

TransAlta Renewables Inc.  
**2019 Annual Report**

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# Letter to Shareholders

## Delivering Clean, Reliable and Competitive Energy Solutions

In 2019, TransAlta Renewables continued growing to meet the expanding demand for clean, sustainable energy. We marked the commissioning of our first growth wind projects constructed in the US when the Big Level and Antrim wind facilities were welcomed into our fleet this past December. More importantly, we welcomed Microsoft, Partners HealthCare and New Hampshire Electric as new customers. As consumers and corporate and industrial customers look to renewable technologies, we have successfully positioned ourselves as a competitive and reliable supplier and partner of renewable energy.

On the regulatory front in Alberta, we worked hard with the government to ensure that revisions to environmental and climate policy delivered a fair outcome to all stakeholders and protected the value of our assets. We are pleased to see that the government has provided for renewable energy credits through the Alberta Technology, Innovation and Emissions Reduction (TIER) Regulation, ensuring that our current and future wind and hydro assets continue to have green value in the Alberta market.

On the regulatory front in Ontario, we are pleased with the results of our efforts to ensure we deliver cost-competitive power to our customers at our Sarnia facility. After many months of working with various stakeholders, we achieved regulatory amendment for behind-the-fence generation on behalf of our customers. This solution delivers millions of dollars in annual savings to our Sarnia customers while improving the competitive advantage of our plant, and we look forward to closing on future contract extensions.

## Results & Innovation

Our financial results were at the high end of our guidance. We delivered another solid year of cash flows from our diversified asset portfolio, with cash available for distribution of \$293 million or \$1.11 per share. This was driven by EBITDA growth of 2% when our two US growth projects were delivered in late December 2019.

As we look forward to 2020, we expect our EBITDA to improve with a full year of operations of our fully commissioned 119 MW of new wind generation.

Our operations team continues to deliver on our core value of innovation. Our Wind team kicked off an exciting initiative by working with Stanford University on a wake steering study that tests the effects of turning the front row of turbines slightly away from the wind, resulting in the downwind turbines receiving a greater share of the wind. The early study results indicate that wake steering increased power production at the test site by nearly 10% when the wind blew from a certain direction. We are excited to see how we can operationalize this research and technology.

Our Gas team has also been executing on ways to improve the performance of our existing assets, which resulted in our minimum load point project at Sarnia. With much out-of-the-box thinking and challenging of previous norms, we can now run this facility at a reduced load point, resulting in the facility providing necessary steam to our customers more efficiently in a softer energy market. When market power prices are low, we minimize our power production and our natural gas and carbon emissions costs by producing steam in the most efficient way possible.

We are pleased to announce the introduction of Environmental, Social and Governance (ESG) reporting at TransAlta Renewables. Our sponsor, TransAlta, has been performing sustainability reporting for 25 years. This year marks our first year of integrating our financial results with our ESG performance.

One of the key elements for our company from an ESG perspective is the safety of the people who work at our facilities. We are proud of our amazing safety results for 2019. We had a Total Injury Frequency Rate of 1.59 compared to 1.54 in 2018, and we maintained the improvements to our 2017 performance levels.

## Financial Flexibility

We continue to maintain a strong balance sheet with significant capacity and liquidity for our future growth plans. In December 2019, we raised US\$126 million of tax equity financing through our TransAlta sponsor to partially fund the construction funding of Big Level and Antrim. At the end of 2019, we had over \$440 million of liquidity made up of cash and available committed lines to support our growth plans in the near term without additional equity funding requirements.

## Outlook

Our long-term goal is to continue to deliver growth and stable, consistent returns to our shareholders. There are currently a number of acquisition-ready opportunities that we expect to secure through our sponsor, TransAlta, including more than \$500 million of wind, battery, on-site and cogeneration projects.

The development team at TransAlta is focused on building a pipeline of renewables, on-site and cogeneration projects in Canada, the US and Australia. Demand for new wind projects in these regions is expected to continue to grow in the near term. We are focused on growing and broadening our corporate customer base and TransAlta has over 2,000 MW of growth projects in the current pipeline. We expect these projects to underpin growth at TransAlta Renewables as we use our debt capacity and deliver growing dividends back to shareholders. Over the last five years, we have added six wind farms and a solar facility in this target market. Our extensive history of on-site and renewable generation extends back three decades and our team makes us a strong partner in this space. We are well positioned to achieve this growth through our expansive development experience and competitive advantages across technologies.

We will fund this growth through cash flow generation from our existing operations and deployment of the current debt capacity on our balance sheet. Looking ahead to our growth plan, we have substantial financial resources and balance sheet strength to execute on our capital growth plans. Our disciplined growth team continues to evaluate projects and opportunities in diverse markets towards ensuring that investments are structured to meet our threshold returns and deliver value for our shareholders.

In 2020 and beyond, our goal is to continue to deliver steady returns to our shareholders and to further drive shareholder value through safety, operational excellence and execution of our growth strategies.

In 2019, we saw some changes to the roles of our Board members. David Drinkwater was appointed Chair of the Board when Allen Hagerman's term as Chair expired, pursuant to the terms of the Chair Terms of Reference. Allen continues to serve as an independent member of the Board.

Allen had been Chair of the Board since the initial public offering of the company in 2013. Allen's leadership, counsel and guidance have been, and continue to be, invaluable. We thank him for all of his contributions to the success of TransAlta Renewables and are pleased with his ongoing participation on the Board.

On behalf of our leadership and team members, we would like to express our sincerest appreciation to our many customers, partners and shareholders for all your support. Thank you, as well, to the entire TransAlta team for working to ensure our success and for helping us power economies and communities safely, reliably and sustainably.

Sincerely,



**John Kousinioris**

President



**David Drinkwater**

Chair of the Board

Feb 28, 2020

# Management's Discussion and Analysis

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*This Management's Discussion and Analysis ("MD&A") should be read in conjunction with our 2019 audited annual consolidated financial statements (the "Consolidated Financial Statements") and our 2020 annual information form ("AIF") for the year ended Dec. 31, 2019. Our Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") for Canadian publicly accountable enterprises as issued by the International Accounting Standards Board ("IASB") in effect at Dec. 31, 2019. Certain financial measures included in this MD&A do not have a standardized meaning as prescribed by IFRS. 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. See the Non-IFRS Measures section of this MD&A for additional information. All dollar amounts in the tables are in millions of Canadian dollars, except amounts per share, which are presented in whole dollars to the nearest two decimals. All other dollar amounts in this MD&A are in Canadian dollars, unless otherwise noted. In this MD&A, unless the context otherwise requires, "we", "our", "us", "TransAlta Renewables", and the "Corporation" refer to TransAlta Renewables Inc. and its subsidiaries, and "TransAlta" refers to TransAlta Corporation and its subsidiaries, other than TransAlta Renewables. Capitalized terms not otherwise defined herein have the respective meanings set forth in the Glossary of Key Terms. This MD&A is dated Feb 28, 2020. Additional information respecting TransAlta Renewables, including our AIF, is available on SEDAR at [www.sedar.com](http://www.sedar.com) and on our website at [www.transaltarenewables.com](http://www.transaltarenewables.com). Information on or connected to our website is not incorporated by reference herein.*

## Operations of the Corporation

As at Dec. 31, 2019, TransAlta Renewables owned 13 hydro facilities, 19 wind farms and one natural gas plant in Canada, and held economic interests in TransAlta's Wyoming, Lakeswind, Big Level and Antrim wind farms, Mass Solar solar projects and the Australian Assets. The Big Level and Antrim wind farms commenced commercial operations on Dec. 19, 2019, and Dec. 24, 2019, respectively. The operational results of those assets in which we have an economic interest are not consolidated into our results; however, the finance income we receive on the underlying investments is included in our consolidated net earnings.

In total, we own, directly or through economic interests, an aggregate of 2,555 MW of gross generating capacity<sup>(1)</sup> (2,527 MW of net generating capacity<sup>(1)</sup>) in operation. TransAlta manages and operates these facilities on our behalf under the terms of a Management, Administrative and Operational Services Agreement, as amended (the "Management Agreement").

## Strategy and Capability to Deliver Results

Our objectives are to (i) provide stable, consistent returns for investors through the ownership of, and investment in, highly contracted renewable and natural gas power generation and other infrastructure assets that provide stable cash flow primarily through long-term contracts with strong counterparties; (ii) pursue and capitalize on strategic growth opportunities in the renewable and natural gas power generation and other infrastructure sectors; (iii) maintain diversity in terms of geography, generation and counterparties; and (iv) pay out 80 to 85 per cent of cash available for distribution to the shareholders of the Corporation on an annual basis. See also the Risk Management section in this MD&A.

Our strategies and capabilities to deliver on our objectives are as follows:

### Growth Strategy

Our growth strategy is to develop or acquire highly contracted renewable and natural gas power generation facilities and other infrastructure assets that generate stable cash flows, with the objective of achieving returns on invested capital. The successful execution of our growth strategy requires careful timing and business judgment, as well as the resources to complete the due diligence and evaluation of such assets.

TransAlta, our sponsor, has indicated that the sale of certain of its contracted assets to us could form one source of their financing. Acquisitions from TransAlta will be subject to independent assessments and approval by the independent directors of the Board of Directors of TransAlta Renewables (the "Board").

Other longer-term growth opportunities may also be sought, primarily through acquisitions of contracted new build projects, industry consolidation and other growth opportunities in new markets, other technologies or investment classes.

### Contracting Strategy

Through our power purchase agreements ("PPAs"), including the TransAlta PPAs, (as defined below) our facilities and those in which we have an economic interest are highly contracted. Substantially all of our generating capacity is contracted over the next six years, gradually decreasing thereafter over a period extending to 26 years. The weighted average remaining contractual life of our PPAs is approximately 11 years.<sup>(2)</sup>

<sup>(1)</sup> We measure capacity as Net Maximum Capacity, which is consistent with industry standards. Capacity figures represent capacity owned and in operation unless otherwise stated. The gross capacity reflects the basis of consolidation of underlying assets owned, plus those in which we hold an economic interest. Net capacity deducts capacity attributable to non-controlling interest in these assets. Megawatts are rounded to the nearest whole number.

<sup>(2)</sup> Weighted average based on capacity.

## Operational Strategy

Our wind, hydro, solar and gas facilities have an established track record of operating history and performance. The assets have been in operation from two months to 29 years, with the weighted average years of operation by capacity being 14.7 years, which includes facilities in which we own an economic interest, including: the gas pipeline in Western Australia, the South Hedland Power Station commissioned in July 2017, the Kent Hills expansion, commissioned in October 2018 and the recently commissioned Big Level and Antrim wind farms in December 2019.

TransAlta provides management, administrative and operational services to the Corporation. The members of TransAlta's management team who are responsible for managing our operations have extensive experience in the power generation business. The employees of TransAlta providing operational services at our facilities are the same individuals who perform such services for TransAlta. Further details are set out in the AIF.

## Financial Strategy

Our financial strategy is to maintain a strong financial position to provide a solid foundation for our core business and growth. A strong financial position improves our ability to create stable, consistent returns.

## Forward-Looking Statements

This MD&A includes forward-looking statements within the meaning of applicable Canadian securities laws. All forward-looking statements are based on our beliefs as well as assumptions based on information available at the time the assumptions were 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", "believe", "expect", "anticipate", "intend", "plan", "foresee", "potential", "enable", "continue", "forecast" or other comparable terminology. These statements are not guarantees of our future performance, results or events and are subject to risks, uncertainties and other important factors that could cause our actual performance, results or events 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 pertaining to our business and anticipated future financial performance including, but not limited to: the forecasted business environment in Canada, Australia and the United States; spending on growth and sustaining capital and productivity projects, including sustaining capital expenditures of subsidiaries of TransAlta in which we have an economic interest; the benefits of the recent acquisition of an interest in two renewable projects from TransAlta; our growth strategy, including the potential sale by TransAlta of certain of its contracted assets; the nature and extent of environmental and social risks, including that no chronic physical risks exist that could materially impact our operations as it relates to climate change; consumer trends that appear to support moving toward more renewable and cleaner energy; outstanding debt levels; our 2020 Outlook, including Comparable EBITDA, AFFO and CAFD (each, as defined below), operating cash flows, interest expense and capital expenditures; renewable energy production from our wind and hydro assets in 2020; expectations relating to the dividend reinvestment plan ("DRIP"), including TransAlta's intention to not participate in the DRIP; our foreign exchange risk strategy; expectations regarding net interest payments and volume of debt; expectations regarding project level debt; tax equity proceed currently held as reserves being released upon the payment of all outstanding project costs and the satisfaction of certain other conditions, and a subsidiary of TransAlta repaying the remaining outstanding interest-bearing promissory notes to the Corporation; the subscription of additional tracking preferred shares to fund the remaining construction costs payable for the Antrim and Big Level wind farms; statutory blended tax rates and our cash tax horizon; expectations in terms of the cost of operations and maintenance, including maintenance performed by third parties, and the variability of those costs; the payment of future dividends; expectations in respect of generation availability, Capacity and production; actions to manage certain risks, including specific notions identified to manage liquidity risk, interest rate risk, projects risks and reputation risk; expected governmental regulatory regimes, legislation and programs, including Canadian federal legislation pertaining to greenhouse gas emissions and the impact on the Corporation of recent regulatory developments in Ontario; the value of environmental attributes generated by our renewable facilities; expectations regarding the implementation of new IFRS standards; expectations regarding seasonality of wind and hydro production; expectations on our ability to access capital markets on reasonable terms; expectations regarding our decommissioning and restoration activities; and our expectations regarding the outcome of existing or potential legal or contractual claims, regulatory investigations and disputes, including the dispute with Fortescue Metals Group Ltd. ("FMG") over the commissioning of the South Hedland Power Station; that TransAlta will

make available to the Corporation acquisition and growth opportunities from time to time to facilitate growth of the Corporation; that TransAlta will continue to provide the necessary management, administrative and operational services to the Corporation; and that the Corporation will continue to have access to natural gas, wind, solar and water resources in amounts consistent with the amounts expected by the Corporation and required to fulfil its obligations under its PPAs. The forward-looking statements contained in this MD&A are based on many assumptions including, but not limited to, the following: 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 investment and credit markets; our relationship with TransAlta not changing materially; and assumptions regarding our current strategy and priorities, including as it pertains to our growth strategy.

Factors that may adversely impact our forward-looking statements include, but are not limited to, risks relating to: changes in general economic 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-related risks; disruptions in the source of water, wind, solar or gas resources required to operate our facilities; natural disasters; the threat of domestic terrorism, cyber attacks and other man-made disasters; equipment failure and our ability to carry out repairs in a cost-effective or timely manner or at all; industry risk and competition; fluctuations in the value of foreign currencies; the need for additional financing and the ability to access financing at a reasonable cost; structural subordination of securities; counterparty credit risk; adverse impacts that may arise in the event that TransAlta is unsuccessful in its on-going litigation with Mangrove Partners, including any negative impact on working capital and credit quality; insurance coverage; our provision for income taxes; disputes with counterparties and legal and contractual proceedings involving the Corporation; reliance on key personnel and services provided by TransAlta; the regulatory and political environments in the jurisdictions in which we operate; increasingly stringent environmental requirements and changes in, or liabilities under, these requirements; and the risks associated with development projects and acquisitions. The foregoing risk factors, among others, are described in further detail in the Risk Factors section of our AIF, which is available on SEDAR at [www.sedar.com](http://www.sedar.com) as well as under Risk Management in this MD&A.

Readers are urged to consider these factors carefully in evaluating the forward-looking statements and are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements included in this document are made only as of the date hereof and we do not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise, except as required by applicable laws. The purpose of the financial outlooks contained herein is to give the reader information about management's current expectations and plans and readers are cautioned that such information may not be appropriate for other purposes. In light of these risks, uncertainties and assumptions, the forward-looking events might occur to a different extent or at a different time than we have described, or might not occur at all. We cannot assure that projected performance results or events will be achieved.



## Highlights

### Consolidated Financial Highlights

Year ended Dec. 31	2019	2018	2017
Renewable energy production (GWh) <sup>(1)</sup>	3,747	3,652	3,623
Revenues	446	462	459
Net earnings attributable to common shareholders	179	236	9
Comparable EBITDA <sup>(2)(3)</sup>	438	430	425
Adjusted funds from operations <sup>(2)</sup>	343	343	328
Cash flow from operating activities	331	385	290
Cash available for distribution <sup>(2)</sup>	293	295	284
Net earnings per share attributable to common shareholders, basic and diluted	0.68	0.92	0.04
Adjusted funds from operations per share <sup>(2)</sup>	1.30	1.33	1.40
Cash available for distribution per share <sup>(2)</sup>	1.11	1.15	1.21
Dividends declared per common share	0.94	0.94	0.91
Dividends paid per common share <sup>(4)</sup>	0.94	0.94	0.90

(1) Includes production from Canadian Wind, Canadian Hydro and US Wind and Solar and excludes Canadian and Australian gas-fired generation. Production is not a key revenue driver for gas-fired facilities as most of their revenues are capacity-based.

(2) Refer to the Non-IFRS Measures section of this MD&A for further discussion of these items.

(3) During the first quarter of 2019, we revised our approach to reporting adjustments to arrive at comparable EBITDA, mainly to be more comparable with other companies in the industry. Comparable EBITDA is now adjusted to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(4) Includes DRIP payments.

As at Dec. 31	2019	2018	2017
Gas installed capacity (MW) <sup>(1)</sup>	949	949	956
Renewables gross installed capacity (MW) <sup>(2)</sup>	1,609	1,496	1,388
Total assets	3,702	3,747	3,628
Long-term debt and lease obligations <sup>(3)</sup>	961	932	1,043
Total long-term liabilities	1,237	1,192	1,075

(1) Includes Canadian and Australian gas-fired generation.

(2) Includes Canadian Wind, Canadian Hydro and US Wind and Solar capacity. The gross installed capacity reflects the basis of consolidation of underlying assets owned, plus those in which we hold an economic interest. Megawatts are rounded to the nearest whole number.

(3) Including current portion.

Renewable energy production for the year ended Dec. 31, 2019, increased 95 GWh compared to 2018. This increase was mainly due to recognizing a full year of production related to the Kent Breeze, Lakeswind and Mass Solar assets, acquired in May 2018, and the Kent Hills expansion, which achieved commercial operation in mid-October 2018, partially offset by lower wind resources that impacted generation from the rest of the wind fleet.

Comparable earnings before interest, taxes, depreciation, and amortization ("Comparable EBITDA") increased \$8 million compared to 2018, mainly due to the inclusion of a full year of results from the Lakeswind wind farm and Mass Solar solar facility and the receipt of insurance proceeds related to a 2018 tower fire at Summerview and fires at Wyoming wind, partially offset by an unfavourable foreign exchange impact on the Australian Gas operations due to the weakening Australian dollar relative to the Canadian dollar.

Overall, our Adjusted Funds From Operations ("AFFO") was consistent with 2018. Higher Comparable EBITDA, lower interest expense and higher interest income contributed positively to higher AFFO and CAFD, but were offset by higher current income tax expense and higher tax equity distributions. AFFO for 2018 was positively impacted by the change in long-term receivable in our Australian Gas business segment.

CAFD ("Cash Available For Distribution") decreased by \$2 million year-over-year, due to higher principal repayments on the amortizing debt and the repayment of lease obligations, recognized on the adoption of IFRS 16.

Net earnings attributable to common shareholders decreased by \$57 million. The decrease was attributable to a reduction in finance income of \$53 million primarily related to higher return of capital and redemptions compared to 2018, lower interest income of \$37 million primarily due to the redemption of the Mandatory Redeemable Preferred Shares ("MRPS"), higher foreign exchange losses of \$37 million recorded on the preferred shares tracking the amortizing term loan of TransAlta Energy (Australia) Pty Ltd ("TEA"), an Australian subsidiary of TransAlta, and higher depreciation expense of \$14 million mainly due to changes in wind component useful lives, partially offset by an increase in the change in fair value of the preferred shares tracking the amortizing term loan of \$50 million and a decrease of interest expense of \$6 million. See the Financial Instruments and Significant and Subsequent Events sections of this MD&A for additional information on the changes in our investments.

In late December 2018 and early January 2019, the Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules in Australia. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AU\$509 million and approximately AU\$41 million of the preferred shares of TEA for cash consideration. This resulted in lower finance income and interest income recognized by the Corporation in the current year. In addition, immediately following the redemptions, the Corporation subscribed for AU\$550 million of the TEA amortizing term loan tracking preferred shares which are measured at fair value through profit and loss ("FVTPL"). The increase in the fair value recorded in the Consolidated Statements of Earnings was due to changes in the timing of cash flows, as well as a reduction in the discount rate during the year related to the amortizing term loan.

### Ability to Deliver Financial Results

The metrics we use to track our performance are Comparable EBITDA, AFFO and CAFD. The table below compares our target to actual amounts:

Year ended Dec. 31		2019	2018
Comparable EBITDA	Target	425-455	400-420
	Actual	438	430
AFFO	Target	320-350	315-340
	Actual	343	343
CAFD	Target	270-300	260-290
	Actual	293	295

## Significant and Subsequent Events

### US Wind Projects

The Big Level and Antrim wind farms (collectively "US Wind Projects") began commercial operations on Dec. 19, 2019, and Dec. 24, 2019, respectively. Big Level is a 90 MW wind farm located in Pennsylvania that has a 15-year PPA with Microsoft Corp. Antrim is a 29 MW wind farm located in New Hampshire with two 20-year PPAs with Partners HealthCare and New Hampshire Electric Co-op. The Big Level and Antrim counterparties each have a Standard & Poor's credit ratings of A+ or better.

On Feb. 20, 2018, we announced that we had entered into an arrangement to acquire economic interests in the US Wind Projects. Big Level and Antrim were acquired by a subsidiary of TransAlta on Mar. 1, 2018, and Mar. 28, 2019, respectively. The US Wind Projects have brought an additional 119 MW of generating capacity to our US Wind and Solar portfolio.

Pursuant to the arrangement, the Corporation agreed to fund the total estimated construction and acquisition costs for the US Wind Projects through the subscription of tracking preferred shares issued from TransAlta Power Ltd. ("TA Power") or interest-bearing promissory notes issued from the project entity, a wholly-owned subsidiary of TransAlta. The Corporation funded the acquisition of Antrim and subsequent construction costs of the US Wind Projects by subscribing for \$164 million (US\$122 million) of interest-bearing promissory notes issued by the project entity, and by subscribing for tracking preferred shares of TA Power in the amount of \$117 million (US\$90 million).

The tracking preferred shares issued by TA Power pay quarterly dividends based on the pre-tax net earnings of the US Wind Projects. The tracking preferred shares have preference over the common shares of TA Power held by TransAlta, in respect of dividends and the distribution of assets in the event of the liquidation, dissolution or winding-up of TA Power.

In conjunction with the Big Level and Antrim wind farms reaching commercial operations, approximately \$166 million (US\$126 million) of tax equity financing proceeds were raised by the project entity to partially fund the projects. From the tax equity proceeds, a subsidiary of TransAlta repaid \$52 million (US\$40 million) of the interest-bearing promissory notes to the Corporation. The remaining amount of the tax equity proceeds received by the project entity is held in reserves within the project entity and will be released upon the payment of all outstanding project costs and the satisfaction of certain conditions being met. Once these conditions are met, the reserves will be released and the subsidiary of TransAlta will repay the remaining outstanding interest-bearing promissory notes to the Corporation. The Corporation expects to subscribe for additional tracking preferred shares to fund the remaining construction costs payable.

### Mandatory Redeemable Preferred Shares ("MRPS") Redemption and Investment in Tracking Preferred Shares

In late December 2018 and early January 2019, the Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In December 2018, TEA redeemed AU\$111 million of the MRPS for cash consideration. Just prior to this redemption, the Corporation repaid to TEA the remaining balance due on the TEA loan. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AU\$509 million and approximately AU\$41 million of the preferred shares of TEA for cash consideration. Immediately following the redemptions, the Corporation subscribed for AU\$550 million of preferred shares of TA Power that track the underlying economics of an amortizing term loan payable held by TEA with another subsidiary of TransAlta. The preferred shares tracking the amortizing term loan will pay dividends, as declared, broadly equal to the interest payments on the underlying loan.

Subsequent to year-end, on Jan. 24, 2020, TEA repaid AU\$45 million of principal on the amortizing term loan owing to another subsidiary of TransAlta. As a result, pursuant to the terms of the tracking preferred shares that track this amortizing term loan a redemption was triggered and resulted in AU\$45 million of the tracking preferred shares being redeemed, which was paid to the Corporation in Canadian dollars at spot rates. The redemption has the effect of reducing the dividends on the TEA Tracking Preferred Shares, until such time that the amount of this redemption has been recouped by an equivalent amount of operating cash flow of TEA.

## Management and Board of Directors Changes

Effective May 16, 2019, the Corporation appointed Brent Ward to the role of Chief Financial Officer of TransAlta Renewables. Todd Stack, the previous Chief Financial Officer, was appointed to the Chief Financial Officer role of TransAlta Corporation. Mr. Ward also serves as Managing Director and Treasurer of TransAlta Corporation.

On Aug. 1, 2019, Mr. David Drinkwater was appointed Chair of the Board of Directors. Mr. Allen Hagerman's term as Chair expired pursuant to the terms of the Chair Terms of Reference. Mr. Hagerman continues to serve as an independent director on the Board of Directors.

## Additional IFRS Measures

An additional IFRS measure is a line item, heading or subtotal that is relevant to an understanding of the 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 financial statements, but is not presented elsewhere in the financial statements. We have included line items entitled "gross margin" and "operating income" in our Consolidated Statements of Earnings. Presenting these line items provides management and investors with a measure of ongoing operating performance that is readily comparable from period to period.

## Non-IFRS Measures

We evaluate our performance using a variety of measures to provide management and investors with an understanding of our financial position and results. Certain of the measures discussed in this MD&A are not defined under IFRS and, therefore, should not be considered in isolation, or as a substitute for or as an alternative to or to be more meaningful than measures as determined in accordance with IFRS when assessing our financial performance or liquidity. These measures have no standardized meaning under IFRS and may not be comparable to similar measures presented by other issuers.

The Corporation's key non-IFRS measures are comparable earnings before interest, taxes, depreciation and amortization ("Comparable EBITDA"), adjusted funds from operations ("AFFO") and cash available for distribution ("CAFD"). Comparable EBITDA is comprised of our reported EBITDA adjusted to exclude the impact of the change in fair value of Class B shares, change in fair value of financial assets, foreign exchange gains and losses and asset impairments; plus the Comparable EBITDA of the facilities in which we hold an economic interest, which is the facilities' reported EBITDA adjusted for: 1) finance lease income and the change in the finance lease receivable amount; 2) contractually fixed management costs; 3) interest earned on the prepayment of certain transmission costs; and 4) insurance recovery. During the first quarter of 2019, we revised our approach to reporting adjustments to arrive at comparable EBITDA, mainly to be more comparable with other companies in the industry. Comparable EBITDA is now adjusted to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change. Comparable EBITDA is presented to provide management and investors with a proxy for the amount of cash generated from operating activities before net interest expense, non-controlling interest, income taxes and the impacts of timing on the finance income from subsidiaries of TransAlta in which we have an economic interest. We present Comparable EBITDA along with operational information of the assets in which we own an economic interest so that readers can better understand and evaluate the drivers of those assets in which we have the economic interest. Since the economic interests are designed to provide the Corporation with returns as if we owned the assets themselves, presenting the operational information and Comparable EBITDA provides a more complete picture for readers to understand the underlying nature of the investments and the resultant cash flows that would otherwise only be presented as finance income from the investments. AFFO is calculated as the cash flow from operating activities before changes in working capital, less sustaining capital expenditures, distributions paid to subsidiaries' non-controlling interest and finance and interest income, plus AFFO of the assets owned through economic interests, which is calculated as Comparable EBITDA from the economic interests less the change in long-term receivable, sustaining capital expenditures, current income tax expense, insurance recovery and currency adjustments. AFFO provides users with a proxy for the amount of cash generated from operating activities and investments in subsidiaries of TransAlta in which we have an economic interest. CAFD is calculated as AFFO less scheduled principal repayments of amortizing debt and lease obligations. CAFD can be used as a proxy for the cash that will be available to common shareholders of the Corporation. One of the primary objectives of the Corporation is to provide reliable and stable cash flows, and presenting AFFO and CAFD assists readers in assessing our cash flows in comparison to prior periods. See the Reconciliation of Non-IFRS Measures section of this MD&A for additional information.

## Reconciliation of Non-IFRS Measures

The table below reconciles our cash flow from our reported operating activities to our AFFO and CAFD:

Year ended Dec. 31	2019	2018	2017
Cash flow from operating activities	331	385	290
Change in non-cash operating working capital balances	(23)	5	17
<b>Cash flow from operations before changes in working capital</b>	<b>308</b>	<b>390</b>	<b>307</b>
Adjustments:			
Sustaining capital expenditures – owned assets	(30)	(34)	(27)
Distributions paid to subsidiaries' non-controlling interest	(5)	(4)	(3)
Finance and interest income – economic interests <sup>(1)</sup> (Table II)	(76)	(171)	(86)
AFFO – economic interests <sup>(1)</sup> (Table II)	146	162	137
<b>AFFO</b>	<b>343</b>	<b>343</b>	<b>328</b>
Deduct:			
Principal repayments of amortizing debt	(49)	(48)	(44)
Principal repayments of lease obligations	(1)	—	—
<b>CAFD</b>	<b>293</b>	<b>295</b>	<b>284</b>
Weighted average number of common shares outstanding in the period (millions)	264	257	235
<b>AFFO per share</b>	<b>1.30</b>	<b>1.33</b>	<b>1.40</b>
<b>CAFD per share</b>	<b>1.11</b>	<b>1.15</b>	<b>1.21</b>

(1) Refer to the reconciliation of the Comparable EBITDA of the facilities in which we hold an economic interest to the reported finance income table (Table II) in this MD&A.

## Reconciliation of Comparable EBITDA to AFFO

Year ended Dec. 31	2019			2018			2017		
	Owned assets	Economic interests <sup>(3)</sup>	Total	Owned assets <sup>(2)</sup>	Economic interests <sup>(3)</sup>	Total	Owned assets	Economic interests <sup>(3)</sup>	Total
Comparable EBITDA <sup>(1)</sup> (Table I)	272	166	438	270	160	430	272	153	425
Interest expense	(41)	—	(41)	(48)	—	(48)	(50)	—	(50)
Change in long-term receivable	—	—	—	—	14	14	—	—	—
Sustaining capital expenditures	(30)	(7)	(37)	(34)	(4)	(38)	(27)	(12)	(39)
Current income tax expense	(2)	(8)	(10)	(6)	(1)	(7)	(6)	—	(6)
Tax equity distributions	—	(6)	(6)	—	(3)	(3)	—	—	—
Distributions paid to subsidiaries' non-controlling interest	(5)	—	(5)	(4)	—	(4)	(3)	—	(3)
Realized foreign exchange loss	(1)	—	(1)	—	—	—	1	—	1
Insurance recovery	(4)	(5)	(9)	—	(6)	(6)	—	—	—
Currency adjustment, reserves, interest income, and other	8	6	14	3	2	5	4	(4)	—
<b>AFFO</b>	<b>197</b>	<b>146</b>	<b>343</b>	<b>181</b>	<b>162</b>	<b>343</b>	<b>191</b>	<b>137</b>	<b>328</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Includes results of the Kent Breeze wind farm from May 31, 2018.

(3) Refer to Table II for a reconciliation Comparable EBITDA for the economic interests to Finance and Interest income as reported and included in the Consolidated Statements of Earnings.

Table I

The tables below reconcile our reported EBITDA of our owned assets to comparable EBITDA, including the comparable EBITDA of those assets we hold an economic interest in. Since the economic interests are designed to provide the Corporation with returns as if we owned the assets ourselves, presenting the operating information and comparable EBITDA provides a more complete picture to understand the underlying nature of the investments and the resultant cash flows that would otherwise only be presented as finance income from investments. For a reconciliation of the finance and interest income recognized on those assets we hold an economic interest in to comparable EBITDA of those assets, refer to the section labelled Table II:

**Year ended Dec. 31, 2019**

	Reported	Adjustments	Economic interests	Comparable total
Revenues <sup>(1)</sup>	446	—	213	659
Fuel, royalties and other costs of sales <sup>(2)</sup>	83	—	7	90
<b>Gross margin</b>	<b>363</b>	<b>—</b>	<b>206</b>	<b>569</b>
Operations, maintenance and administration <sup>(3)</sup>	87	—	44	131
Asset impairment	2	(2)	—	—
Taxes, other than income taxes	8	—	1	9
Insurance recovery	(4)	—	(5)	(9)
Finance income (Table II)	(76)	76	—	—
Interest income (Table II)	(8)	8	—	—
Change in fair value of financial assets	(49)	49	—	—
Foreign exchange loss	31	(31)	—	—
<b>Earnings before interest, taxes, depreciation and amortization</b>	<b>372</b>	<b>(100)</b>	<b>166</b>	<b>438</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Amounts related to economic interests include interest earned on the prepayment of certain transmission costs.

(3) Amounts related to economic interests include the effect of contractually fixed management costs.

**Year ended Dec. 31, 2018**

	Reported	Adjustments	Economic interests	Comparable total
Revenues <sup>(1)</sup>	462	—	200	662
Fuel, royalties and other costs of sales <sup>(2)</sup>	98	—	6	104
<b>Gross margin</b>	<b>364</b>	<b>—</b>	<b>194</b>	<b>558</b>
Operations, maintenance and administration <sup>(3)</sup>	86	—	39	125
Taxes, other than income taxes	8	—	1	9
Insurance recovery	—	—	(6)	(6)
Finance income (Table II)	(129)	129	—	—
Interest income (Table II)	(45)	45	—	—
Change in fair value of financial assets	1	(1)	—	—
Foreign exchange gains	(6)	6	—	—
<b>Earnings before interest, taxes, depreciation and amortization</b>	<b>449</b>	<b>(179)</b>	<b>160</b>	<b>430</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Amounts related to economic interests include interest earned on the prepayment of certain transmission costs.

(3) Amounts related to economic interests include the effect of contractually fixed management costs.

Year ended Dec. 31, 2017

	Reported	Adjustments	Economic interests	Comparable total
Revenues <sup>(1)(2)</sup>	459	1	202	662
Fuel, royalties and other costs of sales	97	—	14	111
Gross margin	362	1	188	551
Operations, maintenance and administration <sup>(3)</sup>	83	—	35	118
Taxes, other than income taxes	8	—	—	8
Finance income (Table II)	(39)	39	—	—
Interest income (Table II)	(48)	48	—	—
Change in fair value of Class B shares	2	(2)	—	—
Foreign exchange gain	(6)	6	—	—
Impairment of investment	137	(137)	—	—
Earnings before interest, taxes, depreciation and amortization	225	47	153	425

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Amounts related to economic interests include finance lease income adjusted for change in finance lease receivable amount.

(3) Amounts related to economic interests include the effect of contractually fixed management costs.

Table II

The table below reconciles the Comparable EBITDA of the facilities in which we hold an economic interest to the reported finance and interest income recognized in net earnings:

Year ended Dec. 31	2019			2018		
	US Wind and Solar <sup>(1)</sup>	Australian Gas	Total	US Wind and Solar <sup>(2)</sup>	Australian Gas	Total
Comparable EBITDA	46	120	166	30	130	160
Sustaining capital	(2)	(5)	(7)	(2)	(2)	(4)
Change in long-term receivable	—	—	—	—	14	14
Current income tax expense	—	(8)	(8)	—	(1)	(1)
Tax equity distributions	(6)	—	(6)	(3)	—	(3)
Insurance recovery	(5)	—	(5)	(6)	—	(6)
Interest income	—	—	—	—	3	3
Currency adjustment, reserves and other	—	6	6	—	(1)	(1)
AFFO of economic interests	33	113	146	19	143	162
Return of Solomon proceeds	—	—	—	—	28	28
Return of capital and redemptions	(17)	(42)	(59)	(4)	(13)	(17)
Effects of changes in working capital and other timing	(9)	(2)	(11)	(4)	2	(2)
Finance and interest income	7	69	76	11	160	171

Year ended Dec. 31	2017		
	US Wind	Australian Gas	Total
Comparable EBITDA	14	139	153
Sustaining capital	(2)	(10)	(12)
Currency adjustment, reserves and other	—	(4)	(4)
AFFO	12	125	137
Return of capital and redemptions	(3)	(42)	(45)
Effects of changes in working capital and other timing	(3)	(3)	(6)
Finance and interest income	6	80	86

Finance and interest income are presented and included in the Consolidated Statements of Earnings as follows:

Year ended Dec. 31	2019			2018			2017		
	US Wind and Solar <sup>(1)</sup>	Australian Gas	Total	US Wind and Solar <sup>(2)</sup>	Australian Gas	Total	US Wind	Australian Gas	Total
Finance income	7	69	76	11	118	129	6	33	39
Interest income <sup>(3)</sup>	—	—	—	—	42	42	—	47	47
Total finance and interest income	7	69	76	11	160	171	6	80	86

(1) Includes Lakeswind, Wyoming, Big Level and Antrim wind farms and Mass Solar solar projects.

(2) Includes Lakeswind wind farm and Mass Solar solar projects from May 31, 2018.

(3) Refer to Note 10 of the Annual Financial Statements for the composition of Interest income. The interest income in 2019 and a portion in 2018, is unrelated to the economic interests.



## Discussion of Comparable EBITDA

The amounts discussed in this section include operational metrics and financial information related to our fuel types and include investments in the economic interests of TransAlta subsidiaries. Since the investments in these economic interests provide us with returns as if we owned the assets, presenting the operational information provides users with information to assist them in assessing the financial performance of the assets that generate the finance income related to the economic interests. All the assets in the US Wind and Solar and Australian Gas business segments are owned through investments in an economic interest. The Comparable EBITDA of the assets in which we have an economic interest is reconciled to the finance income recognized in our Consolidated Financial Statements in the Reconciliation of Non-IFRS Measures section of this MD&A.

The following table summarizes operational data and Comparable EBITDA by fuel type:

Year ended Dec. 31	Long-term average renewable energy production (GWh) <sup>(1)</sup>	Production (GWh)		Comparable EBITDA	
		2019	2018	2019	2018
Canadian Wind	2,977	2,812	2,815	192	188
Canadian Hydro	464	393	388	18	17
US Wind and Solar	572	542	449	46	30
<b>Total – Renewable energy</b>	<b>4,013</b>	<b>3,747</b>	<b>3,652</b>	<b>256</b>	<b>235</b>
Canadian Gas <sup>(2)</sup>		1,257	1,155	82	84
Australian Gas		1,832	1,814	120	130
Corporate		—	—	(20)	(19)
<b>Total</b>		<b>6,836</b>	<b>6,621</b>	<b>438</b>	<b>430</b>

(1) Long-term average is calculated on an annualized basis from the average annual energy yield predicted from our simulation model based on historical resource data performed over a period of typically 15 years for wind and 30 years for hydro.

(2) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

Renewable energy production for the year ended Dec. 31, 2019, increased 95 GWh compared to 2018. This increase was mainly due to recognizing a full year of production related to Kent Breeze, Lakeswind, Mass Solar solar assets and the Kent Hills expansion, partially offset by lower wind resources that impacted generation from the rest of the fleet.

Changes to Comparable EBITDA are discussed below for each of our business segments:

### Canadian Wind

Year ended Dec. 31	2019	2018 <sup>(1)</sup>
Production (GWh)	2,812	2,815
Gross installed capacity (MW) <sup>(2)</sup>	1,167	1,169
Revenues <sup>(3)</sup>	240	239
Royalties and other costs of sales	12	12
<b>Comparable gross margin</b>	<b>228</b>	<b>227</b>
Operations, maintenance and administration	34	34
Insurance recovery	(4)	—
Taxes, other than income taxes	6	5
<b>Comparable EBITDA</b>	<b>192</b>	<b>188</b>

(1) Includes the results of the Kent Breeze wind farm from the acquisition date of May 31, 2018.

(2) Megawatts are rounded to the nearest whole number.

(3) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

Production for the year ended Dec. 31, 2019, was consistent with the production in 2018. Lower wind resources in Western Canada was partially offset by a full year of production in 2019 from Kent Breeze and the Kent Hills expansion in October 2018.

Comparable EBITDA increased \$4 million compared to 2018, mainly due to the receipt of insurance proceeds related to a 2018 turbine fire at Summerview.

### Canadian Hydro

<b>Year ended Dec. 31</b>	<b>2019</b>	<b>2018</b>
Production (GWh)	393	388
Gross installed capacity (MW)	112	112
Revenues	26	26
Royalties and other costs of sales	3	3
<b>Comparable gross margin</b>	<b>23</b>	<b>23</b>
Operations, maintenance and administration	4	4
Taxes, other than income taxes	1	2
<b>Comparable EBITDA</b>	<b>18</b>	<b>17</b>

Production and Comparable EBITDA for the year ended Dec. 31, 2019, were consistent with 2018.

### US Wind and Solar

<b>Year ended Dec. 31</b>	<b>2019<sup>(1)</sup></b>	<b>2018<sup>(2)</sup></b>
Production (GWh)	542	449
Gross installed capacity (MW)	330	215
Revenues	53	35
Royalties and other costs of sales	2	2
<b>Comparable gross margin</b>	<b>51</b>	<b>33</b>
Operations, maintenance and administration	9	8
Insurance recovery	(5)	(6)
Taxes, other than income taxes	1	1
<b>Comparable EBITDA</b>	<b>46</b>	<b>30</b>

(1) Includes results of the Wyoming Wind and Lakeswind wind farms, Mass Solar solar projects and the results of the Big Level and Antrim wind farms which began commercial operation in December 2019.

(2) Includes the results of the Wyoming Wind and the Lakeswind wind farms and Mass Solar solar projects from the acquisition date of May 31, 2018.

Production for the year ended Dec. 31, 2019, increased by 93 GWh compared to 2018, mainly due to realizing a full year of production related to the Lakeswind wind farm and Mass Solar solar projects compared to seven months in 2018, partially offset by higher unplanned outages.

Comparable EBITDA was \$16 million higher compared to 2018 due to a full year of production from the Lakeswind wind farm and Mass Solar solar projects in 2019 compared to seven months in 2018.

## Canadian Gas

Year ended Dec. 31	2019	2018
Production (GWh)	1,257	1,155
Gross installed capacity (MW)	499	499
Revenue <sup>(1)</sup>	180	197
Fuel and purchased power	68	83
<b>Comparable gross margin</b>	<b>112</b>	<b>114</b>
Operations, maintenance and administration	29	29
Taxes, other than income taxes	1	1
<b>Comparable EBITDA</b>	<b>82</b>	<b>84</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

Canadian Gas consists solely of the Sarnia cogeneration facility.

Production for the year ended Dec. 31, 2019, increased by 102 GWh compared to 2018, mainly due to higher market demand.

Comparable EBITDA decreased \$2 million from 2018, mainly due to lower merchant revenues largely offset by lower fuel costs mainly due to a one-time supply pricing event in 2018, partially offset by decreased fuel consumption resulting from a customer planned maintenance outage.

## Australian Gas

Year ended Dec. 31	2019	2018
Production (GWh)	1,832	1,814
Gross installed capacity (MW)	450	450
Revenues	160	165
Fuel and purchased power	5	4
<b>Comparable gross margin</b>	<b>155</b>	<b>161</b>
Operations, maintenance and administration <sup>(1)</sup>	35	31
<b>Comparable EBITDA</b>	<b>120</b>	<b>130</b>

(1) Includes the effect of contractually fixed management costs.

Production for the year ended Dec 31, 2019, increased by 18 GWh compared to 2018, mainly due to changes in customer demand. The contracts in Australia are capacity contracts and our results are not directly impacted by generation.

Comparable EBITDA decreased by \$10 million compared to 2018, mainly due to the weakening of the Australian dollar relative to the Canadian dollar and additional litigation costs related to an ongoing dispute at the South Hedland Power Station.

## Corporate

Year ended Dec. 31	2019	2018
Operations, maintenance and administration	20	19
<b>Comparable EBITDA</b>	<b>(20)</b>	<b>(19)</b>

Corporate costs were consistent with the prior year and mainly driven by the escalation noted in the management and operations contract with TransAlta.

## Fourth Quarter Results

### Consolidated Financial Highlights

Three months ended Dec. 31	2019	2018
Renewable energy production (GWh) <sup>(1)</sup>	1,173	1,107
Revenues	119	140
Net earnings attributable to common shareholders	48	93
Comparable EBITDA <sup>(2)(3)</sup>	125	134
Adjusted funds from operations <sup>(2)</sup>	100	108
Cash flow from operating activities	73	103
Cash available for distribution <sup>(2)</sup>	77	85
Net earnings per share attributable to common shareholders, basic and diluted	0.18	0.35
Adjusted funds from operations per share <sup>(2)</sup>	0.38	0.41
Cash available for distribution per share <sup>(2)</sup>	0.29	0.32
Dividends declared per common share	0.23	0.23
Dividends paid per common share	0.23	0.23

(1) Includes production from Canadian Wind, Canadian Hydro and US Wind and Solar and excludes Canadian and Australian gas-fired generation. Production is not a key revenue driver for gas-fired facilities as most of their revenues are capacity-based.

(2) Refer to the Non-IFRS Measures section of this MD&A for further discussion of these items.

(3) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

Renewable energy production increased 66 GWh, mainly due to higher generation in Canadian Wind, Canadian Hydro and US Wind and Solar.

Comparable EBITDA decreased by \$9 million in the fourth quarter of 2019, primarily due to lower revenues from Canadian Wind from the timing of recognition of environmental attributes and incentives, lower earnings from Canadian Gas due to a one-time market pricing event in 2018, lower earnings from Australia due to the weakening of the Australian dollar relative to the Canadian dollar and higher litigation costs. These were partially offset by the receipt of insurance proceeds related to a fire at Summerview.

AFFO and CAFD decreased by \$8 million and \$8 million, respectively, in the fourth quarter of 2019. Lower AFFO was a result of lower Comparable EBITDA and a higher insurance recovery at Wyoming Wind which is excluded from AFFO and CAFD as it is related to equipment, partially offset by lower sustaining capital expenditures and higher foreign exchange gains. 2018 AFFO was positively impacted by the change in long-term receivable at Australian Gas. CAFD decreased due to lower AFFO.

Reported net earnings attributable to common shareholders decreased by \$45 million, primarily due to lower finance and interest income this quarter of \$16 million and a higher unfavourable change in fair value of financial assets of \$16 million, both related to investments in subsidiaries of TransAlta. In addition, lower margins at Canadian Wind due to lower wind resources and lower margins at Canadian Gas due to market impacts also impacted the 2019 results.

As described previously, the Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules in Australia, which resulted in the balance of the MRPS being repaid. This resulted in lower finance income and interest income recognized by the Corporation in the fourth quarter.

## Reconciliation of Cash flow from Operating Activities to AFFO and CAFD

The table below reconciles our cash flow from operating activities to our AFFO and comparable CAFD:

Three months ended Dec. 31	2019	2018
Cash flow from operating activities	73	103
Change in non-cash operating working capital balances	25	20
<b>Cash flow from operations before changes in working capital</b>	<b>98</b>	<b>123</b>
Adjustments:		
Sustaining capital expenditures – owned assets	(8)	(14)
Distributions paid to subsidiaries' non-controlling interest	(1)	(1)
Finance and interest income (Table II)	(28)	(46)
AFFO – economic interests <sup>(1)</sup> (Table II)	39	46
<b>AFFO</b>	<b>100</b>	<b>108</b>
Deduct:		
Principal repayments of amortizing debt	(23)	(23)
<b>CAFD</b>	<b>77</b>	<b>85</b>
Weighted average number of common shares outstanding in the period (millions)	265	263
<b>AFFO per share</b>	<b>0.38</b>	<b>0.41</b>
<b>CAFD per share</b>	<b>0.29</b>	<b>0.32</b>

(1) Refer to the reconciliation of the Comparable EBITDA for the three months ended Dec. 31, 2019, of the facilities in which we hold an economic interest to the reported finance income table (Table II) in this MD&A.

## Reconciliation of Comparable EBITDA to AFFO

Three months ended Dec. 31	2019			2018		
	Owned assets	Economic interests <sup>(2)</sup>	Total	Owned assets	Economic interests <sup>(2)</sup>	Total
Comparable EBITDA (Table I) <sup>(1)</sup>	77	48	125	91	43	134
Interest expense	(11)	—	(11)	(10)	—	(10)
Change in long-term receivable	—	—	—	—	5	5
Sustaining capital expenditures	(8)	(2)	(10)	(14)	(3)	(17)
Current income tax expense	(1)	(2)	(3)	(2)	(2)	(4)
Tax equity distributions	—	(2)	(2)	—	(1)	(1)
Distributions paid to subsidiaries' non-controlling interest	(1)	—	(1)	(1)	—	(1)
Realized foreign exchange gain	3	—	3	—	—	—
Insurance recovery	—	(5)	(5)	—	—	—
Provisions	—	—	—	(2)	—	(2)
Currency adjustment, reserves, interest income, and other	2	2	4	—	4	4
<b>AFFO</b>	<b>61</b>	<b>39</b>	<b>100</b>	<b>62</b>	<b>46</b>	<b>108</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Refer to Table II for a reconciliation of the economic interest Comparable EBITDA to Finance and Interest income for the three months ended Dec. 31, 2019, as reported on the Consolidated Statements of Earnings.

Table I

The following tables below reconcile our reported EBITDA of our owned assets to Comparable EBITDA for the three months ended Dec. 31, 2019, including the Comparable EBITDA of those assets we hold an economic interest in. Since the economic interests are designed to provide the Corporation with returns as if we owned the assets ourselves, presenting the operating information and Comparable EBITDA provides a more complete picture to understand the underlying nature of the investments and the resultant cash flows that would otherwise only be presented as finance income from investments. For a reconciliation of the finance and interest income recognized on those assets we hold an economic interest in to Comparable EBITDA of those assets, refer to the section labelled Table II:

**Three months ended Dec. 31, 2019**

	Reported	Adjustments	Economic interests <sup>(3)</sup>	Comparable total
Revenues <sup>(1)</sup>	119	—	58	177
Fuel, royalties and other costs of sales <sup>(2)</sup>	19	—	3	22
<b>Gross margin</b>	<b>100</b>	<b>—</b>	<b>55</b>	<b>155</b>
Operations, maintenance and administration <sup>(3)</sup>	22	—	12	34
Taxes, other than income taxes	1	—	—	1
Insurance recovery	—	—	(5)	(5)
Finance income (Table II)	(28)	28	—	—
Interest income (Table II)	(2)	2	—	—
Change in fair value of financial assets	11	(11)	—	—
Foreign exchange gain	(9)	9	—	—
<b>Earnings before interest, taxes, depreciation and amortization</b>	<b>105</b>	<b>(28)</b>	<b>48</b>	<b>125</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Amounts related to economic interests include interest earned on the prepayment of certain transmission costs.

(3) Amounts related to economic interests include the effect of contractually fixed management costs.

**Three months ended Dec. 31, 2018**

	Reported	Adjustments	Economic interests	Comparable total
Revenues <sup>(1)</sup>	140	1	55	196
Fuel, royalties and other costs of sales <sup>(2)</sup>	26	—	2	28
<b>Gross margin</b>	<b>114</b>	<b>1</b>	<b>53</b>	<b>168</b>
Operations, maintenance and administration <sup>(3)</sup>	22	—	10	32
Taxes, other than income taxes	2	—	—	2
Finance income (Table II)	(35)	35	—	—
Interest income (Table II)	(11)	11	—	—
Foreign exchange gain	(13)	13	—	—
Change in fair value of financial assets	(5)	5	—	—
<b>Earnings before interest, taxes, depreciation and amortization</b>	<b>154</b>	<b>(63)</b>	<b>43</b>	<b>134</b>

(1) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

(2) Amounts related to economic interests include interest earned on the prepayment of certain transmission costs.

(3) Amounts related to economic interests include the effect of contractually fixed management costs.

Table II

The table below reconciles our finance and interest income to comparable EBITDA of the facilities in which we hold an economic interest:

Three months ended Dec. 31	2019			2018		
	US Wind and Solar <sup>(1)</sup>	Australian Gas	Total	US Wind and Solar <sup>(2)</sup>	Australian Gas	Total
Comparable EBITDA	20	28	48	10	33	43
Sustaining capital	—	(2)	(2)	(1)	(2)	(3)
Change in long-term receivable	—	—	—	—	5	5
Current income tax expense	—	(2)	(2)	—	(2)	(2)
Tax equity distributions	(2)	—	(2)	(1)	—	(1)
Insurance recovery	(5)	—	(5)	—	—	—
Interest income	—	—	—	—	3	3
Currency adjustment, reserves and other	—	2	2	—	1	1
<b>AFFO of economic interests</b>	<b>13</b>	<b>26</b>	<b>39</b>	<b>8</b>	<b>38</b>	<b>46</b>
Return of capital	(4)	(1)	(5)	(3)	—	(3)
Effects of changes in working capital and other timing	(8)	2	(6)	1	2	3
<b>Finance and interest income</b>	<b>1</b>	<b>27</b>	<b>28</b>	<b>6</b>	<b>40</b>	<b>46</b>

Finance and interest income are presented and included in the Consolidated Statements of Earnings as follows:

Year ended Dec. 31	2019			2018		
	US Wind and Solar <sup>(1)</sup>	Australian Gas	Total	US Wind and Solar <sup>(2)</sup>	Australian Gas	Total
Finance income	1	27	28	6	29	35
Interest income <sup>(3)</sup>	—	—	—	—	11	11
<b>Total finance and interest income</b>	<b>1</b>	<b>27</b>	<b>28</b>	<b>6</b>	<b>40</b>	<b>46</b>

(1) Includes Lakeswind, Wyoming, Big Level and Antrim wind farms and Mass Solar solar projects.

(2) Includes Lakeswind wind farm and Mass Solar solar projects from May 31, 2018.

(3) Refer to Note 10 of the Annual Financial Statements for the composition of Interest income. The interest income in 2019 and a portion in 2018, is unrelated to the economic interests.

## Discussion of Comparable EBITDA and Operational Results for the three months ended Dec. 31, 2019

Presenting Comparable EBITDA from period to period provides management and investors with a proxy for the amount of cash generated from operating activities before net interest expense, non-controlling interest, income taxes and the impacts of timing and sustaining capital expenditures on finance income from subsidiaries of TransAlta.

Three months ended Dec. 31	Long-term average renewable energy production (GWh) <sup>(1)</sup>	Production (GWh)		Comparable EBITDA <sup>(2)</sup>	
		2019	2018	2019	2018
Canadian Wind	925	934	927	58	67
Canadian Hydro	82	69	46	3	2
US Wind and Solar	192	170	134	20	10
<b>Total – Renewable energy</b>	<b>1,199</b>	<b>1,173</b>	<b>1,107</b>	<b>81</b>	<b>79</b>
Canadian Gas		320	247	21	27
Australian Gas		463	457	28	33
Corporate		—	—	(5)	(5)
<b>Total</b>		<b>1,956</b>	<b>1,811</b>	<b>125</b>	<b>134</b>

(1) Long-term average is calculated on an annualized basis from the average annual energy yield predicted from our simulation model based on historical resource data performed over a period of typically 15 years for wind and 30 years for hydro.

(2) During the first quarter of 2019, we revised Comparable EBITDA to exclude the impact of unrealized mark-to-market gains or losses. The current and prior period amounts have been adjusted to reflect this change.

- Canadian Wind: Comparable EBITDA decreased by \$9 million from the prior year mainly due to lower revenues primarily driven by the expiration of the Wind Power Production Incentives ("WPPI") at certain facilities and lower revenues from environmental attributes.
- Canadian Hydro: Comparable EBITDA increased compared to 2018 due to higher water resources.
- US Wind and Solar: Higher Comparable EBITDA in 2019 of \$10 million was mainly due to higher wind resources and higher revenues realized from a full year of the operations at the Lakeswind wind farm and the Mass Solar solar project and insurance recoveries recognized related to a 2018 fire at Wyoming Wind.
- Canadian Gas: Comparable EBITDA decreased \$6 million from 2018, mainly due to lower revenues due to a one-time market pricing event in 2018.
- Australian Gas: Comparable EBITDA decreased by \$5 million from 2018, mainly due to the weakening of the Australian dollar relative to the Canadian dollar and additional litigation costs related to an ongoing dispute at the South Hedland Power Station.
- Corporate: Corporate costs were consistent with 2018.



## Selected Quarterly Information

	Q1 2019	Q2 2019	Q3 2019	Q4 2019
Revenue	127	111	89	119
Net earnings attributable to common shareholders	76	31	24	48
Cash flow from operating activities	131	52	75	73
AFFO <sup>(1)</sup>	94	80	69	100
CAFD <sup>(1)</sup>	92	57	67	77
Net earnings per share attributable to common shareholders, basic and diluted	0.29	0.12	0.09	0.18
CAFD per share <sup>(1)</sup>	0.35	0.22	0.25	0.29

	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Revenue	125	107	90	140
Net earnings attributable to common shareholders	66	65	12	93
Cash flow from operating activities	132	72	78	103
AFFO <sup>(1)</sup>	97	73	67	108
CAFD <sup>(1)</sup>	96	51	65	85
Net earnings per share attributable to common shareholders, basic and diluted	0.26	0.26	0.05	0.35
CAFD per share <sup>(1)</sup>	0.38	0.20	0.25	0.32

(1) Refer to the Non-IFRS Measures section of this MD&A for further discussion of these items.

Our business results fluctuate with seasonal variations, with the first and fourth quarters seeing the largest wind volumes and the second and third quarters recording higher hydro volumes. As wind forms a larger part of our renewable fleet, higher revenues and earnings are expected in the first and fourth quarters. In April 2018, we acquired economic interests in the Big Level US wind development project, and in May 2018, we acquired Kent Breeze directly and economic interests in the Lakeswind wind farm and Mass Solar solar projects. In March 2019, we acquired an economic interest in the Antrim US wind development project. The Big Level and Antrim wind projects achieved commercial operations in December 2019.

Our earnings after these investments include various effects arising from financial instruments:

- The Corporation executed a series of transactions in January 2019 including redeeming the remaining outstanding balance of MRPS and preferred shares of TEA. This resulted in lower finance and interest income resulting in an unfavourable impact on net earnings. Immediately following the redemptions, the Corporation subscribed for preferred shares tracking the TEA amortizing term loan which resulted in variability in earnings.
- Foreign exchange gains on Australian-dollar-denominated instruments in the first quarter of 2019 and fourth quarter of 2018, with losses in the first, second, third and fourth quarters of 2019 and in the second, third and fourth quarters of 2018.
- Foreign exchange gains on US-dollar-denominated instruments in the first and third quarters of 2019, the first, second and fourth quarters of 2018, with losses in the second and fourth quarters of 2019 and the third quarter of 2018.

## Critical Accounting Policies and Estimates

The preparation of 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.

In the process of applying the Corporation's accounting policies, which are discussed in Note 2 of the Consolidated Financial Statements, management has to make judgments and estimates about matters that are highly uncertain at the time the estimate is made and that could significantly affect the amounts recognized in the Consolidated Financial Statements. Different estimates with respect to key variables used in the calculations, or changes to estimates, could potentially have a material impact on the Corporation's financial position or performance. The key judgments and sources of estimation uncertainty are described below:

### Fair Value

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair values can be determined by reference to prices for that instrument in active markets to which the Corporation has access. In the absence of an active market, the Corporation determines fair values based on valuation models or by reference to other similar products in active markets.

Fair values determined using valuation models require the use of assumptions. In determining those assumptions, the Corporation looks primarily to external readily observable market inputs. In limited circumstances, the Corporation uses inputs that are not based on observable market data.

#### Level Determinations and Classifications

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, either directly or indirectly.

Fair values within the Level II category are determined through the use of quoted prices in active markets, which in some cases are adjusted for factors specific to the asset or liability, such as basis, credit valuation and location differentials.

The Corporation's commodity risk management Level II financial instruments may include over-the-counter derivatives with values based on observable commodity futures curves and derivatives with inputs validated by broker quotes or other publicly available market data providers. Level II fair values are also determined using valuation techniques, such as option pricing models and interpolation formulas, where the inputs are readily observable.

In determining Level II fair values of other risk management assets and liabilities and the preferred shares of TEA and the preferred shares tracking the amortizing term loan measured and carried at fair value, the Corporation uses observable inputs other than unadjusted quoted prices that are observable for the asset or liability, such as interest rate yield curves and currency rates. For certain financial instruments where insufficient trading volume or lack of recent trades exists, the Corporation relies on similar interest or currency rate inputs and other third-party information such as credit spreads. The fair value of the preferred shares of TEA and the preferred shares tracking amortizing term loan is determined by calculating an implied price based on a current assessment of the yield to maturity.

c. Level III

Fair values are determined using inputs for the asset or liability that are not readily observable.

In estimating the fair value of the preferred shares tracking adjusted TEA amounts and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar, the Corporation uses a discounted cash flow method and makes estimates and assumptions about sales prices, production, capital expenditures, asset retirement costs and other related cash inflows and outflows over the life of the facilities, as well as the remaining life of the facilities. In developing these assumptions, management uses estimates of contracted and merchant prices, anticipated production levels, planned and unplanned outages, changes to regulations, and transmission capacity or constraints for the estimated remaining life of the facilities. Appropriate discount rates reflecting the risks specific to TEA, Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar are used in the valuations. Management also develops assumptions in respect of the ongoing financing and tax positions of TEA, Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar. These estimates and assumptions are susceptible to change from period to period and actual results can, and often do, differ from the estimates, and can have either a positive or negative impact on the estimate of the fair value of the instrument, and may be material.

The table below summarizes quantitative data regarding the unobservable inputs used in valuing the TEA Tracking Preferred Shares (discussed further below) as at the referenced dates:

Unobservable input	Dec. 31, 2019	Dec. 31, 2018
Discount rate	5.5 %	6.7 %
Quarterly cash flows (millions)	Average of \$10	Average of \$11

The following table summarizes the impact on the fair value measurement of a change in the unobservable inputs to reflect reasonably possible alternative assumptions:

Unobservable input	Alternative assumption	Change in fair value as at Dec. 31, 2019	Change in fair value as at Dec. 31, 2018
Basis point change in discount rates	-10 basis points decrease	6	5
	+10 basis points increase	(6)	(5)
Quarterly cash flows	+1% increase <sup>(1)</sup>	6	6
	- 1% decrease <sup>(1)</sup>	(6)	(6)

(1) Quarterly cash flows could vary by a higher rate than the assumed one per cent factor.

The table below summarizes quantitative data regarding the unobservable inputs used in valuing the fair value of the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar as at the referenced dates:

Unobservable input as at Dec. 31, 2019	Wyoming Wind	Big Level and Antrim <sup>(1)</sup>	Lakeswind	Mass Solar
Discount rate	5.6 %	7.8 %	8.4 %	6.3 %
Quarterly cash flows (millions)	Average of \$3	Average of \$4	Average of \$1	Average of \$1

(1) Projects achieved commercial operations in December 2019.

Unobservable input as at Dec. 31, 2018	Wyoming Wind	Big Level <sup>(1)</sup>	Lakeswind	Mass Solar
Discount rate	5.9 %	8.0 %	8.8 %	6.5 %
Quarterly cash flows (millions)	Average of \$3	Average of \$5	Average of \$1	Average of \$1

(1) Project under construction at Dec. 31, 2018.

The following table summarizes the impact on the fair value measurements of a change in the unobservable inputs to reflect reasonably possible alternative assumptions as at the referenced dates:

Unobservable input	Alternative assumption	Change in fair value as at Dec. 31, 2019 <sup>(1)</sup>	Change in fair value as at Dec. 31, 2018 <sup>(2)</sup>
Basis point change in discount rates	-10 basis points decrease	3	2
	+10 basis points increase	(3)	(2)
Quarterly cash flows	+1% increase	3	3
	- 1% decrease	(3)	(3)

(1) The fair value changes presented relates to Wyoming Wind, Big Level and Antrim, Mass Solar and Lakeswind in total.

(2) The fair value changes presented relates to Wyoming Wind, Big Level, Mass Solar and Lakeswind in total.

### Significant Influence through Tracking Preferred Shares

The Corporation has invested in preferred shares of subsidiaries of TransAlta that pay dividends based on certain financial results of other subsidiaries of TransAlta. Under IFRS, a 20 per cent voting interest is presumed to provide the holder with significant influence over the investee. Significant influence is the power to participate in the financial and operating policy decisions of an investee.

The rights associated with the Corporation's investments in the preferred shares of a subsidiary of TransAlta tracking the financial results of certain US Wind and Solar assets provide the Corporation individually with a 5 per cent (cumulatively 25 per cent) voting interest in that subsidiary. In the event that any dividends on these preferred shares have not been paid within six months of the date at which the payout formula would have them paid, and while such amounts remain unpaid, the Corporation will have the right to appoint individually 15 per cent (cumulatively 75 per cent) of the directors of that subsidiary.

The investment in the preferred shares of a subsidiary of TransAlta tracking the financial results of TEA does not provide the Corporation with any voting rights, unless and until the subsidiary fails to pay four quarterly dividends on the dates when due in accordance with the payout formula, whether or not consecutive, and whether or not such dividends have been declared. Thereafter, but only for so long as any such dividends remain in arrears, the Corporation is entitled to elect 30 per cent of the directors of the subsidiary. The investment agreement with TransAlta provides the Corporation with rights to financial information and further protections against adverse changes in the operation and financial structure of TEA through post-closing covenants. The investment agreement is discussed further in our AIF.

The Corporation determined that it does not have significant influence over the TransAlta subsidiaries, in consideration of TransAlta's block ownership of the voting shares, and accordingly, the investments were determined to constitute financial assets.

### Consolidation of Kent Hills 1, 2 and 3 ("Kent Hills") Wind Farms

Under IFRS, the Corporation is required to consolidate all entities that it controls. The Corporation consolidates Kent Hills Wind LP as a subsidiary. Kent Hills Wind LP is owned 83 per cent by the Corporation and 17 per cent by an external third party. The Corporation controls the Kent Hills Wind LP through its 83 per cent ownership, and accordingly, consolidation is required.

## Dividends as Income or Return of Capital

The Corporation receives dividends from its investments in the preferred shares tracking adjusted TEA amounts, TEA preferred shares, preferred shares tracking earnings and distributions of Wyoming Wind, Lakeswind, Big Level and Antrim, and Mass Solar. Determining whether a dividend represents in substance a return of capital requires significant judgment. The Corporation determines the amount of dividends that represents a return of capital based on the lower of: (i) the difference, if positive, between the cost base of the shares and their fair value, at the end of the reporting period; and (ii) the actual dividend declared on the shares during the reporting period. When it is determined that a dividend represents a return of capital, the carrying amount of the related investment is reduced.

## Impairment of PP&E

Impairment exists when the carrying amount of an asset exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. An assessment is made at each reporting date as to whether there is any indication that an impairment loss may exist or that a previously recognized impairment loss may no longer exist or may have decreased. In determining fair value less costs of disposal, information about third-party transactions for similar assets is used and if none is available, other valuation techniques, such as discounted cash flows, are used. Value in use is computed using the present value of management's best estimates of future cash flows based on the current use and present condition of the asset. In estimating either fair value less costs of disposal or value in use using discounted cash flow methods, estimates and assumptions must be made about sales prices, production, asset retirement costs and other related cash inflows and outflows over the life of the facilities, which can range from 25 to 50 years. In developing these assumptions, management uses estimates of contracted prices, anticipated production levels, planned and unplanned outages, changes to regulations, and transmission capacity or constraints for the remaining life of the facilities. Appropriate discount rates reflecting the risks specific to the asset under review are used in the assessments. These estimates and assumptions are susceptible to change from period to period and actual results can, and often do, differ from the estimates, and can have either a positive or negative impact on the estimate of the impairment charge, and may be material. Substantially all of the Corporation's generating assets are contracted under the TransAlta PPAs or other PPAs with various third parties.

## Income Taxes

Preparation of the Consolidated Financial Statements involves determining an estimate of, or provision for, income taxes in each of the jurisdictions in which the Corporation operates. The process also involves making an estimate of income taxes currently payable and income taxes expected to be payable or recoverable in future periods, referred to as deferred income taxes. Deferred income taxes result from the effects of temporary differences due to items that are treated differently for tax and accounting purposes. The tax effects of these differences are reflected in the Consolidated Statements of Financial Position as deferred income tax assets and liabilities. An assessment must also be made to determine the likelihood that the Corporation's future taxable income will be sufficient to permit the recovery of deferred income tax assets. To the extent that such recovery is not probable, deferred income tax assets must be reduced. Management must exercise judgment in its assessment of continually changing tax interpretations, regulations and legislation, to ensure deferred income tax assets and liabilities are complete and fairly presented. Differing assessments and applications than the Corporation's estimates could materially impact the amounts recognized for deferred income tax assets and liabilities.

## Provisions for Decommissioning and Restoration Activities

We recognize provisions for decommissioning and restoration obligations in the period in which they are incurred if there is a legal or constructive obligation to reclaim the plant or site. Initial decommissioning provisions, and subsequent changes thereto, are determined using the Corporation's best estimate of the required cash expenditures, adjusted to reflect the risks and uncertainties inherent in the timing and amount of settlement. The estimated cash expenditures are present valued using a current, risk-adjusted, market-based, pre-tax discount rate. A change in estimated cash flows, market interest rates or timing could have a material impact on the carrying amount of the provision.

At Dec. 31, 2019, the total provision recognized for decommissioning and restoration activities was \$56 million (2018 - \$44 million). We estimate the undiscounted amount of cash flow required to settle these provisions is approximately \$220 million (2018 - \$193 million), which is expected to be incurred between 2029 and 2050. The majority of these costs will be incurred between 2035 and 2045. An increase of one per cent and 10 per cent for the discount rate and undiscounted cash flows would result in a total net earnings decrease of \$1 million.

## Useful Life of PP&E

Each significant component of an item of PP&E is depreciated over its estimated useful life. Estimated useful lives are determined based on current facts and past experience, and take into consideration the anticipated physical life of the asset, existing long-term sales agreements and contracts, current and forecasted demand, the potential for technological obsolescence, and regulations. The useful lives of PP&E are reviewed at least annually to ensure they continue to be appropriate.

During the third quarter of 2019, the allocation of the costs recognized for the components of Wind assets and the useful lives of the identified components were reviewed. During the review, additional components were identified for parts where the useful lives are shorter than the original estimate. The useful life of each of these components was reduced from 30 years to either 15 years or 10 years. As a result, depreciation expense increased by approximately \$10 million for the twelve months ended Dec. 31, 2019.

## Revenue from Contracts with Customers

Where contracts contain multiple promises for goods or services, management exercises judgment in determining whether goods or services constitute distinct goods or services or a series of distinct goods that are substantially the same and that have the same pattern of transfer to the customer. The determination of a performance obligation affects whether the transaction price is recognized at a point in time or over time. Management considers both the mechanics of the contract and the economic and operating environment of the contract in determining whether the goods or services in a contract are distinct.

In determining the transaction price and estimates of variable consideration, management considers past history of customer usage in estimating the goods and services to be provided to the customer. We also consider the historical production levels and operating conditions for our variable generating assets.

The satisfaction of performance obligations requires management to make judgments as to when control of the underlying good or service transfers to the customer. Determining when a performance obligation is satisfied affects the timing of revenue recognition. We consider both customer acceptance of the good or service, and the impact of laws and regulations such as certification requirements, in determining when this transfer occurs.

Management also applies judgment in determining whether the invoice practical expedient permits recognition of revenue at the invoiced amount, if that invoiced amount corresponds directly with the entity's performance to date.

## Leases

In determining whether a contract is a lease, we apply judgment in determining whether an identified asset exists, whether the customer or supplier obtains substantially all of the economic benefits from use of the identified asset, and who has the right to control the use of the identified asset during the term of the contract.

For contracts that are considered to be leases, judgment is applied in making the following determinations at the lease commencement date, all of which affect the amount recognized for the right of use asset and lease liability:

- Lease term - whether the Corporation is reasonably certain to exercise renewal or, not to exercise, termination options;
- Lease payments - identifying in-substance fixed payments (included) and variable payments that are based on usage or performance factors (excluded);
- Components of a contract - identifying lease and non-lease components (services that the supplier performs) and allocating contract payments to lease and non-lease components.

## Financial Instruments

Our financial instruments as at the end of the referenced periods are as follows:

As at	Dec. 31, 2019		Dec. 31, 2018	
	Fair value Level II	Fair value Level III	Fair value Level II	Fair value Level III
Preferred shares tracking adjusted TEA amounts	—	598	—	637
Preferred shares tracking earnings and distributions of Wyoming Wind	—	119	—	137
Preferred shares tracking earnings and distributions of Big Level and Antrim	—	118	—	42
Preferred shares tracking earnings and distributions of Mass Solar	—	53	—	69
Preferred shares tracking earnings and distributions of Lakeswind	—	30	—	33
Preferred shares tracking amortization term loan	532	—	—	—
Preferred shares of TEA	42	—	88	—
Net risk management liabilities	(2)	—	(1)	—

At Dec. 31, 2019, Level III financial instruments were comprised of financial assets with a carrying value of \$918 million (2018 - \$918 million).

The decrease in fair value of the preferred shares tracking adjusted TEA amounts during the year is due to changes in the assumptions and expected timing of cash flows, a decrease in forecast foreign exchange translation rate from Australian dollars to Canadian dollars, partially offset by the impact of lower discount rates and assumptions on the timing of redemption of preferred shares.

The fair value of the preferred shares tracking earnings and distributions of Big Level and Antrim have increased as the Corporation has subscribed for additional preferred shares for the acquisition of Antrim and to cover the construction costs associated with the US Wind Projects.

The fair values of the other tracking preferred shares have mainly declined due to the rolling of the future cash periods, payment of return of capital, as well as changes in the assumptions associated with exchange rates and discount rates.

Refer to the Critical Accounting Policies and Estimates section of this MD&A for additional information on these Level III fair value measurements.

At Dec. 31, 2019, Level II financial instruments were comprised of financial assets with a carrying value of \$574 million (2018 - \$88 million) primarily related to the addition of the preferred shares tracking the amortization term loan. The change in fair value of the preferred shares tracking the amortizing term loan was due to changes in timing of cash flows, as well as a reduction in the discount rate during the year.

Financial instruments give rise to credit risk, foreign currency risk, interest risk and liquidity risk. We accept the market risk that arises from our investment in Australian Tracking Preferred Shares and preferred shares. Refer to the Risk Management section of this document for a discussion thereof and our management strategies.

Financial instruments can be used to manage exposure to interest rates, commodity prices and currency fluctuations, as well as other market risks. TransAlta enters into derivative contracts with external counterparties on our behalf. Derivative financial instruments are accounted for using the fair value method of accounting. The initial recognition of fair value and subsequent changes in fair value can affect reported earnings in the period the change occurs if hedge accounting is not elected. Otherwise, the effective portion of the changes in fair value will generally not affect earnings until the financial instrument is settled.

The two types of derivative financial instruments that we primarily use are: (i) those that are used in relation to energy trading activities, commodity hedging activities and other contracting activities; and (ii) those used in the hedging of foreign-denominated revenues, debt, projects and expenditures.

## Other Consolidated Results

### Interest Expense

The components of net interest expense for the referenced periods are shown below:

Year ended Dec. 31	2019	2018
Interest on long-term debt	37	36
Interest on lease obligations	1	—
Interest on TEA loan	—	4
Other net interest <sup>(1)</sup>	3	8
Accretion of provisions	4	3
<b>Interest expense</b>	<b>45</b>	<b>51</b>

(1) Consists of letters of credit and guarantees, credit facility commitments, other interest and banking fees (net of capitalized interest). For the year ended Dec. 31, 2019, interest on letters of credit and guarantees pledged by TransAlta was \$1 million (2018 - \$1 million).

For the year ended Dec. 31, 2019, interest expense decreased compared to 2018, primarily due to the payout in late 2018 of the TEA loan and approximately \$4 million of costs incurred in 2018 due to project level financing that was no longer practicable.

### Income Taxes

Our income tax rates and tax expense are based on the earnings generated in each jurisdiction in which we operate and any permanent differences between how pre-tax income is calculated for accounting and tax purposes. If there is a timing difference between when an expense or revenue item is recognized for accounting and tax purposes, these differences result in deferred income tax assets or liabilities and are measured using the income tax rate expected to be in effect when these temporary differences reverse. The impact of any changes in income tax rates on deferred income tax assets or liabilities is recognized in earnings in the period the new rates are enacted.

In 2019, the Corporation recognized a deferred income tax recovery of \$18 million related to a decrease in the Alberta corporate tax rate from 12 per cent to 8 per cent. The tax decrease will be phased in as follows: 11 per cent effective Jul. 1, 2019, 10 per cent effective Jan. 1, 2020, 9 per cent effective Jan. 1, 2021, and 8 per cent effective Jan. 1, 2022.

### Non-Controlling Interest

Natural Forces Technologies, Inc. owns a 17 per cent interest in Kent Hills Wind LP, which owns the Kent Hills 1, 2 and 3 wind facilities, which collectively have 167 MW of gross generating capacity.

Since we have a controlling interest in Kent Hills Wind LP, 100 per cent of the earnings, assets and liabilities are consolidated into our financial statements. The non-controlling interest on the Consolidated Statements of Earnings and Consolidated Statements of Financial Position relate to the earnings and net assets attributable to the portion of Kent Hills that we do not own. On the Consolidated Statements of Cash Flows, cash paid to the minority owners of Kent Hills is shown in the financing activities section as distributions to non-controlling interest.

Net earnings attributable to the non-controlling interest were \$4 million for the year ended Dec. 31, 2019, a decrease of \$1 million compared to 2018, primarily due to a decrease in Wind Power Production Incentives ("WPPI") that expired in early 2019.

### Other Comprehensive Income (OCI)

Other comprehensive income (loss) includes the changes in fair value for investments in subsidiaries of TransAlta related to the preferred shares of TEA, the preferred shares tracking adjusted TEA amounts and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar. These gains and losses are excluded from the Consolidated Statements of Earnings. To calculate the fair values of these investments, we use discounted cash flow models based on the underlying future cash flows of the related operations and make estimates and assumptions that are susceptible to change from period-to-period and often do impact the estimate of the fair values. Period-to-period fluctuations in fair value are generally attributed to changes in forward-looking cash flow assumptions, discount rates and foreign exchange rates.



During the year ended Dec. 31, 2019, we recognized a \$45 million decrease in fair value in OCI (2018 - \$40 million increase). The decrease during 2019 is primarily attributable to changes in the discount rate and cash flow assumptions for the preferred shares tracking adjusted TEA amounts and unfavourable foreign exchange rate impacts on the US Wind and Solar Tracking Preferred Shares.

See Note 9 of the Consolidated Financial Statements for additional information related to the investments for which changes in fair value are recognized in OCI.

### Sustaining Capital Expenditures

Sustaining capital expenditures for assets we directly own, as well as the facilities in which we own economic interests, are noted below:

Year ended Dec. 31	Canadian Wind	Canadian Hydro	US Wind and Solar	Canadian Gas	Australian Gas	Total
2019 Total sustaining expenditures	11	3	2	16	5	37
2018 Total sustaining expenditures	10	4	2	20	2	38

Sustaining capital expenditures decreased by \$1 million compared to 2018. Although sustaining capital for the year ended Dec. 31, 2019, was mainly consistent, we incurred higher gas turbine overhaul costs for the Australian Gas facilities in 2019, as compared to higher costs in the Canadian Gas segment due to planned major maintenance in 2018.

We also incurred US\$1 million in 2019 related to productivity capital primarily for the Wolfe Island and Melancthon bushing monitoring systems.

## Related-Party Transactions and Balances

### Related-Party Transactions

Amounts recognized from transactions with TransAlta or subsidiaries of TransAlta for the referenced periods, excluding those described in the Significant and Subsequent Events section of this MD&A, are as follows:

Year ended Dec. 31	2019	2018
Revenue from TransAlta PPAs (I)	35	36
Revenue from Environmental Attributes <sup>(1)</sup>	13	1
Finance income from investments in subsidiaries of TransAlta	76	129
Interest income - promissory notes and investments in subsidiaries of TransAlta	5	42
G&A Reimbursement Fee (II) <sup>(2)</sup>	17	16
Natural gas purchases (III)	9	7
Financial power swap sales - loss/(gain) (III)	(1)	1
Interest expense on TEA loan	—	4
Asset optimization fee <sup>(3)</sup>	2	2
Interest expense on credit facility and letter of credit and guarantee fees	1	1

(1) The value of Environmental Attributes was determined by reference to market information for similar instruments, including historical transactions with third parties.

(2) Excludes portion charged directly to the Wyoming Wind wind farm by TransAlta and, in 2018, the Kent Hills 3 development fee.

(3) A subsidiary of TransAlta provides asset management and optimization services for the Corporation's Sarnia cogeneration plant. The Sarnia cogeneration plant is charged a fixed fee of approximately \$0.125 million per quarter, plus a variable fee of 1.6 per cent of its gross margin.

### I. TransAlta PPAs

We have agreements with TransAlta for certain wind and hydro facilities, providing for the purchase by TransAlta, for a fixed price, of all of the power produced by such facilities (the "TransAlta PPAs"). The price paid by TransAlta in 2019 for output under the TransAlta PPAs was approximately \$32.88 per MWh for wind facilities and \$49.33 per MWh for hydro facilities, which are adjusted annually for changes in the Consumer Price Index ("CPI"). TransAlta is only required to purchase power that is actually produced. Each TransAlta PPA has a term of 20 years or end-of-asset life, where end-of-asset life is less than 20 years.

## II. Management Agreement

Under the Management Agreement between the Corporation and TransAlta, TransAlta provides us with all the general administrative services, including key management personnel services, as may be required or advisable for the management of the business affairs of the Corporation. As reimbursement for the services provided, we pay TransAlta a fee (the "G&A Reimbursement Fee"), adjusted annually for changes in the CPI. TransAlta also provides operational and maintenance services under the Management Agreement, which generally includes all services as may be necessary or requested for the operation and maintenance of our gas, wind and hydro facilities. TransAlta is reimbursed for all out-of-pocket and third-party fees and costs, including salaries, wages and benefits associated with managing and operating the facilities not captured by the G&A Reimbursement Fee. The Management Agreement has an initial 20-year term, which is automatically renewed for further successive terms of five years after the expiry of the initial term or any renewal term, unless terminated by either party. On Feb. 28, 2020, the Management Agreement was amended so that the G&A Reimbursement Fee will be calculated quarterly in an amount equal to 5 per cent of Comparable EBITDA of the immediately prior fiscal quarter, without duplication for any indirect costs associated with the management, administrative, accounting, planning and other head office costs of TransAlta that reduce the dividends or distributions that would otherwise be payable to the Corporation on any of the tracking preferred shares. This amendment is not expected to significantly change the amount of the G&A Reimbursement Fee. Further details concerning the Management Agreement are set out in our AIF. See also the Risk Management section of this MD&A.

In 2018, the Corporation paid a \$2 million one-time upfront fee upon achieving commercial operation of Kent Hills 3 that will be recognized over a 30-year period, in lieu of the annual five per cent of incremental EBITDA that would otherwise be paid pursuant to the Management Agreement. The Corporation also paid TransAlta a development fee of \$2 million in respect of the Big Level wind project.

## III. Natural Gas Purchases, Sales and Power Swap Sales

Our subsidiary, TransAlta (SC) LP ("Sarnia"), and TransAlta Energy Marketing Corp. ("TEMCO"), a Canadian subsidiary of TransAlta, are parties to a Gas Management Intercompany Agreement for the Sarnia cogeneration facility to obtain its natural gas at the Dawn Hub from TEMCO in consideration of TEMCO being allowed to trade and profit from Sarnia's storage position. The key terms of the Gas Management Intercompany Agreement are as follows:

- all gas burned at Sarnia is purchased by Sarnia from TEMCO priced at the ICE NGX Union Dawn Day Ahead Index (previously NGX Union Dawn Daily Spot Price) published by the Canadian Gas Price Reporter ("CGPR") on the day the gas is burned;
- TEMCO will purchase all customer make-up gas from Sarnia at the ICE NGX Union Dawn Day Ahead Index at the day of occurrence;
- all gas not consumed and used by Sarnia for hedging purposes is purchased by TEMCO at the ICE NGX Union Dawn Day Ahead Index; and
- in exchange for the gas, Sarnia grants TEMCO the unlimited right to inject, store and withdraw gas from the Sarnia storage asset for proprietary purposes.

Additionally, Sarnia remains responsible for all storage and transportation costs, which are based on the volumes of gas transported on the Union Gas pipeline from the hub to the plant.

## IV. Governance and Co-operation Agreement

Pursuant to the Governance and Co-operation Agreement between the Corporation and TransAlta, TransAlta serves as the primary vehicle through which we will acquire and/or develop renewable power projects. The Governance and Co-operation Agreement provides, among other things, that we will rely on TransAlta to: (i) identify acquisition and/or development opportunities for us (the "Opportunities"); (ii) evaluate the Opportunities for their suitability; (iii) present Opportunities suitable for, and meeting the strategic goals and objectives of the Corporation to the Board for assessment and approval; and (iv) execute and complete any Opportunities approved by the Board. TransAlta and its affiliates are not required to allocate any minimum level of dedicated resources for the pursuit of renewable power generation opportunities nor shall TransAlta or its affiliates be required to offer any specific opportunities to us. Approval of any Opportunities involving a transfer of interests from TransAlta or its affiliates to us must be supported and approved by a majority of the independent directors of our Board. Further details concerning the Governance and Co-operation Agreement are set out in our AIF. See also the Risk Management section of this MD&A.

In 2019, we acquired an economic interest in the Antrim wind farm from TransAlta. In 2018, we acquired the Kent Breeze wind farm and economic interests in Big Level, Lakeswind wind farms and Mass Solar solar project from TransAlta.

## Related-Party Balances

Related-party balances include the following:

As at	Dec. 31, 2019	Dec. 31, 2018
Trade and other receivables	19	41
Accounts payable and accrued liabilities (including interest payable)	8	11
Dividends payable	38	38
Investments in subsidiaries of TransAlta	1,492	1,495
Big Level and Antrim promissory notes	113	23
Letters of credit issued by TransAlta on behalf of the Corporation (I) <sup>(1)</sup>	—	1
Guarantees provided by TransAlta on behalf of the Corporation (II) <sup>(1)</sup>	314	106
Long-term prepaid – management fee (III)	2	2
Indemnification guarantee provided by the Corporation to TransAlta (IV) <sup>(1)</sup>	512	538

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

All of these balances are with TransAlta or subsidiaries of TransAlta.

### I. Letters of Credit

TransAlta has provided letters of credit on behalf of the Corporation. Any amounts owed by the Corporation for obligations under the contracts to which the letters of credit pertain are reflected in the Consolidated Statements of Financial Position. All letters of credit expire within one year and are expected to be renewed, as needed, in the normal course of business. No amounts have been exercised by third parties under these arrangements.

### II. Guarantees

If the Corporation does not perform under the related agreements, the counterparty may present claim for payment from TransAlta.

### III. Long-term Prepaid – Management Fee

In 2018, the Corporation paid a \$2 million one-time upfront fee upon achieving commercial operation of Kent Hills 3, in lieu of the annual five per cent of incremental EBITDA that would otherwise be paid pursuant to the Management Agreement.

### IV. Indemnification Guarantee

As part of the acquisition of the Australian Assets, we entered into a Guarantee and Indemnification Agreement in favour of TransAlta related to certain guarantees it has provided to third parties in respect of certain obligations of TEA (the "TEA Guarantees"). We have agreed to indemnify TransAlta from and against all claims, actions, proceedings, liabilities, losses, costs, expenses or damages against or incurred by it arising out of or in connection with the TEA Guarantees and to reimburse TransAlta in full for the amount of any payment made by it under and in accordance with the TEA Guarantees, relating to actions, omissions, events and circumstances that occur on or after May 7, 2015. As consideration for this indemnity that we have provided, TransAlta is required to pay us the Canadian-dollar equivalent of the guarantor fees it receives from TEA in respect of any of the TEA Guarantees.

## Liquidity and Capital Resources

Liquidity risk arises from our ability to meet general funding needs, engage in hedging activities and manage the assets, liabilities and capital structure of the Corporation. Liquidity risk is managed by maintaining sufficient liquid financial resources to fund obligations as they come due in the most cost-effective manner. See also the Risk Management – Risk Factors – Liquidity Risk section of this MD&A.

We operate with significant liquidity to enable us to fund growth initiatives, operational expenses, capital expenditures, distributions to the non-controlling interest, interest and principal payments on debt and dividends. Principal sources of liquidity include cash generated from operations, capital markets and funding from our existing Credit Facility. The Corporation remains focused on any refinancing of debt obligations on acceptable terms and maintaining a manageable maturity ladder and does not anticipate material issues in addressing our borrowing through 2023 and beyond on acceptable terms.

### Financial Position

The following table highlights significant changes in the Consolidated Statements of Financial Position from Dec. 31, 2018 to Dec. 31, 2019:

	Increase/ (decrease)	Primary factors explaining change
Cash and cash equivalents	(10)	Timing of receipts and payments
Trade and other receivables	(25)	Timing of receipts and collections and lower amounts receivable for dividends from intercompany investments
Property, plant and equipment, net	(91)	Depreciation expense, transfers to right-of-use assets and asset impairments, partially offset by additions
Intangible assets	(10)	Decrease due to amortization expense
Right-of-use assets	28	New right-of-use assets recognized under IFRS 16 (see Accounting Changes section) and transfers from property, plant, and equipment
Restricted cash	(31)	Restricted cash related to Kent Hills bond financing was released in July 2019
Other assets (including current portion)	97	Acquisition of the economic interest in Antrim and additional funding of construction costs for the Big Level and Antrim wind projects through promissory notes, net of repayments received
Accounts payable and accrued liabilities	(10)	Timing of payments and accruals
Long-term debt (including current portion)	29	Increase in drawings on the Credit Facility and the recognition of lease liabilities (see Accounting Changes section), partially offset by scheduled principal repayments on non-recourse bonds
Decommissioning and other provisions (including current portion)	12	Increase due to revisions to estimated cashflows
Deferred income tax liabilities	6	Decrease in tax loss carryforwards
Equity attributable to shareholders	(87)	Decrease due to common share dividends and other comprehensive loss due to unfavourable fair value changes, partially offset by net earnings and common shares issued under DRIP

## Cash Flows

The following table highlights significant changes in the Consolidated Statements of Cash Flows for the year ended Dec. 31, 2019, compared to the same period in 2018:

Year ended Dec. 31	2019	2018	Change	Primary factors explaining change
Cash and cash equivalents, beginning of year	73	20	53	
Provided by (used in):				
Operating activities	331	385	(54)	Lower cash earnings of \$82 million and favourable changes in working capital of \$28 million
Investing activities	(126)	(137)	11	Lower additions to property, plant and equipment of \$32 million, increase in proceeds on redemptions and return of capital on investments in subsidiaries of TransAlta of \$465 million, higher investments in subsidiaries of \$467 million, increase in loan receivables of \$79 million, receipt of restricted cash of \$31 million and lower acquisitions compared to 2018 of \$39 million.
Financing activities	(215)	(195)	(20)	Lower common shares issuance proceeds of \$144 million and a decrease in borrowings under the credit facility of \$81 million, partially offset by no repayments of the Canadian Assets working capital loan compared to 2018 of \$199 million and lower dividends paid on common shares of \$9 million
Cash and cash equivalents, end of year	63	73	(10)	

## Debt and Lease Obligations

Debt and lease obligations totalled \$961 million as at Dec. 31, 2019, compared to \$932 million as at Dec. 31, 2018. The increase in debt is mainly due to increased borrowings under the Credit Facility of \$55 million and the recognition of approximately \$23 million in lease obligations due to changes in accounting rules, effective Jan. 1, 2019 (see the Accounting Changes section of this MD&A), partially offset by scheduled repayments of non-recourse bonds of \$49 million.

In the second quarter of 2019, the Credit Facility was amended from \$500 million to \$700 million and extended to 2023. As at Dec. 31, 2019, we had a \$700 million syndicated Credit Facility available to us for general corporate purposes, including financing ongoing working capital requirements, construction capital requirements, growth opportunities and the repayment of outstanding borrowings. As at Dec. 31, 2019, \$220 million was drawn and outstanding on the Credit Facility (2018 - \$165 million). We also have an uncommitted \$100 million demand letter of credit facility, under which \$99 million of letters of credit have been issued as at Dec. 31, 2019 (2018 - \$77 million).

We are subject to customary positive and negative covenants related to debt and are not in violation of any of these covenants. See our AIF for further details.

The Melancthon Wolfe Wind, Pingston, New Richmond and Kent Hills Wind bonds are subject to customary financing conditions and covenants that restrict the Corporation's ability to access funds generated by the facilities' operations. Upon meeting certain distribution tests, typically performed once per quarter, the funds can be distributed by the subsidiary entities to their respective parent entity. These restrictions include the ability to meet a debt service coverage ratio prior to distribution. Funds in these entities that have accumulated since the fourth quarter test will remain there until the next debt service coverage ratio can be calculated in the first quarter of 2019. As at Dec. 31, 2019, \$23 million of cash was subject to these financial restrictions (2018 - \$23 million).

The Corporation had no restricted cash as at Dec. 31, 2019. In the prior year, the Corporation had \$31 million in restricted cash related to its Kent Hills Wind bond financing. The restricted cash was released in July 2019.

## Share Capital

On Dec. 31, 2019, we had approximately 265.6 million (2018 - 263.4 million) common shares issued and outstanding. During 2019, the Corporation issued approximately 2.2 million common shares under the DRIP for a total equity value of \$28 million.

As at Feb. 28, 2020, we had approximately 265.9 million common shares issued and outstanding.

## Capital Structure

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

As at Dec. 31	2019		2018	
	Amount	%	Amount	%
Debt, net of available cash and cash equivalents <sup>(1)</sup>	898	28	859	27
Non-controlling interest	45	1	41	1
Equity attributable to shareholders	2,268	71	2,355	72
<b>Total capital</b>	<b>3,211</b>	<b>100</b>	<b>3,255</b>	<b>100</b>

(1) The Corporation includes available cash and cash equivalents as a reduction of capital, as capital is managed internally and evaluated by management using a net debt position. Debt includes long-term debt and lease obligations.

In 2019, the Corporation's capital structure remained consistent with 2018. The increase in debt is mainly due to increased borrowings under the Credit Facility and recognition of lease obligations, partially offset by scheduled repayments of non-recourse bonds. The decrease in equity is due to the payment of common share dividends, partially offset by earnings.

## Commitments

Payments required under the Corporation's contractual obligations are as follows:

	Long-term service agreements <sup>(1)</sup>	General administrative services <sup>(2)</sup>	Long-term debt and lease obligations	Interest on long-term debt and lease obligations	Other <sup>(3)</sup>	Total
2020	18	19	52	38	5	132
2021	21	19	53	36	2	131
2022	30	20	55	33	2	140
2023	15	20	322	27	2	386
2024	13	20	60	20	1	114
2025 and thereafter	14	191	428	84	35	752
<b>Total</b>	<b>111</b>	<b>289</b>	<b>970</b>	<b>238</b>	<b>47</b>	<b>1,655</b>

(1) Long-term service agreements for wind and gas facilities.

(2) Excludes management fees charged directly to Wyoming Wind by TransAlta and includes the asset management and optimization fees for the Corporation's Sarnia cogeneration plant.

(3) Includes land access, other leases, purchase contracts and natural gas purchase and transportation.

## Contingencies

In the normal course of business, the Corporation may become party to litigation, proceedings or regulatory investigations. While the Corporation is not directly involved in the ongoing dispute with FMG over the purported termination of the South Hedland PPA, the results of the litigation could impact the finance income received as a result of the economic interest in the Australian Assets. The Corporation, and TransAlta as direct owner of the South Hedland Power Station, are precluded under IFRS accounting principles from recognizing the financial impacts of any contingent assets or gains prior to any such realization becoming virtually certain. TransAlta constructed the South Hedland Power Station for approximately \$570 million and the facility was expected to generate approximately \$80 million in EBITDA on an annual basis. The Corporation's investment in the Australian Assets is through an economic interest that provides after-tax finance and interest income based on EBITDA of the underlying facilities. TransAlta will not recognize any financial impacts from the litigation until it is concluded, other than the on-going litigation costs. The Corporation recognizes finance and interest income when declared on our investments in the Australian Assets, inclusive of the impacts of any contingent gains when recognized by TransAlta.

## Unconsolidated Structured Entities or Arrangements

Disclosure is required of all unconsolidated structured entities or arrangements such as transactions, agreements, or contractual arrangements with unconsolidated entities, structured finance entities, special purpose entities, or variable interest entities that are reasonably likely to materially affect liquidity or the availability of, or requirements for, capital resources. We currently have no such unconsolidated structured entities or arrangements.

## Accounting Changes

### Current Accounting Changes

#### I. IFRS 16 Leases

The Corporation has adopted IFRS 16 *Leases* ("IFRS 16") with an initial adoption date of Jan. 1, 2019. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. The standard provides a single lessee accounting model, requiring lessees to recognize a right-of-use asset and liabilities for all in-scope leases. Previously, the Corporation determined at contract inception whether an arrangement is or contains a lease under IAS 17 *Leases* ("IAS 17") or International Financial Reporting Interpretations Committee Interpretation ("IFRIC 4") *Determining Whether an Arrangement Contains a Lease*.

On Jan. 1, 2019, the Corporation recognized right-of-use assets of \$23 million, \$16 million for initial lease recognition and \$7 million transferred from property, plant and equipment and other assets for a pre-existing finance lease. Lease liabilities of \$16 million were initially recognized.

In December 2019, the Corporation recognized an additional \$6 million of right-of-use assets and \$6 million of lease liabilities as a result of revised interpretations of the unit of account/identified asset concepts present in IFRS 16.

Refer to Notes 2, 3, 7, and 17 of the financial statements for additional information and disclosures related to IFRS 16.

#### II. IFRIC 23 - *Uncertainty over Income Tax Treatments*

The Corporation adopted IFRIC 23 on its effective date of Jan. 1, 2019 and applied it retrospectively. No cumulative effect of initial applying the guidance arose. The Interpretation clarifies the application of recognition and measurement requirements in IAS 12 *Income Taxes* when there is uncertainty over income tax treatments and provides guidance on: considering uncertain tax treatments separately or together; examination by tax authorities; the appropriate method to reflect uncertainty; and accounting for changes in facts and circumstances.

### Future Accounting Changes

#### IFRS 3 *Business Combinations*

Amendments to IFRS 3 *Business Combinations* ("IFRS 3 amendments") with a mandatory effective date of Jan. 1, 2020 and prospective application requirement will be adopted by the Corporation in 2020. The amendments are intended to assist entities to determine whether a transaction should be accounted for as a business combination or as an asset acquisition. Refer to Note 3 of the Consolidated Financial Statements for additional information and disclosures related to the IFRS 3 amendments.

## 2020 Outlook

The following table outlines our expectation on key financial targets for 2020:

Measure	Target
Comparable EBITDA	\$445 million to \$475 million
Adjusted funds from operations	\$350 million to \$380 million
Cash available for distribution	\$300 million to \$330 million

### Operations

#### Production

In 2020, we expect renewable energy production from our wind and hydro assets, including those owned through economic interests, to be in the range of 4,100 to 4,500 GWh. Our gas-fired generation primarily receives compensation for capacity, and accordingly, production is not a significant performance indicator of that business.

#### Contracted Cash Flows

Through the use of PPAs, including the TransAlta PPAs, our facilities and those in which we have an economic interest have a weighted average remaining contractual life of approximately 11 years.

#### Operating Costs

We have established long-term service agreements with suppliers to stabilize operations and maintenance costs. Most of our generation from gas is sold under contracts with pass-through provisions for fuel. For gas generation with no pass-through provision, we purchase natural gas coincident with production, thereby minimizing our exposure to changes in price.

#### Exposure to Fluctuations in Foreign Currencies

We are exposed to fluctuations in the exchange rate between Canadian and Australian and US dollars as a result of our economic interest in the US Wind and Solar Assets and the Australian Assets. The securities acquired from TransAlta and the related dividends received are denominated in Canadian, Australian and US dollars. TransAlta has agreed to provide the Corporation with protection against fluctuations in the exchange rates until June 30, 2020, on the first five years of cash flows from the Australian Assets. Any changes in foreign investments or foreign-denominated debt may change our exposure. All of our other assets are located in Canada. We may acquire equipment from foreign suppliers in various foreign currencies for future capital projects, which could create exposure to fluctuations in the value of the Canadian dollar related to these currencies.

Our strategy is to mitigate foreign exchange risk on foreign-denominated cash flows to ensure our ability to meet dividend requirements.

#### Interest Expense

Based on our current asset holdings, interest expense for 2020 is expected to be lower than 2019, due to a lower volume of debt. The interest expense is subject to any growth projects or acquisitions undertaken by the Corporation in 2020 as described below. Our syndicated Credit Facility gives us access to \$700 million in direct borrowings at a variable interest rate. As a result, we have some exposure to interest rate risk, and changes in interest rates can affect the amount of interest expense incurred.

#### Net Debt, Liquidity and Capital Resources

If there are low wind volumes, low hydro resources or unexpected maintenance costs, we may need additional liquidity in the future. We expect to maintain adequate available liquidity under our Credit Facility.

#### Income Taxes

The Corporation's statutory blended tax rate is 25.96 per cent. The effective income tax rate can change depending on the mix of earnings from various countries and certain deductions that do not fluctuate with earnings.



The Corporation's anticipated cash tax horizon is subject to risks, uncertainties and other factors that could cause the cash tax horizon to occur sooner than our current projection of approximately two years. In particular, our anticipated cash tax horizon is subject to risk pertaining to a change in our operations, asset base, corporate structure or changes to tax legislation, regulations or interpretations. In the event we become cash taxable sooner than projected, our cash available for distribution and our dividend could decrease.

In 2019, the Alberta government approved corporate tax rate reductions from 12 per cent to 8 per cent. The tax decrease will be phased in as follows: 11 per cent effective July 1, 2019, 10 per cent effective Jan. 1, 2020, 9 per cent effective Jan. 1, 2021, and 8 per cent effective Jan. 1, 2022.

#### Environmental Legislation

The new Technology Innovation and Emissions Reductions ("TIER") Regulation replaced the Carbon Competitiveness Incentive Regulation ("CCIR") in the Province of Alberta on Jan. 1, 2020. Under TIER, renewables wind projects will continue to generate carbon credits – offsets and Emission Performance Credits ("EPC") – as they did under the CCIR. We anticipate the value of carbon credits generated in Alberta to be similar to 2019 revenues. Total revenues from Alberta carbon offsets and EPCs amounted to approximately \$17 million in 2019.

### Capital Expenditures

#### Sustaining Capital

Our sustaining capital is comprised of the ongoing capital costs associated with maintaining the existing generating capacity of our facilities. The facilities of TransAlta in which we own economic interests also incur sustaining capital expenditures. While we are not required to fund these expenditures, they reduce the finance income from these investments.

For 2020, our estimate for total sustaining capital expenditures for owned assets and those in which we own an economic interest ranges from \$20 million to \$30 million. We also expect to spend approximately \$1 million on productivity capital.

#### US Wind Projects

In April 2018, we entered into a contribution agreement with several subsidiaries of TransAlta related to our funding of the construction and other capital costs of the US Wind Projects. The Big Level and Antrim wind farms began commercial operations on Dec. 19, 2019 and Dec. 24, 2019, respectively. We expect to invest a total of approximately US\$260 million in these projects. To date, we have funded approximately US\$212 million. In conjunction with reaching commercial operation in December 2019, approximately US\$166 million of tax equity proceeds were raised to partially fund the projects. From the tax equity proceeds, a subsidiary of TransAlta repaid \$52 million (US\$40 million) of the interest-bearing promissory notes to the Corporation. The remaining amount of the tax equity proceeds is held as reserves within the project entity and will be released upon the payment of all outstanding project costs and the satisfaction of certain conditions being met. Once these conditions are met, the reserves will be released and the subsidiary of TransAlta will repay the remaining outstanding interest-bearing promissory notes to the Corporation. The Corporation anticipates to subscribe for additional tracking preferred shares to fund the remaining construction costs payable.

#### Growth

TransAlta has identified several growth projects that it expects to complete in 2020–2021 that are targeted for potential direct acquisition by us, or for acquisition through investments in economic interests of the projects. The identified portfolio includes wind projects totalling approximately 275 MW and on-site cogeneration projects totalling approximately 40 MW. While there can be no certainty that any of these transactions will occur we continue to engage with TransAlta to assess each opportunity.

#### Financing

Financing for these capital expenditures is expected to be provided by cash flow from operating activities, our Credit Facility, proceeds from the DRIP and project financing. The tax equity financing proceeds received by the Big Level and Antrim wind projects will also be used to fund our remaining commitment for the capital costs of these projects.

## Business Environment

### Demand and Supply

Our business is cyclical due to the nature of electricity, which is generally consumed as it is generated. Wind and run-of-river hydro resources fluctuate based on both seasonal patterns and naturally occurring weather variation. Typically, run-of-river hydro facilities generate most of their electricity and revenues during the spring and summer months when melting snow starts feeding watersheds and rivers. Wind generation is historically greater during the cold winter months and lower in the warm summer months.

Generally, market demand, supply conditions and changes in such conditions do not have a significant impact on our business operations due to our highly contracted position.

### Contracted Cash Flows

Substantially all of our wind, hydro, solar and gas facilities have contracts in place for the sale of electricity they produce. Most of our wind and hydro facilities located in Alberta are contracted under long-term PPAs with TransAlta. The remaining wind and hydro facilities are contracted with government-owned entities and large utility customers. The Sarnia cogeneration gas facility is contracted to supply steam and electricity to commercial users in various industries, with the remaining generation sold into the Ontario market via the Independent Electricity System Operator. The Australian gas facilities are predominantly contracted to mining companies in Western Australia and Horizon Power, a state-owned utility.

In addition to contracting for power, we have entered into long-term and short-term contracts to sell the Environmental Attributes from our wind and hydro facilities that do not sell the Environmental Attributes bundled with power sold under long term contracts. These environmental attributes are sold to a variety of counterparties ranging from government entities, commercial users or to TransAlta.

## Regulatory and Environmental Legislation

### Environmental Legislation

We are subject to federal, provincial, state and local environmental laws, regulations and guidelines concerning the generation and transmission of electrical and thermal energy. We are committed to complying with legislative and regulatory requirements and to minimizing the environmental impact of our operations. We work with governments and the public to develop appropriate frameworks to protect the environment and to promote sustainable development. See also the Risk Management – Risk Factors section of this MD&A.

### Canada

#### Federal Carbon Pricing on Greenhouse Gases ("GHG")

On June 21, 2018, the *Greenhouse Gas Pollution Pricing Act* ("GGPPA") came into force. Under the GGPPA, the Canadian federal government implemented a national price on GHG emissions. The price began at \$20 per tonne of carbon dioxide equivalent ("CO<sub>2</sub>e") emissions in 2019, and will rise by \$10 per year until reaching \$50 per tonne in 2022. In 2022, there will be a review of the Output Based Pricing Standard (OBPS) and other aspects of the GGPPA to determine their effectiveness and the path forward for the next five-year compliance period.

On Jan. 1, 2019, the GGPPA's backstop mechanisms came into force in provinces and territories that did not have an independent carbon pricing program or where the existing program was not deemed equivalent to the federal system. The backstop mechanism has two components: the federal pollution pricing fuel charge ("Carbon Tax") and the regulation for large emitters called the Output Based Pricing System ("OBPS"). The Carbon Tax sets a carbon price per tonne of GHG emissions related to transportation fuels, heating fuels and other small emission sources. Provinces and territories captured by the OPBS include Ontario, Manitoba, New Brunswick, Saskatchewan, Prince Edward Island, Yukon and Nunavut. Provinces and territories subject to the Carbon Tax include Alberta, Ontario, Manitoba, Saskatchewan, Prince Edward Island, Yukon and Nunavut.

The OBPS regulates large emitters' carbon intensity by setting a sector performance standard (benchmark) of greenhouse emissions per unit of production (e.g tCO<sub>2</sub>e/MWh for electricity generators). Emitters exceeding the benchmark generate carbon obligations and those emitters that perform below the benchmark generate emission performance credits (EPCs). Emitters can meet their obligations by reducing their emission intensity, buying carbon credits from others (offsets or EPCs) or making compliance payments to the government.

Other jurisdictions that were compliant with the GGPPA did not have the backstop mechanism imposed in 2019. These jurisdictions must annually file and have their carbon pricing programs approved. Over future annual compliance periods, if parts or all of a province's greenhouse gas regulations fall out of compliance with the GGPPA, the federal government will impose its backstop mechanisms.

Overall, the Carbon Tax in the applicable provinces adds a cost to transportation and heating fuels used in the operation of the renewable facilities. These facilities consume relatively small amounts of these fuels in their operations, so the cost impacts will be negligible to the Corporation.

#### Alberta

##### Large Emitter Greenhouse Gas Regulations

On Apr. 16, 2019, the United Conservative Party ("UCP") won the Alberta provincial election with a majority government. The UCP committed to move to a new large emitters regulation called the Technology Innovation and Emissions Reduction ("TIER") regulation. TIER replaced the Carbon Competitiveness Incentive Regulation (CCIR) on Jan. 1, 2020. For the electricity sector, there were negligible changes between CCIR and TIER with renewable facilities continuing to receive crediting. The carbon prices for TIER in 2020 remain at the CCIR level of \$30/tCO<sub>2</sub>e. The performance standard benchmark remained at 0.370 tonnes CO<sub>2</sub>e/MWh. A review of TIER is not expected until 2023.

Facilities with emissions above the set benchmark will need to comply with TIER by: 1) paying into the TIER Fund; 2) making reductions at their facility; 3) remitting emission performance credits from other facilities; or 4) remitting carbon offset credits.

As required by the GGPPA, the Alberta government filed the TIER program details with the Federal government. TIER was passed by the Alberta government on Oct. 29, 2019, and on Dec. 6, 2019, the federal government accepted the TIER regulation as compliant with the GGPPA for 2020. The Corporation will continue to receive offsets and emission performance credits for its renewable facilities under TIER ensuring expected revenues are realized.

#### Ontario

##### Large Emitter Greenhouse Gas Regulations

On Oct. 23, 2018, the federal government announced that Ontario large emitters would be subject to the federal backstop OBPS regulation. On July 4, 2019, the Government of Ontario released its own final regulations for the provincial Greenhouse Gas Emissions Performance Standards (EPS). The first compliance period under the EPS will begin on Jan. 1, 2020 in which Ontario is removed from the list of provinces to which the federal OBPS applies. Ontario has submitted the EPS for federal review. The federal government has not accepted the EPS with the GGPPA so the OBPS remains in force for reporting purposes for 2019 obligations.

Sarnia will be a covered entity under the OPBS. This will require Sarnia to track and make compliance filings annually and to meet the carbon emission obligations. While Sarnia will make compliance payments under the OBPS, change of law provisions in contracts and the OBPS allocation of 0.37 tonnes CO<sub>2</sub>e/MWh for electricity generation is expected to result in negligible cost increases to the Corporation.

#### Quebec

Under the Le Nordais contract with Hydro-Quebec, the Corporation retains the rights to the RECs. As a directly adjacent region, these REC's can be sold into the New England RPS market. These RPS markets continue to grow and the acceptability of RECs from Quebec also has expanded. The Corporation will continue to market these RECs at the best available market price in the New England region.

#### Massachusetts

The Massachusetts solar assets that the Corporation holds an economic interest in generate Solar Renewable Electricity Credit I ("SREC I") credits. The SREC I program was carved out from Massachusetts' Renewable Portfolio Standard (RPS) requiring an initial quantity of 400 MW from small solar facilities of 10 MW or less. The initial SREC I program's volume target was achieved, and qualified projects under SREC I continue to generate SREC I credits for their first 10 years post-COD. SREC I facilities then generate Class 1 RECs under the Massachusetts RPS for the remainder of their operational life.

The market for SREC I was designed to be a closed market where demand roughly equals supply. As a result, the Corporation will continue to market SREC I credits and realize at least the compliance price faced by RPS regulated electricity retailers in the state.

Under Massachusetts' net metering program, qualified facilities connect with the local utility and generate net metering credits. Net metering credits offset the delivery, supply and customer charges and can be sold to customers from remote

or on-site qualifying facilities. In 2016, the net metering program was updated to reduce the value of the net metering credits by reducing the offset to only energy costs. New projects are impacted once the net metering program volume reached 1,600 MW. TransAlta Renewable's and other existing facilities were grandfathered and continue to receive the full, original cost offset treatment for a period of 25 years from initial COD.

#### Australia

On Dec. 13, 2014, the Australian government enacted legislation to implement the Emissions Reduction Fund (the ERF). The AU\$2.55 billion ERF is the centerpiece of the Australian government's policy and provides a policy framework to cut emissions by five per cent below 2000 levels by 2020 and 26 to 28 per cent below 2005 emissions by 2030. The ERF's safeguard mechanism, which became effective on July 1, 2016, is designed to ensure emissions reductions purchased by the Australian government through the ERF are not displaced by significant increases in emissions elsewhere in the economy. The ERF and its safeguard mechanism provide incentives to reduce emissions across the Australian economy.

Under the ERF safeguard mechanism, electricity-sector emissions are capped at 198 million tonnes CO<sub>2</sub>e annually. If the electricity-sector emissions exceed the sector baseline, then individual facilities would face a compliance obligation. To comply with the ERF, a generation facility would need to keep their individual emissions below their facility specific baseline. Facility baselines are set at their highest level of operations so even if the regulations applied to a facility it is unlikely the facility would exceed its baseline and be non-compliant.

Electricity sector emissions have been falling in recent years and are below the 198 million tonnes CO<sub>2</sub>e annual baseline. Given this trend, it is unlikely individual generators will be subject to ERF compliance requirements in the foreseeable future. As a result, the ERF is not expected to have an impact on Australian assets unless legislation/regulations are changed.

#### Market Regulatory Framework

Regulatory and political risk is the risk to our business associated with potential changes to the existing regulatory structures and the political influence upon those structures. This risk can come from market regulation and re-regulation, increased oversight and control, structural or design changes in markets, or other unforeseen influences.

We manage these risks systematically through our legal and regulatory groups and our compliance program, which is reviewed periodically to ensure its effectiveness. We work with governments, regulators, electricity system operators and other stakeholders to resolve issues as they arise. We are actively monitoring changes to market rules and market design, and we engage in industry-and-government-agency-led stakeholder engagement processes. Through these and other avenues, we engage in advocacy and policy discussions at a variety of levels. These stakeholder negotiations have allowed us to engage in proactive discussions with governments and regulatory agencies over the longer term.

International investments are subject to unique risks and uncertainties relating to the political, social and economic structures of the respective country and such country's regulatory regime. We mitigate this risk through the use of non-recourse financing and insurance. See also the Risk Management section of this MD&A.

#### Alberta

Alberta remains an energy-only market where generators make power supply offers that clear against power demand. The demand and supply dynamics determine market clearing prices. All market risk for the Corporation's assets is held pursuant to a fixed contract between the two companies.

On July 4, 2019, the Government of Alberta announced that it will not transition to a capacity market and will continue with an energy-only market design. This decision stopped all work on the capacity market design work, which had been underway through the Alberta Electric System Operator ("AESO") since 2017. The Government's announcement followed a stakeholder consultation and review that found stakeholder support for maintaining the energy-only market based upon its proven track record for providing a reliable supply and affordable electricity for Albertans. The removal of legislative changes to enable the capacity market received royal assent on Oct. 31, 2019.

The Minister of Energy further directed Alberta Energy to conduct a policy review on market power and market power mitigation in the energy-only and ancillary services market and directed the AESO to conduct analysis and make recommendations on whether changes are needed to the price floor/ceiling and shortage pricing by July 31, 2020. The outcomes of these reviews are ongoing and no changes to the energy-only market have been proposed to date.

## Ontario

Ontario's electricity market is a hybrid market that includes a wholesale spot electricity market, as well as regulated prices for certain electricity consumers and long-term contracts for the purchase of power by the Independent Electricity System Operators ("IESO"). The Ontario Ministry of Energy, Northern Development and Mines supports the IESO in defining the electricity mix to be procured by the IESO. The IESO has the mandate to undertake long-term planning of the electric system, to procure the electricity generation in that plan and to manage contracts for privately owned generation. The IESO is responsible for managing the Ontario wholesale market and for ensuring the reliability of the electric system in Ontario. The electricity sector is regulated by the Ontario Energy Board.

The IESO is currently running a market renewal consultation that includes proposed fundamental changes to the electricity market. These include modifying the energy market, adding a capacity market and improving operability and reliability. The IESO is planning to implement a capacity auction starting in 2020. The IESO is continuing to consult on changes to the energy market that are expected to be implemented in early 2023.

In November 2019, the Minister of Energy, Northern Development and Mines issued a directive to the IESO to retain a third party to review the existing contracts and provide a report by Feb. 28, 2020. The IESO is also working with its contract counterparties to identify opportunities to reduce electricity costs.

Due to the fact all our units are almost entirely contracted, we expect market rule changes to have minimal short-term impact on the Corporation.

## US Wholesale Power Market

The *Federal Power Act* gives the US Federal Energy Regulatory Commission ("FERC") rate-making jurisdiction over public utilities engaged in wholesale sales of electricity and the transmission of electricity in interstate commerce. FERC oversees the market structure for all integrated market rules and wholesale sales from generators.

TransAlta Renewables' wind facilities in the US, with the exception of the Wyoming wind farm, are part of integrated wholesale markets. These wind assets are under long-term contracts so we expect the market rule changes to have minimal impact on the Corporation's revenues. Antrim and Big Level offer capacity in the ISO-New England and PJM capacity markets respectively. Antrim has a long-term Capacity Supply Obligation so the capacity market auction changes have no short term impact on revenues. Big Level's capacity has been assigned to the customer so there are only offer requirements and no contract revenue impacts.

The Wyoming wind farm is not located in an integrated market, but it qualifies as an Exempt Wholesale Generator and is not regulated by the local public utility commission. It also has a long-term contract that minimize the impact of market changes on the Corporation's revenues.

The Massachusetts solar facilities flow their generation to the utility and their power is not directly offered in the ISO-New England wholesale market. As a result, market changes have no impact on revenues.

## Environment, Social and Governance ("ESG")

The Corporation places a high priority on ESG or sustainability management and performance. TransAlta has reported on sustainability for over 25 years and fiscal 2019 reporting marked TransAlta's fifth year of integrated financial and sustainability disclosure. TransAlta provides management, administrative and operational services to the Corporation. As a result, the Corporation benefits from the well-established sustainability practices at TransAlta.

Key elements of the following disclosure are guided by our sustainability materiality assessment. To help inform discussion and provide context on how ESG affects our business, we have applied various ESG reporting formats to varying degrees, including Global Reporting Index ("GRI"), Sustainability Accounting Standards Board ("SASB") and Task Force on Climate-related Financial Disclosures ("TCFD").

### ESG Strategy

Sustainability is a core value for the Corporation. Our actions support this; the Corporation was established as an investment vehicle to, among other things, pursue and capitalize on strategic growth opportunities in the clean electricity (renewable and natural gas) generation and other infrastructure sectors. Our assets cover both renewable and natural gas assets, with the rationale that natural gas is a clean fuel that plays an important role in the electricity sector, providing low-emission baseload and peaking generation to support system demands and intermittent renewable generation. Our focus on clean electricity generation also supports the mitigation of potential adverse regulatory developments in response to emerging environmental regulation including, but not limited to, a regulated cost of carbon.

### Environmental and Social ("E&S") Risk and Materiality

Our major environmental risk factors include weather, environmental disasters, climate change, exposure to the elements, environmental compliance risk, and current and emerging environmental regulation. Our major social risk factors include public health and safety, employee and contractor health and safety, local communities, employee retention, reputation management and stakeholder relationships. Further guidance on our risk factors can be found in the Risk Management section of this MD&A.

### Environmental Risk

A high-level overview of the major environmental risk factors affecting the Corporation are as follows:

- our generation facilities and their operations are exposed to potential damage and partial or complete loss, resulting from environmental disasters (e.g., floods, high winds, fires and earthquakes), equipment failures and other events beyond our control. Climate change can increase the frequency and severity of these extreme weather events.
- our activities are subject to stringent environmental laws and regulations promulgated and administered by federal, provincial, state and municipal governments where we operate. These laws and regulations generally concern use of water, wildlife protection, wetlands preservation, remediation of contamination, waste disposal requirements, preservation of archaeological artifacts, endangered species preservation and noise limitations, among others. Changes to regulations may affect our strategy, financial position and earnings by reducing the operating life of generating facilities, imposing additional costs on the generation of electricity, requiring additional capital investments to reduce emissions or requiring us to invest in offset credits.

Refer to the Risk Management section of this MD&A for additional information on risk factors affecting the Corporation. See also "Risk Factors" in our AIF.



## Social Risk

A high-level overview of the major social risk factors affecting the Corporation follows:

- we depend on certain partners, including in particular TransAlta, that may have interests or objectives that conflict with our objectives and such differences could have a negative impact on us.
- we are dependent on access to parts and equipment from certain key suppliers and we may be adversely affected if these relationships are not maintained.
- the electricity generation industry has certain inherent risks related to worker health and safety and the environment that could cause us to suffer unanticipated expenditures or to incur fines, penalties or other consequences material to our business and operations.
- TransAlta manages and operates our facilities and if they fail to attract and retain key personnel, we could be materially and adversely affected. The loss of any such key personnel or the inability to attract, train, retain and motivate additional qualified management and other personnel could have a material adverse effect on our business.

Further information on all our risk factors can be found in the Risk Management section of this MD&A. See also "Risk Factors" in our AIF.

## Environmental Management and Performance

Reducing the environmental impact of our activities benefits not only our operations and financial results, but also the communities in which we operate. We seek continuous improvement in numerous performance metrics such as emissions, safety, land and water impacts, and environmental incidents to minimize both risk to the environment and our compliance risk. The following environmental performance data is also reported by TransAlta as part of its overall reporting on ESG. Hence, it is important to note that comparing TransAlta and the Corporation's ESG data would result in double-counting.

We strive to be in compliance with all environmental regulations relating to our operations and facilities. Compliance with both regulatory requirements and management system standards is regularly audited through TransAlta's performance assurance policy and results are reported quarterly.

### Environmental Governance

TransAlta employees operate and maintain the Corporation's assets pursuant to the Management, Administrative and Operational Services Agreement, which includes providing environment, health and safety services to the Corporation. We do not specifically include environmental oversight within the General Governance Guidelines of the Board; however, the Board is generally responsible for understanding the principal risks associated with the Corporation's business and for ensuring that TransAlta has identified the principal risks and has implemented appropriate strategies and systems to monitor, manage and mitigate these risks which includes environmental risks. Accordingly, the Board maintains oversight on environmental-related business impacts to those facilities we own (including those held through economic interests), and TransAlta reports to the Board quarterly on any environmental incidents.

### Environmental Management Systems ("EMS")

All of the Corporation's facilities (including those held through economic interests) have an EMS in place, the majority of which closely align with the internationally recognized International Organization for Standardization ("ISO") 14001 EMS standard. Only two facilities do not have an ISO 14001 aligned EMS in place, although these facilities do have a comparable EMS in place. This is due to commercial arrangements (TransAlta is not the operator of those two sites). Aligning with ISO 14001 provides assurance that our systems are designed to continuously improve performance.

### Environmental Incidents

Protecting the environment and minimizing our impact to the environment supports healthy ecosystems and mitigates our environmental compliance risk and reputational risk. Environmental incidents are separated into two categories: significant environmental incidents and non-compliant environmental incidents. We define regulatory non-compliant environmental incidents as events that resulted in a non-compliance event, but did not have an impact on the environment. For example, a technical issue with a computer system for gathering real-time data could cause us to be out of compliance with local regulation or our EMS, but there is no direct consequence for the physical environment. All other events are captured as significant environmental incidents and these are where we deem there to be a material impact to the environment. In 2019, we recorded three significant environmental incidents (2018 – one incident). We recorded two non-compliant environmental incidents in 2019 (2018 – one incident).

Our three significant environmental incidents in 2019 occurred at two of our wind facilities in the US. At our Lakeswind wind facility in Minnesota, we discovered a bald eagle mortality. At our Wyoming wind facility, we discovered two golden eagle mortalities. Root cause analysis investigations were performed on each eagle mortality and we found no causal factors or root causes related to human behaviour or equipment failure being involved in the incidents. These incidents were unusual – we have not had an eagle mortality across our wind fleet since 2015. For all incidents we collaborated with authorities and there were no enforcement actions in respect of such mortalities. Despite inconclusive findings, in order to reduce the risks of future impacts to protected eagle species, we are working on indirect corrective actions that include reviewing the potential for an updated bird monitoring study to be conducted at Lakeswind and Wyoming wind and other at-risk sites.

Environmental incidents	2019	2018	2017
Significant environmental incidents	3	0	1
Regulatory environmental incidents	2	1	0

#### Environmental Spills

Typical spills that could occur at our operation sites are hydrocarbon spills. Spills generally happen in low environmental impact areas and are almost always contained and fully recovered. It is extremely rare that we experience large spills, which would adversely impact the environment and the Corporation. Spills that do occur are always addressed with a critical time factor. The estimated volume of spills in 2019 was 528 m<sup>3</sup> (2018 – 2 m<sup>3</sup>). Spill volumes in 2019 were higher due to a 527 m<sup>3</sup> spill at our Sarnia cogeneration facility. This was not a traditional product spill rather it was a wastewater effluent limit exceedance from a sump. There was no enforcement action associated with this spill.

#### Air Emissions

Our seven natural gas generation facilities, those held through economic interests, emit a low level of nitrogen dioxide ("NO<sub>x</sub>") that triggers reporting to national regulatory bodies. These gas facilities also produce trace amounts of sulphur dioxide and particulate matter, but are at levels that are deemed negligible and do not trigger any reporting requirements or compliance issues. The air emissions at all six Australia facilities occur in very remote and unpopulated regions, away from dense urban areas. Our Sarnia facility in Ontario is our only gas facility within 49 kilometres of dense or urban environments. Our NO<sub>x</sub> emissions increased four per cent in 2018 as a result of South Hedland being commissioned in 2017 and realizing its first full year of operations in 2018.

Air emissions	2019	2018	2017
Nitrogen dioxide emissions (tonnes)	3,609	3,624	3,464
Sulphur dioxide emissions (tonnes)	12	13	12
Particulate matter emissions (tonnes)	133	135	123

#### Water Use

Our principal water use is for cooling and steam generation in our gas plants. Our hydro operations also require water flow for operations. Water for gas operations is withdrawn primarily from rivers where we hold permits to withdraw water and must adhere to regulations on the quality of water that is discharged. We return or discharge approximately 93 per cent of water for gas operations back to the source and meet the regulatory quality levels that exist in the various locations in which we operate. The difference between withdrawal and discharge, representing consumption, is largely due to evaporation loss. Water consumption fluctuates based on several factors such as facility availability and weather.

Our gas facilities were responsible for withdrawal of 218 million m<sup>3</sup> of water in 2019, but returned 204 million m<sup>3</sup> or 93 per cent. Our water withdrawal numbers at our Sarnia gas cogeneration facility (which produces both electricity and steam for our customers) operates as a once-through non-contact cooling system for our steam turbines. This means large amounts of water flow in and out of the system, as opposed to more advanced technology, which recycles water in cooling towers (more of a closed system). Despite large withdrawals from the adjacent St Clair River to support our Sarnia operations, we return approximately 93 per cent of the water withdrawn. Water from this source is currently at 'low risk' as per analysis from the SASB-endorsed Aqueduct Water Risk Atlas tool.



The Aqueduct Water Risk Atlas tool also highlights that water risk is high at our interior and southern Western Australia facilities due to high interannual variability in the region. Interannual variability refers to wider variations in regional water supply from year to year. Our water supply at these facilities is provided at no cost under PPAs with our mining customers, hence our risk is significantly mitigated. In addition, conservation and re-use strategies aimed at recycling water for mining operational needs have been developed. All water used in the region is sourced from scheme water, and with gas and diesel turbine water use, water wash techniques and frequency of activities are continually modified to minimize consumption and environmental impact. At the South Hedland facility in northern Western Australia, water risk is also high due to the risk of flooding in the region. The South Hedland facility was built above normal flood levels to mitigate potential risk from flooding. During a recent category 4 cyclone event in the area and associated flooding in the region, the South Hedland facility stayed dry and continued to generate power for the region. In addition, the South Hedland facility has developed a Water Efficiency Management Plan with Water Corporation WA, the principal supplier of water, wastewater and drainage services in Western Australia. Initiatives are aimed at reducing water consumption and costs through innovative technology and efficiencies identified through Plant Management.

<b>Water management</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Water intake (million m <sup>3</sup> )	218	196	159
Water discharge (million m <sup>3</sup> )	204	184	148
<b>Water consumption (million m<sup>3</sup>)</b>	<b>14</b>	<b>12</b>	<b>11</b>

#### Land Use

Land use associated with our operations is approximately 744 hectares (1,838 acres or 7.4 km<sup>2</sup>). For comparability, this is the equivalent of approximately 1 per cent of land use in Calgary, Alberta, where our head office is located. We work closely with all of our neighbouring stakeholders in all of our operating regions.

#### Waste

In 2019, the facilities we own, directly and through economic interests, generated approximately 2,812 tonnes of non-hazardous and hazardous waste. In 2019, close to 92 per cent (2018 – 90 per cent) was diverted away from landfills through recycling efforts. Of the total waste generated, hazardous waste accounted for 72 per cent (2018 – 71 per cent), with the remaining 28 per cent (2018 – 29 per cent) being non-hazardous waste generation. Only 50 tonnes, or 3 per cent, of hazardous waste generation was directed to landfills. Our waste volumes typically fluctuate year over year based on the level of maintenance required to sustain our facilities. Recycled volumes were higher in 2017 due to a scheduled clean up of parts and materials at our southern Alberta wind operations.

<b>Waste management</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
Waste to landfill (tonne eq.)	231	232	394
Waste recycled (tonne eq.)	2,581	2,176	15,359
Waste reuse (tonne eq.)	0	0	0
<b>% of total waste to landfill</b>	<b>8%</b>	<b>10%</b>	<b>2%</b>

#### Energy Use

We use energy a number of different ways. At the gas facilities, we burn predominately natural gas, but also a small amount of diesel in dual gas and diesel turbines in Australia. We harness the kinetic energy of water and wind to generate electricity. We also generate electricity from the sun. In addition to combustion of fuel sources, we also track combustion of gasoline or diesel in our vehicles and the electricity use and fuel use for heating (such as natural gas) in the buildings we occupy. Knowledge of how much energy we use allows us to optimize and create energy efficiencies. As an electricity generator, we continually and consistently look for ways to optimize or create efficiencies related to the use of energy. As an example, in 2019 we supported a study conducted by Stanford University to understand how to improve wind production. The research showed that angling turbines slightly away from the wind can boost energy produced and even out variable supply.

The following highlights our operational resource or energy use:

Resource or energy use	2019	2018	2017
Natural gas (GJ): <i>combustion/power generation and heating</i>	39,766,417	39,439,185	38,028,721
Diesel (L): <i>combustion/power generation and vehicle use</i>	7,218,000	7,217,470	2,639,549
Gasoline (L): <i>vehicle use</i>	156,762	146,314	111,297
Propane (L): <i>vehicle use and heating</i>	87,504	72,633	67,456
Electricity (MWh): <i>building operations</i>	8,892	10,686	9,180
<b>Total resource or energy use (GJ)</b>	<b>40,091,687</b>	<b>39,770,184</b>	<b>38,173,075</b>

## Climate Change

We believe in open and transparent reporting on climate change. The climate change reporting is structured as per recommendations from the TCFD. The following highlights our management, performance and leadership of climate change related impacts.

### Governance

We do not specifically include climate change oversight within the General Governance Guidelines of the Board, however, the Board is generally responsible for understanding the principal risks associated with the Corporation's business and for ensuring that TransAlta has identified the principal risks and has implemented appropriate strategies and systems to monitor, manage and mitigate these risks which includes climate change related risks. Accordingly, the Board maintains oversight on climate change-related business impacts to those facilities we own, and TransAlta regularly reports to the Board on any applicable climate change developments, including as it pertains to any applicable regulatory changes. TransAlta provides management, operational and administrative services to the Corporation pursuant to the Management Agreement, which includes providing environment, health and safety services to the Corporation.

### Strategy

Our objectives are to (i) provide stable, consistent returns for investors through the ownership of, and investment in, highly contracted renewable and natural gas power generation and other infrastructure assets that provide stable cash flow primarily through long-term contracts with strong counterparties; (ii) pursue and capitalize on strategic growth opportunities in the renewable and natural gas power generation and other infrastructure sectors; (iii) maintain diversity in terms of geography, generation and counterparties; and (iv) pay out 80 to 85 per cent of cash available for distribution to the shareholders of the Corporation on an annual basis. Our assets cover both renewable and natural gas assets, with the rationale that natural gas is a clean fuel that plays an important role in the electricity sector, providing low-emission baseload and peaking generation to support system demands and intermittent renewable generation.

### Risk Management

Our climate risks are divided into two major categories as per guidance from the TCFD, which include: (1) risks related to the transition to a lower-carbon economy, and (2) risks related to the physical impacts of climate change.

### Transition Risks

#### Policy and Legal Risks

We stay engaged on current and emerging carbon regulations in the regions in which we operate. TransAlta, which operates and maintains the assets of the Corporation pursuant to the Management Agreement, commits significant resources to and is experienced in working with regulators and governments in Australia, Canada and the US to advocate that regulatory or policy changes are well designed and cost effective. See the Business Environment section of this MD&A for an update on climate-related regional regulations and the associated impact to our business.

#### Technology Risks

Battery storage technology is an emerging risk to the large-scale power generation model. Battery storage has the ability to enable greater adoption of renewables and a shift to a distributed power generation model. We continue to evaluate battery storage for its economics and potential to support grid reliability, while monitoring the potential impact battery technology could have on natural gas power generation.

### Market Risks

Changing customer behaviour and reduced consumption, and associated use of electricity, could impact the demand for electricity. However, we believe this risk is mitigated somewhat by the global trend to increasingly electrify customer products, transport and more. Our low carbon business model supports this type of future. Increased costs for natural gas supply from carbon pricing can impact us. Use of renewable resources, such as the wind and sun, removes associated risk related to cost of supply.

TransAlta's Corporate function applies regionally specific carbon pricing, both current and anticipated, as a mechanism to manage future risks pertaining to uncertainty in the carbon market and as a safeguard to anticipate future impacts of regulatory changes on facilities. This information is directed to the business unit level for further integration. Identified climate change risks or opportunities and carbon pricing are recognized in the annual TransAlta long and medium range forecasting processes. We capture economic profit through generation of environmental attributes (such as carbon offsets and Renewable Energy Credits) and through our emission trading function, which seeks to commoditize and profit from carbon trading.

### Reputation Risks

Consumer trends appear to be moving in favour of renewable and cleaner energy, which may make hydrocarbon options decreasingly popular. We are invested in natural gas as it provides vital support to the electricity system and is a lower carbon fossil fuel. We already invest significantly in renewable energy and natural gas.

### Physical Risks

#### Acute Risks

The TransAlta South Hedland facility in northwest Western Australia was built with climate adaptation in mind. The plant is designed to withstand a category 5 cyclone, which can frequent the northwest region of Western Australia. Category 5 is the highest cyclone rating. Floods, which can occur in the area, have been mitigated by constructing the facility above the normal flood levels. In 2019, a category 4 cyclone hit this facility. Operations were not impacted and we were able to continue generating electricity through the storm, despite wide-spread flooding and shutdown of the nearby port and associated business activities.

#### Chronic Risks

We have not identified any chronic physical risks that could impact our operations. However, we continue to further our understanding and integration of climate modelling into our long-term planning.

### Greenhouse Gas Emissions: Metrics and Targets

Our GHG emission exposure in 2019 was 2.0 million tonnes (2018 – 1.9 million tonnes CO<sub>2</sub>e). Our seven gas facilities were responsible for the majority of GHG emissions and with no change to gas asset ownership, our GHG exposure from gas is expected to remain in the range of 2 million tonnes CO<sub>2</sub>e. GHG from our renewable fleet is minor. The majority of our GHG emissions are scope 1 emissions. Our exposure to renewable energy reduces our GHG impact and in 2019, our renewable energy facilities offset the equivalent of 1.6 million tonnes CO<sub>2</sub>e (2018 – 1.7 million tonnes CO<sub>2</sub>e). As a result, our net exposure to GHG emissions was 354,182 tonnes CO<sub>2</sub>e in 2019 (2018 – 273,607 tonnes CO<sub>2</sub>e). In 2019, our carbon intensity exposure was 0.29 CO<sub>2</sub>e / MWh (2018 – 0.31 CO<sub>2</sub>e / MWh).

Greenhouse gas (GHG) emissions	2019	2018	2017
Scope 1 (million tonnes CO <sub>2</sub> e)	2.0	2.0	1.9
Scope 2 (million tonnes CO <sub>2</sub> e)	—	—	—
<b>Total GHG emissions from operations (million tonnes CO<sub>2</sub>e)</b>	<b>2.0</b>	<b>2.0</b>	<b>2.0</b>
Carbon offset – renewable energy production (million tonnes CO <sub>2</sub> e)	-1.6	-1.7	-1.8
<b>Total GHG emissions exposure (million tonnes CO<sub>2</sub>e)</b>	<b>0.4</b>	<b>0.3</b>	<b>0.1</b>
<i>GHG emission intensity all facilities (tonnes CO<sub>2</sub>e/MWh)</i>	0.29	0.31	0.29

Our 2019 GHG data is reported to a number of different regulatory bodies throughout the year for regional compliance and, as a result, may incur minor revisions as we review and report data. Any revisions would be reported historically in future reporting. As per the Kyoto Protocol, GHGs include carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, nitrogen trifluoride, hydrofluorocarbons and perfluorocarbons. Our exposure is limited to carbon dioxide, methane, nitrous oxide and a small amount of sulphur hexafluoride. The majority of our estimated GHG emissions are comprised of carbon dioxide emissions from stationary combustion from natural gas power generation. Emissions intensity data has been aligned with the "Setting Organizational Boundaries: Operational Control" methodology set out in The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard developed by the World Resources Institute and the World Business Council for Sustainable Development. As per the methodology, TransAlta reports emissions on an operation control basis, which means that we report 100 per cent of emissions at facilities in which we are the operator. Emissions intensity is calculated by dividing total operational emissions by 100 per cent of production (MWh) from operated facilities, regardless of financial ownership.

We do not currently have any established long-term GHG reduction targets due to the current low exposure of GHG emissions in our business.

## Social Management and Performance

TransAlta provides management, administrative and operational services to the Corporation pursuant to the Management Agreement. As a result, the Corporation benefits from the well-established social sustainability practices at TransAlta.

### Social Governance

TransAlta employees operate and maintain the Corporation's assets pursuant to the Management Agreement, which includes providing environment, health and safety services to the Corporation. The General Governance Guidelines of the Board provide that the Board is responsible for monitoring the actions of TransAlta, including reviewing and monitoring compliance with all significant policies and procedures, such as the code of conduct that includes principles of fair dealing and ethical conduct. The Board maintains oversight on social impacts associated with those facilities we own (including those held through economic interests), and TransAlta regularly reports to the Board on any applicable social developments, including as it pertains to any applicable safety incidents, customer interactions, or community and Indigenous developments.

### Employment Standards

The Corporation does not have any direct employees and rather all management, administrative and operational services are provided by TransAlta under the Management Agreement. TransAlta is an attractive employer in all three countries in which it operates. TransAlta provides compensation to its employees at levels that are competitive in relation to their respective location. It strives to be an employer of choice through its total rewards program, which includes recognition pay for special contributions, participation in TransAlta's incentive program for eligible employees, benefits that can include extended health, medical, vision and dental, retirement plans, educational assistance for courses and workshops, and association memberships. In addition to monetary rewards, TransAlta also offers non-monetary incentives, which include competitive paid time-off programs to encourage work/life balance, time off for volunteer activities, discounted rates on home and auto insurance, financial planning tools and resources, ongoing learning and development, employee assistance programs, culture and purpose (namely, by being part of a corporation that is recognized for sustainability legacy and at the forefront of energy transition), and being part of a corporation that invests in community organizations like the Calgary Stampede, United Way and many more.

### Human Rights

We operate in Australia, Canada and the US. All of these countries have high human rights standards. We do not conduct operational human rights reviews or impact assessments, but we do continue to operate aligned with the highest ethical standards, such as ISO 14001 and ISO 18001.

### Health and Safety

The safety of our people, communities and environment is one of our core values. At TransAlta, we operate large and often complex facilities. The environments in which we work, including Canadian winters and the Australian outback, can add additional challenges to keeping our employees, contractors and visitors safe. Each year we invest significant resources into improving our safety performance, including positively enhancing our safety culture. The safety of people at our facilities, including TransAlta employees, staff, contractors and visitors, is a top priority of our social performance.

Exposure hours in 2019 for employees at our facilities was approximately 598,000 hours (2018 – 780,000 hours) and during this time, we experienced five incidents (2018 – six incidents). Incident types in 2019 included three first aid incidents, one medical aid incident and one long-term incident. Our Total Injury Frequency ("TIF") rate in 2019 was 1.59 (2018 – 1.54). All of our incidents in 2019 occurred at our Sarnia facility, an abnormal year after experiencing only one incident in both 2017 and 2018. Facilities in scope from Australia, our hydro fleet and wind and solar fleet experienced no safety incidents in 2019 – an excellent achievement.

<b>Safety management</b>	<b>2019</b>	<b>2018</b>	<b>2017</b>
First aid incidents	3	4	6
Medical aid incidents	1	1	0
Lost-time incidents	1	0	2
Restricted working incidents	0	1	1
Exposure hours	629,868	779,706	771,894
<i>Total injury frequency rate</i>	1.59	1.54	2.46

#### Indigenous Relationships

We value our relationships and partnerships with stakeholders and our Indigenous neighbours. Our Indigenous Relations team focuses on community engagement, employment, economic development and community investment. We ensure that our principles for engagement are upheld and that the Corporation fulfills its commitments to Indigenous communities. Efforts are focused on building and maintaining solid relationships and establishing strong communication channels that enable us to share information regarding operations and growth initiatives, gather feedback to inform project planning and understand priorities and interests from communities to better address concerns. Methods of engagement include:

- relationship building through regular communication and in-person meetings with representatives at various levels within Indigenous community organizations;
- hosting company-community activities that share both business information and cultural lessons;
- maintaining consistent communications with each community and following appropriate community protocols and procedures;
- participating in community events such as powwows and blessing ceremonies; and
- providing both monetary and in-kind sponsorships for community initiatives.

TransAlta supports several initiatives to promote equal access to all levels of education for youth and Indigenous peoples. Support in 2019 included providing bursaries to high school graduates through a partnership with Indspire, funding academic upgrading programs through the Southern Alberta Institute of Technology, supporting an Indigenous Leadership Program and maintaining communication on employment opportunities through various mediums to support different access options for Indigenous communities.

#### Stakeholder Relationships and Local Communities

Fostering relationships with our stakeholders is important to TransAlta. We take a proactive approach to building relationships and understanding the impacts our business may have on local stakeholders. To act in the best interests of TransAlta and to optimize the balance between financial, environmental and social value for both our stakeholders and TransAlta, we seek to:

- engage regularly with stakeholders about our operations, growth prospects and future developments;
- consider feedback and make changes to project designs and plans to resolve and/or accommodate concerns expressed by our stakeholders; and
- respond in a timely and professional manner to stakeholder inquiries and concerns and work diligently to resolve issues or complaints.

Major stakeholder categories include shareholders, debt holders, business partners, contractors, suppliers, customers, community organizations, employees, industry and professional bodies, media, NGOs, government and regulatory agencies, and neighbouring residents.

During 2019, TransAlta contributed more than \$2 million in donations and sponsorships (2018 – \$2.4 million) across its operations, with a significant portion of this impacting our operating regions.

### Supply Chain Management

We continue to seek solutions to advance supply chain sustainability. In 2017, we optimized our global supply chain management operations by implementing a platform that supports increasing supply chain efficiency, reducing lead times, lowering costs and improving supplier performance. As we explore major projects, we assess vendors both at the evaluation stage and as part of information requests on such elements as safe work practices, environmental practices and Indigenous spend. This means, for example, getting information on:

- estimated value of services that will be procured through local Indigenous businesses;
- estimated number of local Indigenous persons that will be employed;
- understanding overall community spend and engagement; and
- understanding the state of community relations through interview processes and stakeholder work.

In early 2019, the Board of Directors adopted a Supplier Code of Conduct that applies to all vendors and suppliers of TransAlta. Under this code, suppliers of goods and services to TransAlta are required to adhere to our core values, including as it pertains to health and safety, ethical business conduct and environmental leadership. The code also allows suppliers to report ethical or legal concerns via TransAlta's Ethics Helpline.

### Customers

TransAlta's customer team is focused on helping customers, including customers of the Corporation, in ways uniquely suited to achieving their sustainability goals. Solutions can include the development of renewable generation projects. For example, we recently announced commercial operation at the Big Level wind farm, in which we own an economic interest, that is contracted with Microsoft Corp., which enables them to contribute to the clean energy economy and further their steps toward enabling a clean energy future. We also announced commercial operation of the 29 MW Antrim wind farm located in New Hampshire, which is under two 20-year contracts with Partners Healthcare and New Hampshire Electric Co-op, respectively. In consultation with TransAlta, we regularly assess renewable and natural gas projects across North America that can be custom built to secure energy production and reduce the environmental footprints of our customers. By supporting the development of our customers' sustainability goals we equally further our own clean energy and de-carbonization strategy.

## Risk Management

Our business activities expose us to a variety of risks including, but not limited to, increased regulatory changes, rapidly changing market dynamics and volatility in commodity markets. Our goal is to manage these risks so that we are reasonably protected from an unacceptable level of earnings, cash available for distribution or financial exposure while still enabling business development. We use a multilevel risk management oversight structure to manage the risks arising from our business activities, the markets in which we operate, and the political environments and structures with which we interface.

The responsibilities of various stakeholders in our risk management oversight structure are described below:

**The Board** is responsible for the stewardship of the Corporation. Subject to the provisions of the *Canada Business Corporations Act*, the Board may delegate certain of its powers and authority that the Board, or independent members of the Board, as applicable, deem necessary or desirable to effect the actual administration of the duties of the Board. Pursuant to the Management Agreement, the Board has delegated broad discretion to administer and manage the business and affairs of the Corporation to TransAlta. Nonetheless, the Board retains certain responsibilities that are described in the Board of Directors' Charter, a copy of which is available on our website and on SEDAR under the electronic profile of the Corporation. The Board includes three independent members.

**The Audit and Nominating Committee's** primary role is to assist the Board in fulfilling its oversight responsibilities regarding our internal controls, financial reporting and risk management processes. The Audit and Nominating Committee is composed entirely of independent members of the Board.

The Audit and Nominating Committee is directly responsible for overseeing the work of the external auditor engaged for the purpose of preparing and issuing an auditor's report or performing other audit, review or attestation services, including the resolution of disagreements between the external auditor and management. The external auditor reports directly to the Audit and Nominating Committee. In addition, the Audit and Nominating Committee pre-approves all non-audit services undertaken by the external auditor.

The Audit and Nominating Committee is responsible for establishing and maintaining satisfactory procedures for the receipt, retention and treatment of complaints and for the confidential, anonymous submission of questionable accounting or auditing matters. The Audit and Nominating Committee is accountable to the Board and provides a report to the Board at each regularly scheduled Board meeting outlining the results of the Audit and Nominating Committee's activities and any reviews it has undertaken.

The Audit and Nominating Committee is also responsible for the identification and recommendation of individuals to the Board for nomination as members of the Board and its committees.

### Risk Controls

Our risk controls have several key components:

#### Enterprise Tone

We strive to foster beliefs and actions that are true to, and respectful of, our many stakeholders. We do this by investing in communities where we live and work, operating and growing sustainably, putting safety first, and being responsible to the many groups and individuals with whom we work.

#### Policies

Under the Management Agreement, TransAlta provides all the general administrative and operational services as may be required or advisable for the management of the affairs of the Corporation and operation and maintenance of our facilities. TransAlta maintains a comprehensive set of enterprise-wide policies. These policies establish delegated authorities and limits for business transactions, as well as allow for an exception approval process. Periodic reviews and audits are performed to ensure TransAlta's compliance with these policies. All TransAlta employees are required to comply with a corporate code of conduct. Our directors and officers are also required to sign a code of conduct on an annual basis.

#### Risk Factors

Risk is an inherent factor of doing business. The following section addresses some, but not all, risk factors that could affect our future results and our activities in mitigating those risks. These risks do not occur in isolation, but must be considered in conjunction with each other. Further information on these risk factors can be found in our AIF.



For some risk factors we show the after-tax effect on net earnings of changes in certain key variables. The analysis is based on business conditions in 2019 and includes the indirect effects of risks on the facilities in which we have an economic interest. The actions that we describe as being part of our management of these risks include those carried by TransAlta as owner of those facilities. Each item in the sensitivity analysis assumes all other potential variables are held constant. While these sensitivities are applicable to the period and the magnitude of changes on which they are based, they may not be applicable in other periods, under other economic circumstances or for a greater magnitude of changes. The changes in rates should also not be assumed to be proportionate to earnings in all instances.

#### Volume Risk

Volume risk relates to the variances from our expected production. The financial performance of our hydro, wind and solar operations is highly dependent upon the availability of their input resources in a given year. Shifts in weather or climate patterns, seasonal precipitation and the timing and rate of melting and runoff may impact the water flow to our facilities. The strength and consistency of the wind resource at our facilities impacts production. The operation of thermal plants can also be impacted by ambient temperatures and the availability of water and fuel. Where we are unable to produce sufficient quantities of output in relation to contractually specified volumes we may be required to pay penalties or purchase replacement power in the market.

The volume risk is managed by TransAlta by:

- actively managing our assets and their condition in order to be proactive in plant maintenance so that our plants are available to produce when required;
- placing our facilities in locations we believe to have adequate resources to generate electricity to meet the requirements of our contracts. However, we cannot guarantee that these resources will be available when we need them or in the quantities that we require; and
- diversifying our fuels and geography as one way of mitigating regional or fuel-specific events.

#### Generation Equipment and Technology Risk

There is a risk of equipment failure due to wear and tear, latent defect, design error or operator error, among other things, which could have a material adverse effect on the Corporation. Although our generation facilities have generally operated in accordance with expectations, there can be no assurance that they will continue to do so. Our plants are exposed to operational risks such as failures due to damage in generators and turbines, and other issues that can lead to outages and increased volume risk. If plants do not meet production targets specified in their PPA or other long-term contracts, we may be required to compensate the purchaser for the loss in the availability of production or record reduced energy or capacity payments.

As well, we are exposed to procurement risk for specialized parts that may have long lead times. If we are unable to procure these parts when they are needed for maintenance activities, we could face an extended period where our equipment is unavailable to produce electricity.

This generation equipment and technology risk is managed by TransAlta by:

- operating our generating facilities within defined industry standards that optimizes availability over their commercial operating life;
- performing preventive maintenance in accordance with applicable industry practices, major equipment supplier recommendations and our operating experience;
- adhering to comprehensive maintenance programs and regular turnaround schedules;
- adjusting maintenance plans by facility to reflect equipment type, age and commercial risk;
- having adequate business interruption coverage in place to cover extended forced outages;
- having clauses in our PPAs and other long-term contracts that allow us to declare force majeure in the event of an unforeseen failure;
- selecting and applying proven technology in our generating facilities, where practical;
- where technology is newer, ensuring service agreements with equipment suppliers include appropriate availability and performance guarantees;
- monitoring our fleet against industry performance to identify issues or advancements that may impact performance and adjusting our maintenance and investment programs accordingly;
- negotiating strategic supply agreements with selected vendors to ensure key components are readily available in the event of a significant outage;
- entering into long-term arrangements with our strategic supply partners to ensure availability of critical spare parts; and
- implementing long-term asset management strategies that optimize the life cycles of our existing facilities and/or identifies replacement requirements for our generating assets.



### Environmental Compliance Risk

Our activities are subject to stringent environmental laws and regulations promulgated and administered by federal, provincial, state and municipal governments where we operate. These laws and regulations generally concern use of water, wildlife protection, wetlands preservation, remediation of contamination, waste disposal requirements, preservation of archaeological artifacts, endangered species preservation and noise limitations, among others.

Environmental compliance risks are risks to our business associated with existing and/or changes in environmental regulations. New emission reduction objectives for the power sector are being established by governments in Canada and the US. We anticipate continued and growing scrutiny by investors relating to sustainability performance. These changes to regulations may affect our earnings by reducing the operating life of generating facilities, imposing additional costs on the generation of electricity, such as emission caps or tax, requiring additional capital investments in emission capture technology, or requiring us to invest in offset credits. It is anticipated that these compliance costs will increase due to increased political and public attention to environmental concerns.

This environmental compliance risk is managed by TransAlta by:

- seeking continuous improvement in numerous performance metrics such as emissions, safety, land and water impacts, and environmental incidents;
- having an International Organization for Standardization and Occupational Health and Safety Assessment Series-based environmental health and safety management system in place that is designed to continuously improve performance;
- committing significant experienced resources to work with regulators in Canada and the US to advocate that regulatory changes are well designed and cost effective;
- purchasing environmental attributes (such as carbon or emission offset credits);
- investing in renewable energy projects, such as wind, solar and hydro generation; and
- incorporating change-in-law provisions in contracts that allow recovery of certain compliance costs from our customers.

We strive to be in compliance with all environmental regulations relating to operations and facilities. Compliance with both regulatory requirements and management system standards is regularly audited through our performance assurance policy and results are reported quarterly.

### Credit Risk

Credit risk is the risk to our business associated with changes in the creditworthiness of entities with which we have commercial exposures. This risk results from the ability of a counterparty to either fulfil its financial or performance obligations to us or where we have made a payment in advance of the delivery of a product or service. The inability to collect cash due to us or to receive products or services may have an adverse impact upon our net earnings and cash flows. We are also exposed indirectly to the credit risks of TEA and other TransAlta subsidiaries through our economic interest investments.

This exposure to credit risk is managed by TransAlta by:

- establishing and adhering to policies that define credit limits based on the creditworthiness of counterparties, contract term limits and the credit concentration with any specific counterparty;
- requiring formal sign-off on contracts that include commercial, financial, legal and operational reviews;
- requiring security instruments, such as parental guarantees, letters of credit, cash collateral or third-party credit insurance if a counterparty goes over its limits. Such security instruments can be collected if a counterparty fails to fulfil its obligation; and
- reporting our exposure using a variety of methods that allow key decision-makers to assess credit exposure by counterparty. This reporting allows us to assess credit limits for counterparties and the mix of counterparties based on their credit ratings.

If established credit exposure limits are exceeded, we take steps to reduce this exposure, such as requesting collateral, if applicable, or by halting commercial activities with the affected counterparty. However, there can be no assurances that we will be successful in avoiding losses as a result of a contract counterparty not meeting its obligations.

Our credit risk management profile and practices have not changed materially from Dec. 31, 2018. We had no material counterparty losses in 2019. We continue to keep a close watch on changes and trends in the market and the impact these changes could have on our business activities and will take appropriate actions as required, although no assurance can be given that we will always be successful.

A summary of our direct and indirect credit exposures at Dec. 31, 2019, is provided below:

Counterparty credit rating	Direct exposure	Indirect exposure <sup>(2)</sup>
	Receivables <sup>(1)</sup>	Trade accounts receivable
Investment grade	49	25
Non-investment grade	22	24
TransAlta and subsidiaries of TransAlta	132	—
No external rating	47	3

(1) Includes trade accounts receivable, distributions receivable from subsidiaries of TransAlta and a loan receivable.

(2) Includes accounts receivable of TEA. Receivables of other economic interest investments were approximately \$3 million in total and are with investment-grade and other high-quality counterparties.

### Currency Rate Risk

We are exposed to fluctuations in the exchange rate between the Canadian and the Australian and US dollars as a result of our investments in and loans from subsidiaries of TransAlta. Changes in the values of these currencies relative to the Canadian dollar may affect our earnings or the value of our foreign investments to the extent that these positions or cash flows are not hedged, or the hedges are ineffective.

We manage currency rate risk by:

- entering into contractual arrangements with TransAlta to fix in Canadian dollars the Australian-denominated income from all sources arising from our investment in the Australian Assets. The exchange rates at which we will recognize income denominated in Australian dollars is fixed until June 30, 2020; and
- offsetting our US dollar cash flows primarily related to the US Wind and Solar assets with foreign exchange forward contracts.

As at Dec. 31, 2019, a three cent increase or decrease in the Australian dollar relative to the Canadian dollar would increase or decrease net earnings of the Corporation by \$14 million, and result in an increase or decrease in other comprehensive income of \$21 million.

The Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar tracking preferred shares contain embedded US-denominated cash flows. A three cent increase or decrease in the US dollar relative to the Canadian dollar would increase or decrease net earnings of the Corporation by \$2 million and would result in an increase or decrease in other comprehensive income of \$21 million.

### Liquidity Risk

Liquidity risk arises from our ability to meet general funding needs and manage the assets, liabilities and capital structure of the Corporation. Our liquidity needs are met through a variety of sources, including capital markets, cash generated from operations and funding from our credit facility. Our primary uses of funds are operational expenses, capital expenditures, interest and principal payments on debt, funding growth and dividends.

We manage liquidity risk by:

- maintaining sufficient liquid financial resources to fund obligations as they come due in the most cost-effective manner;
- preparing and revising longer-term financing plans to reflect changes in business plans and the market availability of capital; and
- maintaining a \$700 million syndicated credit facility to support potential liquidity requirements.

### Interest Rate Risk

Changes in interest rates can impact our borrowing costs, and changes in our cost of capital may also affect the feasibility of new growth initiatives.

We manage interest rate risk by establishing and adhering to policies that include:

- employing a combination of fixed and floating rate debt instruments; and
- monitoring the mixture of floating and fixed rate debt and adjusting where necessary to ensure a continued efficient mixture of these types of debt.

At Dec. 31, 2019, approximately 23 per cent (2018 – 18 per cent) of our total debt portfolio was subject to changes in interest rates.

### Project Management Risk

On capital projects, we face risks associated with cost overruns, delays and performance.

These project risks are managed by TransAlta by:

- ensuring all projects are reviewed to see that established processes and policies are followed, risks have been properly identified and quantified, input assumptions are reasonable, and returns are realistically forecasted prior to senior management and Board approvals (including, where applicable, independent Board approval);
- using consistent and disciplined project management methodologies and processes;
- performing detailed analysis of project economics prior to construction or acquisition and by determining our asset contracting strategy to ensure the right mix of contracted and merchant capacity before starting construction;
- developing and following through with comprehensive plans that include critical paths identified, key delivery points, and backup plans;
- managing project closeouts so that any learnings from the project are incorporated into the next significant project;
- fixing the price and availability of the equipment, foreign currency rates, warranties and source agreements as much as is economically feasible before proceeding with the project; and
- entering into labour agreements to provide security around cost and productivity.

### Human Resource Risk

Human resource risk relates to the potential impact upon our business as a result of changes in the workplace. Human resource risk can occur in several ways:

- potential disruption as a result of labour action at our generating facilities;
- reduced productivity due to turnover in positions;
- inability to complete critical work due to vacant positions;
- failure to maintain fair compensation with respect to market rate changes; and
- reduced competencies due to insufficient training, failure to transfer knowledge from existing employees, or insufficient expertise within current employees.

We do not have employees, but rather rely on the Management Agreement with TransAlta for the provision of all our management, administrative and operational services, including making available appropriate personnel. The Human Resources risk is managed by TransAlta by:

- monitoring industry compensation and aligning salaries with those benchmarks;
- using incentive pay to align employee goals with corporate goals;
- monitoring and managing target levels of employee turnover; and
- ensuring new employees have the appropriate training and qualifications to perform their jobs.

### Regulatory and Political Risk

Regulatory and political risk is the risk to our business associated with potential changes to the existing regulatory structures and the political influence upon those structures. This risk can come from market regulation and re-regulation, increased oversight and control, structural or design changes in markets, or other unforeseen influences. Market rules are often dynamic and we are not able to predict whether there will be any material changes in the regulatory environment or the ultimate effect of changes in the regulatory environment on our business. This risk includes, among other things, uncertainties associated with the development of a capacity market for electricity in Ontario, potential market bid mitigation in Alberta, uncertainties associated with the development of carbon pricing policies, the qualification of our renewable facilities in Alberta to generate of tradable environmental attributes as part of the transition from the *Carbon Competitiveness Incentive Regulation* to the *Technology Innovation and Emissions Reductions* regulations.

We manage these risks systematically through TransAlta's legal and regulatory compliance programs, which are reviewed periodically to ensure their effectiveness. TransAlta works with governments, regulators, electricity system operators and other stakeholders to resolve issues as they arise. TransAlta actively monitors changes to market rules and market design and engages in industry-and-government-agency-led stakeholder engagement processes. Through these and other avenues, TransAlta engages in advocacy and policy discussions at a variety of levels. These stakeholder negotiations have allowed us to engage in proactive discussions with governments and regulatory agencies over the longer term.

International investments are subject to unique risks and uncertainties relating to the political, social and economic structures of the respective country and such country's regulatory regime. We mitigate this risk through the use of non-recourse financing and insurance.

### Transmission Risk

Access to transmission lines and transmission capacity for existing and new generation is key to our ability to deliver energy produced at our power plants to our customers. The risks associated with the aging existing transmission infrastructure in the markets in which we operate continue to increase because new connections to the power system are consuming transmission capacity quicker than it is being added by new transmission developments.

### Reputation Risk

Our reputation is one of our most valued assets. Reputation risk relates to the risk associated with our business because of changes in opinion from the general public, private stakeholders, governments and other entities.

We manage reputation risk by:

- striving as a neighbour and business partner in the regions where we operate to build viable relationships based on mutual understanding leading to workable solutions with our neighbours and other community stakeholders;
- clearly communicating our business objectives and priorities to a variety of stakeholders on a routine basis;
- maintaining positive relationships with various levels of government;
- pursuing sustainable development as a longer-term corporate strategy;
- ensuring that each business decision is made with integrity and in line with our corporate values;
- communicating the impact and rationale of business decisions to stakeholders in a timely manner; and
- maintaining strong corporate values that support reputation risk management initiatives, including the annual code of conduct sign-off.

### Corporate Structure Risk

#### *TransAlta*

TransAlta is the majority shareholder of the Corporation and is also responsible for the management and operation of the Corporation pursuant to the Management Agreement. In addition, TransAlta is able to nominate directors to the Board and we rely on TransAlta to identify acquisition and growth opportunities. As a result, TransAlta is able to exercise substantial influence over our operations, administration and growth. Any failure to effectively manage our operations or to implement our growth strategy could have a material adverse effect on our business, financial condition and results of operations. Our risk management procedures in respect of this corporate structure risk include incorporating Board members that are independent of TransAlta.

*Other*

We conduct a significant amount of business through subsidiaries and partnerships. Our ability to meet and service debt obligations is dependent upon the results of operations of our subsidiaries and the payment of funds by our subsidiaries in the form of distributions, loans, dividends or otherwise. In addition, our subsidiaries may be subject to statutory or contractual restrictions that limit their ability to distribute cash to us.

*General Economic Conditions*

Changes in general economic conditions impact product demand, revenue, operating costs, the timing and extent of capital expenditures, the net recoverable value of property, plant and equipment ("PP&E"), financing costs, credit and liquidity risk, and counterparty risk.

*Investments in Subsidiaries of TransAlta*

Following the investments in economic interests of the Australian Assets, Wyoming Wind, Lakeswind, Big Level and Antrim, and Mass Solar, all owned by TransAlta, some, but not all, additional risk factors that could affect our future results, and our activities in mitigating those risks, are outlined below:

*Nature of interests*

The Corporation indirectly retains an economic interest in, and has no legal rights, in respect of the Australian Assets, Wyoming Wind, Lakeswind, Big Level, Antrim and Mass Solar. We own securities providing an economic interest based on the cash flows from the assets broadly equal to the underlying net distributable profits. This means that we are not able to dispose of these assets or exercise other rights of ownership, nor do we have any ability to directly oversee or manage the ownership and operation of these assets. Consequently, the rights to us in relation to these assets may be of less value compared to direct ownership of these assets.

*Dependence on financial performance*

The value of our common shares depends, in part, on the financial performance and profitability derived from these assets. Any decline in the financial performance of these assets or adverse change in such other factors could have an adverse effect on us and the value and market price of our common shares. In addition, these assets are potentially subject to the liabilities attributed to TransAlta, even if those liabilities arise from lawsuits, contracts or indebtedness that do not relate or are otherwise attributed to the assets or the Corporation.

*Insufficient funds to satisfy distributions*

We are entitled to receive quarterly preferential cash dividend payments on the Australian Tracking Preferred Shares. This subsidiary's only source of income is the distributions it receives from a 43 per cent owned limited partnership with TransAlta. In turn, the assets the limited partnership owns are the Australian Assets. There can be no certainty that the Australian Assets will generate sufficient income, such that the distributions it pays will, in aggregate, be sufficient to satisfy the dividend payments in respect of the Australian Tracking Preferred Shares.

Effective Jan. 6, 2016, TransAlta and a subsidiary of TransAlta signed a funding support agreement under which, among other things, TransAlta agreed to subscribe for securities of the subsidiary that issued the Australian Tracking Preferred Shares upon receipt of a funding notice to ensure that the subsidiary of TransAlta has sufficient funds to satisfy the dividend payable on the Australian Tracking Preferred Shares.

### Income Tax Risk

Our operations are complex and located in several jurisdictions. The computation of the provision for income taxes involves tax interpretations, regulations and legislation that are continually changing. Our tax filings are subject to audit by taxation authorities. Management believes that it has adequately provided for income taxes as required by IFRS, based on all information currently available.

The Corporation and the subsidiaries of TransAlta in which we hold economic interests are subject to changing laws, treaties and regulations in and between countries. Various tax proposals in the countries we operate in could result in changes to the basis on which deferred taxes are calculated or could result in changes to income or non-income tax expense. There has recently been an increased focus on issues related to the taxation of multinational corporations.

Effective Jan. 1, 2019, Australia enacted anti-hybrid rules that will impact the tax benefits of certain financing structures, including our MRPS. In January 2019, TEA redeemed the MRPS and a portion of the TEA preferred shares and, immediately following the redemptions, the Corporation subscribed for AU\$550 million of TEA amortizing term loan tracking preferred shares.

A change in tax laws, treaties or regulations, or in the interpretation thereof, could result in a materially higher income or non-income tax expense that could have a material adverse impact to the Corporation.

The sensitivity of changes in income tax rates upon our net earnings is shown below:

Factor	Increase or decrease (%)	Approximate impact on net earnings
Tax rate	1	1

The Corporation's statutory blended tax rate is 25.96 per cent. The effective income tax rate can change depending on the mix of earnings from various countries and certain deductions that do not fluctuate with earnings.

The Corporation's anticipated cash tax horizon is subject to risks, uncertainties and other factors that could cause the cash tax horizon to occur sooner than our current projection of approximately two years. In particular, our anticipated cash tax horizon is subject to risk pertaining to a change in our operations, asset base, corporate structure or changes to tax legislation, regulations or interpretations. In the event we become cash taxable sooner than projected, our cash available for distribution and our dividend could decrease.

### Legal Contingencies

We are occasionally named as a party in various claims and legal or regulatory proceedings that arise during the normal course of our business. We review 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 our favour or that such claims may not have a material adverse effect on us.

### Other Contingencies

We maintain a level of insurance coverage deemed appropriate by management. There were no significant changes to our insurance coverage during renewal of the insurance policies on Dec. 31, 2019. Our insurance coverage may not be available in the future on commercially reasonable terms. There can be no assurance that our insurance coverage will be fully adequate to compensate for potential losses incurred. In the event of a significant economic event, the insurers may not be capable of fully paying all claims.

### Cybersecurity

We rely on our information technology systems to process, transmit and store electronic information and data used for the safe operation of our assets. In today's ever-evolving cybersecurity-threat landscape, any attacks or breaches of our network or information systems may cause disruptions to our business operations. Cyberattackers may use a range of techniques, from exploiting vulnerabilities within our user-base to using sophisticated malicious code on a single or distributed basis to try to breach our network security controls. Attackers may also use a combination of techniques in their attempt to evade safeguards such as firewalls, intrusion prevention systems and antivirus software that exist on our network infrastructure systems. A successful cyberattack may allow for the unauthorized interception, destruction, use or dissemination of our information and may cause disruptions to our business operations.

We continuously take measures to secure our infrastructure against potential cyber attacks that may damage our infrastructure, systems and data. Our cybersecurity program aligns with industry best practices to ensure that a holistic approach to security is maintained. We have implemented security controls to help secure our data and business operations, including access control measures, intrusion detection and prevention systems, logging and monitoring of network activities, and implementing policies and procedures to ensure the secure operations of the business. We have also established security awareness programs to help educate our users on cybersecurity risks and their responsibilities in helping protect the business.

While we have systems, policies, hardware, practices, data backups and procedures designed to prevent or limit the effect of security breaches of our generation facilities and infrastructure, there can be no assurance that these measures will be sufficient and that such security breaches will not occur or, if they do occur, that they will be adequately addressed in a timely manner. We closely monitor both preventive and detective measures to manage these risks.

#### Growth Risk

Our growth strategy is to develop or acquire stable cash flows associated with high-quality contracted renewable and natural gas power generation facilities and other infrastructure assets, with the objective of achieving returns on invested capital. Our business plan includes growth through identifying suitable acquisition or contracted new build opportunities, pursuing such opportunities, consummating acquisitions or contracting development and construction, and effectively integrating such growth opportunities into our existing business. There can be no assurance that we will be able to identify attractive growth opportunities in the future (whether through our relationship with TransAlta or otherwise), that we will be able to complete growth opportunities that increase the amount of cash available for distribution, or that growth opportunities will be successfully integrated into our existing operations. The successful execution of the growth strategy requires careful timing and business judgment, as well as the resources to complete the due diligence and evaluation of such opportunities and to acquire and successfully integrate those assets into our business.

## Controls and Procedures

Management is responsible for establishing and maintaining adequate internal control over financial reporting ("ICFR") and disclosure controls and procedures ("DC&P"). There have been no changes in our ICFR or DC&P during the year ended Dec. 31, 2019, that have 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 are recorded, processed, summarized and reported within the time frame specified in 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 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 Dec. 31, 2019, the end of the period covered by this report, our ICFR and DC&P were effective.



# Consolidated Financial Statements

## Management's Report

To the Shareholders of TransAlta Renewables Inc.

The Consolidated Financial Statements and other financial information included in this annual report have been prepared by management. It is management's responsibility to ensure that sound judgment, appropriate accounting principles and methods, and reasonable estimates have been used to prepare this information. They also ensure that all information presented is consistent.

Management is also responsible for establishing and maintaining internal controls and procedures over the financial reporting process. The internal control system includes an internal audit function and an established business conduct policy. TransAlta Corporation provides general administrative services to TransAlta Renewables Inc. under a Management, Administrative and Operational Services Agreement. Employees of TransAlta Corporation providing such services are required to adhere to TransAlta Corporation's business conduct policy. In addition, TransAlta Renewables Inc. has a code of conduct that can be viewed on TransAlta Renewables Inc.'s website ([www.transaltarenewables.com](http://www.transaltarenewables.com)). Management believes the system of internal controls, review procedures and established policies provide reasonable assurance as to the reliability and relevance of financial reports. Management also believes that TransAlta Renewables Inc.'s operations are conducted in conformity with the law and with a high standard of business conduct.

The Board of Directors (the "Board") is responsible for ensuring that management fulfils its responsibilities for financial reporting and internal control. The Board carries out its responsibilities principally through its Audit and Nominating Committee (the "Committee"). The Committee, which consists solely of independent directors, reviews the financial statements and annual report and recommends them to the Board for approval. The Committee meets with management, internal auditors and external auditors to discuss internal controls, auditing matters and financial reporting issues. Internal and external auditors have full and unrestricted access to the Committee. The Committee also recommends the firm of external auditors to be appointed by the shareholders.



**John Kousinioris**  
President



**Brent Ward**  
Chief Financial Officer

February 28, 2020

## Management's Annual Report on Internal Control over Financial Reporting

To the Shareholders of TransAlta Renewables Inc.

The following report is provided by management in respect of TransAlta Renewables Inc.'s internal control over financial reporting as defined in the Canadian Securities Administrators' National Instrument 52-109.

TransAlta Renewables Inc.'s management is responsible for establishing and maintaining adequate internal control over financial reporting for TransAlta Renewables Inc.

Management has used the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") 2013 framework to evaluate the effectiveness of TransAlta Renewables Inc.'s internal control over financial reporting. Management believes that the COSO 2013 framework is a suitable framework for its evaluation of TransAlta Renewables Inc.'s internal control over financial reporting because it is free from bias, permits reasonably consistent qualitative and quantitative measurements of TransAlta Renewables Inc.'s internal controls, is sufficiently complete so that those relevant factors that would alter a conclusion about the effectiveness of TransAlta Renewables Inc.'s internal controls are not omitted, and is relevant to an evaluation of internal control over financial reporting.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper overrides. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process, and it is possible to design safeguards into the process to reduce, though not eliminate, this risk.

Management has assessed the effectiveness of TransAlta Renewables Inc.'s internal control over financial reporting as at December 31, 2019, and has concluded that such internal control over financial reporting is effective.



**John Kousinioris**  
President



**Brent Ward**  
Chief Financial Officer

February 28, 2020

# Independent Auditors' Report

## To the Shareholders of TransAlta Renewables Inc.

### Opinion

We have audited the consolidated financial statements of TransAlta Renewables Inc. and its subsidiaries (the Corporation), which comprise the consolidated statements of financial position as at December 31, 2019 and 2018, and the consolidated statements of earnings, comprehensive income, changes in equity and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects the consolidated financial position of the Corporation as at December 31, 2019 and 2018, and its consolidated financial performance and consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRSs).

### Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Corporation in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Other information

Management is responsible for the other information. The other information comprises:

- Management's Discussion and Analysis
- The information, other than the consolidated financial statements and our auditor's report thereon, in the Annual Report

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information, and in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

We obtained Management's Discussion and Analysis and the Annual Report prior to the date of this auditor's report. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact in this auditor's report. We have nothing to report in this regard.

### Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Corporation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Corporation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Corporation's financial reporting process.

### Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

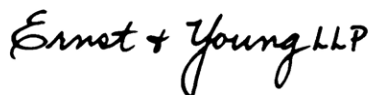
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Corporation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Corporation to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Valerie Bertram.

The logo for Ernst & Young LLP, featuring the company name in a stylized, handwritten-style script.

Chartered Professional Accountants  
Calgary, Canada

February 28, 2020

## Consolidated Statements of Earnings

<b>Year ended Dec. 31 (in millions of Canadian dollars, except as otherwise noted)</b>	<b>2019</b>	<b>2018</b>
Revenues (Note 5)	438	414
Government incentives (Note 6)	8	16
Lease revenue (Note 3)	—	32
<b>Total revenue</b>	<b>446</b>	<b>462</b>
Fuel, royalties and other costs (Note 8)	83	98
<b>Gross margin</b>	<b>363</b>	<b>364</b>
Operations, maintenance and administration (Note 8)	87	86
Depreciation and amortization	136	122
Asset impairment (Note 14)	2	—
Taxes, other than income taxes	8	8
Insurance recovery (Note 14)	(4)	—
<b>Operating income</b>	<b>134</b>	<b>148</b>
Finance income related to subsidiaries of TransAlta (Note 9)	76	129
Interest income (Note 10)	8	45
Interest expense (Note 10)	(45)	(51)
Change in fair value of financial assets (Note 9)	49	(1)
Foreign exchange gain (loss)	(31)	6
<b>Earnings before income taxes</b>	<b>191</b>	<b>276</b>
Income tax expense (Note 11)	8	35
<b>Net earnings</b>	<b>183</b>	<b>241</b>
<b>Net earnings attributable to:</b>		
Common shareholders	179	236
Non-controlling interest (Note 12)	4	5
	<b>183</b>	<b>241</b>
<b>Weighted average number of common shares outstanding in the year (millions) (Note 19)</b>	<b>264</b>	<b>257</b>
<b>Net earnings per share attributable to common shareholders, basic and diluted</b>	<b>0.68</b>	<b>0.92</b>

See accompanying notes.

## Consolidated Statements of Comprehensive Income

Year ended Dec. 31 (in millions of Canadian dollars)	2019	2018
<b>Net earnings</b>	<b>183</b>	<b>241</b>
<b>Other comprehensive income (loss)</b>		
Net change in fair value of investments in subsidiaries of TransAlta (Note 9) <sup>(1)</sup>	(45)	40
<b>Total items that will not be reclassified subsequently to net earnings</b>	<b>(45)</b>	<b>40</b>
<b>Other comprehensive income (loss)</b>	<b>(45)</b>	<b>40</b>
<b>Total comprehensive income</b>	<b>138</b>	<b>281</b>
<b>Total comprehensive income attributable to:</b>		
Common shareholders	<b>134</b>	<b>276</b>
Non-controlling interest (Note 12)	<b>4</b>	<b>5</b>
	<b>138</b>	<b>281</b>

(1) Net of income tax expense of \$1 million for the year ended Dec. 31, 2019 (2018 - \$1 million recovery).

See accompanying notes.


## Consolidated Statements of Financial Position

<b>As at Dec. 31 (in millions of Canadian dollars)</b>	<b>2019</b>	<b>2018</b>
Cash and cash equivalents (Note 13)	63	73
Accounts receivable (Note 13)	90	115
Restricted cash (Notes 13 and 17)	—	31
Prepaid expenses	2	2
Inventory	7	6
Current portion of other assets (Note 13 and 16)	113	23
Current portion of investments in subsidiaries of TransAlta (Notes 9 and 13)	18	—
	<b>293</b>	<b>250</b>
Property, plant and equipment (Note 14)		
Cost	2,850	2,842
Accumulated depreciation	(1,122)	(1,023)
	<b>1,728</b>	<b>1,819</b>
Right-of-use assets (Note 7)	28	—
Intangible assets (Note 15)	114	124
Other assets (Notes 13 and 16)	49	42
Investments in subsidiaries of TransAlta (Notes 9 and 13)	1,474	1,495
Deferred income tax assets (Note 11)	16	17
<b>Total assets</b>	<b>3,702</b>	<b>3,747</b>
Accounts payable and accrued liabilities (Note 13)	37	47
Dividends payable (Notes 13 and 19)	62	62
Risk management liabilities (Note 13)	1	1
Current portion of long-term debt and lease obligations (Notes 13 and 17)	52	49
	<b>152</b>	<b>159</b>
Long-term debt and lease obligations (Notes 13, 17 and 24)	909	883
Decommissioning provisions and other provisions (Note 18)	56	44
Contract liabilities (Note 5)	6	—
Deferred revenues	1	7
Risk management liabilities (Note 13)	1	—
Deferred income tax liabilities (Note 11)	264	258
<b>Total liabilities</b>	<b>1,389</b>	<b>1,351</b>
<b>Equity</b>		
Common shares (Note 19)	3,039	3,011
Deficit	(637)	(567)
Accumulated other comprehensive loss	(134)	(89)
<b>Equity attributable to shareholders</b>	<b>2,268</b>	<b>2,355</b>
Non-controlling interest (Note 12)	45	41
<b>Total equity</b>	<b>2,313</b>	<b>2,396</b>
<b>Total liabilities and equity</b>	<b>3,702</b>	<b>3,747</b>

Commitments and contingencies (Note 23)

On behalf of the Board:

  
**David Drinkwater**  
Chair

  
**Kathryn B. McQuade**  
Director

See accompanying notes.

## Consolidated Statements of Changes in Equity

(in millions of Canadian dollars)

	Common shares	Deficit	Accumulated other comprehensive income (loss)	Attributable to shareholders	Attributable to non- controlling interest	Total
Balance, Dec. 31, 2018	3,011	(567)	(89)	2,355	41	2,396
Net earnings	—	179	—	179	4	183
Other comprehensive income:						
Net change in fair value of investments of subsidiaries of TransAlta (Note 9) <sup>(1)</sup>	—	—	(45)	(45)	—	(45)
Total comprehensive income (loss)	—	179	(45)	134	4	138
Common share dividends (Note 19)	—	(249)	—	(249)	—	(249)
Dividend reinvestment plan (Note 19)	28	—	—	28	—	28
<b>Balance, Dec. 31, 2019</b>	<b>3,039</b>	<b>(637)</b>	<b>(134)</b>	<b>2,268</b>	<b>45</b>	<b>2,313</b>

See accompanying notes.

(in millions of Canadian dollars)

	Common shares	Deficit	Accumulated other comprehensive income (loss)	Attributable to shareholders	Attributable to non-controlling interest	Total
Balance, Dec. 31, 2017	2,854	(701)	8	2,161	36	2,197
Impacts of change in accounting policy:						
Reclassification of impairment on available- for-sale financial assets	—	137	(137)	—	—	—
Fair value adjustment on available-for-sale financial assets	—	3	—	3	—	3
Adjusted balance, Jan. 1, 2018	2,854	(561)	(129)	2,164	36	2,200
Net earnings	—	236	—	236	5	241
Other comprehensive income:						
Net change in fair value of investments of subsidiaries of TransAlta (Note 9) <sup>(1)</sup>	—	—	40	40	—	40
Total comprehensive income	—	236	40	276	5	281
Common share dividends (Note 19)	—	(245)	—	(245)	—	(245)
Acquisitions (Note 4)	—	3	—	3	—	3
Dividend reinvestment plan (Note 19)	12	—	—	12	—	12
Completion of public share offering (Note 19)	145	—	—	145	—	145
Balance, Dec. 31, 2018	3,011	(567)	(89)	2,355	41	2,396

See accompanying notes.



## Consolidated Statements of Cash Flows

<b>Year ended Dec. 31 (in millions of Canadian dollars)</b>	<b>2019</b>	<b>2018</b>
<b>Operating activities</b>		
Net earnings	183	241
Depreciation and amortization	136	122
Accretion of provisions (Notes 10 and 18)	4	3
Deferred income tax expense (Note 11)	6	29
Change in fair value of financial assets	(49)	1
Unrealized foreign exchange (gain) loss	30	(6)
Unrealized (gain) loss from risk management activities	1	—
Asset impairment (Note 14)	2	—
Other non-cash items	(5)	—
Cash flow from operations before changes in working capital	308	390
Change in non-cash operating working capital balances (Note 20)	23	(5)
<b>Cash flow from operating activities</b>	<b>331</b>	<b>385</b>
<b>Investing activities</b>		
Additions to property, plant and equipment (Note 14)	(31)	(63)
Advances, net of repayments, on promissory notes from a subsidiary of TransAlta (Note 16)	(90)	(22)
Proceeds on redemptions of investments in subsidiaries (Note 9)	549	107
Proceeds on sale of assets	—	1
Investments in subsidiaries of TransAlta (Note 9)	(607)	(140)
Acquisitions (Note 4)	—	(39)
Recovery of property insurance settlements	4	—
Realized gain on financial instruments	2	—
Return of capital on investments in subsidiaries of TransAlta (Note 9)	40	17
Restricted cash (Note 17)	31	—
Repayment (advances) on Kent Hills Wind LP loan receivable (Note 16)	(10)	1
Change in non-cash investing working capital balances	(14)	2
Other	—	(1)
<b>Cash flow used in investing activities</b>	<b>(126)</b>	<b>(137)</b>
<b>Financing activities</b>		
Net increase in borrowings under credit facilities (Note 17)	55	136
Repayments of Canadian Assets working capital loan and TEA loan	—	(199)
Long-term debt repayments (Note 17)	(49)	(48)
Net proceeds on issuance of common shares (Note 19)	—	144
Dividends paid on common shares (Note 20)	(221)	(230)
Lease obligations – principal repayment	(1)	—
Other	1	2
<b>Cash flow used in financing activities</b>	<b>(215)</b>	<b>(195)</b>
<b>Increase (decrease) in cash and cash equivalents</b>	<b>(10)</b>	<b>53</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>73</b>	<b>20</b>
<b>Cash and cash equivalents, end of year</b>	<b>63</b>	<b>73</b>
Cash income taxes paid	2	6
Cash interest paid	41	45

See accompanying notes.

# Notes to Consolidated Financial Statements

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

## 1. Corporate Information

### A. Formation of the Corporation

TransAlta Renewables Inc. ("TransAlta Renewables" or the "Corporation") was incorporated on May 28, 2013, under the *Canada Business Corporations Act* and has been formed to own a portfolio of renewable and natural gas power generation facilities and other infrastructure assets. The Corporation is a majority-owned subsidiary of TransAlta Corporation ("TransAlta"). The Corporation's head office is located in Calgary, Alberta.

### B. Basis of Preparation

These Consolidated Financial Statements have been prepared by management in compliance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

The Consolidated Financial Statements include the accounts of the Corporation and the subsidiaries that it controls. Control exists when the Corporation is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary.

The Consolidated Financial Statements have been prepared on a historical cost basis, except for certain financial instruments, which are stated at fair value.

The Consolidated Financial Statements reflect all adjustments that consist of normal recurring adjustments and accruals that are, in the opinion of management, necessary for a fair presentation of results. The Corporation's results are partly seasonal due to the nature of electricity, which is generally consumed as it is generated; and the nature of wind and run-of-river hydro resources, which fluctuate based on both seasonal patterns and annual weather variation. Typically, run-of-river hydro facilities generate most of their electricity and revenues during the spring and summer 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.

The Consolidated Financial Statements are presented in Canadian dollars, which is the Corporation's functional and presentation currency. All financial information presented in the tables is in Canadian dollars and has been rounded to the nearest million dollars unless otherwise noted.

These consolidated financial statements were authorized for issue by the Board of Directors (the "Board") on February 28, 2020.

## 2. Significant Accounting Policies

### A. Revenue Recognition

#### I. Contracts with Customers

The Corporation evaluates whether the contracts it enters into meet the definition of a contract with a customer at the inception of the contract and on an ongoing basis if there is an indication of significant changes in facts and circumstances. Each promise to provide a good or service within a contract is accounted for separately as a performance obligation if it is distinct. The Corporation's contracts may contain more than one performance obligation. The transaction price, which is the amount of consideration to which the Corporation expects to be entitled to within each contract, is determined and is allocated to the performance obligation in the contract. The transaction price may include variable consideration based on for example, future production volumes, variable costs, market prices, or indices and escalators. Variable consideration is only included in the transaction price for each performance obligation when it is highly probable that a significant reversal of the cumulative variable revenue will not occur. Variable consideration is assessed at each reporting period to determine whether the constraint is lifted. Revenue is recognized when, or as, the Corporation satisfies the performance obligations by transferring control of the good or service to the customer.

For certain contracts, revenue may be recognized at the invoiced amount, as permitted using the invoice practical expedient, if such amount corresponds directly with the Corporation's performance to date.

The majority of the Corporation's revenues from contracts with customers are derived from the sale of electricity, capacity and Environmental Attributes. Obligations to deliver electricity are satisfied over time and revenue is recognized using a units-based output measure (i.e., megawatt hours). Obligations to deliver capacity are satisfied over time and revenue is recognized using a time-based measure. Environmental Attributes that are sold together with electricity are satisfied on the same basis as the electricity. Obligations to deliver Environmental Attributes are satisfied at a point in time, generally upon delivery.

The Corporation recognizes unconditional rights to consideration separately as a receivable. Receivables are evaluated at each reporting period to determine whether there is any objective evidence that they are impaired. A contract liability is recognized when the Corporation receives consideration from the customer before the performance obligations have been satisfied.

## II. Other Revenues

Dividend income from investments is recognized when the right to receive payment has been established, usually on declaration of dividends by the paying entity's Board of Directors. Dividends characterized as a return of capital are recognized as a reduction in the cost of the related investment.

Interest income on financial assets classified as amortized cost is accrued on a passage-of-time basis based on the principal outstanding and the applicable stated interest rates. Guarantee fee income is accrued on the basis of the period and amounts over which the guarantee is provided.

## B. Foreign Currency Translation

The Corporation's functional currency is the Canadian dollar. Foreign-currency-denominated monetary assets and liabilities are translated at exchange rates in effect at the end of the reporting period. Transactions denominated in a currency other than the functional currency are translated at the exchange rate in effect on the transaction date. The resulting exchange gains or losses are included in net earnings in the period in which they arise.

## C. Financial Instruments

### I. Financial Instruments, Impairment and Hedging

#### a. Classification and Measurement

Financial assets are classified and measured based on their contractual cash flow characteristics and the business model under which the Corporation holds the financial asset. All financial assets and financial liabilities, including derivatives, are recognized at fair value on the Consolidated Statements of Financial Position when the Corporation becomes party to the contractual provisions of a financial instrument or non-financial derivative contract. Financial assets must be classified and measured at either amortized cost, fair value through profit or loss ("FVTPL"), or fair value through other comprehensive income ("FVTOCI"). Financial liabilities are classified as FVTPL when the financial liability is held for trading. All other financial liabilities are subsequently measured at amortized cost.

Financial assets whose contractual cash flows arise on specified dates, consist solely of principal and interest, and are held within a business model whose objective is to collect the contractual cash flows are subsequently measured at amortized cost. Financial assets measured at FVTOCI are those that have contractual cash flows arising on specific dates, consisting solely of principal and interest, and that are held within a business model whose objective is to collect the contractual cash flows and to sell the financial asset. All other financial assets and equity investments are subsequently measured at FVTPL.

At initial recognition, the Corporation may irrevocably elect to measure particular investments in equity instruments at FVTOCI that would otherwise be measured at FVTPL. When an equity investment is designated as measured at FVTOCI, the cumulative gain or loss previously recognized in other comprehensive income ("OCI") is not subsequently reclassified to profit or loss.

Refer to section Q(II) below for policy on return of capital for investments in equity instruments.

Financial assets are derecognized when the contractual rights to receive cash flows expire. Financial liabilities are derecognized when the obligation is discharged, cancelled or expired.

Transaction costs are expensed as incurred for financial instruments classified or designated as at fair value through profit or loss. For other financial instruments transaction costs are recognized as part of the initial carrying amount of the financial instrument. The Corporation uses the effective interest method of amortization for any transaction costs or fees, premiums or discounts earned or incurred for financial instruments measured at amortized cost.

The Corporation may enter into a variety of derivative financial instruments to manage its exposure to commodity price risk, interest rate risk and foreign currency exchange risk, including fixed price financial swaps, long-term physical power sale contracts and foreign exchange forward contracts. Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently measured at their fair value at the end of each reporting period. The resulting gain or loss is recognized in net earnings immediately unless the derivative is designated and effective as a hedging instrument, in which case the timing of the recognition in net earnings is dependent on the nature of the hedging relationship.

Derivatives embedded in non-derivative host contracts that are not financial assets are recognized as separate derivatives when they meet the definition of a derivative, their risks and economic characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL. Derivatives embedded in hybrid contracts that contain financial asset hosts are not separated and the entire contract is measured at FVTOCI, FVTPL or amortized cost, as appropriate.

#### b. Impairment of Financial Assets

The Corporation recognizes an allowance for expected credit losses for financial assets measured at amortized cost as well as certain other instruments. The loss allowance for a financial asset is measured at an amount equal to the lifetime expected credit loss if its credit risk has increased significantly since initial recognition, or if the financial asset is a purchased or originated credit-impaired financial asset. If the credit risk on a financial asset has not increased significantly since initial recognition, its loss allowance is measured at an amount equal to the 12-month expected credit loss.

For trade receivables, the Corporation applies a simplified approach for measuring the loss allowance. Therefore, the Corporation does not track changes in credit risk but instead recognizes a loss allowance at an amount equal to the lifetime expected credit losses at each reporting date.

The assessment of the expected credit loss is based on historical data, and adjusted by forward-looking information. Forward-looking information utilized includes third-party default rates over time, dependent on credit ratings.

#### c. Hedge Accounting

Where hedge accounting can be applied and the Corporation chooses to apply hedge accounting, a hedge relationship is designated as a cash flow or fair value hedge. A relationship qualifies for hedge accounting if, at inception, it is formally designated and documented as a hedge, and the hedging instrument and the hedged item have values that generally move in opposite direction because of the hedged risk. The documentation includes identification of the hedging instrument and hedged item or transaction, the nature of the risk being hedged, the Corporation's risk management objectives and strategy for undertaking the hedge, and how hedge effectiveness will be assessed. The process of hedge accounting includes linking derivatives to specific recognized assets and liabilities or to specific firm commitments or highly probable anticipated transactions.

The Corporation formally assesses, both at the hedge's inception and on an ongoing basis, whether the derivatives used are highly effective in offsetting changes in fair values or cash flows of hedged items. If hedge criteria are not met or the Corporation does not apply hedge accounting, the derivative is recognized at fair value on the Consolidated Statements of Financial Position, with subsequent changes in fair value recorded in net earnings in the period of change.

In a cash flow hedging relationship, the effective portion of the change in the fair value of the hedging derivative is recognized in OCI while any ineffective portion is recognized in net earnings. The cash flow hedge reserve is adjusted to the lower of the cumulative gain or loss on the hedging instrument and the cumulative change in fair value of the hedged item. If cash flow hedge accounting is discontinued, the amounts previously recognized in accumulated other comprehensive income ("AOCI") must remain in AOCI if the hedged future cash flows are still expected to occur. Otherwise, the amount will be immediately reclassified to net earnings as a reclassification adjustment. After discontinuation, once the hedged cash flow occurs, any amount remaining in AOCI must be accounted for depending on the nature of the underlying transaction.

In certain cases, the Corporation purchases non-financial items in a foreign currency, for which it enters into foreign exchange contracts to hedge foreign currency risk on the anticipated payments. Hedging gains and losses are basis adjusted to the initial carrying amount of non-financial hedged items once recognized. These adjustments are not considered reclassification adjustments and do not affect other comprehensive income, but are directly transferred to the asset and are reflected in the statement of changes in equity as a reclassification from AOCI.

## D. Cash and Cash Equivalents

Cash and cash equivalents are comprised of cash and highly liquid investments with original maturities of three months or less.

## E. Inventory

### I. Emission Credits

Purchased emission credits and allowances are recorded as inventory at cost and are carried at the lower of weighted average cost and net realizable value. Credits granted to, or internally generated by, the Corporation are recorded at nil.

### II. Parts, Materials and Supplies

Parts, materials and supplies are recorded at the lower of cost, measured at moving average cost and net realizable value.

## F. Property, Plant and Equipment

The Corporation's investment in property, plant and equipment ("PP&E") is initially measured at the original cost of each component at the time of construction, purchase or acquisition. A component is a tangible portion of an asset that can be separately identified and depreciated over its own expected useful life, and is expected to provide a benefit for a period in excess of one year. Original cost includes items such as materials, labour, borrowing costs and other directly attributable costs, including the initial estimate of the cost of decommissioning and restoration. Costs are recognized as PP&E assets if it is probable that future economic benefits will be realized and the cost of the item can be measured reliably.

The cost of capital spares is capitalized and classified as PP&E, as these items can only be used in connection with an item of PP&E.

Planned life cycle maintenance for gas and hydro facilities is performed at regular intervals and includes inspection, repair and maintenance of existing components. Costs incurred are capitalized in the period in which maintenance activities occur and are amortized on a straight-line basis over the term until the next maintenance event. Expenditures incurred for the replacement of components are capitalized and amortized over the estimated useful life of such components.

The cost of routine repairs and maintenance and the replacement of minor parts is charged to net earnings as incurred.

Subsequent to initial recognition and measurement at cost, all classes of PP&E continue to be measured using the cost model and are reported at cost less accumulated depreciation and impairment losses, if any.

An item of PP&E or a component is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition is included in net earnings when the asset is derecognized.

The estimate of the useful lives of each component of PP&E is based on current facts and past experience, and takes into consideration existing long-term sales agreements and contracts, current and forecasted demand, and the potential for technological obsolescence. The useful life is used to estimate the rate at which the component of PP&E is depreciated. PP&E assets are subject to depreciation when the asset is considered to be available for use, which is typically upon commencement of commercial operations. Each significant component of an item of PP&E is depreciated to its residual value over its estimated useful life, using the straight-line method. Estimated useful lives, residual values and depreciation methods are reviewed at least annually and are subject to revision based on new or additional information. The effect of a change in useful life, residual value or depreciation method is accounted for prospectively.

Estimated remaining useful lives of the components of depreciable assets, categorized by asset class, are as follows:

Hydro generation	2-40 years
Wind generation	2-20 years
Gas generation	2-15 years
Capital spares and other	2-40 years

The Corporation capitalizes borrowing costs on capital invested in projects under construction (see Note 2(K)). Upon commencement of commercial operations, capitalized borrowing costs, as a portion of the total cost of the asset, are depreciated over the estimated useful life of the related asset.

## G. Intangible Assets

Intangible assets acquired in a business combination are recognized at their fair value at the date of acquisition. Intangible assets acquired separately are recognized at cost. Internally generated intangible assets arising from development projects are recognized when certain criteria related to the feasibility of internal use or sale, and probable future economic benefits, of the intangible asset are demonstrated. Intangible assets are initially recognized at cost, which is comprised of all directly attributable costs necessary to create, produce and prepare the intangible asset to be capable of operating in the manner intended by management.

Subsequent to initial recognition, intangible assets continue to be measured using the cost model, and are reported at cost less accumulated amortization and impairment losses, if any. Amortization is included in depreciation and amortization in the Consolidated Statements of Earnings.

Amortization commences when the intangible asset is available for use and is computed on a straight-line basis over the intangible asset's estimated useful life. Estimated useful lives of intangible assets may be determined, for example, with reference to the term of the related contract or licence agreement. The estimated useful lives and amortization methods are reviewed annually, with the effect of any changes being accounted for prospectively.

Intangible assets include power sale contracts with fixed prices higher than market prices at the date of acquisition, software and intangibles under development. Estimated remaining useful lives of intangible assets are as follows:

Software	2-7 years
Power sale contracts	5-15 years

## H. Impairment of Tangible and Intangible Assets

At the end of each reporting period, the Corporation assesses whether there is any indication that PP&E and finite life intangible assets are impaired.

Factors that could indicate that an impairment exists include: significant underperformance relative to historical or projected operating results; significant changes in the manner in which an asset is used, or in the Corporation's overall business strategy; or significant negative industry or economic trends. In some cases, these events are clear. However, in many cases, a clearly identifiable event indicating possible impairment does not occur. Instead, a series of individually insignificant events occurs over a period of time leading to an indication that an asset may be impaired.

The Corporation's operations, the market and business environment are routinely monitored, and judgments and assessments are made to determine whether an event has occurred that indicates a possible impairment. If such an event has occurred, an estimate is made of the recoverable amount of the asset. Recoverable amount is the higher of an asset's fair value less costs of disposal and its value in use. Fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. In determining fair value, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model, such as discounted cash flows, is used. Value in use is the present value of the estimated future cash flows expected to be derived from the asset from its continued use and ultimate disposal by the Corporation. If the recoverable amount is less than the carrying amount of the asset, an asset impairment loss is recognized in net earnings and the asset's carrying amount is reduced to its recoverable amount.

At each reporting date, an assessment is made to determine if there is any indication that an impairment loss previously recognized no longer exists or has decreased. If such indication exists, the recoverable amount of the asset is estimated and the impairment loss previously recognized is reversed if there has been an increase in the asset's recoverable amount. Where an impairment loss is subsequently reversed, the carrying amount of the asset is increased to the lesser of the revised estimate of its recoverable amount or the carrying amount that would have been determined (net of depreciation) had no impairment loss been recognized previously. A reversal of an impairment loss is recognized in net earnings.

## I. Income Taxes

Income tax expense comprises current and deferred income tax. Current income tax is the expected income tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to income taxes in respect of previous years.

Deferred income tax is recognized in respect of differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes (temporary differences). Deferred income tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the tax laws that have been enacted or substantively enacted at the reporting date.

A deferred income tax asset is recognized for unused tax losses and tax credits to the extent that it is probable that future taxable profits will be available against which such losses can be utilized. Deferred income tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related income tax benefit will be realized.

## J. Provisions

Provisions are recognized when the Corporation has a present obligation (legal or constructive) as a result of a past event, it is probable that the Corporation will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. A legal obligation can arise through a contract, legislation or other operation of law. A constructive obligation arises from an entity's actions, whereby through an established pattern of past practice, published policies or a sufficiently specific current statement, the entity has indicated it will accept certain responsibilities and has thus created a valid expectation that it will discharge those responsibilities. The amount recognized as a provision is the best estimate, remeasured at each period-end, of the expenditures required to settle the present obligation considering the risks and uncertainties associated with the obligation. Where expenditures are expected to be incurred in the future, the obligation is measured at its present value using a current market-based, risk-adjusted interest rate.

The Corporation records a decommissioning and restoration provision for all generating facilities for which it is legally or constructively required to remove the facilities at the end of their useful lives and restore the site. For some hydro facilities, the Corporation is required to remove the generating equipment, but is not required to remove the structures. Initial decommissioning provisions are recognized at their present value when incurred. Each reporting date, the Corporation determines the present value of the provision using the current discount rates that reflect the time value of money and associated risks. The Corporation recognizes the initial decommissioning and restoration provisions, as well as changes resulting from revisions to cost estimates and period-end revisions to the market-based, risk-adjusted discount rate, as a cost of the related PP&E (see Note 2(F)). The accretion of the net present value discount is charged to net earnings each period and is included in net interest expense.

Changes in other provisions resulting from revisions to estimates of expenditures required to settle the obligation or period-end revisions to the market-based, risk-adjusted discount rate are recognized in net earnings. The accretion of the net present value discount is charged to net earnings each period and is included in net interest expense.

## K. Borrowing Costs

The Corporation capitalizes borrowing costs that are directly attributable to, or relate to general borrowings used for, the construction of qualifying assets. Qualifying assets are assets that take a substantial period of time to prepare for their intended use and typically include generating facilities or other assets that are constructed over periods of time exceeding 12 months. Borrowing costs are considered to be directly attributable if they could have been avoided if the expenditure on the qualifying asset had not been made. Borrowing costs that are capitalized are included in the cost of the related PP&E component. Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the asset for its intended use are complete.

All other borrowing costs are expensed in the period in which they are incurred.



## L. Non-Controlling Interest

A non-controlling interest arises from contractual arrangements between the Corporation and other parties, whereby the other party has acquired an interest in a specified asset or operation, and the Corporation retains control.

Subsequent to acquisition, the carrying amount of the non-controlling interest is increased or decreased by the non-controlling interest's share of subsequent changes in equity and payments to the non-controlling interest. Total comprehensive income is attributed to the non-controlling interest even if this results in the non-controlling interest having a negative balance.

## M. Joint Arrangements

A joint arrangement is a contractual arrangement that establishes the terms by which two or more parties agree to undertake and jointly control an economic activity. The Corporation's joint arrangements are generally classified as joint operations.

A joint operation arises when two or more parties that have joint control have rights to the assets and obligations for the liabilities relating to the arrangement. Generally, each party takes a share of the output from the asset and each bears an agreed-upon share of the costs incurred in respect of the joint operation. The Corporation reports its interests in joint operations in its consolidated financial statements using the proportionate consolidation method by recognizing its share of the assets, liabilities, revenues and expenses in respect of its interest in the joint operation.

## N. Government Incentives

Government incentives are recognized when the Corporation has reasonable assurance that it will comply with the conditions associated with the incentive and that the incentive will be received. When the incentive relates to an expense or revenue item, it is recognized in net earnings over the same period in which the related costs or revenues are recognized. When the incentive relates to an asset, it is recognized as a reduction of the carrying amount of PP&E and released to earnings as a reduction in depreciation expense over the expected useful life of the related asset.

## O. Leases

### I. 2019 Lease Policy

Effective Jan.1, 2019, the Corporation adopted IFRS 16. Comparative period information is reported under IAS 17. Refer to (II) below for information on the prior accounting policy.

A contract is a lease when the contract conveys to the customer the right to control the use of an identified asset for a period of time in exchange for consideration. The right to control the use of the asset exists when the customer has the right to obtain substantially all of the economic benefits from the use of the asset and the right to direct the use of the asset.

**Corporation as Lessee** For all contracts that meet the definition of a lease, in which the Corporation is the lessee (customer), and do not meet the exemption for short-term or low-value leases, the Corporation:

- Recognizes right-of-use assets and lease liabilities in the Consolidated Statements of Financial Positions, initially measured at the present value of the remaining lease payments discounted using the Corporation's incremental borrowing rate or the rate implicit in the lease;
- Recognizes depreciation of the right-of-use assets and interest expense on lease obligations in the Consolidated Statements of Earnings; and
- Recognizes the principal repayments on lease obligations as financing activities and interest payments on lease obligations as operating activities in the Consolidated Statements of Cash Flows.

For short-term and low-value leases, the Corporation recognizes the lease payments as an operating expense.

Variable lease payments that do not depend on an index or a rate are not included in the measurement of the lease liability and the right-of-use asset, and are recognized as an expense in the period in which the event or condition that triggers the payments occurs.

The right-of-use asset is adjusted for: payments made at or before the commencement date of the lease; initial direct cost incurred; lease incentives; and, an estimate of costs to dismantle and remove the underlying asset, or to restore the underlying asset or the site on which it is located



The lease liability is re-measured when there is a change in future lease payments arising from a change in an index or rate, or if there is a change in the Corporation's estimate or assessment of whether it will exercise an extension, termination, or purchase option. A corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The lease term includes periods covered by an option to extend if the Corporation is reasonably certain to exercise that option and periods covered by an option to terminate if the Corporation is reasonably certain not to exercise that option.

Right-of-use assets are depreciated over the shorter period of either the lease term or the useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Corporation expects to exercise the purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset.

#### Corporation as Lessor

Where the Corporation determines that the contractual provisions of a Power purchase arrangements ("PPA") and other long-term contracts for the sale of power generated meet the definition of a lease and result in the customer assuming the principal risks and rewards of ownership of the asset, the arrangement is a finance lease. Assets subject to finance leases are not reflected as PP&E and the net investment in the lease, represented by the present value of the amounts due from the lessee, is recorded in the Consolidated Statements of Financial Position as a financial asset, classified as a finance lease receivable. The payments considered to be part of the leasing arrangement are apportioned between a reduction in the lease receivable and finance lease income. The finance lease income element of the payments is recognized using a method that results in a constant rate of return on the net investment in each period and is reflected in finance lease income on the Consolidated Statements of Earnings.

Where the Corporation determines that the contractual provisions of a contract meet the definition of a lease and result in the Corporation retaining the principal risks and rewards of ownership of the asset, the arrangement is an operating lease. For operating leases, the asset is, or continues to be, capitalized as PP&E and depreciated over its useful life.

When the Corporation has subleased all or a portion of an asset it is leasing and for which it remains the primary obligor under the lease, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance lease by reference to the right of use asset arising from the head lease.

## II. Leases (Prior to 2019)

A lease is an arrangement whereby the lessor conveys to the lessee, in return for a payment or series of payments, the right to use an asset for an agreed period of time.

#### Corporation as Lessee

Leasing or other contractual arrangements that transfer substantially all of the risks and rewards of ownership to the Corporation are considered finance leases. A leased asset and lease obligation are recognized at the lower of the fair value or the present value of the minimum lease payments. Lease payments are apportioned between interest expense and a reduction of the lease liability. Contingent rents are charged as expenses in the periods incurred. The leased asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

#### Corporation as Lessor

PPAs and other long-term contracts may contain, or may be considered, leases where the fulfillment of the arrangement is dependent on the use of a specific asset (e.g., a generating unit) and the arrangement conveys to the customer the right to use that asset.

Where the Corporation determines that the contractual provisions of a contract contain, or are, a lease and result in the customer assuming the principal risks and rewards of ownership of the asset, the arrangement is a finance lease. Assets subject to finance leases are not reflected as PP&E and the net investment in the lease, represented by the present value of the amounts due from the lessee, is recorded in the Consolidated Statements of Financial Position as a financial asset, classified as a finance lease receivable. The payments considered to be part of the leasing arrangement are apportioned between a reduction in the lease receivable and finance lease income. The finance lease income element of the payments is recognized using a method that results in a constant rate of return on the net investment in each period and is reflected in finance lease income on the Consolidated Statements of Earnings.

Where the Corporation determines that the contractual provisions of a contract contain, or are, a lease and result in the Corporation retaining the principal risks and rewards of ownership of the asset, the arrangement is an operating lease. For operating leases, the asset is, or continues to be, capitalized as PP&E and depreciated over its useful life. Rental income, including contingent rent, from operating leases is recognized over the term of the arrangement and is reflected in revenue on the Consolidated Statements of Earnings (Loss). Contingent rent may arise when payments due under the contract are not fixed in amount but vary based on a future factor such as the amount of use or production.

## P. Earnings per Share

Basic earnings per share is calculated by dividing earnings attributable to common shareholders by the weighted average number of common shares outstanding in the year.

Diluted earnings per share is calculated by dividing net earnings attributable to common shareholders, adjusted for the after-tax effects of dividends, interest or other changes in net earnings that would result from potential dilutive instruments, by the weighted average number of common shares outstanding in the year, adjusted for additional common shares that would have been issued on the conversion of all potential dilutive instruments.

## Q. Significant Accounting Judgments and Key Sources of Estimation Uncertainty

The preparation of 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, and such differences could be material.

In the process of applying the Corporation's accounting policies, management has to make judgments and estimates about matters that are highly uncertain at the time the estimate is made and that could significantly affect the amounts recognized in the Consolidated Financial Statements. Different estimates with respect to key variables used in the calculations, or changes to estimates, could potentially have a material impact on the Corporation's financial position or performance.

The key judgments and sources of estimation uncertainty are described below:

### I. Significant Influence through Tracking Preferred Shares

The Corporation has invested in preferred shares of subsidiaries of TransAlta that pay dividends based on certain financial results of other subsidiaries of TransAlta. Under IFRS, a 20 per cent voting interest is presumed to provide the holder with significant influence over the investee. Significant influence is the power to participate in the financial and operating policy decisions of an investee.

The rights associated with the Corporation's investments in the preferred shares of a subsidiary of TransAlta tracking the financial results of certain US Wind and Solar assets and the TEA amortizing term loan (see Note 9) provide the Corporation individually with a 5 per cent (cumulatively 25 per cent) voting interest in that subsidiary. In the event that any dividends on these shares have not been paid within six months of the date at which the payout formula would have them paid, and while such amounts remain unpaid, the Corporation will have the right to appoint individually 15 per cent (cumulatively 75 per cent) of the directors of that subsidiary.

The investment in the preferred shares of a subsidiary of TransAlta tracking the financial results of TransAlta Energy (Australia) Pty Ltd. ("TEA") does not provide the Corporation with any voting rights, unless and until the subsidiary fails to pay four quarterly dividends on the dates when due in accordance with the payout formula, whether or not consecutive, and whether or not such dividends have been declared. Thereafter, but only for so long as any such dividend remains in arrears, the Corporation is entitled to elect 30 per cent of the directors of the subsidiary. The investment agreement provides the Corporation with rights to financial information and further protections against adverse changes in the operation and financial structure of TEA through post-closing covenants.

The Corporation determined that it does not have significant influence over the TransAlta subsidiaries, in consideration of TransAlta's block ownership of the voting shares, and accordingly, the investments were determined to constitute financial assets.

## II. Dividends as Income or Return of Capital

The Corporation receives dividends from its investments in the preferred shares tracking adjusted TEA amounts, TEA preferred shares, preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar. Determining whether a dividend represents in substance a return of capital requires significant judgment. The Corporation determines the amount of dividends that represents a return of capital based on the lower of: (i) the difference, if positive, between the cost base of the shares and their fair value, at the end of the reporting period; and (ii) the actual dividend declared on the shares during the reporting period. When it is determined that a dividend represents a return of capital, the carrying amount of the related investment is reduced.

## III. Financial Instrument Fair Values

The Corporation has entered into financial instruments and derivatives that are accounted for at fair value, with the initial and subsequent changes in fair value affecting earnings and OCI in the period the change occurs. The fair values of financial instruments and derivatives are classified within three levels.

Level III fair values are determined using inputs for the asset or liability that are not readily observable. These fair value levels are outlined and discussed in more detail in Note 13. Some of the Corporation's fair values are included in Level III because they require the use of significant unobservable assumptions in the internal valuation techniques or models to determine fair value. The determination of the fair value of these contracts can be complex and relies on judgments and estimates concerning operating revenue, costs, discount rates and business alternatives, among other factors. These fair value estimates may not necessarily be indicative of the amounts that could be realized or settled, and changes in these assumptions could affect the reported fair value of the financial instruments. Fair values can fluctuate significantly and can be favourable or unfavourable depending on current market conditions.

## IV. Consolidation of Kent Hills 1, 2 and 3 ("Kent Hills") Wind Farms

Under IFRS, the Corporation is required to consolidate all entities that it controls. The Corporation consolidates Kent Hills Wind LP as a subsidiary. Kent Hills Wind LP is owned 83 per cent by the Corporation and 17 per cent by an external third party. The Corporation controls the Kent Hills Wind LP through its 83 per cent ownership, and accordingly, consolidation is required.

## V. Impairment of PP&E

Impairment exists when the carrying amount of an asset exceeds its recoverable amount, which is the higher of its fair value less costs of disposal and its value in use. An assessment is made at each reporting date as to whether there is any indication that an impairment loss may exist or that a previously recognized impairment loss may no longer exist or may have decreased. In determining fair value less costs of disposal, information about third-party transactions for similar assets is used and if none is available, other valuation techniques, such as discounted cash flows, are used. Value in use is computed using the present value of management's best estimates of future cash flows based on the current use and present condition of the asset. In estimating either fair value less costs of disposal or value in use using discounted cash flow methods, estimates and assumptions must be made about sales prices, production, capital expenditures, asset retirement costs and other related cash inflows and outflows over the life of the facilities, which can range from 25 to 50 years. In developing these assumptions, management uses estimates of contracted prices, anticipated production levels, planned and unplanned outages, changes to regulations, and transmission capacity or constraints for the remaining life of the facilities. Appropriate discount rates reflecting the risks specific to the asset under review are used in the assessments. These estimates and assumptions are susceptible to change from period to period and actual results can, and often do, differ from the estimates, and can have either a positive or negative impact on the estimate of the impairment charge, and may be material. All of the Corporation's generating assets are contracted under the TransAlta PPAs or other PPAs with various third parties.

## VI. Income Taxes

Preparation of the Consolidated Financial Statements involves determining an estimate of, or provision for, income taxes in each of the jurisdictions in which the Corporation operates. The process also involves making an estimate of income taxes currently payable and income taxes expected to be payable or recoverable in future periods, referred to as deferred income taxes. Deferred income taxes result from the effects of temporary differences due to items that are treated differently for tax and accounting purposes. The tax effects of these differences are reflected in the Consolidated Statements of Financial Position as deferred income tax assets and liabilities. An assessment must also be made to determine the likelihood that the Corporation's future taxable income will be sufficient to permit the recovery of deferred income tax assets. To the extent that such recovery is not probable, deferred income tax assets must be reduced. Management must exercise judgment in its assessment of continually changing tax interpretations, regulations and legislation to ensure deferred income tax assets and liabilities are complete and fairly presented. Differing assessments and applications than the Corporation's estimates could materially impact the amounts recognized for deferred income tax assets and liabilities.

## VII. Provisions for Decommissioning and Restoration Activities

The Corporation recognizes provisions for decommissioning and restoration obligations as outlined in Note 2(J) and Note 18. Initial decommissioning provisions, and subsequent changes thereto, are determined using the Corporation's best estimate of the required cash expenditures, adjusted to reflect the risks and uncertainties inherent in the timing and amount of settlement. The estimated cash expenditures are present valued using a current, risk-adjusted, market-based, pre-tax discount rate. A change in estimated cash flows, market interest rates or timing could have a material impact on the carrying amount of the provision.

## VIII. Useful Life of PP&E

Each significant component of an item of PP&E is depreciated over its estimated useful life. Estimated useful lives are determined based on current facts and past experience, and take into consideration the anticipated physical life of the asset, existing long-term sales agreements and contracts, current and forecasted demand, the potential for technological obsolescence and regulations. The useful lives of PP&E are reviewed at least annually to ensure they continue to be appropriate.

During the third quarter, the allocation of the costs recognized for the components of the Corporation's wind assets and the useful lives of the identified components were reviewed. During the review, additional components were identified for parts where the useful lives are shorter than the original estimate. The useful life of each of these components was reduced from 30 years to either 15 years or 10 years. As a result, depreciation expense increased by approximately \$10 million for the twelve months ended Dec. 31, 2019.

## IX. Revenue from Contracts with Customers

Where contracts contain multiple promises for goods or services, management exercises judgment in determining whether goods or services constitute distinct goods or services or a series of distinct goods that are substantially the same and that have the same pattern of transfer to the customer. The determination of a performance obligation affects whether the transaction price is recognized at a point in time or over time. Management considers both the mechanics of the contract and the economic and operating environment of the contract in determining whether the goods or services in a contract are distinct.

In determining the transaction price and estimates of variable consideration, management considers past history of customer usage in estimating the goods and services to be provided to the customer. The Corporation also considers the historical production levels and operating conditions for its variable generating assets.

The satisfaction of performance obligations requires management to make judgments as to when control of the underlying good or service transfers to the customer. Determining when a performance obligation is satisfied affects the timing of revenue recognition. Management considers both customer acceptance of the good or service, and the impact of laws and regulations such as certification requirements, in determining when this transfer occurs.

Management also applies judgment in determining whether the invoice practical expedient permits recognition of revenue at the invoiced amount, if that invoiced amount corresponds directly with the entity's performance to date.

## X. Leases

In determining whether a contract is a lease, the Corporation applies judgment in determining whether an identified asset exists, whether the customer or supplier obtains substantially all of the economic benefits from use of the identified asset, and who has the right to control the use of the identified asset during the term of the contract.

For contracts that are considered to be leases, judgment is applied in making the following determinations at the lease commencement date, all of which affect the amount recognized for the right of use asset and lease liability:

- Lease term - whether the Corporation is reasonably certain to exercise renewal or, not to exercise, termination options;
- Lease payments - identifying in-substance fixed payments (included) and variable payments that are based on usage or performance factors (excluded);
- Components of a contract - identifying lease and non-lease components (services that the supplier performs) and allocating contract payments to lease and non-lease components

### 3. Accounting Changes

#### A. Current Accounting Changes

##### I. IFRS 16 Leases

Effective Jan. 1, 2019, the Corporation adopted IFRS 16 Leases ("IFRS 16") using the modified retrospective approach on transition. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases. The standard provides a single lessee accounting model, requiring lessees to recognize a right-of-use asset and liabilities for all in-scope leases. Previously, the Corporation determined at contract inception whether an arrangement is or contains a lease under IAS 17 *Leases* ("IAS 17") or International Financial Reporting Interpretations Committee Interpretation 4 ("IFRIC 4") *Determining Whether an Arrangement Contains a Lease*. Comparative information has not been restated and is reported under IAS 17. For further details on the lease policy under IFRS 16, and the prior year policy under IAS 17, refer to Note 2(O)(I)

The Corporation applied the definition of a lease and related guidance set out in IFRS 16 to all lease contracts in existence at Dec. 31, 2018 and all relevant contractual arrangements were reviewed to assess if the contract meets the new definition of a lease.

The Corporation has used the following practical expedients permitted by the standard:

- Exemption to not recognize right-of-use assets and lease liabilities for short-term leases that have a remaining lease term of less than 12 months as at Jan. 1, 2019 and for low value leases;
- Excluding initial direct costs for the measurement of the right-of-use asset at the date of initial application;
- Using hindsight in determining the lease term where the contract contains options to extend or terminate the lease; and
- Measuring the right-of-use asset at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the statement of financial position immediately before the date of initial application.

#### Impact of adoption on the financial statements

##### *Lessee*

The Corporation recognized the cumulative impact of the initial application of the standard by recording a right-of-use asset based on the corresponding lease liability measured at the present value of the remaining lease payments discounted using the Corporation's incremental borrowing rate or the rate implicit in the lease applied to the lease liabilities at Jan. 1, 2019. The weighted average rate applied to the lease liabilities on Jan. 1 was 6.3%. On adoption, the Corporation recognized \$16 million of lease liabilities.

The following table reconciles the Corporation's operating lease commitments at Dec. 31, 2018, as previously disclosed in the Corporation's 2018 annual consolidated financial statements, to the lease obligations recognized on initial application of IFRS 16 at Jan. 1, 2019.

	Total
Non-cancellable operating lease commitments disclosed at Dec. 31, 2018	32
Add: Extension and termination options reasonably certain to be exercised	2
Undiscounted lease liability	34
Discounted using the incremental borrowing rate at Jan. 1, 2019	(18)
Lease liability recognized as at Jan. 1, 2019	16

The associated right-of-use assets were measured at an amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the Consolidated Statements of Financial Position. On Jan. 1, 2019, the Corporation recognized right-of-use assets of \$23 million, \$16 million for initial lease recognition and \$7 million transferred from property, plant and equipment and other assets for a pre-existing finance lease.

In December 2019, the Corporation recognized an additional \$6 million of right-of-use assets and \$6 million of lease liabilities as a result of revised interpretations of the unit of account/identified asset concepts present in IFRS 16.

Refer to Note 7 and 17 for more information on the Corporation's leases.

*Lessor*

On adoption of IFRS 16, the Corporation determined that long-term contracts for sale of power generated from certain wind and hydro facilities no longer meet the definition of a lease. Revenues earned on these contracts, previously accounted for as an operating lease, are now accounted for applying IFRS 15 *Revenue from Contracts with Customers*. No significant change in the pattern of revenue recognition occurred. \$6 million of deferred revenues related to one of the contracts and were reclassified from deferred revenue to contract liability.

The Corporation continues to account for its subleases as operating leases.

## II. IFRIC 23 - Uncertainty over Income Tax Treatments

The Corporation adopted IFRIC 23 on its effective date of Jan. 1, 2019 and applied it retrospectively. No cumulative effect of initial applying the guidance arose. The Interpretation clarifies the application of recognition and measurement requirements in IAS 12 Income Taxes when there is uncertainty over income tax treatments and provides guidance on: considering uncertain tax treatments separately or together; examination by tax authorities; the appropriate method to reflect uncertainty; and accounting for changes in facts and circumstances.

## B. Future Accounting Changes

## IFRS 3 Business Combinations

Amendments to IFRS 3 *Business Combinations* ("IFRS 3 amendments") with a mandatory effective date of Jan. 1, 2020 will be adopted by the Corporation in 2020. The amendments are intended to assist entities to determine whether a transaction should be accounted for as a business combination or as an asset acquisition. Specifically, these amendments:

- Clarify the minimum requirements for a business, whereby at minimum, an input and a substantive process that together significantly contribute to the ability to create output must be present;
- Remove the assessment of whether market participants are capable of replacing any missing elements so that the assessment is based on what has been acquired in its current state and condition, rather than on whether market participants are capable of replacing any missing elements, for example, by integrating the acquired activities and assets;
- Add guidance to help entities assess whether an acquired process is substantive, which requires more persuasive evidence when there are no outputs, because the existence of outputs provides some evidence that the acquired set of activities and assets is a business;
- Narrow the definition of outputs to focus on goods or services provided to customers, investment income or other income from ordinary activities; and
- Introduce an optional fair value concentration test, that can be applied on a transaction-by-transaction basis, to permit a simplified assessment of whether an acquired set of activities and assets are not a business. The concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

## C. 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.



## 4. Significant Events

### 2019

#### US Wind Projects

On Feb. 20, 2018, the Corporation announced it had entered into an arrangement to acquire economic interests in two construction-ready wind projects in the Northeastern United States (collectively "US Wind Projects"). The Big Level wind development project ("Big Level") consists of a 90 MW wind project located in Pennsylvania that has a 15-year PPA with Microsoft Corp. The Antrim wind development project ("Antrim") consists of a 29 MW wind project located in New Hampshire with 20-year PPAs with Partners Healthcare and New Hampshire Electric Co-op. The Big Level and Antrim counterparties each have Standard & Poor's credit ratings of A+ or better. Big Level and Antrim were acquired by a subsidiary of TransAlta on March 1, 2018, and March 28, 2019, respectively, and began commercial operations on Dec. 19, 2019, and Dec. 24, 2019, respectively. The US Wind Projects have brought an additional 119 MW of generating capacity to the Corporation's Wind and Solar portfolio.

Pursuant to the arrangement, the Corporation agreed to fund the total estimated construction and acquisition costs for the US Wind Projects through the subscription of tracking preferred shares issued from TransAlta Power Ltd. ("TA Power") or interest-bearing promissory notes issued from the project entity, a wholly-owned subsidiary of TransAlta. The Corporation funded the acquisition of Antrim and the subsequent construction costs of the US Wind Projects by subscribing for \$164 million (US\$122 million) of interest-bearing promissory notes issued by the project entity, and by subscribing for tracking preferred shares of TA Power in the amount of \$117 million (US\$90 million).

The tracking preferred shares issued by TA Power pay quarterly dividends based on the pre-tax net earnings of the US Wind Projects. The tracking preferred shares have preference over the common shares of TA Power held by TransAlta, in respect of the dividends and the distribution of assets in the event of the liquidation, dissolution or winding-up of TA Power.

In conjunction with the Big Level and Antrim wind farms reaching commercial operations, approximately \$166 million (US\$126 million) of tax equity financing proceeds were raised by the project entities to partially fund the projects. From the tax equity proceeds, a subsidiary of TransAlta repaid \$52 million (US\$40 million) of the interest-bearing promissory notes to the Corporation. The remaining amount of the tax equity proceeds received by the project entities is held in reserves within the project entity and will be released upon the payment of all outstanding project costs and the satisfaction of certain other conditions being met. Once these conditions are met, the reserves will be released and the subsidiary of TransAlta will repay the outstanding interest-bearing promissory notes to the Corporation. The Corporation expects to subscribe for additional tracking preferred shares to fund the remaining construction costs payable.

See Notes 9 and 16 for more details on the terms of the tracking preferred shares and promissory notes.

#### Mandatory Redeemable Preferred Shares ("MRPS") Redemption and Investment in Tracking Preferred Shares

In late December 2018 and early January 2019, the Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In December 2018, TransAlta Energy (Australia) Pty Ltd, an Australian subsidiary of TransAlta ("TEA") redeemed AU\$111 million of the MRPS for cash consideration. Just prior to this redemption, the Corporation repaid to TEA the remaining balance due on the TEA loan. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AU\$509 million and approximately AU\$41 million of the preferred shares of TEA for cash consideration. Immediately following the redemptions, the Corporation subscribed for AU\$550 million of Class E Preferred Shares of a subsidiary of TransAlta that track the underlying economics of an amortizing term loan payable held by TEA with another subsidiary of TransAlta. The preferred shares tracking the amortizing term loan will pay dividends, as declared, broadly equal to the interest payments on the underlying loan. See Note 9 for additional information.

### 2018

#### Expansion of the Kent Hills Wind Facility

On Oct. 19, 2018, the Corporation announced the commissioning of the 17.25 MW Kent Hills 3 expansion, bringing the total generating capacity of the Kent Hills wind facility to 167 MW. Natural Forces Technologies Inc., a wind-energy developer based in Atlantic Canada, co-developed and co-owns the wind farm, which is under a 17-year PPA with New Brunswick Power Corporation ("NB Power"). At the same time, the term of the Kent Hills 1 contract with NB Power was extended from 2033 to 2035, matching the life of the Kent Hills 2 and Kent Hills 3 wind projects.

### Acquisition of Three Renewables Assets

On May 31, 2018, the Corporation acquired 100 per cent of the equity interests in three entities from TransAlta, which resulted in, among other things, the transfer to TransAlta Renewables of the direct ownership of the 20 MW Kent Breeze wind farm located in Ontario for a total purchase price of \$39 million. The acquisition was accounted for as a business combination under common control, as TransAlta controlled Kent Breeze prior to, and after, the acquisition by the Corporation. IFRS 3 *Business Combinations* requires fair value accounting for acquisitions and excludes from its requirements a combination of entities or businesses under common control. Under established IFRS practice, common control transactions are generally accounted for using either the fair value or the pooling of interest (book value) methods of accounting. The Corporation applied the pooling of interest method to account for the acquisition, consistent with its previously chosen accounting policies. The assets and liabilities acquired have been recognized at the book values previously recognized by TransAlta at May 31, 2018, and not at their fair values. As a result, a \$3 million adjustment to equity was recognized in deficit.

On May 31, 2018, the Corporation also acquired from TransAlta an economic interest in the 50 MW Lakeswind wind farm in Minnesota and 21 MW of solar projects located in Massachusetts ("Mass Solar"). The total purchase price for the two assets was \$65 million (US\$50 million), net of the indirect economic assumption of \$62 million (US\$48 million) of tax equity obligations and project debt. The Corporation's investment consists of tracking preferred shares of a subsidiary of TransAlta that provides the Corporation with an economic interest based on cash flows broadly equal to the underlying net distributable profits (after satisfaction of tax equity and debt obligations) of the entities that own Lakeswind wind farm and Mass Solar.

On June 28, 2018, the Corporation subscribed for an additional \$33 million (US\$25 million) of tracking preferred shares of a subsidiary of TransAlta, in order to fund the repayment of Mass Solar's solar project debt.

### Common Share Issuance

On June 22, 2018, the Corporation issued 11.86 million common shares at a price of \$12.65 per share for gross proceeds of approximately \$150 million. The shares were issued under a bought deal offering through a syndicate of underwriters. TransAlta did not purchase any of these common shares. The net proceeds were used to partially repay drawn amounts under the credit facility, which were drawn to fund the acquisition of the US Wind Projects.

### Dividend Reinvestment Plan

On May 31, 2018, the Board of Directors approved the implementation of a dividend reinvestment plan ("DRIP") for Canadian holders of common shares of the Corporation. Commencing with the dividend payable on July 31, 2018, eligible shareholders may elect to automatically reinvest monthly dividends into additional common shares of the Corporation. The price for common shares under the DRIP will be 98 per cent of the average market price of the common shares for the five trading days on which not less than 500 common shares of the Corporation are traded immediately prior to the dividend payment date. Eligible shareholders are not required to participate in the DRIP. TransAlta does not participate in the DRIP.



## 5. Revenue from Contracts with Customers

### A. Disaggregation of Revenue from Contracts with Customers

The majority of the Corporation's revenues are derived from the sale of electricity, capacity and Environmental Attributes, which the Corporation disaggregates into the following groupings for the purpose of determining how economic factors affect the recognition of revenue.

<b>Year ended Dec. 31, 2019</b>	<b>Canadian Wind</b>	<b>Canadian Hydro</b>	<b>Canadian Gas</b>	<b>Total</b>
Revenue from contracts with customers	231	26	179	436
Other revenue <sup>(1)</sup>	—	—	2	2
<b>Revenues</b>	<b>231</b>	<b>26</b>	<b>181</b>	<b>438</b>

Timing of revenue recognition:

At a point in time	15	—	—	15
Over time	216	26	179	421
<b>Revenue from contracts with customers</b>	<b>231</b>	<b>26</b>	<b>179</b>	<b>436</b>

(1) Includes merchant revenue and other miscellaneous.

<b>Year ended Dec. 31, 2018</b>	<b>Canadian Wind</b>	<b>Canadian Hydro</b>	<b>Canadian Gas</b>	<b>Total</b>
Revenue from contracts with customers	197	18	198	413
Other revenue	2	—	(1)	1
<b>Revenues</b>	<b>199</b>	<b>18</b>	<b>197</b>	<b>414</b>

Timing of revenue recognition:

At a point in time	12	—	—	12
Over time	185	18	198	401
<b>Revenue from contracts with customers</b>	<b>197</b>	<b>18</b>	<b>198</b>	<b>413</b>

### B. Remaining Performance Obligations

The following disclosures about the aggregate amounts of transaction prices allocated to remaining performance obligations (contract revenues that have not been recognized) for contracts in place at the end of the year, exclude revenues related to contracts that qualify for the following practical expedients:

- The Corporation recognizes revenue from the contract in an amount that is equal to the amount invoiced where the amount invoiced represents the value to the customer of the service performed to date. Certain of the Corporation's contracts at most of its wind and hydro facilities qualify for this practical expedient. For these contracts, the Corporation is not required to disclose information about the remaining unsatisfied performance obligations.
- Contracts with an original expected duration of less than 12 months.

Additionally, in some of the Corporation's contracts, elements of the transaction price are considered constrained, such as for variable revenues dependent upon future production volumes that are driven by customer or market demand or market prices that are subject to factors outside the Corporation's influence. Future revenues that are related to constrained variable consideration are not included in the disclosure of remaining performance obligations until the constraints are resolved.

As a result, the amounts of future revenues disclosed below represent only a portion of future revenues that are expected to be realized by the Corporation from its contractual portfolio.

**Canadian Wind**

At Dec. 31, 2019, the Corporation has two long-term contracts with customers to deliver electricity and the associated renewable energy credits from two wind farms, for which the invoice practical expedient is not applied. The PPAs generally require all available generation to be provided to the customers at fixed prices, with certain pricing subject to annual escalations for inflation. The Corporation expects to recognize such amounts as revenue as it delivers electricity over the remaining terms of the contracts, to 2024 and 2033, respectively. Electricity delivered is ultimately dependent upon wind resource, which is outside of the Corporation's control. Amounts delivered, and therefore revenue recognized, in the future will vary. These variable revenues for electricity delivered are considered to be fully constrained, and will be recognized at a point in time as the performance obligation, the delivery of electricity, is satisfied. Accordingly, these revenues are excluded from these disclosures.

The Corporation has contracts to sell renewable energy certificates generated at certain wind facilities and expects to recognize revenues as it delivers the renewable energy certificates to the purchaser over the remaining terms of the contracts, from 2020 through 2024. Estimated future revenues related to the remaining performance obligations for these contracts as of Dec. 31, 2019, are approximately \$8 million, of which the Corporation expects to recognize between approximately \$1 million to \$2 million annually through to contract expiry.

The practical expedient allowing the recognition of revenue from the contract in an amount that is equal to the amount invoiced is applied to wind energy contracts in Ontario, New Brunswick and Quebec; accordingly, disclosures related to remaining performance obligations are not provided for these contracts.

**Canadian Hydro**

The practical expedient allowing the recognition of revenue from the contract in an amount that is equal to the amount invoiced is applied to all hydro energy contracts in Ontario and British Columbia; accordingly, disclosures related to remaining performance obligations are not provided for these contracts.

**Canadian Gas**

The Corporation has contracts with customers to deliver energy services from its gas plant in Ontario. The contracts all consist of a single performance obligation requiring the Corporation to stand ready to deliver electricity and steam. The following is a summary of the key terms:

The energy supply agreements require specified amounts of steam to be delivered to each customer, and have pricing terms that include fixed and variable charges for electricity, capacity and steam, as well as a true-up based on contractual minimum volumes of steam. The steam reconciliation is based on an estimate of the customer's steam volume taken and the contractual minimum volume, and various factors including the annual average market price of electricity and the average locally posted and index prices of natural gas, including transportation. For steam volumes not taken by the customer, a revenue-sharing mechanism provides for sharing of revenues earned by the Corporation using that steam to generate and sell electricity. Capacity and electricity pricing vary from contract to contract and are subject to annual indexation at varying rates. Electricity and steam delivered is ultimately dependent upon customer requirements, which is outside of the Corporation's control. These variable revenues under the contracts are considered to be fully constrained. Accordingly, these revenues are excluded from these disclosures. The Corporation expects to recognize revenue as it delivers electricity and steam until the completion of the contract in late 2022.

At the same gas plant, the Corporation has a contract with the local power authority with fixed capacity charges that are adjusted for seasonal fluctuations, steam demand from the plant's other customers and for deemed net revenue related to production of electricity into the market. As a result, revenues recognized in the future will vary as they are dependent upon factors outside of the Corporation's control and are considered to be fully constrained. Accordingly, these revenues are excluded from these disclosures. The Corporation expects to recognize such revenue as it stands ready to deliver electricity until the completion of the contract term at Dec. 31, 2025.

## C. Contract Balances

The Corporation has recognized the following revenue-related contract liabilities:

<b>Contract liabilities</b>	
Balance, Dec. 31, 2018	—
Transfer from deferred revenue <sup>(1)</sup>	6
<b>Balance, Dec. 31, 2019</b>	<b>6</b>

(1) Transferred from deferred revenues on Jan. 1, 2019, on adoption of IFRS 16 Leases as the contract to which customer payment relates to is not a lease arrangement under IFRS 16, and is accounted for under IFRS 15.

Contract liabilities consist primarily of a payment received under a PPA for the option, by the customer, to extend the term of the contract. This amount is amortized on a straight-line basis into revenue over the term of the contract.

## 6. Government Incentives

Certain of the Corporation's wind and hydro facilities are eligible to receive incentives under the Wind Power Production Incentive or the ecoENERGY for Renewable Power incentive programs sponsored by the Canadian federal government to encourage the development of clean power generation projects in Canada. Qualifying facilities receive specified incentive payments for every kilowatt hour of energy production for a period of up to 10 years from the date of commissioning.

## 7. Right-of-Use Assets and Leases

The Corporation leases land, buildings, vehicles and various types of equipment. Lease contracts are typically entered into for fixed periods. Leases are negotiated on an individual basis and include a range of different terms and conditions.

A reconciliation of the changes in the carrying amount of the right-of-use assets is as follows:

	Land	Other <sup>(2)</sup>	Total
New leases recognized on Jan. 1, 2019	16	—	16
Transfers <sup>(1)</sup>	—	7	7
Additions	6	1	7
Amortization	(1)	(1)	(2)
<b>As at Dec. 31, 2019</b>	<b>21</b>	<b>7</b>	<b>28</b>

(1) Transfer of right-of-use assets on Jan. 1, 2019, from PP&E and other assets related to pre-existing lease arrangements.

(2) Other right-of-use assets include equipment, vehicles and buildings.

In December 2019, the Corporation recognized an additional \$6 million of right-of-use assets and \$6 million of lease liabilities for land leases at certain wind farms as a result of revised interpretations of the unit of account/identified asset concepts present in IFRS 16.

For the year ended Dec. 31, 2019, the Corporation paid \$2 million related to recognized lease liabilities, consisting of \$1 million in interest and \$1 million in principal repayments.

For the year ended Dec. 31, 2019, the Corporation expensed nil in total related to short-term and low-value leases. Short-term leases (term of less than 12 months) and leases with total lease payments below the Corporation's capitalization threshold do not require recognition as lease liabilities and right-of-use assets.

Some of the Corporation's land leases that met the definition of a lease were not recognized as they require variable payments based on production or revenue. Additionally, certain land leases require payments be made on the basis of the greater of minimum fixed payments and variable payments based on production or revenue. For these leases, lease liabilities have been recognized on the basis of the minimum fixed payments. For the year ended Dec. 31, 2019, the Corporation expensed \$6 million in variable land lease payments related to these leases.

For further information regarding the impacts of adopting IFRS 16 Leases on Jan. 1, 2019, see Note 3, and regarding recognized lease liabilities see Note 17.

## 8. Expenses by Nature

Expenses classified by nature are as follows:

Year ended Dec. 31	2019		2018	
	Fuel, royalties and other costs	Operations, maintenance and administration	Fuel, royalties and other costs	Operations, maintenance and administration
Fuel	67	—	81	—
Royalties, land lease costs, other direct costs	13	—	14	—
Transmission tariffs	3	—	3	—
Contracted operating expenses	—	42	—	40
Other operating expenses	—	45	—	46
<b>Total</b>	<b>83</b>	<b>87</b>	<b>98</b>	<b>86</b>

## 9. Finance Income Related to Subsidiaries of TransAlta

Finance income related to subsidiaries of TransAlta is comprised of income from various interests that in aggregate and over time indirectly provide the Corporation with cash flows based on those of the subsidiaries. This includes TEA, TransAlta Wyoming Wind LLC, Lakeswind, Mass Solar, and the Big Level and Antrim wind projects (see Note 4).

Year ended Dec. 31	2019	2018
Dividend income from investment in preferred shares of TEA	3	6
Fee income from indirect guarantee of TEA obligations	12	11
Dividend income from investment in preferred shares tracking adjusted TEA amounts	26	101
Dividend income from investment in preferred shares tracking amortizing term loan	28	—
<b>Finance income related to TEA</b>	<b>69</b>	<b>118</b>
Dividend income from investment in preferred shares tracking earnings and distributions of Big Level and Antrim	—	—
Dividend income from investment in preferred shares tracking earnings and distributions of Mass Solar	3	—
Dividend income from investment in preferred shares tracking earnings and distributions of Lakeswind	3	—
Dividend income from investment in preferred shares tracking earnings and distributions of Wyoming Wind	1	11
<b>Total finance income</b>	<b>76</b>	<b>129</b>

Finance income is recognized in cash flows from operating activities in the Consolidated Statements of Cash Flows. Foreign exchange gains and losses related to monetary investments in subsidiaries of TransAlta are recognized within foreign exchange gain (loss) in the Consolidated Statements of Earnings.

Interest income from the investment in MRPS and TEA preferred shares represents income realized from the average coupon rates. The Corporation also receives a fee for providing an indemnity in respect of guarantees of TransAlta disclosed in Note 24. Ultimately, these cash flows are deducted from the TEA amounts that form the basis for dividends payable to the Corporation from TEA. That basis is broadly comprised of earnings before interest, income taxes, depreciation and amortization ("EBITDA"), plus net cash interest, less cash taxes, sustaining capital expenditures, and other adjustments. Income from all Australian sources is fixed in Canadian dollars until June 30, 2020, at the following exchange rates:

	2018	2019	Thereafter until June 30, 2020
Income denominated in AUD	0.94	0.94	0.94
Income denominated in USD	1.24	1.24	1.20

A summary of investments in subsidiaries of TransAlta is as follows:

As at	Dec. 31, 2019	Dec. 31, 2018
Investment in MRPS	—	489
Investment in preferred shares tracking adjusted TEA amounts	598	637
Investment in preferred shares of TEA	42	88
Investment in preferred shares tracking amortizing term loan	532	—
<b>Total investments in subsidiaries related to TEA</b>	<b>1,172</b>	<b>1,214</b>
Investment in preferred shares tracking earnings and distributions of Big Level and Antrim	118	42
Investment in preferred shares tracking earnings and distributions of Mass Solar	53	69
Investment in preferred shares tracking earnings and distributions of Lakeswind	30	33
Investment in preferred shares tracking earnings and distributions of Wyoming Wind	119	137
<b>Total investments in subsidiaries of TransAlta</b>	<b>1,492</b>	<b>1,495</b>
<b>Less: current portion of investments in subsidiaries of TransAlta <sup>(1)</sup></b>	<b>18</b>	<b>—</b>
<b>Total long-term investments in subsidiaries of TransAlta</b>	<b>1,474</b>	<b>1,495</b>

(1) Current portion due to quarterly redemptions of the investments in preferred shares tracking amortizing term loan.

### Investment in Subsidiaries of TransAlta Related to TEA

Changes in the investments in subsidiaries of TransAlta that relate to TEA are detailed as follows:

	MRPS <sup>(1)</sup>	Preferred shares tracking adjusted TEA amounts	Preferred shares of TEA <sup>(2)</sup>	Preferred shares tracking amortizing term loan <sup>(3)</sup>	Total
Investment balance at Dec. 31, 2017	601	616	94	—	1,311
Redemption <sup>(4)</sup>	(107)	—	—	—	(107)
Unrealized foreign exchange gains recognized in earnings	(5)	—	—	—	(5)
Return of capital <sup>(5)</sup>	—	(13)	—	—	(13)
Net change in fair value recognized in OCI	—	34	(6)	—	28
Investment balance at Dec. 31, 2018	489	637	88	—	1,214
Investment	—	—	—	529	529
Redemption <sup>(4)</sup>	(490)	—	(40)	(19)	(549)
Unrealized foreign exchange losses recognized in earnings	1	—	—	(27)	(26)
Return of capital <sup>(5)</sup>	—	(23)	—	—	(23)
Net change in fair value recognized in earnings	—	—	—	49	49
Net change in fair value and foreign exchange recognized in OCI	—	(16)	(6)	—	(22)
<b>Investment balance at Dec. 31, 2019</b>	<b>—</b>	<b>598</b>	<b>42</b>	<b>532</b>	<b>1,172</b>

(1) Principal amount as at Dec. 31, 2019, and Dec. 31, 2018, was nil million and AU\$509 million, respectively.

(2) Principal amount as at Dec. 31, 2019, and Dec. 31, 2018, was AU\$45 million and AU\$86 million, respectively.

(3) Principal amount as at Dec. 31, 2019, and Dec. 31, 2018, was AU\$530 million and nil million, respectively.

(4) See Note 4.

(5) See Note 2 (Q).

The MRPS were classified as and carried at amortized cost and denominated in Australian dollars. The Corporation was entitled to receive cash dividends on the MRPS.

In late December 2018 and early January 2019, the Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In December 2018, TEA redeemed \$107 million of the MRPS for cash consideration. Just prior to this redemption, the Corporation repaid to TEA the remaining balance due on the TEA Loan. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS (AU\$509 million) and approximately AU\$41 million of the preferred shares of TEA for cash consideration. Immediately following those redemptions, the Corporation subscribed for AU\$550 million of preferred shares of a subsidiary of TransAlta that track the underlying economics of an amortizing term loan payable held by TEA with another subsidiary of TransAlta.

The preferred shares tracking the amortizing term loan will pay dividends, as declared, broadly equal to the interest payments on the underlying loan. The preferred shares tracking the amortizing term loan will be redeemed when scheduled or other principal repayments occur on the underlying loan. The dividends, as declared, and scheduled redemptions will be fixed in Canadian dollars until June 30, 2020, at the hedged rates guaranteed by TransAlta. The Corporation determined that the shares are a hybrid instrument as they include a redemption option and are therefore classified as FVTPL. The change in fair value of the preferred shares tracking the amortizing term loan was due to changes in timing of cash flows, as well as a reduction in the discount rate during the year.

The Canadian-dollar-denominated preferred shares tracking adjusted TEA amounts are issued by another subsidiary of TransAlta that provide cumulative variable cash dividends, when declared, that are broadly equal to the underlying net distributable profits of TEA. The Corporation has measured the tracking preferred shares at FVTOCI. The decrease in fair value of the preferred shares tracking adjusted TEA amounts during 2019 is due to changes in the expected timing and assumptions of cash flows, decrease in forecast foreign exchange translation rate from Australian dollars to Canadian dollars, offset by the impact of lower discount rates and assumptions on the timing of redemption of preferred shares.

The change in fair value of the preferred shares tracking adjusted TEA amounts in 2018 is primarily due to the transactions executed late December and early 2019. Changes to TEA's capital spending plan, depreciation schedule and an increase in the forecast foreign exchange translation rate from Australian dollars to Canadian dollars also contributed to the increase in fair value.

The preferred shares of TEA are non-voting and rank subordinate to all present and future secured and unsecured indebtedness of TEA, subordinate to the MRPS, but senior to all other classes of issued and outstanding shares in the capital of TEA. The dividends are non-cumulative and payable quarterly at a rate of 7.4 per cent per annum. The preferred shares have been measured at FVTOCI.

The Corporation estimated the fair value of the preferred shares tracking adjusted TEA amounts utilizing significant unobservable inputs such as TEA's long-range forecast as part of a discounted cash flow model, as outlined in Note 13(B)(I)(c). Key assumptions in respect of significant unobservable inputs used in the Level III fair value measurement include the discount rate and the quarterly cash flows from the instrument and guarantee fees. The forecast extends over 29 years, which is consistent with the expected cash flow periods. The table below summarizes quantitative data regarding these unobservable inputs:

Unobservable input	Dec. 31, 2019	Dec. 31, 2018
Discount rate	5.5 %	6.7 %
Quarterly cash flows (millions)	Average of \$10	Average of \$11

The following table summarizes the impact on the fair value measurement of a change in the above unobservable inputs to reflect reasonably possible alternative assumptions:

Unobservable input	Alternative assumption	Change in fair value as at Dec. 31, 2019	Change in fair value as at Dec. 31, 2018
Basis point change in discount rates	-10 basis points decrease	6	5
	+10 basis points increase	(6)	(5)
Quarterly cash flows	+1% increase <sup>(1)</sup>	6	6
	- 1% decrease <sup>(1)</sup>	(6)	(6)

(1) Quarterly cash flows could vary by a higher rate than the assumed one percent factor.

## Investments in a Subsidiary of TransAlta Related to Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar

Changes in the investment balances are detailed as follows:

For the year ended Dec. 31	2019				
	Preferred shares tracking earnings and distributions of Wyoming Wind <sup>(1)</sup>	Preferred shares tracking earnings and distributions of Lakeswind <sup>(2)</sup>	Preferred shares tracking earnings and distributions of Mass Solar <sup>(3)</sup>	Preferred shares tracking earnings and distributions of Big Level and Antrim <sup>(4)</sup>	Total
Investment balance, beginning of year	126	—	—	—	126
IFRS 9 recognition at fair value	3	—	—	—	3
Adjusted balance, Jan. 1, 2018	129	—	—	—	129
Investment (redemption) <sup>(5)</sup>	—	30	69	41	140
Return of capital	(2)	—	(2)	—	(4)
Foreign exchange gain (loss) and changes in fair value recognized in earnings	7	1	(3)	—	5
Unrealized foreign exchange gain and changes in fair value recognized in OCI	3	2	5	1	11
Investment balance at Dec. 31, 2018	137	33	69	42	281
Investment	—	—	—	78	78
Return of capital	(10)	(1)	(6)	—	(17)
Unrealized foreign exchange loss recognized in OCI	(6)	(1)	(4)	(2)	(13)
Net change in fair value recognized in OCI	(2)	(1)	(6)	—	(9)
Investment balance at Dec. 31, 2019	119	30	53	118	320

(1) Principal amounts as at Dec. 31, 2019, and Dec. 31, 2018, was US\$92 million and US\$100 million for Wyoming Wind.

(2) Principal amounts as at Dec. 31, 2019, and Dec. 31, 2018, was US\$23 million and US\$23 million for Lakeswind.

(3) Principal amounts as at Dec. 31, 2019, and Dec. 31, 2018, was US\$46 million and US\$52 million for Mass Solar.

(4) Principal amounts as at Dec. 31, 2019, and Dec. 31, 2018, was US\$90 million for Big level and Antrim and US\$31 million for Big Level.

(5) Big Level investment includes acquisition costs represented by a US\$2 million development fee paid to TransAlta.

The investment in preferred shares of a subsidiary of TransAlta related to Wyoming Wind provides cumulative variable cash dividends, when declared, that are broadly equal to the pre-tax earnings and distributable profits of Wyoming Wind. The preferred shares were accounted for as FVTPL from Jan. 1, 2018 to Sept. 30, 2018.

During the second quarter of 2018, the Corporation acquired an economic interest in each of the Lakeswind wind farm and the Mass Solar solar projects from TransAlta. The Corporation's investments consist of tracking preferred shares in a subsidiary of TransAlta that provide the Corporation with economic interests based on cash flows broadly equal to the underlying net distributable profits (after satisfaction of tax equity obligations) of each of the entities that own Lakeswind and Mass Solar. The investments were accounted for as FVTPL from issuance to Sept. 30, 2018.

On Oct. 1, 2018, TransAlta's subsidiary that issued the Wyoming Wind, Lakeswind and Mass Solar tracking preferred shares amended the rights, privileges, restrictions and conditions of these shares. As a result of these amendments, prospectively from Oct. 1, 2018, the Corporation irrevocably elected to account for the shares as at FVTOCI, with changes in fair value and foreign exchange recognized in OCI as opposed to in net earnings. The Corporation has irrevocably elected to present changes in fair value of this investment as FVTOCI so as to not distort net earnings with unrealized changes in fair value, which can be temporary in nature and may arise due to factors not specifically related to the underlying future cash flows of the investments.

During 2018, the Corporation acquired their initial economic interest in the Big Level wind development project. The Corporation's investment consists of tracking preferred shares in a subsidiary of TransAlta that provides the Corporation with an economic interest based on cash flows broadly equal to the underlying net distributable profits of the entities that own Big Level. The Corporation has irrevocably elected to present changes in fair value of this investment as FVTOCI so as to not distort net earnings with unrealized changes in fair value, which can be temporary in nature and may arise due to factors not specifically related to the underlying future cash flows of the investments.

During 2019, the Corporation acquired an economic interest in the Antrim wind project and funded construction costs of the US Wind Projects by subscribing for additional preferred shares of a subsidiary of TransAlta.

The Corporation estimated the fair values of the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar utilizing significant unobservable inputs such as long-range forecasts as part of a discounted cash flow model, as outlined in Note 13(B)(I)(c). The forecasts extend over the expected operating lives of the underlying facilities, which range from 13 years to 30 years. Key assumptions in respect of significant unobservable inputs used in these Level III fair value measurements include the discount rate and the quarterly cash flows from the instruments.

The tables below summarize quantitative data regarding these unobservable inputs:

Unobservable input as at Dec. 31, 2019	Wyoming Wind	Big Level and Antrim <sup>(1)</sup>	Lakeswind	Mass Solar
Discount rate	5.6 %	7.8 %	8.4 %	6.3 %
Quarterly cash flows (millions)	Average of \$3	Average of \$4	Average of \$1	Average of \$1

(1) Projects achieved commercial operations in December 2019.

Unobservable input as at Dec. 31, 2018	Wyoming Wind	Big Level <sup>(1)</sup>	Lakeswind	Mass Solar
Discount rate	5.9 %	8.0 %	8.8 %	6.5 %
Quarterly cash flows (millions)	Average of \$3	Average of \$5	Average of \$1	Average of \$1

(1) Project under construction at Dec. 31, 2018.

The following table summarizes the impact on the fair value measurements of a change in the above unobservable inputs to reflect reasonably possible alternative assumptions:

Unobservable input	Alternative assumption	Change in total fair values as at Dec. 31, 2019 <sup>(1)</sup>	Change in fair value as at Dec. 31, 2018 <sup>(2)</sup>
Basis point change in discount rates	-10 basis points decrease	3	2
	+10 basis points increase	(3)	(2)
Quarterly cash flows	+1% increase	3	3
	- 1% decrease	(3)	(3)

(1) The fair value changes presented relate to Wyoming Wind, Big Level and Antrim, Mass Solar and Lakeswind in total.

(2) The fair value changes presented relates to Wyoming Wind, Big Level, Mass Solar and Lakeswind in total.

## 10. Interest Income and Interest Expense

The components of interest income are as follows:

Year ended Dec. 31	2019	2018
Interest income from investment in MRPS of TEA (Note 9)	—	42
Interest income on promissory notes due from subsidiaries of TransAlta (Note 16)	5	—
Other interest income	3	3
<b>Interest income</b>	<b>8</b>	<b>45</b>



The components of interest expense are as follows:

Year ended Dec. 31	2019	2018
Interest on long-term debt	37	36
Interest on lease obligations	1	—
Interest on TEA loan	—	4
Other net interest <sup>(1)</sup>	3	8
Accretion of provisions (Note 18)	4	3
<b>Interest expense</b>	<b>45</b>	<b>51</b>

(1) Consists of letters of credit and guarantees, credit facility commitments, other interest and banking fees (net of capitalized interest). For the year ended Dec. 31, 2019, interest on letters of credit and guarantees pledged by TransAlta on behalf of the Corporation was \$1 million (2018 - \$1 million). For the year ended Dec. 31, 2018, other interest includes \$4 million related to costs that were written off due to project-level financing that was no longer practicable and \$1 million of transaction costs relating to the acquisitions of Kent Breeze, Lakeswind and Mass Solar.

## 11. Income Taxes

### A. Consolidated Statements of Earnings

#### I. Rate Reconciliation

Year ended Dec. 31	2019	2018
<b>Earnings before income taxes</b>	<b>191</b>	<b>276</b>
Net earnings attributable to non-controlling interests	(4)	(5)
<b>Adjusted earnings before income taxes</b>	<b>187</b>	<b>271</b>
Statutory Canadian federal and provincial income tax rate (%) <sup>(1)</sup>	25.96 %	26.00 %
Expected income tax expense	49	70
Increase (decrease) in income taxes resulting from:		
Non-taxable (deductible) capital (gain) loss	7	(1)
Adjustments in respect of deferred income tax of previous years	2	—
Statutory and other rate differences	(20)	—
Investment in subsidiary	(13)	1
Finance and interest income not subject to tax	(17)	(42)
Other	—	7
<b>Income tax expense</b>	<b>8</b>	<b>35</b>

#### II. Components of Income Tax Expense

The components of income tax expense (recovery) are as follows:

Year ended Dec. 31	2019	2018
Current income tax expense	2	6
Adjustments in respect of deferred income tax of previous years	2	—
Deferred income tax expense resulting from changes in tax rates or laws <sup>(1)</sup>	(18)	—
Deferred income tax expense related to the origination and reversal of temporary differences	22	29
<b>Income tax expense</b>	<b>8</b>	<b>35</b>

(1) In the second quarter of 2019, the Corporation recognized a deferred income tax recovery of \$18 million related to a decrease in the Alberta corporate tax rate from 12% to 8%. The tax decrease will be phased in as follows: 11% effective July 1, 2019, 10% effective Jan. 1, 2020, 9% effective Jan. 1, 2021, and 8% effective Jan. 1, 2022. The statutory blended tax rate for 2019 was 25.96% (2018 - 26%).

Year ended Dec. 31	2019	2018
Current income tax expense	2	6
Deferred income tax expense	6	29
<b>Income tax expense<sup>(1)</sup></b>	<b>8</b>	<b>35</b>

(1) At implementation of IFRS 16, the effect of recognizing right-of-use assets and lease liabilities resulted in an increase in depreciation and interest expense, and a decrease in operating lease expenses. The net effect on current and deferred income tax expense will depend on the magnitude of the increase in interest expense and depreciation in comparison to the decrease in the expense for operating leases.

## B. Consolidated Statements of Changes in Equity

The aggregate current and deferred income tax related to items charged or credited to equity is as follows:

Year ended Dec. 31	2019	2018	Component of equity
Income tax expense (recovery) related to:			
Investments in subsidiaries of TransAlta	1	(1)	OCI
Common share issue costs	—	(2)	Common shares
<b>Income tax expense (recovery) reported in equity</b>	<b>1</b>	<b>(3)</b>	

## C. Components of Net Deferred Income Tax Liability

Significant components of the Corporation's net deferred income tax (asset) liability are as follows:

As at Dec. 31	2019	2018
Net operating and capital loss carryforwards <sup>(1)</sup>	(58)	(101)
Property, plant and equipment	305	343
Right-of-use assets and lease liabilities (net) <sup>(2)</sup>	1	—
Foreign exchange differences on US-denominated debt	—	(1)
<b>Net deferred income tax liability</b>	<b>248</b>	<b>241</b>

(1) Net operating losses expire between 2029 and 2038.

(2) Net effect of recognizing right-of-use assets and lease liabilities under IFRS 16.

As at Dec. 31	2019	2018
Deferred income tax assets	(16)	(17)
Deferred income tax liabilities	264	258
<b>Net deferred income tax liability</b>	<b>248</b>	<b>241</b>

(1) The deferred income tax assets presented on the Consolidated Statements of Financial Position are recoverable based on estimated future earnings and tax-planning strategies. The assumptions used in the estimate of future earnings are based on the Corporation's long-range forecasts.

## 12. Non-Controlling Interest

The Corporation's non-controlling interest is comprised of Natural Forces Technologies Inc.'s 17 per cent interest in Kent Hills Wind LP, which owns the Kent Hills (1, 2 and 3) wind facilities. Summarized financial information relating to Kent Hills Wind LP is as follows:

Year ended Dec. 31	2019	2018
<b>Results of operations</b>		
Revenues	44	45
Net earnings and total comprehensive income	25	28

As at Dec. 31	2019	2018
<b>Financial position</b>		
Current assets	66	20
Long-term assets	447	471
Current liabilities	(13)	(12)
Long-term liabilities	(237)	(241)
Total equity	(263)	(238)

## 13. Financial Instruments and Risk Management

### A. Financial Assets and Liabilities – Classification and Measurement

The following table outlines the carrying amounts and classifications of financial assets and liabilities:

Carrying value as at Dec. 31, 2019

	Derivatives - fair value through earnings	Amortized cost	Fair value through OCI	Fair value through earnings	Total
<b>Financial assets</b>					
Cash and cash equivalents	—	63	—	—	63
Accounts receivable	—	90	—	—	90
Investments in subsidiaries of TransAlta <sup>(1)</sup>	—	—	960	532	1,492
Other assets (loans receivable) <sup>(1)</sup>	—	160	—	—	160
<b>Financial liabilities</b>					
Accounts payable and accrued liabilities	—	37	—	—	37
Dividends payable	—	62	—	—	62
Risk management liabilities <sup>(1)</sup>	2	—	—	—	2
Debt and lease obligations <sup>(1)</sup>	—	961	—	—	961

(1) Includes current portion and long-term portion.

Carrying value as at Dec. 31, 2018

	Derivatives - fair value through earnings	Amortized cost	Fair value through OCI	Fair value through earnings	Total
<b>Financial assets</b>					
Cash and cash equivalents	—	73	—	—	73
Accounts receivable	—	115	—	—	115
Restricted cash	—	31	—	—	31
Investments in subsidiaries of TransAlta	—	489	1,006	—	1,495
Other assets (loans receivable) <sup>(1)</sup>	—	60	—	—	60
<b>Financial liabilities</b>					
Accounts payable and accrued liabilities	—	47	—	—	47
Dividends payable	—	62	—	—	62
Risk management liabilities	1	—	—	—	1
Debt <sup>(1)</sup>	—	932	—	—	932

(1) Includes current portion and long-term portion.

### B. Fair Value of Financial Instruments

The fair value of a financial instrument is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair values can be determined by reference to prices for that instrument in active markets to which the Corporation has access. In the absence of an active market, the Corporation determines fair values based on valuation models or by reference to other similar products in active markets.

Fair values determined using valuation models require the use of assumptions. In determining those assumptions, the Corporation looks primarily to external readily observable market inputs. In limited circumstances, the Corporation uses inputs that are not based on observable market data.

The Corporation's financial instruments measured at fair value are as follows:

As at	Dec. 31, 2019		Dec. 31, 2018	
	Fair value Level II	Fair value Level III	Fair value Level II	Fair value Level III
Preferred shares tracking adjusted TEA amounts	—	598	—	637
Preferred shares tracking earnings and distributions of Wyoming Wind	—	119	—	137
Preferred shares tracking earnings and distributions of Big Level and Antrim	—	118	—	42
Preferred shares tracking earnings and distributions of Mass Solar	—	53	—	69
Preferred shares tracking earnings and distributions of Lakeswind	—	30	—	33
Preferred shares tracking amortization term loan	532	—	—	—
Preferred shares of TEA	42	—	88	—
Net risk management liabilities	(2)	—	(1)	—

#### I. Level Determinations and Classifications

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, either directly or indirectly.

Fair values within the Level II category are determined through the use of quoted prices in active markets, which in some cases are adjusted for factors specific to the asset or liability, such as basis, credit valuation and location differentials.

The Corporation's commodity risk management Level II financial instruments include over-the-counter derivatives with values based on observable commodity futures curves and derivatives with inputs validated by broker quotes or other publicly available market data providers. Level II fair values are also determined using valuation techniques, such as option pricing models and interpolation formulas, where the inputs are readily observable.

In determining Level II fair values of other net risk management assets and liabilities, the Corporation uses observable inputs other than unadjusted quoted prices that are observable for the asset or liability, such as interest rate yield curves and currency rates. For certain financial instruments where insufficient trading volume or lack of recent trades exists, the Corporation relies on similar interest or currency rate inputs and other third-party information such as credit spreads. The fair value of the preferred shares of TEA and the preferred shares tracking amortizing term loan is determined by calculating an implied price based on a current assessment of the yield to maturity.

##### c. Level III

Fair values are determined using inputs for the asset or liability that are not readily observable.

In estimating the fair value of the preferred shares tracking adjusted TEA amounts and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar, the Corporation uses a discounted cash flow method, and makes estimates and assumptions about sales prices, production, capital expenditures, asset retirement costs and other related cash inflows and outflows over the life of the facilities, as well as the remaining life of the facilities. In developing these assumptions, management uses estimates of contracted and merchant prices, anticipated production levels, planned and unplanned outages, changes to regulations, and transmission capacity or constraints for the estimated remaining life of the facilities. Appropriate discount rates reflecting the risks specific to TEA, Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar are used in the valuations. Management also develops assumptions in respect of ongoing financing and tax positions of TEA, Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar. These estimates and assumptions are susceptible to change from period to period and actual results can, and often do, differ from the estimates, and can have either a positive or negative impact on the estimate of the fair value of the instrument, and may be material. Additional disclosures on these measurements are presented in Note 9.

## II. Commodity and Other Risk Management Assets and Liabilities

The Corporation's commodity-based risk management assets and liabilities relate to trading activities and certain contracting activities. Other risk management assets and liabilities include risk management assets and liabilities that are used in managing foreign-denominated receipts and expenditures, capital project expenditures and debt. To the extent applicable, changes in net risk management assets and liabilities for non-hedge positions are reflected within net earnings.

The following table summarizes the net risk management assets (liabilities):

	Cash flow hedges	Non-hedges	
	Level II	Level II	Total
Net risk management liabilities at Dec. 31, 2019	—	(2)	(2)
Net risk management liabilities at Dec. 31, 2018	—	(1)	(1)

## III. Financial Instruments – Not Measured at Fair Value

The carrying value of cash and cash equivalents, restricted cash, accounts receivable, accounts payable and accrued liabilities, and dividends payable approximates their fair value at the Consolidated Statements of Financial Position date due to their short-term nature.

The fair value of financial instruments not measured at fair value is as follows:

As at	Dec. 31, 2019		Dec. 31, 2018	
	Fair value Level II	Carrying value	Fair value Level II	Carrying value
MRPS	—	—	489	489
Loans receivable <sup>(1)</sup>	160	160	60	60
Long-term debt <sup>(2)</sup>	943	938	916	932

(1) Includes current portion and excludes interest income receivable.

(2) Includes current portion and excludes lease obligations.

The fair value of the long-term debt is determined by calculating an implied price based on a current assessment of the yield to maturity. The fair values of the loans receivable discussed in Note 16 approximate their carrying values. The fair value of the MRPS in the prior period was determined using a discounted cash flow methodology based on inputs including interest and currency rates and a discount rate reflecting the risks specific to TEA.

## IV. Non-Hedges

### Commodity

The Corporation enters into various derivative transactions as well as other contracting activities that do not qualify for hedge accounting. As a result, the related assets and liabilities are classified as FVTPL. Changes in the fair value of these derivatives are reported in earnings in the period the change occurs.

The fair value liability associated with commodity activities as at Dec. 31, 2019, is \$2 million (2018 – \$1 million). The outstanding commodity derivative instruments are as follows:

As at Dec. 31	2019		2018	
Type (thousands)	Notional amount sold	Notional amount purchased	Notional amount sold	Notional amount purchased
Electricity (MWh)	33	—	549	24
Natural gas (GJ)	—	378	1,506	4,340
Emissions (MWh)	115	35	4	3

## C. Nature and Extent of Risks Arising from Financial Instruments and Derivatives

### I. Credit Risk

Credit risk is the risk that customers or counterparties will cause a financial loss for the Corporation by failing to discharge their obligations, and the risk to the Corporation associated with changes in creditworthiness of entities with which commercial exposures exist. The Corporation actively manages its exposure to credit risk by assessing the ability of counterparties to fulfill their obligations under the related contracts before entering into such contracts. The Corporation makes detailed assessments of the credit quality of all counterparties and, where appropriate, obtains corporate guarantees, cash collateral, letters of credit or third-party insurance to support the ultimate collection of these receivables. For commodity trading, the Corporation sets strict credit limits for each counterparty and monitors exposures on a daily basis. If credit limits are exceeded, the Corporation will request collateral from the counterparty or halt trading activities with the counterparty.

The Corporation has limited direct exposure to credit risk, as the majority of its power sales contracts are with TransAlta, governments and large utility customers with extensive operations. Historically, the Corporation has not had collection issues associated with its receivables and the aging of receivables is reviewed on a regular basis to ensure the timely collection of amounts owing to the Corporation.

The Corporation's maximum exposure to credit risk at Dec. 31, 2019, without taking into account collateral held or right of set-off, and including indirect exposures arising from the Corporation's investments in subsidiaries of TransAlta discussed in Note 9, is detailed as follows:

Counterparty credit rating	Direct exposure	Indirect exposure <sup>(2)</sup>
	Receivables <sup>(1)</sup>	Trade accounts receivable
Investment grade	49	25
Non-investment grade	22	24
TransAlta and subsidiaries of TransAlta	132	—
No external rating	47	3

(1) Includes trade accounts receivable, distributions receivable from subsidiaries of TransAlta, risk management assets and loans receivable.

(2) Includes accounts receivable of TEA. Receivables of other economic interest investments were approximately \$3 million in total and are with investment grade and other high-quality counterparties.

The Corporation uses external credit ratings, as well as internal ratings in circumstances where external ratings are not available, to establish credit limits for counterparties. In certain cases, the Corporation will require security instruments such as parental guarantees, letters of credit, cash collateral or third-party credit insurance to reduce overall credit risk.

### II. Other Market Risks

The Corporation is exposed to market risks based on changes in the fair value of the preferred shares of TEA, the preferred shares tracking adjusted TEA amounts, and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level and Antrim, Lakeswind and Mass Solar. A one per cent increase (decrease) in the value of these securities would result in a \$10 million increase (decrease) in OCI as at Dec. 31, 2019.

The Corporation is exposed to market risk based on the changes in fair value of the preferred shares tracking the amortizing term loan. A one percent increase (decrease) in the value of this security would result in a \$5 million increase (decrease) in net earnings as at Dec. 31, 2019.

### III. Liquidity Risk

Liquidity risk relates to the Corporation's ability to access capital to be used in commodity hedging, capital projects, debt refinancing and general corporate purposes. The Corporation is focused on maintaining a strong financial position.

The Corporation manages its liquidity risk associated with its financial liabilities by utilizing cash flow generated from operations, capital markets and its third-party credit facility. The Corporation manages liquidity risk associated with its long-term debt through preparing and revising long-term external financing plans reflecting business plans and market availability of capital. The Corporation is in compliance with all financial covenants relating to its debt obligations as at Dec. 31, 2019.

The following table presents the contractual maturities of the Corporation's financial liabilities:

	2020	2021	2022	2023	2024	2025 and thereafter	Total
Accounts payable and accrued liabilities	37	—	—	—	—	—	37
Long-term debt	51	52	54	321	59	410	947
Lease obligations	1	1	1	1	1	18	23
Net risk management liabilities	1	1	—	—	—	—	2
Interest on long-term debt and lease obligations	38	36	33	27	20	84	238
Dividends payable	62	—	—	—	—	—	62
<b>Total</b>	<b>190</b>	<b>90</b>	<b>88</b>	<b>349</b>	<b>80</b>	<b>512</b>	<b>1,309</b>

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

#### IV. Foreign Currency Rate Risk

The Corporation has exposure to various currencies, such as the US and Australian dollars, as a result of investments in subsidiaries of TransAlta. The Corporation has mitigated the anticipated incremental exposure to the Australian- and US-dollar-denominated cash flows arising from the investment in the Australian Assets for the period through June 30, 2020, through the use of contractual agreements with TransAlta (see Note 9).

The possible effect on net earnings and OCI for the years ended Dec. 31, 2019 and 2018 due to changes in foreign exchange rates associated with financial instruments denominated in currencies other than the Corporation's functional currency is outlined below. The sensitivity analysis has been prepared using management's assessment that an average 3 cent (2018 – four cent) increase or decrease in these currencies relative to the Canadian dollar is a reasonable potential change over the next quarter.

As at Dec. 31	2019		2018	
Currency	Net earnings increase <sup>(1)</sup>	OCI gain <sup>(1)</sup>	Net earnings increase <sup>(1)</sup>	OCI gain <sup>(1)</sup>
USD	2	21	4	8
AUD	14	21	18	20
<b>Total</b>	<b>16</b>	<b>42</b>	<b>22</b>	<b>28</b>

(1) These calculations assume an increase in the value of this currency relative to the Canadian dollar. A decrease would have the opposite effect.

#### V. Interest Rate Risk

Interest rate risk arises when the future cash flows of financial instruments fluctuate due to changes in market interest rates, and can impact the Corporation's borrowing costs. All of the Corporation's long-term debt, except its credit facility, as described in Note 17, is comprised of fixed interest rate debt. The Corporation's interest rate risk management strategy is to minimize cash flow volatility due to interest rate risk by ensuring its long-term debt has fixed interest rates, where possible.

#### VI. Commodity Price Risk

The Corporation's contractual profile minimizes commodity price risk as substantially all power is sold under long-term contracts.

## 14. Property, Plant and Equipment

The changes in the cost of major classes of PP&E and related accumulated depreciation are as follows:

	Hydro generation	Wind generation	Gas generation	Capital spares	Total
<b>Cost</b>					
As at Dec. 31, 2017	276	1,863	648	18	2,805
Additions	5	36	19	3	63
Acquisitions (Note 4)	—	5	—	—	5
Disposals and retirements	(2)	—	(13)	—	(15)
Revisions and additions to decommissioning costs	(1)	(1)	(2)	—	(4)
Transfers	(3)	3	(4)	(8)	(12)
As at Dec. 31, 2018	275	1,906	648	13	2,842
Transfer to right-of-use assets	—	(7)	—	—	(7)
Additions	3	10	10	8	31
Disposals and retirements	(2)	(3)	(13)	—	(18)
Revisions and additions to decommissioning costs	(1)	(1)	10	—	8
Asset impairment	(2)	—	—	—	(2)
Transfers	—	1	3	(8)	(4)
<b>As at Dec. 31, 2019</b>	<b>273</b>	<b>1,906</b>	<b>658</b>	<b>13</b>	<b>2,850</b>
<b>Accumulated depreciation</b>					
As at Dec. 31, 2017	87	522	327	—	936
Depreciation	8	66	32	—	106
Acquisitions	—	1	—	—	1
Disposals and retirements	—	—	(9)	—	(9)
Transfers	(3)	—	(8)	—	(11)
As at Dec. 31, 2018	92	589	342	—	1,023
Transfer to right-of-use assets	—	(3)	—	—	(3)
Depreciation <sup>(1)</sup>	9	77	34	—	120
Disposals and retirements	(1)	—	(12)	—	(13)
Transfers	—	—	(5)	—	(5)
<b>As at Dec. 31, 2019</b>	<b>100</b>	<b>663</b>	<b>359</b>	<b>—</b>	<b>1,122</b>
<b>Carrying amount</b>					
As at Dec. 31, 2018	183	1,317	306	13	1,819
<b>As at Dec. 31, 2019</b>	<b>173</b>	<b>1,243</b>	<b>299</b>	<b>13</b>	<b>1,728</b>

(1) For further information regarding a one-time adjustment to wind generation depreciation in Q3 2019 as a result of changes in useful life, see Note 3.

During the third quarter of 2019, the Corporation recognized an impairment charge of \$2 million related to one Ontario hydro facility. The impairment arose mainly due to higher estimated sustaining capital requirements.

During 2019, the Corporation received \$4 million in insurance recovery related to a tower fire at Summerview in 2018. The proceeds were recorded as income as the tower was not rebuilt and capacity was reduced.



## 15. Intangible Assets

A reconciliation of the changes in the carrying amount of intangible assets is as follows:

	Power sale contracts <sup>(1)</sup>	Software	Total
Cost			
As at Dec. 31, 2017	170	10	180
Acquisition (Note 4)	36	—	36
Transfers	3	2	5
As at Dec. 31, 2018	209	12	221
Transfers	—	2	2
<b>As at Dec. 31, 2019</b>	<b>209</b>	<b>14</b>	<b>223</b>
Accumulated amortization			
As at Dec. 31, 2017	69	8	77
Amortization	10	1	11
Acquisition	6	—	6
Transfers	3	—	3
As at Dec. 31, 2018	88	9	97
Amortization	10	2	12
<b>As at Dec. 31, 2019</b>	<b>98</b>	<b>11</b>	<b>109</b>
Carrying amount			
As at Dec. 31, 2018	121	3	124
<b>As at Dec. 31, 2019</b>	<b>111</b>	<b>3</b>	<b>114</b>

(1) Comprised of values associated with certain power sale contracts that arose on TransAlta's acquisition of Canadian Hydro Developers and Kent Breeze, whereby the price of electricity to be delivered under the contracts exceeded the market price.

## 16. Other Assets

As at	Dec. 31, 2019	Dec. 31, 2018
Big Level and Antrim promissory notes (I)	113	23
Kent Hills Wind LP loan receivable (II)	47	37
Long-term prepaids	2	5
Total other assets	162	65
Less: current portion	(113)	(23)
<b>Total long-term other assets</b>	<b>49</b>	<b>42</b>

The promissory notes and loan receivable are classified as a debt instrument at amortized cost under IFRS 9, as the contractual cash flows are solely payments of principal and interest and the Corporation manages the loans receivable under a business model in which it will collect the contractual cash flows.

### I. Big Level and Antrim

The following promissory notes are outstanding:

Date of issuance (repayment)	Principal amount (\$US)	Canadian amount	
		Dec. 31, 2019	Dec. 31, 2018
Sept. 28, 2018	17	22	23
Jan. 2, 2019	33	44	—
March 29, 2019	52	68	—
Sept. 30, 2019	20	26	—
Promissory notes <sup>(1)</sup>	122	160	23
Interest receivable <sup>(1)</sup>	4	5	—
Dec. 20, 2019	(8)	(11)	—
Dec. 31, 2019	(32)	(41)	—
<b>Total Big Level and Antrim promissory notes (I)</b>	<b>86</b>	<b>113</b>	<b>23</b>

(1) On Dec. 16, 2019, all promissory notes outstanding were terminated, consolidated, and reissued to a subsidiary of TransAlta. This amount included \$US 4 million in accrued interest.

During 2019, the Corporation funded construction costs for the Big Level wind development project and funded the acquisition and subsequent construction costs for the Antrim wind development project by subscribing for \$138 million (US\$105 million) of interest-bearing promissory notes (including accrued interest) issued by the project entity, a subsidiary of TransAlta.

During December 2019, the Big Level and Antrim project entity, a subsidiary of TransAlta, assigned the total outstanding principal and interest balances of the promissory notes of \$165 million (US\$126 million) to another subsidiary of TransAlta. The project entity promissory notes were terminated and a new promissory note was issued to the Corporation. The Corporation received repayment of \$52 million (US\$40 million) of the promissory note from the tax equity proceeds received by the TransAlta project entities.

The interest-bearing promissory note outstanding at Dec. 31, 2019 bears interest at 3.97 per cent. The outstanding principal and accrued interest are due to be repaid to the Corporation on Sept. 30, 2021.

### II. Kent Hills Wind LP Loan Receivable

The Corporation's subsidiary, Kent Hills Wind LP, advanced \$39 million of the Kent Hills Wind bond financing proceeds to its 17 per cent partner on Nov. 2, 2017. The loan bears interest at 4.55 per cent, with interest payable quarterly, is unsecured and matures on Oct. 2, 2022. The balance of the loan receivable at Dec. 31, 2018 was \$37 million. During 2019, the Corporation advanced an additional \$10 million under the loan, comprised of earnings distributions and funds related to the release of the Kent Hills bond financing restricted cash.

Other assets also includes long-term prepaid expenses of \$2 million at Dec. 31, 2019 (2018 – \$5 million) as described in Note 24(B)(III).

## 17. Long-Term Debt and Lease Obligations

### A. Amounts Outstanding

As at	Dec. 31, 2019			Dec. 31, 2018		
	Carrying value	Face value	Interest <sup>(1)</sup>	Carrying value	Face value	Interest <sup>(1)</sup>
Credit facility	220	220	3.53 %	165	165	3.67 %
Pingston bond	45	45	2.95 %	45	45	2.95 %
Melancthon Wolfe Wind bond	298	302	3.83 %	332	336	3.83 %
New Richmond bond	134	136	3.96 %	140	142	3.96 %
Kent Hills Wind bond	241	244	4.45 %	250	252	4.45 %
Total long-term debt	938	947		932	940	
Lease obligations	23	—		—	—	
	961	947		932	940	
Less: current portion	(51)			(49)		
Less: current portion of lease obligations	(1)			—		
<b>Total long-term debt and lease obligations</b>	<b>909</b>			<b>883</b>		

(1) Interest rate reflects the stipulated rate or the average rate weighted by principal amounts outstanding.

**Pingston bond** bears interest at 2.95 per cent, with interest payable semi-annually and no principal repayments until maturity in May 2023, and is secured by the Pingston hydro facility, which at Dec. 31, 2019, had a carrying value of \$44 million (2018 – \$45 million).

**Melancthon Wolfe Wind bond** bears interest at 3.83 per cent, with principal and interest payable semi-annually in blended payments until maturity on Dec. 31, 2028, and is secured by a first ranking charge over all assets of the issuer, which primarily include the Melancthon and Wolfe Island wind farms, which at Dec. 31, 2019, had a combined carrying value of \$541 million (2018 – \$573 million).

**New Richmond bond** bears interest at 3.96 per cent, with principal and interest payable semi-annually in blended payments until maturity on June 30, 2032. The New Richmond bond is secured by a first ranking charge over all the assets of the issuer, New Richmond Wind LP, which primarily includes the New Richmond wind farm, which at Dec. 31, 2019, had a carrying value of \$176 million (2018 – \$184 million).

**Kent Hills Wind bond** issued in October 2017, bears interest at 4.45 per cent, with principal and interest payable quarterly in blended payments until maturity on Nov. 30, 2033. The Kent Hills Wind bond is secured by a first ranking charge over all of the assets of the issuer, Kent Hills Wind LP, which primarily includes the Kent Hills 1, 2 and 3 wind farms, which at Dec. 31, 2019, had a combined carrying value of \$207 million (2018 – \$220 million).

**Credit Facility** The Corporation has a \$700 million committed syndicated credit facility, of which \$381 million was available as at Dec. 31, 2019 (2018 – \$258 million,) including the undrawn letters of credit. The Corporation is in compliance with the terms of the credit facility.

In the second quarter of 2019, the credit facility was amended from \$500 million to \$700 million and extended to 2023. The \$700 million credit facility is the primary source for short-term liquidity after the cash flow generated from the Corporation's business. Interest rates on the credit facility vary depending on the type of borrowing selected: Canadian prime, bankers' acceptances, LIBOR or US base rate in accordance with a pricing grid that is standard for such a facility. The agreement is fully committed for four years, expiring in 2023.

### B. Restrictions

The Melancthon Wolfe Wind, Pingston, New Richmond and Kent Hills Wind bonds are subject to customary financing conditions and covenants that may restrict the Corporation's ability to access funds generated by the facilities' operations. Upon meeting certain distribution tests, typically performed once per quarter, the funds can be distributed by the subsidiary entities to their respective parent entity. The funds held in these entities will remain there until the next debt service coverage ratio can be calculated in the first quarter of 2020. As at Dec. 31, 2019, \$23 million of cash was subject to these financial restrictions (2018 – \$23 million).

### C. Covenants

As of Dec. 31, 2019, neither the Corporation nor any of its subsidiaries was in violation of any positive or negative covenants related to its debt.

### D. Restricted Cash

The Corporation has no restricted cash as at Dec. 31, 2019. In the prior year, the Corporation had \$31 million in restricted cash related to its Kent Hills Wind bond financing. The restricted cash was released in July 2019.

Additionally, the Melancthon Wolfe Wind, New Richmond and Kent Hills bonds require that certain reserve accounts be established and funded through cash held on deposit and/or by providing letters of credit. The Corporation has elected to utilize letters of credit to fund these reserve accounts.

### E. Principal Repayments of Long-Term Debt

	2020	2021	2022	2023	2024	2025 and thereafter	Total
Principal repayments	51	52	54	321	59	410	947

### F. Letters of Credit

The Corporation has an uncommitted \$100 million demand letter of credit facility, under which \$99 million of letters of credit have been issued as at Dec. 31, 2019 (2018 – \$77 million). Letters of credit are issued to counterparties under various contractual arrangements with the Corporation and certain subsidiaries of the Corporation. If the Corporation or its subsidiary does not perform under such contracts, the counterparty may present its claim for payment to the financial institution through which the letter of credit was issued. Any amounts owed by the Corporation or its subsidiaries under these contracts are reflected in the Consolidated Statements of Financial Position. All letters of credit expire within one year and are expected to be renewed, as needed, in the normal course of business.

## 18. Decommissioning Provisions

The change in the decommissioning and restoration provision balance is outlined below:

	<b>Total</b>
Balance, Dec. 31, 2017	44
Acquisition	1
Accretion	3
Revisions in estimated cash flow	(1)
Revisions in discount rates	(3)
Balance, Dec. 31, 2018	44
Accretion	4
Revisions in estimated cash flow	13
Revisions in discount rates	(5)
<b>Balance, Dec. 31, 2019</b>	<b>56</b>

Carrying value	
Balance, Dec. 31, 2018	44
Current portion	—
Non-current portion	44
<b>Balance, Dec. 31, 2019</b>	<b>56</b>
Current portion	—
Non-current portion	56

A decommissioning and restoration provision has been recognized for all generating facilities for which the Corporation is legally, or constructively, required to remove the facilities at the end of their useful lives and restore the sites to their original condition. The Corporation estimates that the undiscounted amount of cash flows required to settle the decommissioning and restoration obligations is approximately \$220 million (2018 – \$193 million), which will be incurred between 2029 and 2050. The majority of the costs will be incurred between 2035 and 2045.

## 19. Common Shares

### A. Authorized and Outstanding

The Corporation is authorized to issue an unlimited number of common shares without nominal or par value and an unlimited number of preferred shares. The common shares entitle the holders thereof to one vote per share at meetings of shareholders. The preferred shares are issuable in series and have such rights, restrictions, conditions and limitations as the Board may from time to time determine. No preferred shares have been issued.

The change in issued and outstanding common shares is as follows:

As at Dec. 31	2019		2018	
	Common shares (millions)	Amount (millions)	Common shares (millions)	Amount (millions)
Issued and outstanding, beginning of year	263.4	3,011	250.4	2,854
Public offering <sup>(1)</sup>	—	—	11.9	145
Dividend reinvestment plan	2.2	28	1.1	12
Issued and outstanding, end of year	265.6	3,039	263.4	3,011

(1) The share issuance in 2018, is net of \$7 million in issuance costs, less tax effects of \$2 million.

### B. Dividends

The declaration of dividends on the Corporation's common shares is at the discretion of the Board.

The following table summarizes the common share dividends declared in 2019 and 2018:

Dividends declared	Total dividends per share	Total dividends	TransAlta	Other shareholders
Year ended Dec. 31, 2019	0.93996	249	151	98
Year ended Dec. 31, 2018	0.93996	245	151	94

On Nov. 6, 2019, the Corporation declared a monthly dividend of \$0.07833 per common share payable on each of Jan. 31, 2020, Feb. 28, 2020, and March 31, 2020.

On Feb. 28, 2020, the Corporation declared a monthly dividend of \$0.07833 per common share payable on Apr. 30, 2020, May 29, 2020, and June 30, 2020.

### C. Dividend Reinvestment Plan (DRIP)

Commencing with the dividend payable on July 31, 2018, eligible shareholders may elect to automatically reinvest monthly dividends into additional common shares of the Corporation. The price for common shares under the DRIP will be 98 per cent of the average market price of the common shares for the five trading days on which not less than 500 common shares of the Corporation are traded immediately prior to the dividend payment date. Common shares under the DRIP will be issued from treasury.

## 20. Cash Flow Information

### A. Change in Non-Cash Operating Working Capital

Year ended Dec. 31	2019	2018
Source (use):		
Accounts receivable	37	(3)
Prepaid expenses	—	(2)
Inventory	(1)	(1)
Accounts payable and accrued liabilities	(13)	1
<b>Change in non-cash operating working capital</b>	<b>23</b>	<b>(5)</b>

### B. Changes in Liabilities from Financing Activities

	As at Jan. 1, 2019	Cash inflows	Cash outflows	Other	As at Dec. 31, 2019
Dividends payable	62	—	(221)	221	62
Long-term debt <sup>(1)</sup>	932	55	(49)	—	938
Lease obligations	16	—	(1)	8	23
<b>Total liabilities from financing activities</b>	<b>1,010</b>	<b>55</b>	<b>(271)</b>	<b>229</b>	<b>1,023</b>

(1) Includes current portion. Credit facility cash inflows and outflows included on a net basis.

	As at Jan. 1, 2018	Cash inflows	Cash outflows	Other	As at Dec. 31, 2018
Dividends payable	59	—	(230)	233	62
Long-term debt <sup>(1)</sup>	1,043	136	(247)	—	932
<b>Total liabilities from financing activities</b>	<b>1,102</b>	<b>136</b>	<b>(477)</b>	<b>233</b>	<b>994</b>

(1) Includes current portion. Credit facility cash inflows and outflows included on a net basis.

## 21. Capital

The Corporation's objectives in managing its capital are to ensure it is able to support day-to-day operations and meet required financial obligations, as well as to provide for growth opportunities and ensure stable and predictable distributions to shareholders.

The Corporation's capital is comprised of the following:

As at Dec. 31	2019	2018
Current portion of long-term debt and lease obligations	52	49
Less: available cash and cash equivalents	(63)	(73)
	(11)	(24)
Long-term debt and lease obligations	909	883
Equity		
Common shares	3,039	3,011
Deficit	(637)	(567)
Accumulated other comprehensive income	(134)	(89)
Non-controlling interest	45	41
	3,222	3,279
<b>Total capital</b>	<b>3,211</b>	<b>3,255</b>

In 2019, the Corporation's percentage of total net debt to capital remained relatively consistent with 2018. The increase in total debt and lease obligations is mainly due to increased borrowings under the credit facility and the recognition of lease liabilities due to accounting changes, partially offset by repayments of the Melancthon Wolfe Wind bond, New Richmond bond, and Kent Hills bond.

The Melancthon Wolfe Wind bond of \$302 million (2018 – \$336 million), the Pingston bond of \$45 million (2018 – \$45 million), the New Richmond bond of \$136 million (2018 – \$142 million) and the Kent Hills Wind bond of \$244 million (2018 – \$252 million) are subject to customary financing restrictions, which restrict the Corporation's ability to access funds generated by the facilities' operations (see Note 17).

At Dec. 31, 2019, the Corporation and its subsidiaries were in compliance with all financial covenants relating to debt obligations.

Dividends on the Corporation's common shares are at the discretion of the Board. In determining the payment and level of future dividends, the Board considers the financial performance, results of operations, cash flow and needs with respect to financing ongoing operations and growth, balanced against returning capital to shareholders.

## 22. Joint Operations

The Corporation's joint operations at Dec. 31, 2019, and 2018, include the following:

Joint operation	Ownership (per cent)	Description
McBride Lake	50	Wind facility in Alberta operated by the Corporation
Pingston	50	Hydro facility in British Columbia operated by the Corporation
Soderglen	50	Wind facility in Alberta operated by the Corporation

## 23. Commitments and Contingencies

### A. Contracts for Goods and Services

In the ordinary course of operations, the Corporation routinely enters into contracts for the purchase of goods and services and for leases of equipment. The Corporation also has several long-term service agreements in place for repairs and maintenance that may be required at its gas plant and on turbines at wind facilities. In addition, the Corporation has entered into the Management Agreement with TransAlta for general, administrative and operational services (Note 24). Approximate future payments under these and other contractual obligations are as follows:

	Long-term service agreements <sup>(1)</sup>	General administrative services <sup>(2)</sup>	Other <sup>(3)</sup>	Total
2020	18	19	5	42
2021	21	19	2	42
2022	30	20	2	52
2023	15	20	2	37
2024	13	20	1	34
2025 and thereafter	14	191	35	240
<b>Total</b>	<b>111</b>	<b>289</b>	<b>47</b>	<b>447</b>

(1) Long-term service agreements for wind and gas facilities.

(2) Excludes management fee charged directly to Wyoming Wind and includes the asset management and optimization fees for the Corporation's Sarnia cogeneration plant.

(3) Includes land access, other leases, purchase contracts and natural gas purchase and transportation.

### B. Guarantees

As part of the acquisition of the Australian Assets, the Corporation entered into a Guarantee and Indemnification Agreement in favour of TransAlta related to certain guarantees TransAlta has provided to third parties in respect of certain obligations of TEA (the "TEA Guarantees"). The Corporation has agreed to indemnify TransAlta from and against all claims, actions, proceedings, liabilities, losses, costs, expenses or damages against or incurred by TransAlta arising out of or in connection with the TEA Guarantees and to reimburse TransAlta in full for the amount of any payment made by TransAlta under and in accordance with the TEA Guarantees, relating to actions, omissions, events and circumstances that occur on or after May 7, 2015. As at Dec. 31, 2019, the total amounts guaranteed by the Corporation were \$512 million (2018 – \$538 million).



As consideration for this indemnity, TransAlta is required to pay the Corporation the Canadian-dollar equivalent of the guarantor fees it receives from TEA in respect of any of the TEA Guarantees, subject to the fixed rate conversion as described in Note 9.

### C. Litigation

In the normal course of business, the Corporation may become party to litigation, proceedings or regulatory investigations. While the Corporation is not directly involved in the ongoing dispute with Fortescue Metals Group Limited ("FMG") over the purported termination of the South Hedland PPA, the results of the litigation could impact the finance income received as a result of the economic interest in the Australian Assets. The Corporation, and TransAlta, as direct owner of the South Hedland Power Station, are precluded under IFRS accounting principles from recognizing the financial impacts of any contingent assets or gains prior to any such realization becoming virtually certain. TransAlta constructed the South Hedland Power Station for approximately \$570 million and the facility was expected to generate approximately \$80 million in EBITDA on an annual basis. The Corporation's investment in the Australian Assets is through an economic interest that provides after-tax finance and interest income based on EBITDA of the underlying facilities. TransAlta will recognize any financial impacts from the litigation only when it is concluded. The Corporation recognizes finance and interest income when declared on our investments in the Australian Assets, inclusive of the impacts of any contingent gains when recognized by TransAlta.

In addition, a second matter involves FMG's claims against TransAlta related to the transfer of the Solomon Power Station to FMG. FMG claims certain amounts related to the condition of the facility while TransAlta claims certain outstanding costs that should be reimbursed.

### D. Contribution Commitment

In April 2018, the Corporation entered into a Contribution Agreement with several subsidiaries of TransAlta related to funding the construction and other capital costs of the Big Level and Antrim wind development projects. We expect to invest a total of approximately US\$260 million in these projects. To date, the Corporation has funded approximately US\$212 million (see Notes 4, 9, 16). In conjunction with reaching commercial operation in December 2019, approximately US\$126 million of tax equity proceeds were raised by the project entities to partially fund the projects and the Corporation received repayment of US\$40 million in promissory notes from tax equity proceeds.

## 24. Related-Party Transactions and Balances

The Corporation has entered into certain agreements and transactions with TransAlta, which are discussed below.

### A. Related-Party Transactions

Related-party transactions include the finance income related to subsidiaries of TransAlta (Note 9) and interest income in 2018 related to investments in subsidiaries of TransAlta (Note 10) and the interest income in 2019 related to promissory notes due from subsidiaries of TransAlta (Note 10). Also, all derivatives of the Corporation are entered into on behalf of the Corporation by a subsidiary of TransAlta.

Significant related-party transactions that are not otherwise presented elsewhere consist of the following:

Year ended Dec. 31	2019	2018
Revenue from TransAlta PPAs (I)	35	36
Revenue from Environmental Attributes <sup>(1)</sup>	13	1
G&A Reimbursement Fee <sup>(2)</sup> (II)	17	16
Natural gas purchases (III)	9	7
Financial power swap sales– losses (gains) (III)	(1)	1
Interest expense on TEA loan	—	4
Asset optimization fee <sup>(3)</sup>	2	2
Interest expense on credit facility and letter of credit and guarantee fees	1	1

(1) The value of the Environmental Attributes was determined by reference to market information for similar instruments, including historical transactions with third parties.

(2) Excludes portion charged directly to the Wyoming Wind farm by TransAlta and in 2018, the Kent Hills 3 development fee.

(3) A subsidiary of TransAlta provides asset management and optimization services for the Corporation's Sarnia cogeneration plant. The Sarnia cogeneration plant is charged a fixed fee of approximately \$0.125 million per quarter, plus a variable fee of 1.6 per cent of its gross margin.

All of the above transactions are with TransAlta or subsidiaries of TransAlta.

### I. TransAlta PPAs

The Corporation has agreements with TransAlta for certain wind and hydro facilities, providing for the purchase by TransAlta, for a fixed price, of all of the power produced by such facilities. The fixed prices are adjusted annually for changes in the Consumer Price Index ("CPI"). TransAlta is only required to purchase power that is actually produced. Each TransAlta PPA has a term of 20 years or end-of-asset life, where end-of-asset life is less than 20 years.

### II. Management, Administrative and Operational Services Agreement ("Management Agreement")

Under the Management Agreement, TransAlta provides all the general administrative services, including key management personnel services, as may be required or advisable for the management of the affairs of the Corporation. As reimbursement for the services provided, the Corporation pays TransAlta a fee (the "G&A Reimbursement Fee"), adjusted annually for changes in the CPI. The G&A Reimbursement Fee is increased or decreased by an amount equal to five per cent of the amount of any increase or decrease, respectively, to the Corporation's total EBITDA resulting from the addition or divestiture of assets by the Corporation. On Feb. 28, 2020, the G&A Reimbursement Fee was amended to a calculation based on 5 per cent of Comparable EBITDA (see Note 27).

In the fourth quarter of 2018, the Corporation paid TransAlta a fee of \$2 million upon achieving commercial operation of the Kent Hills expansion, in lieu of the annual five per cent of incremental EBITDA that would otherwise be paid pursuant to the Management Agreement. In 2018, the Corporation also paid TransAlta a development fee of \$2 million in respect of the Big Level wind project.

TransAlta also provides operational and maintenance services under the Management Agreement, which generally includes all services as may be necessary or requested for the operation and maintenance of the Corporation's gas, wind and hydro facilities. TransAlta is reimbursed for all out-of-pocket and third-party fees and costs, including salaries, wages and benefits associated with managing and operating the facilities not captured by the G&A Reimbursement Fee.

### III. Natural Gas Purchases, Sales and Power Swap Sales

The Corporation's subsidiary, TransAlta (SC) LP, and TransAlta Energy Marketing Corp. ("TEMCO"), a Canadian subsidiary of TransAlta, are parties to a Gas Management Intercompany Agreement for the Sarnia facility to obtain its natural gas at the Dawn Hub from TEMCO in consideration of TEMCO being allowed to trade and profit from Sarnia's storage position. The terms of the Gas Management Intercompany Agreement are as follows:

- All gas burned at Sarnia is purchased from TEMCO priced at the ICE NGX Union Dawn Day Ahead Index (previously NGX Union Dawn Daily Spot Price) published by the Canadian Gas Price Reporter ("CGPR") on the day the gas is burned;
- TEMCO will purchase all customer make-up gas from Sarnia at the ICE NGX Union Dawn Day Ahead Index at the day of occurrence;
- All gas not consumed and used by Sarnia for hedging purposes is purchased by TEMCO at the ICE NGX Union Dawn Day Ahead Index; and
- In exchange for the gas, Sarnia grants TEMCO the unlimited right to inject, store and withdraw gas from the Sarnia storage asset for proprietary purposes.

Additionally, TransAlta (SC) LP remains responsible for all storage and transportation costs, which are based on the volumes of gas transported on the Union Gas pipeline from the hub to the plant.

### B. Related-Party Balances

Related-party balances include the investments in subsidiaries of TransAlta disclosed in Note 9, the risk management assets and liabilities disclosed in Note 13, and the guarantees provided by the Corporation on behalf of TransAlta and TEA disclosed in Note 23.

Significant related-party balances that are not otherwise presented elsewhere consist of the following:

As at Dec. 31	2019	2018
Trade and other receivables	19	41
Accounts payable and accrued liabilities (including interest payable)	8	11
Dividends payable	38	38
Letters of credit issued by TransAlta on behalf of the Corporation (I)	—	1
Guarantees provided by TransAlta on behalf of the Corporation (II)	314	106
Long-term prepaid – management fee (III)	2	2

#### I. Letters of Credit

TransAlta has provided letters of credit on behalf of the Corporation. Any amounts owed by the Corporation for obligations under the contracts to which the letters of credit pertain are reflected in the Consolidated Statements of Financial Position. All letters of credit expire within one year and are expected to be renewed, as needed, in the normal course of business. No amounts have been exercised by third parties under these arrangements.

#### II. Guarantees

If the Corporation does not perform under the related guarantee agreements, the counterparty may present a claim for payment from TransAlta.

#### III. Long-term Prepaid – Management Fee

In the fourth quarter of 2018, the Corporation paid a \$2 million one-time upfront fee upon achieving commercial operation of Kent Hills 3 and will be recognized over a 30-year period, in lieu of the annual five per cent of incremental EBITDA that would otherwise be paid pursuant to the Management Agreement. In 2018, the Corporation also paid TransAlta a development fee of \$2 million in respect to the Big Level wind project.

#### C. Key Management Personnel Services

The Corporation's key management personnel include the members of its Board and its Corporate Officers. Key management personnel services for Corporate Officers are provided through TransAlta and its subsidiaries and are part of the G&A Reimbursement Fee. Total compensation comprised of short-term employee benefits that pertain exclusively to director compensation, consisting of retainer and meeting fees and an allocation of director compensation towards grants of deferred share units and the purchase of common shares in the market, was approximately \$1 million for the year ended Dec. 31, 2019 (2018 – \$1 million).

## 25. Significant Customers

In addition to revenue from TransAlta (see Note 24), which represented 11 per cent of total revenues (2018 – eight per cent), the Corporation had revenues from one customer (2018 – one customer) that exceeded 10 per cent of the Corporation's total revenues at 42 per cent (2018 – 41 per cent).

## 26. Segment Disclosures

### A. Description of Reportable Segments

The Corporation has four reportable segments outlined below.

### B. Reported Segment Earnings (Loss) and Other Segment Information

#### I. Earnings Information

Year ended Dec. 31, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	231	26	181	—	438
Government incentives	8	—	—	—	8
<b>Total revenue</b>	<b>239</b>	<b>26</b>	<b>181</b>	<b>—</b>	<b>446</b>
Fuel, royalties and other costs	12	3	68	—	83
<b>Gross margin</b>	<b>227</b>	<b>23</b>	<b>113</b>	<b>—</b>	<b>363</b>
Operations, maintenance and administration	34	4	29	20	87
Depreciation and amortization	90	10	36	—	136
Taxes, other than income taxes	6	1	1	—	8
Asset impairment charge	—	2	—	—	2
Insurance recovery	(4)	—	—	—	(4)
<b>Operating income (loss)</b>	<b>101</b>	<b>6</b>	<b>47</b>	<b>(20)</b>	<b>134</b>
Finance income related to subsidiaries of TransAlta					76
Interest income					8
Interest expense					(45)
Change in fair value of financial assets					49
Foreign exchange loss					(31)
<b>Earnings before income taxes</b>					<b>191</b>

Year ended Dec. 31, 2018	Canadian Wind	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	199	18	197	—	414
Government incentives	15	1	—	—	16
Lease revenue	25	7	—	—	32
<b>Total revenue</b>	<b>239</b>	<b>26</b>	<b>197</b>	<b>—</b>	<b>462</b>
Fuel, royalties and other costs	12	3	83	—	98
<b>Gross margin</b>	<b>227</b>	<b>23</b>	<b>114</b>	<b>—</b>	<b>364</b>
Operations, maintenance and administration	34	4	29	19	86
Depreciation and amortization	76	10	36	—	122
Taxes, other than income taxes	5	2	1	—	8
<b>Operating income (loss)</b>	<b>112</b>	<b>7</b>	<b>48</b>	<b>(19)</b>	<b>148</b>
Finance income related to subsidiaries of TransAlta					129
Interest income					45
Interest expense					(51)
Foreign exchange gain					6
Change in fair value of financial assets					(1)
Impairment of investment					—
<b>Earnings before income taxes</b>					<b>276</b>

## II. Selected Consolidated Statements of Financial Position Information

Year ended Dec. 31, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Total
PP&E	1,249	173	306	1,728
Right-of-use assets	23	5	—	28
Intangible assets	110	2	2	114

Year ended Dec. 31, 2018	Canadian Wind	Canadian Hydro	Canadian Gas	Total
PP&E	1,322	183	314	1,819
Intangible assets	119	2	3	124

## III. Selected Consolidated Statements of Cash Flows Information

Year ended Dec. 31, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Additions to non-current assets:				
PP&E	18	3	10	31

Year ended Dec. 31, 2018	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Additions to non-current assets:				
PP&E	39	5	19	63

## 27. Subsequent Events

On Jan. 24, 2020, TEA repaid AU\$45 million of principal on the amortizing term loan owing to another subsidiary of TransAlta. As a result, pursuant to the terms of the tracking preferred shares that track this amortizing term loan a redemption was triggered and resulted in AU\$45 million of the tracking preferred shares being redeemed, which was paid to the Corporation in Canadian dollars at spot rates. The redemption is tied to operating cash at TEA and this will reduce the ability of TEA to declare and pay dividends on the TEA Tracking Preferred Shares, until operating cash flow has been recouped.

On Feb. 28, 2020, the Management Agreement was amended so that the G&A Reimbursement Fee will be calculated quarterly in an amount equal to 5 per cent of Comparable EBITDA of the immediately prior fiscal quarter, effective Jan. 1, 2020, without duplication for any indirect costs associated with the management, administrative, accounting, planning and other head office costs of TransAlta that reduce the dividends or distributions that would otherwise be payable to the Corporation on any of the tracking preferred shares.

# Plant Summary

As of January 2020	Facility	Installed capacity <sup>(1)</sup> (MW)	Ownership (%)	Owned capacity <sup>(1)</sup> (MW)	Region	Revenue source <sup>(2)</sup>	Contract expiry date
Wind	Summerview 1, AB	68	100 %	68	Western Canada	TransAlta PPA	2033
23 facilities	Summerview 2, AB	66	100 %	66	Western Canada	TransAlta PPA	2033
	Ardenville, AB	69	100 %	69	Western Canada	TransAlta PPA	2033
	Blue Trail, AB	66	100 %	66	Western Canada	TransAlta PPA	2033
	Castle River, AB <sup>(3)</sup>	44	100 %	44	Western Canada	TransAlta PPA	2027
	McBride Lake, AB	75	50 %	38	Western Canada	PPA	2024
	Soderglen, AB	71	50 %	35	Western Canada	TransAlta PPA	2033
	Cowley North, AB	20	100 %	20	Western Canada	TransAlta PPA	2031
	Sinnott, AB	7	100 %	7	Western Canada	TransAlta PPA	2031
	Macleod Flats, AB	3	100 %	3	Western Canada	TransAlta PPA	2033
	Melancthon, ON <sup>(4)</sup>	200	100 %	200	Eastern Canada	PPA	2026-2028
	Wolfe Island, ON	198	100 %	198	Eastern Canada	PPA	2029
	Kent Breeze, ON	20	100 %	20	Eastern Canada	PPA	2031
	Kent Hills, NB <sup>(5)</sup>	167	83 %	139	Eastern Canada	PPA	2035
	Le Nordais, QC	98	100 %	98	Eastern Canada	PPA	2033
	New Richmond, QC	68	100 %	68	Eastern Canada	PPA	2033
	Wyoming Wind, WY <sup>(6)(7)</sup>	140	100 %	140	United States	PPA	2028
	Lakeswind, MN <sup>(6)</sup>	50	100 %	50	United States	PPA	2034
	Big Level, PA <sup>(6)</sup>	90	100 %	90	United States	PPA	2034
	Antrim, NH <sup>(6)</sup>	29	100 %	29	United States	PPA	2039
Total Wind		1,547		1,446			
Hydro	Taylor, AB	13	100 %	13	Western Canada	TransAlta PPA	2033
13 facilities	Belly River, AB	3	100 %	3	Western Canada	TransAlta PPA	2033
	Waterton, AB	3	100 %	3	Western Canada	TransAlta PPA	2033
	St. Mary, AB	2	100 %	2	Western Canada	TransAlta PPA	2033
	Upper Mamquam, BC	25	100 %	25	Western Canada	PPA	2025
	Pingston, BC	45	50 %	23	Western Canada	PPA	2023
	Bone Creek, BC	19	100 %	19	Western Canada	PPA	2031
	Akolkolex, BC	10	100 %	10	Western Canada	PPA	2046
	Ragged Chute, ON	7	100 %	7	Eastern Canada	PPA	2029
	Misema, ON	3	100 %	3	Eastern Canada	PPA	2027
	Galetta, ON	2	100 %	2	Eastern Canada	PPA	2030
	Appleton, ON	1	100 %	1	Eastern Canada	PPA	2030
	Moose Rapids, ON	1	100 %	1	Eastern Canada	PPA	2030
Total Hydro		134		112			
Gas	Sarnia, ON	499	100 %	499	Eastern Canada	PPA	2022-2025
7 facilities	Southern Cross, WA <sup>(6)(8)(9)</sup>	245	100 %	245	Australia	PPA	2023
	South Hedland, WA <sup>(6)(9)</sup>	150	100 %	150	Australia	PPA	2042
	Parkeston, WA <sup>(6)(9)</sup>	110	50 %	55	Australia	PPA	2026
Total Gas		1,004		949			
Solar	Mass Solar, MA <sup>(6)</sup>	21	100 %	21	United States	PPA	2032-2035
1 facility							
Total Solar		21		21			
Total		2,706		2,527			

(1) Megawatts are rounded to the nearest whole number; columns may not add due to rounding.

(2) PPA refers to Power Purchase Agreement.

(3) Includes seven individual turbines at other locations.

(4) Comprised of two facilities.

(5) Comprised of three facilities.

(6) The Company holds an economic interest in this facility.

(7) Installed capacity lowered to 140 MW due to past turbine fires.

(8) Comprised of four facilities.

(9) Gas/diesel.

# Glossary of Key Terms

**AU\$** – means Australian dollars.

**Australian assets** – TransAlta's 450 MW Australian gas-fired generation assets that are fully operational and contracted under long-term contracts, including the 150 MW South Hedland Power Station, as well as the 270-kilometre Fortescue River Gas pipeline, the Parkeston plant ("Parkeston"), the four natural-gas and diesel-fired generation facilities that comprise Southern Cross Energy ("Southern Cross"), the Fortescue River Gas Pipeline, and South Hedland.

**Canadian assets** – 499 MW Sarnia cogeneration plant, 98 MW Le Nordais wind farm and 7 MW Ragged Chute hydro facility that are fully operational and contracted under long-term contracts. The assets are located in Ontario and Quebec.

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

**Credit facility** – A \$700 million external syndicated credit facility that is fully committed for four years, expiring in 2023. The facility is subject to a number of customary covenants and restrictions in order to maintain access to the funding commitments.

**Environmental attributes** – Renewable Energy Credits and carbon offsets, or other tradable or saleable instruments that represent the property rights to the environmental, social and other non-power qualities of renewable electricity generation that can be sold separately from the underlying physical electricity. Carbon offsets can be voluntarily generated from any project that reduces GHG emissions and not limited to renewable energy.

**FVTOCI** – Fair value through other comprehensive income, an accounting treatment for changes in fair value of derivative instruments under IFRS 9.

**G&A Reimbursement Fee** – The fee payable to TransAlta under the Management, Administrative and Operational Services Agreement to compensate TransAlta for the provision of all the general administrative services as may be required or advisable for the management of the business and affairs of the Corporation.

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

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

**Greenhouse gases (GHG)** – Gases having potential to retain heat in the atmosphere, including water vapour, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons and perfluorocarbons.

**Management, Administrative and Operational Services Agreement** – The agreement between TransAlta Corporation and TransAlta Renewables dated Aug. 9, 2013, as amended, that outlines the terms under which TransAlta manages and operates the facilities recognized as our economic interest. Under this agreement, TransAlta has been delegated, broad discretion to administer and manage the business and operations of the Company.

**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.

**MRPS** – Australian Mandatory Redeemable Preferred Shares are non-voting and rank subordinate to all present and future secured and unsecured indebtedness, but are senior to all other classes of issued and outstanding shares in the capital of the Australian subsidiary.

**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.

**Offset credit** – The carbon emission credit in units of tonnes of CO<sub>2</sub>e able to be used as an alternative carbon compliance mechanism to avoid carbon obligation costs from the large emitters GHG regulation. Credits are generated by completing an emission reduction project pursuant to a regulator approved quantification methodology to identify the creditable GHG reductions.

**PPA** – A power purchase and sale agreement between a power generator and a third-party acquirer of electricity.

**Preferred shares tracking amortizing term loan** – Preferred shares of subsidiaries of TransAlta, which track the underlying economic of an amortizing term loan payable owed by TEA to another subsidiary of TransAlta. The tracking preferred shares will be redeemed when scheduled or other principal repayments occur on the underlying loan. The dividends, as declared, and scheduled redemptions will be fixed in Canadian dollars until June 30, 2020.

**Renewable Energy Credits** – All right, title, interest and benefit in and to any credit, reduction right, offset, allocated pollution right, emission reduction allowance, renewable attribute or other proprietary or contractual right, whether or not tradable, resulting from the actual or assumed displacement or reduction of emissions, or other environmental characteristic, from the production of one megawatt-hour (MWh) of electrical energy from a facility utilizing certified renewable energy technology.

**South Hedland or South Hedland Power Station** – A 150 MW combined-cycle gas power station in South Hedland, Western Australia.

**TEA** – TransAlta Energy (Australia) Pty Ltd., an Australian subsidiary of TransAlta.

**TIER** – Technology Innovation and Emissions Reduction system, a GHG regulatory scheme launched by the Government of Alberta that replaced the Carbon Competitiveness incentive Regulation effective Jan. 1, 2020.

**Tracking Preferred Shares** – Preferred shares of subsidiaries of TransAlta, which provide the Corporation with cumulative variable dividends broadly equal to the underlying net distributable profits of each of Wyoming Wind, Lakeswind, Mass Solar, Big Level and Antrim, and TEA.

**TransAlta PPAs** – PPAs between TransAlta and the Corporation providing for the purchase by TransAlta, for a fixed price, of all of the power produced by certain wind and hydro facilities. The initial price payable in 2013 by TransAlta for output was \$30.00/MWh for wind facilities and \$45.00/MWh for hydro facilities, and these amounts are adjusted annually for changes in the consumer price index.

**TA Power** – TransAlta Power Ltd., a corporation incorporated pursuant to the federal laws of Canada and a wholly owned subsidiary of TransAlta.

**Unplanned outage** – The shutdown of a generating unit due to an unanticipated breakdown.

**US Wind and Solar assets** – TransAlta's wind farm and solar project assets that are fully operational and contracted under long-term contracts, including the 50 MW Lakeswind, 140 MW Wyoming Wind, 90 MW Big Level and 29 MW Antrim wind farms and the 21 MW Mass Solar solar project.

# Shareholder and Corporate Information

## Annual Meeting

The Annual Meeting of Shareholders will be held at 10:00 a.m. MST, on Tuesday, April 28, 2020, at the BMO Centre (Stampede Park) 20 Roundup Way SE, Calgary, Alberta.

## Transfer Agent

Computershare Trust Company of Canada  
Suite 600, 530 - 8th Ave SW  
Calgary, Alberta T2P 3S8

### Phone

North America:  
1.800.564.6253 toll-free  
Toronto/outside North America:  
514.982.7555

### Fax

1.888.453.0330

### Website

[www.investorcentre.com](http://www.investorcentre.com)

## Exchange

Toronto Stock Exchange (TSX)

## Ticker Symbols

TransAlta Renewables Inc.  
common shares: **TSX: RNW**

## Voting Rights

Common shareholders receive one vote for each common share held.

## Special Services for Registered Shareholders<sup>(1)</sup>

Service	Description
Account consolidations	Eliminate costly duplicate mailings by consolidating account registrations
Address changes and share transfers	Receive tax splits and dividends without the delays resulting from address and ownership changes

To use these services please contact our transfer agent.  
(1) Also available to non-registered shareholders.

## Dividend Declaration for Common Shares

Dividends on our common shares are at the discretion of the Board. In determining the payment and level of future dividends, the Board considers our financial performance, results of operations, cash flow and needs, with respect to financing our ongoing operations and growth, balanced against returning capital to shareholders. The Board continues to focus on building sustainable earnings and cash flow growth.

## Common Share Dividends Declared in 2020

Payment Date	Record Date	Ex-Dividend Date	Dividend
Mar 31, 2020	Mar 13, 2020	Mar 12, 2020	\$0.07833
Feb 28, 2020	Feb 14, 2020	Feb 13, 2020	\$0.07833
Jan 31, 2020	Jan 15, 2020	Jan 14, 2020	\$0.07833
Dec 31, 2019	Dec 13, 2019	Dec 12, 2019	\$0.07833
Nov 29, 2019	Nov 15, 2019	Nov 14, 2019	\$0.07833
Oct 31, 2019	Oct 15, 2019	Oct 11, 2019	\$0.07833
Sep 30, 2019	Sep 13, 2019	Sep 12, 2019	\$0.07833
Aug 30, 2019	Aug 15, 2019	Aug 14, 2019	\$0.07833
Jul 31, 2019	Jul 15, 2019	Jul 12, 2019	\$0.07833
Jun 28, 2019	Jun 14, 2019	June 13, 2019	\$0.07833
May 31, 2019	May 15, 2019	May 14, 2019	\$0.07833
Apr 30, 2019	Apr 15, 2019	Apr 12, 2019	\$0.07833

*Common share dividends are to be paid on or about the last business day of each calendar month to shareholders of record as of the close of the mid-month (previously first) business day of each calendar month. Dividends are paid in Canadian dollars.*

## Dividend Reinvestment Plan ("DRIP")

On May 31, 2018, the Board of Directors approved the implementation of a DRIP for Canadian holders of common shares. Commencing with the dividend payable on July 31, 2018, to shareholders of record at the close of business on July 13, 2018, eligible shareholders may elect to automatically reinvest monthly dividends into additional common shares of TransAlta Renewables. The price for common shares purchased under the DRIP will be 98 per cent of the average market price of the common shares for the five trading days on which not less than 500 common shares of the Company are traded immediately prior to the dividend payment date. Common shares acquired under the DRIP will be issued from the treasury of TransAlta Renewables.



## Submission of Concerns Regarding Accounting or Auditing Matters

TransAlta has adopted a procedure for employees, shareholders or others to report concerns or complaints regarding accounting or other matters on an anonymous, confidential basis to the Audit and Nominating Committee of the Board of Directors. Such submissions may be directed to the Audit and Risk Committee c/o the Corporate Secretary of the Corporation.

## Corporate Governance

TransAlta Renewables' Corporate Governance Guidelines, Audit Committee Charter and Code of Conduct are available on our website at [www.transaltarenewables.com](http://www.transaltarenewables.com).

## Ethics Helpline

The Board of Directors has established an anonymous and confidential internet portal, email address and toll-free telephone number for employees, contractors, shareholders and other stakeholders to contact with respect to accounting irregularities, ethical violations or any other matters they wish to bring to the attention of the Board.

The Ethics Helpline phone number is **1.855.374.3801 (US/Canada)** and **1.800.339276 (Australia)**  
Internet portal: [transalta.ethicspoint.com](http://transalta.ethicspoint.com)  
Email: [TA\\_ethics\\_helpline@transalta.com](mailto:TA_ethics_helpline@transalta.com)

Any communications to the Board of Directors may also be sent to [corporate\\_secretary@transalta.com](mailto:corporate_secretary@transalta.com)

## Corporate Officers

**John H. Kousinioris**  
President

**Brent Ward**  
Chief Financial Officer

**Aron J. Willis**  
Senior Vice-President, Growth

**Kathryn Higgins**  
Managing Director and Corporate Controller

**Scott T. Jeffers**  
Corporate Secretary

## Additional Information

Requests can be directed to:

**Investor Relations\***  
**TransAlta Corporation**  
110 - 12th Avenue SW  
P.O. Box 1900, Station "M"  
Calgary, Alberta  
T2P 2M1

**Phone**  
North America:  
1.800.387.3598 toll-free  
Calgary/outside North America:  
403.267.2520

**Email**  
[investor\\_relations@transalta.com](mailto:investor_relations@transalta.com)

**Fax**  
403.267.7405

**Website**  
[www.transaltarenewables.com](http://www.transaltarenewables.com)

In an effort to be environmentally responsible, please notify your financial institution if you received duplicate mailings of this annual report.

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\* In accordance with the Management, Administrative and Operational Services Agreement between TransAlta Corporation and TransAlta Renewables Inc., a copy of which is available on [www.sedar.com](http://www.sedar.com), TransAlta Corporation provides investor relations services to TransAlta Renewables.

**TransAlta Renewables Inc.**

110 - 12th Avenue SW

Box 1900, Station "M"

Calgary, Alberta

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**403.267.7110**

**[www.transaltarenewables.com](http://www.transaltarenewables.com)**