to the use of 1,000 megawatts of power over a period of one hour.

Greenhouse gas (GHG)

A gas that has the potential to retain heat in the atmosphere, including water vapour, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons and perfluorocarbons.

Heat rate

A measure of conversion, expressed as Btu/MWh, of the amount of thermal energy required to generate electrical energy.

Megawatt (MW)

A measure of electric power equal to 1,000,000 watts.

Megawatt Hour (MWh)

A measure of electricity consumption equivalent to the use of 1,000,000 watts of power over a period of one hour.

Merchant

A term used to describe assets that are not contracted and are exposed to market pricing.

Net maximum capacity

The maximum capacity or effective rating, modified for ambient limitations, that a generating unit or power plant can sustain over a specific period, less the capacity used to supply the demand of station service or auxiliary needs.

Pioneer Pipeline

The Pioneer gas pipeline jointly owned and operated by TransAlta and Tidewater Midstream and Infrastructure Ltd.

PPA Termination Payments

The Balancing Pool terminated the Sundance B and C Power Purchase Arrangements and as a result paid TransAlta \$157 million in the first quarter of 2018 as well as an additional \$56 million (plus GST and interest) on winning the arbitration against the Balancing Pool in the third quarter of 2019. Refer to the Significant and Subsequent Events section for further details.

Renewable power

Power generated from renewable terrestrial mechanisms including wind, geothermal, solar and biomass with regeneration.

Terajoule (TJ)

A metric unit of energy commonly used in the energy industry. One TJ equals 1,000 GJ or one trillion joules. One TJ is also equal to 277,778 kilowatt hours ("kWh").

Turbine

A machine for generating rotary mechanical power from the energy of a stream of fluid (such as water, steam or hot gas). Turbines convert the kinetic energy of fluids to mechanical energy through the principles of impulse and reaction or a mixture of the two.

Planned outage

Periodic planned shutdown of a generating unit for major maintenance and repairs. Duration is normally in weeks. The time is measured from unit shutdown to putting the unit back on line.

Unplanned outage

The shutdown of a generating unit due to an unanticipated breakdown.

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