

Management's Discussion and Analysis

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

This MD&A should be read in conjunction with the unaudited interim condensed consolidated financial statements of TransAlta Renewables Inc. as at and for the three and six months ended June 30, 2019 and 2018 and should also be read in conjunction with the annual audited consolidated financial statements and MD&A contained within our Annual Report for the year ended Dec. 31, 2018. 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. Capitalized terms not otherwise defined herein have the respective meanings set forth in the Glossary of Key Terms. All dollar amounts in the tables presented in this MD&A are in millions of Canadian dollars except per share amounts which are presented in whole dollars to the nearest two decimals, unless otherwise noted. The interim condensed consolidated financial statements have been prepared in accordance with International Financial Reporting Standard ("IFRS") International Accounting Standards ("IAS") 34 *Interim Financial Reporting*. This MD&A is dated Aug. 7, 2019. Additional information respecting the Corporation, including its Annual Information Form, is available on SEDAR at www.sedar.com and on our website at www.transaltarenewables.com. Information on or connected to our website is not incorporated by reference herein.

Operations of the Corporation

As at June 30, 2019, TransAlta Renewables owned and operated 13 hydro facilities, 19 wind farms, and one gas plant in Canada, and held economic interests in TransAlta's Wyoming Wind wind farm, Lakeswind wind farm, Mass Solar solar projects, the Australian Assets, and the Big Level and Antrim US wind development projects. The Antrim acquisition closed on March 28, 2019.

In total, we own, directly or through economic interests, an aggregate of 2,445 MW of gross generating capacity⁽¹⁾ (2,414 MW of net generating capacity⁽¹⁾) in operation and 119 MW under development. TransAlta manages and operates these facilities on our behalf under the terms of a Management, Administrative and Operational Services Agreement, as amended.

We have an economic interest in the cash flows from, and not direct ownership of, the Australian Assets, the Wyoming Wind wind farm, the Lakeswind wind farm, and the Mass Solar solar projects. We also have an economic interest in the Big Level and Antrim US wind development projects, currently being constructed. The operational results of these assets are not consolidated into our reported results; however, the finance income we receive on the underlying investments is included in our consolidated net earnings.

Non-IFRS Measures

We evaluate our performance using a variety of measures. Certain of the measures discussed in this MD&A are not defined under IFRS and, therefore, should not be considered in isolation 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 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 unrealized mark-to-market gains and losses, the change in fair value of financial assets, and foreign exchange gains and losses; plus the Comparable EBITDA of the facilities in which we hold an economic interest, which is the facilities' reported EBITDA adjusted for: 1) contractually fixed management costs; 2) interest earned on the prepayment of certain transmission costs; and 3) mark-to-market gains and losses. 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.

(1) 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.

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 of these facilities 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 sustaining capital expenditures, current income tax expense and tax equity distributions. AFFO provides users with a proxy for the amount 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 payments on finance 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.

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.

Forward-Looking Statements

This MD&A includes forward-looking statements. 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", "project", "enable", "continue" or other comparable terminology. These statements are not guarantees of our future performance and are subject to risks, uncertainties and other important factors that could cause our actual performance to be materially different from that projected.

In particular, this MD&A contains forward-looking statements pertaining to our business and anticipated future financial performance including, but not limited to: the total cost of the Big Level and Antrim wind projects and the source of funding for such costs; the commercial operate dates for the Big Level and Antrim wind projects; implementation and changes to regulatory and environmental legislation, including the expectation for the Alberta Government to move away from the CCIR (as defined below) to a new regulation called the Technology Innovation and Emissions Reduction regime and the Ontario Government's electricity market review; statements included under "2019 Outlook", including Comparable EBITDA of \$425 million to \$455 million, adjusted funds from operations of \$320 million to \$350 million, cash available for distribution of \$270 million to \$300 million, production being in the range of 3,600 to 4,000 GWh, variations of operating costs, exposure to foreign currencies, net interest expense, availability of liquidity, blended income tax rate of 26% and anticipated cash tax horizon, sustaining capital of \$30 million to \$40 million and productivity capital of \$5 million, and the source of financing for capital expenditures; the outcome of litigation and disputes, including as it pertains to disputes with Fortescue Metals Group Ltd. ("FMG"); and the impact of accounting changes. 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; risks pertaining to the construction and commissioning of our new US Wind Development Projects; disruptions in the transmission and distribution of electricity; the effects of weather; disruptions in the source of water, wind, or gas required to operate our facilities; natural disasters; the threat of domestic terrorism, cyberattacks, and other man-made disasters; equipment failure and our ability to carry out repairs in a cost-effective or timely manner;

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; insurance coverage; our provision for income taxes; disputes with counterparties and legal and contractual proceedings involving the Corporation; reliance on key personnel; 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 Annual Information Form and Management's Discussion and Analysis for the year ended Dec. 31, 2018, which is available on SEDAR at www.sedar.com.

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. We cannot assure that projected results or events will be achieved.

Highlights

Consolidated Financial Highlights

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019 ⁽¹⁾	2018 ⁽¹⁾
Renewable energy production (GWh) ⁽²⁾	867	874	1,868	1,878
Revenues	111	107	238	232
Net earnings attributable to common shareholders	31	65	107	131
Comparable EBITDA ^(1,3)	111	98	227	208
Cash flow from operating activities	52	72	183	204
Adjusted funds from operations ⁽³⁾	80	73	174	170
Cash available for distribution ⁽³⁾	57	51	149	147
Net earnings per share attributable to common shareholders, basic and diluted	0.12	0.26	0.41	0.52
Adjusted funds from operations per share ⁽³⁾	0.30	0.29	0.66	0.68
Cash available for distribution per share ⁽³⁾	0.22	0.20	0.56	0.59
Dividends declared per common share	0.23	0.23	0.47	0.47
Dividends paid per common share ⁽⁴⁾	0.23	0.23	0.47	0.47

(1) 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 and losses. Both the current and prior period amounts have been adjusted to reflect this change.

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

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

(4) Includes DRIP non-cash payments.

As at	June 30, 2019	Dec. 31, 2018
Gas installed capacity (MW) ⁽¹⁾	949	949
Renewables installed capacity (MW) ⁽²⁾	1,496	1,496
Total assets	3,673	3,747
Long-term debt and lease obligations ⁽³⁾	957	932
Total long-term liabilities	1,217	1,192

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

(2) Includes US Wind and Solar installed capacity, excludes Big Level and Antrim wind projects under construction.

(3) Including current portion.

Comparable EBITDA for the three and six months ended June 30, 2019 increased by \$13 million and \$19 million, respectively, mainly due to an increase in US Wind and Solar EBITDA from the Lakeswind wind and Mass Solar solar economic interests acquired in May 2018, an increase in Canadian Wind Comparable EBITDA due to insurance proceeds related to a 2018 tower fire at Summerview and higher green attribute revenues and higher Comparable EBITDA at Canadian Gas due to favourable market impacts.

AFFO for the three and six months ended June 30, 2019 increased by \$7 million and \$4 million, respectively, mainly due to higher Comparable EBITDA and lower interest expense, partially offset by higher sustaining capital expenditures, distributions paid to subsidiaries' non-controlling interest, insurance recovery and higher tax equity distributions.

CAFD for the three and six months ended June 30, 2019 increased by \$6 million and \$2 million, respectively, mainly due to higher AFFO on owned assets.

Reported net earnings attributable to common shareholders for the three and six months ended June 30, 2019 decreased \$34 million and \$24 million, respectively, primarily as a result of a decrease in finance and interest income related to subsidiaries of TransAlta, higher foreign exchange losses, partially offset by an increase in the change in fair value of investments in subsidiaries of TransAlta, an increase in operating income, a decrease in interest expense, and an increase in income tax recovery due to the reduction in Alberta corporate tax rates. Lower finance and interest income resulted as \$26 million and \$36 million of distributions were recognized as returns of capital and redemptions in 2019. See the Financial Instruments and Significant and Subsequent Events sections of this MD&A for additional information on the changes in our investments.

Significant and Subsequent Events

Acquisition of US Wind Projects

On Feb. 20, 2018, we announced that we had entered into an arrangement to acquire economic interests in two construction-ready projects in the Northeast United States. The wind development projects consist of: (i) a 90 MW project located in Pennsylvania ("Big Level") which has a 15-year PPA with Microsoft Corp. and (ii) a 29 MW project located in New Hampshire ("Antrim") with two 20-year PPAs, with counterparties that have a Standard & Poor's credit ratings of A + or better. The commercial operation date for both projects is expected during the second half of 2019. A subsidiary of TransAlta acquired Big Level on March 1, 2018 and Antrim on March 28, 2019.

Pursuant to the arrangement with TransAlta, the Corporation expects to fund the total construction and acquisition costs of the Big Level and Antrim wind projects through the subscription of tracking preferred shares or interest bearing promissory notes. Cost estimates have been re-forecasted to US\$259 million due to weather related delays and higher interconnection costs. We expect to fund these costs using existing liquidity and tax equity.

On Jan. 2, 2019, the Corporation funded \$45 million (US\$33 million) of construction costs for the Big Level wind development project by subscribing for an interest-bearing promissory note issued by the project entity, a subsidiary of TransAlta.

On March 29, 2019, the Corporation funded the acquisition and already incurred construction costs of the Antrim wind development project in the amount of \$63 million (US\$47 million) and the final holdback for the Big Level purchase of \$7 million (US\$5 million) by subscribing for an interest-bearing promissory note issued by the project entity, a subsidiary of TransAlta.

On June 28, 2019, the Corporation funded construction costs for the Big Level and Antrim wind development projects by subscribing for preferred shares tracking earnings and distributions of Big Level/Antrim in the principal amount of \$21 million (US\$16 million).

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

The Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AUD\$509 million and approximately AUD\$41 million of the preferred shares of TEA for cash consideration. Immediately following those redemptions, the Corporation subscribed for AUD\$550 million of preferred shares of a subsidiary of TransAlta that track the underlying economics of an amortizing term loan payable owed by TEA to another subsidiary of TransAlta. The tracking preferred shares will pay dividends, as declared, equal to the interest payments 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 shares are accounted for at fair value, with changes in fair value recognized in earnings.

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 and he continues to serve as an independent director on the Board of Directors.

Reconciliation of Non-IFRS Measures

Presenting AFFO provides users with a proxy for the amount of cash generated from operating activities of our business and from investments in subsidiaries of TransAlta in which we have an economic interest, before changes in working capital. CAFD provides users with a proxy for the cash that will be available for distribution 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 Non-IFRS Measures section of this MD&A for additional information. AFFO per share and CAFD per share are calculated using the weighted average number of common shares outstanding during the period.

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

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Cash flow from operating activities	52	72	183	204
Change in non-cash operating working capital balances	19	32	(22)	1
Cash flow from operations before changes in working capital	71	104	161	205
Adjustments:				
Sustaining capital expenditures - owned assets	(10)	(7)	(17)	(12)
Distributions paid to subsidiaries' non-controlling interest	(4)	—	(4)	—
Finance and interest income - economic interests ⁽¹⁾	(13)	(59)	(39)	(96)
AFFO - economic interests ⁽¹⁾	36	35	73	73
AFFO	80	73	174	170
Deduct:				
Principal repayments of amortizing debt	(22)	(22)	(24)	(23)
Principal repayments of finance lease obligations	(1)	—	(1)	—
CAFD	57	51	149	147
Weighted average number of common shares outstanding in the period (millions)	264	252	264	251
AFFO per share	0.30	0.29	0.66	0.68
CAFD per share	0.22	0.20	0.56	0.59

(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 in this MD&A.

Presenting Comparable EBITDA 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 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. See the Non-IFRS Measures section of this MD&A for additional information.

The tables below reconcile our Reported EBITDA to Comparable EBITDA:

3 months ended June 30, 2019

	Reported	Adjustments	Economic interests	Comparable total
Revenues	111	—	51	162
Fuel, royalties and other costs of sales ⁽¹⁾	18	—	1	19
Gross margin	93	—	50	143
Operations, maintenance and administration ⁽²⁾	24	—	9	33
Taxes, other than income taxes	2	—	1	3
Insurance recovery	(4)	—	—	(4)
Finance income	(13)	13	—	—
Interest income	(3)	3	—	—
Change in fair value of financial assets	(2)	2	—	—
Foreign exchange loss	26	(26)	—	—
Earnings before interest, taxes, depreciation and amortization	63	8	40	111

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

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

3 months ended June 30, 2018

	Reported	Adjustments	Economic interests	Comparable total ⁽¹⁾
Revenues	107	–	47	154
Fuel, royalties and other costs of sales ⁽¹⁾	22	–	2	24
Gross margin	85	–	45	130
Operations, maintenance and administration ⁽²⁾	20	–	10	30
Taxes, other than income taxes	2	–	–	2
Finance income	(48)	48	–	–
Interest income	(11)	11	–	–
Change in fair value of financial assets	5	(5)	–	–
Foreign exchange gain	(2)	2	–	–
Earnings before interest, taxes, depreciation and amortization	119	(56)	35	98

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

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

6 months ended June 30, 2019

	Reported	Adjustments ⁽¹⁾	Economic interests	Comparable total
Revenues ⁽¹⁾	238	(1)	105	342
Fuel, royalties and other costs of sales ⁽²⁾	47	–	3	50
Gross margin	191	(1)	102	292
Operations, maintenance and administration ⁽³⁾	45	–	19	64
Taxes, other than income taxes	4	–	1	5
Insurance recovery	(4)	–	–	(4)
Finance income	(39)	39	–	–
Interest income	(4)	4	–	–
Change in fair value of financial assets	(33)	33	–	–
Foreign exchange loss	30	(30)	–	–
Earnings before interest, taxes, depreciation and amortization	192	(47)	82	227

(1) During the first quarter of 2019, we revised Comparable EBITDA to remove the unrealized mark-to-market (gains) losses.

(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.

6 months ended June 30, 2018

	Reported	Adjustments ⁽¹⁾	Economic interests	Comparable total ⁽¹⁾
Revenues ⁽¹⁾	232	(1)	95	326
Fuel, royalties and other costs of sales ⁽²⁾	50	–	3	53
Gross margin	182	(1)	92	273
Operations, maintenance and administration ⁽³⁾	41	–	20	61
Taxes, other than income taxes	4	–	–	4
Finance income	(75)	75	–	–
Interest income	(22)	22	–	–
Change in fair value of financial assets	4	(4)	–	–
Foreign exchange gain	(8)	8	–	–
Earnings before interest, taxes, depreciation and amortization	238	(102)	72	208

(1) During the first quarter of 2019, we revised Comparable EBITDA to remove the unrealized mark-to-market (gains) losses. 2018 results have been revised 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.

The tables below reconcile the Comparable EBITDA of the facilities in which we hold an economic interest to the reported finance and interest income:

3 months ended June 30	2019			2018		
	US Wind and Solar	Australian Gas	Total	US Wind and Solar ⁽¹⁾	Australian Gas	Total
Comparable EBITDA	8	32	40	3	32	35
Sustaining capital	—	(2)	(2)	—	—	—
Current income tax expense	—	(2)	(2)	—	—	—
Tax equity distributions	(2)	—	(2)	—	—	—
Other	—	2	2	—	—	—
AFFO	6	30	36	3	32	35
Return of Solomon proceeds	—	—	—	—	28	28
Return of capital and redemptions	(4)	(22)	(26)	(1)	—	(1)
Effects of changes in working capital and timing on finance income	—	3	3	(2)	(1)	(3)
Finance and interest income	2	11	13	—	59	59

3 months ended June 30	2019			2018		
	US Wind and Solar	Australian Gas	Total	US Wind and Solar ⁽¹⁾	Australian Gas	Total
Finance income	2	11	13	—	48	48
Interest income	—	—	—	—	11	11
Total finance and interest income	2	11	13	—	59	59

(1) Includes Lakeswind wind farm and Mass Solar solar projects acquired on May 31, 2018.

6 months ended June 30	2019			2018		
	US Wind and Solar	Australian Gas	Total	US Wind and Solar ⁽¹⁾	Australian Gas	Total
Comparable EBITDA	18	64	82	8	64	72
Sustaining capital	(1)	(2)	(3)	(1)	—	(1)
Current income tax expense	—	(4)	(4)	—	—	—
Tax equity distributions	(3)	—	(3)	—	—	—
Other	—	1	1	—	2	2
AFFO	14	59	73	7	66	73
Return of Solomon proceeds	—	—	—	—	28	28
Return of capital and redemptions	(9)	(27)	(36)	(1)	—	(1)
Effects of changes in working capital and timing on finance income	1	1	2	(1)	(3)	(4)
Finance and interest income	6	33	39	5	91	96

6 months ended June 30	2019			2018		
	US Wind and Solar	Australian Gas	Total	US Wind and Solar ⁽¹⁾	Australian Gas	Total
Finance income	6	33	39	5	70	75
Interest income	—	—	—	—	21	21
Total finance and interest income	6	33	39	5	91	96

(1) Includes Lakeswind wind farm and Mass Solar solar projects acquired on May 31, 2018.

Reconciliation of Comparable EBITDA to AFFO

3 months ended June 30	2019			2018		
	Owned assets	Economic interests	Total	Owned assets ⁽¹⁾	Economic interests ⁽²⁾	Total
Comparable EBITDA	71	40	111	63	35	98
Interest expense	(10)	–	(10)	(17)	–	(17)
Sustaining capital expenditures	(10)	(2)	(12)	(7)	–	(7)
Current income tax expense	–	(2)	(2)	(1)	–	(1)
Tax equity distributions	–	(2)	(2)	–	–	–
Distributions paid to subsidiaries' non-controlling interest	(4)	–	(4)	–	–	–
Realized foreign exchange loss	(2)	–	(2)	(1)	–	(1)
Insurance recovery	(4)	–	(4)	–	–	–
Other	3	2	5	1	–	1
AFFO	44	36	80	38	35	73

(1) Includes results of the Kent Breeze wind farm acquired on May 31, 2018.

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

6 months ended June 30	2019			2018		
	Owned assets	Economic interests	Total	Owned assets ^(1,3)	Economic interests ⁽²⁾	Total ⁽³⁾
Comparable EBITDA ⁽³⁾	145	82	227	136	72	208
Interest expense	(20)	–	(20)	(27)	–	(27)
Sustaining capital expenditures	(17)	(3)	(20)	(12)	(1)	(13)
Current income tax expense	(1)	(4)	(5)	(3)	–	(3)
Tax equity distributions	–	(3)	(3)	–	–	–
Distributions paid to subsidiaries' non-controlling interest	(4)	–	(4)	–	–	–
Realized foreign exchange loss	(1)	–	(1)	(1)	–	(1)
Provisions	–	–	–	2	–	2
Insurance recovery	(4)	–	(4)	–	–	–
Other	3	1	4	2	2	4
AFFO	101	73	174	97	73	170

(1) Includes results of the Kent Breeze wind farm acquired on May 31, 2018.

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

(3) During the first quarter of 2019, we revised Comparable EBITDA to remove the unrealized mark-to-market (gains) losses. 2018 results have been revised to reflect this change.

AFFO for the three and six months ended June 30, 2019 increased by \$7 million and \$4 million, respectively, mainly due to higher Comparable EBITDA and lower interest expense, partially offset by higher sustaining capital expenditures, distributions paid to subsidiaries' non-controlling interest, insurance recovery and higher tax equity distributions. The insurance recovery is deducted in arriving at AFFO as the recovery relates to claims on equipment.

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 be able to assess the 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 businesses 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 interim condensed consolidated financial statements in the Reconciliation of Non-IFRS Measures section of this MD&A.

The following tables summarize operational data and Comparable EBITDA by fuel type:

3 months ended June 30	Long-term average renewable energy production (GWh) ⁽¹⁾	Production (GWh)		Comparable EBITDA	
		2019	2018	2019	2018
Canadian Wind	622	585	621	47	41
Canadian Hydro	161	159	160	7	7
US Wind and Solar	132	123	93	8	3
Total - Renewable energy	915	867	874	62	51
Canadian Gas		222	281	23	19
Australian Gas		453	473	32	32
Corporate		—	—	(6)	(4)
Total		1,542	1,628	111	98

(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.

6 months ended June 30	Long-term average renewable energy production (GWh) ⁽¹⁾	Production (GWh)		Comparable EBITDA	
		2019	2018	2019 ⁽²⁾	2018 ⁽²⁾
Canadian Wind	1,482	1,413	1,465	106	100
Canadian Hydro	205	189	202	8	8
US Wind and Solar	286	266	211	18	8
Total - Renewable energy	1,973	1,868	1,878	132	116
Canadian Gas ⁽²⁾		661	590	42	37
Australian Gas		919	913	64	64
Corporate		—	—	(11)	(9)
Total		3,448	3,381	227	208

(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 remove the unrealized mark-to-market (gains) losses. 2018 results have been revised to reflect this change.

Renewable energy production for the three and six months ended June 30, 2019 decreased 7 GWh and 10 GWh, respectively, compared to the same periods in 2018. This decrease was mainly due to lower wind and water resources, partially offset by the acquisitions in May 2018 of Kent Breeze, Lakeswind and Mass Solar and the commissioning of the Kent Hills 3 wind expansion in mid-October 2018.

Canadian Wind

	3 months ended June 30		6 months ended June 30	
	2019	2018 ⁽¹⁾	2019	2018 ⁽¹⁾
Production (GWh)	585	621	1,413	1,465
Gross installed capacity (MW)	1,169	1,149	1,169	1,149
Revenues	56	53	128	125
Royalties and other costs of sales	3	3	6	7
Comparable gross margin	53	50	122	118
Operations, maintenance and administration	9	7	17	15
Insurance proceeds	(4)	—	(4)	—
Taxes, other than income taxes	1	2	3	3
Comparable EBITDA	47	41	106	100

(1) Includes the results of the Kent Breeze wind farm acquired on May 31, 2018.

Production for both the three and six months ended June 30, 2019 decreased 36 GWh and 52 GWh, respectively, compared to the same periods in 2018. The decreases in the quarter and year to date were mainly due to lower wind resources in

Alberta, partially offset by the acquisition of Kent Breeze on May 31, 2018 and the commissioning of the Kent Hills 3 wind expansion in mid-October 2018.

Comparable EBITDA for both the three and six months ended June 30, 2019 increased \$6 million compared to the same periods in 2018 mainly due to insurance proceeds related to a 2018 tower fire at Summerview and higher green attribute revenues, partially offset by higher operations, maintenance and administration costs due to long term service agreement cost escalations.

Canadian Hydro

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Production (GWh)	159	160	189	202
Gross installed capacity (MW)	112	112	112	112
Revenues	10	9	12	12
Royalties and other costs of sales	1	1	1	1
Comparable gross margin	9	8	11	11
Operations, maintenance and administration	1	1	2	2
Taxes, other than income taxes	1	—	1	1
Comparable EBITDA	7	7	8	8

Production for the six months ended June 30, 2019 decreased 13 GWh compared to the same period in 2018, primarily due to unfavourable water resources in British Columbia. Despite the lower production, Comparable EBITDA for the three and six months ended June 30, 2019 remained consistent with the same periods in 2018.

US Wind and Solar

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019 ⁽¹⁾	2018 ⁽¹⁾
Production (GWh)	123	93	266	211
Gross installed capacity (MW)	211	215	211	215
Revenues	11	6	24	13
Royalties and other costs of sales	—	1	1	1
Comparable gross margin	11	5	23	12
Operations, maintenance and administration	2	2	4	4
Taxes, other than income taxes	1	—	1	—
Comparable EBITDA	8	3	18	8

(1) Includes the results of the Lakeswind wind farm and Mass Solar solar projects acquired on May 31, 2018. The Big Level and Antrim wind development projects are excluded as they are under construction and have not achieved commercial operations.

As at June 30, 2019, US Wind and Solar consists of the Wyoming Wind wind farm, Lakeswind wind farm, and Mass Solar solar projects.

Production for the three and six months ended June 30, 2019 increased by 30 GWh and 55 GWh, respectively, compared to the same periods in 2018, primarily due to the acquisitions of economic interests in Lakeswind and Mass Solar in the second quarter of 2018.

Comparable EBITDA for the three and six months ended June 30, 2019 increased by \$5 million and \$10 million, respectively, compared to the same periods in 2018, due to the acquisitions of economic interests in Lakeswind and Mass Solar.

Canadian Gas

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019 ⁽¹⁾	2018 ⁽¹⁾
Production (GWh)	222	281	661	590
Gross installed capacity (MW)	499	506	499	506
Revenue ⁽¹⁾	45	45	97	94
Fuel and purchased power	14	18	40	42
Comparable gross margin	31	27	57	52
Operations, maintenance, and administration	8	8	15	15
Comparable EBITDA⁽¹⁾	23	19	42	37

(1) During the first quarter of 2019, we revised Comparable EBITDA to remove the unrealized mark-to-market (gains) losses. 2018 results have been revised to reflect this change.

Canadian Gas consists solely of the Sarnia facility.

Production for the three and six months ended June 30, 2019 decreased by 59 GWh and increased by 71 GWh, respectively. The decrease in production for the three months ended June 30, 2019 was mainly due to lower market demand in the second quarter. The increase in production for the six months ended June 30, 2019 was due to higher market demand in the first quarter of 2019, which more than offset the decrease in production in the second quarter. Comparable EBITDA for the three and six months ended June 30, 2019 increased by \$4 million and \$5 million, respectively, compared to the same periods in 2018, primarily due to favourable market impacts.

Australian Gas

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Production (GWh)	453	473	919	913
Gross installed capacity (MW)	450	450	450	450
Revenues	40	41	81	82
Fuel and purchased power	1	1	2	2
Comparable gross margin	39	40	79	80
Operations, maintenance and administration ⁽³⁾	7	8	15	16
Comparable EBITDA	32	32	64	64

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

Production for the three and six months ended June 30, 2019 decreased 20 GWh and increased 6 GWh, respectively, compared to the same periods in 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 for the three and six months ended June 30, 2019 was consistent with the same periods in 2018, which was expected due to the nature of the contracts.

Regulatory and Environmental Legislation

Refer to the Business Environment section of our 2018 Annual MD&A for further details about regulatory and environmental legislation that supplement the recent developments discussed below.

Alberta

Emissions Reductions

On Jan. 1, 2018, the Alberta government transitioned from the *Specified Gas Emitters Regulation* to the *Carbon Competitiveness Incentive Regulation* ("CCIR"). Under the CCIR, the regulatory compliance moved from a facility-specific compliance standard to a product or sectoral performance compliance standard. The CCIR will be in place until 2020 and will allow all renewables generation not currently receiving carbon crediting to receive credits for the 2018 and 2019 compliance years. The first incremental carbon credits will be delivered in mid-2019. The CCIR program is positive for the

Corporation as the wind facilities that did not receive credits under the previous standards will now be able to opt into the CCIR.

On April 16, 2019, the United Conservative Party ("UCP") won the Alberta provincial election with a majority government. The UCP have committed to moving away from the CCIR to a new regulation called the Technology Innovation and Emissions Reduction ("TIER") regime, expected to take effect on Jan. 1, 2020.

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

The Alberta government intends to draft and pass the new TIER regulation during the Fall session with TIER replacing CCIR on Jan. 1, 2020. Upon finalization of the program, the TIER system will be submitted for review by the federal government. The 2019 review process is expected to be completed in the fourth quarter of 2019.

Electricity Market Review

On July 24, 2019, the UCP cancelled the capacity market after completing their 90 day review process. The Alberta government has indicated they will continue with the energy-only market structure. This market structure is expected to be supportive of the Corporation's current and future strategies.

Ontario

Large Greenhouse Gas Emitter Regulations

Ontario large emitters are currently subject to the Federal backstop Output-Based Pricing System ("OBPS") regulation and are expected to remain under this regulation until at least the next Federal review in 2022. On July 4, 2019, the Government of Ontario released the final regulations for the provincial Greenhouse Gas Emissions Performance Standards ("EPS"). The EPS establishes greenhouse gas emission limits on covered facilities. Large emitters generating over 50,000 tonnes CO₂e ("tCO₂e") or more per year will be covered with an opt-in provision for those emitters between 10,000 and 50,000 tCO₂e annually. The carbon emissions limit for electricity is set at 420 tCO₂e/GWh. The program also provides a method that accounts for the carbon efficiency of cogeneration units.

Facilities with emissions above the set reduction requirements can comply by: 1) buying excess emission units from the regulator; 2) making reductions at their facility; or 3) using emission performance units generated by facilities emitting below their emission intensity limit.

The first compliance period under the EPS will begin on January 1 in the year in which Ontario is removed from the list of provinces to which the federal OBPS applies.

Electricity Market Review

Ontario is implementing the first stage of a capacity market that will allow demand response and existing, uncontracted generators to participate. The first auction will be held in December 2019 for the 2020 obligation period. Sarnia is contracted and will not participate. This capacity market will evolve and allow participation by imports and uncontracted capacity at contracted facilities. Sarnia may be able to participate in the 2022 or later auctions.

Ontario is planning to implement major changes to its energy market, including the adoption of nodal pricing (transmission congestion pricing) and a day-ahead market. These changes are not expected to have any significant impacts on prices in Southern Ontario where Sarnia is located.

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.

Our liquidity needs are met through a variety of sources, including cash generated from operations, our line of credit and capital markets. Our primary uses of funds are growth, operational expenses, sustaining capital expenditures, distributions to the non-controlling interest, interest and principal payments on debt, and dividends.

Financial Position

The following table highlights significant changes in the Consolidated Statements of Financial Position from Dec. 31, 2018 to June 30, 2019:

	Increase/ (decrease)	Primary factors explaining change
Cash and cash equivalents	(54)	Timing of receipts and payments
Accounts receivables	(17)	Timing of receipts and seasonality of production
Prepaid expenses	5	Timing of payments for insurance and property tax
Property, plant and equipment, net	(42)	Depreciation expense, disposals and retirements, partially offset by additions
Intangible assets	(5)	Decrease due to depreciation expense
Right-of-use assets	23	Transfers from property, plant and equipment and other assets and new right of use assets recognized under IFRS 16 (see Accounting Changes section of this MD&A for further details)
Other assets (including current portion)	114	Additional funding of construction costs for the Big Level and acquisition of Antrim wind development projects through promissory notes
Investments in subsidiaries of TransAlta (including current portion)	(97)	Decrease due to returns of capital and lower fair values on investments in TEA and US Wind and Solar, partially offset by an investment in the Big Level/Antrim US wind development projects
Accounts payable and accrued liabilities	(10)	Timing of payments and accruals
Long-term debt and lease obligations (including current portion)	25	Increase in drawings on the Credit Facility and recognition of lease liabilities (see Accounting Changes section of this MD&A), partially offset by scheduled principal repayments on non recourse bonds
Equity attributable to shareholders	(92)	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 the DRIP

Cash Flows

The following tables highlight significant changes in the Condensed Consolidated Statements of Cash Flows for the three and six months ended June 30, 2019, compared to the same periods in 2018:

3 months ended June 30	2019	2018	Change	Primary factors explaining change
Cash and cash equivalents, beginning of period	50	59	(9)	
Provided by (used in):				
Operating activities	52	72	(20)	Lower cash earnings of \$33 million and favourable changes in working capital of \$13 million
Investing activities	(21)	(197)	176	Lower investments in subsidiaries of TransAlta of \$119 million, higher proceeds on redemptions and return of capital on investment in subsidiaries of TransAlta of \$25 million, lower acquisitions of \$39 million and a decrease in additions to property, plant and equipment of \$14 million, partially offset by unfavourable changes in working capital of \$22 million
Financing activities	(62)	90	(152)	Lower common shares issuance proceeds of \$144 million and a decrease in borrowings under credit facility of \$75 million, partially offset by lower repayments of Canadian Assets working capital loan of \$63 million and lower dividends paid on common shares of \$5 million
Cash and cash equivalents, end of period	19	24	(5)	

6 months ended June 30	2019	2018	Change	Primary factors explaining change
Cash and cash equivalents, beginning of period	73	20	53	
Provided by (used in):				
Operating activities	183	204	(21)	Lower cash earnings of \$44 million and favourable changes in working capital of \$23 million
Investing activities	(136)	(203)	67	Increase in proceeds on redemptions and return of capital on investments in subsidiaries of TransAlta of \$565 million, lower acquisitions of \$39 million and lower additions of property, plant and equipment of \$11 million, partially offset by higher investment in subsidiaries of TransAlta of \$411 million, higher loans receivable from subsidiary of TransAlta of \$115 million and unfavourable changes in working capital of \$24 million
Financing activities	(101)	3	(104)	Lower common shares issuance proceeds of \$144 million and a decrease in borrowings under credit facility of \$30 million, partially offset by lower repayments of Canadian Assets working capital loan of \$63 million and lower dividends paid on common shares of \$9 million
Cash and cash equivalents, end of period	19	24	(5)	

Debt and Lease Obligations

Debt totalled \$957 million as at June 30, 2019, compared to \$932 million as at Dec. 31, 2018. The net increase in debt as at June 30, 2019 is due to increased borrowings under the Credit Facility, partially offset by scheduled principal repayments of our non recourse bonds in the second quarter of 2019. Additionally, as a result of changes in accounting rules, effective Jan. 1, 2019, we recognized approximately \$16 million in lease obligations (see the Accounting Changes section of this MD&A).

In the second quarter of 2019, the credit facility was amended from \$500 million to \$700 million and extended. As at June 30, 2019, we had a \$700 million syndicated Credit Facility available to us for general corporate purposes, including financing ongoing working capital requirements, sustaining capital requirements and growth opportunities. As at June 30, 2019, there was \$200 million (Dec. 31, 2018 - \$165 million) of credit utilized under the facility which was comprised of actual drawings. We also have an uncommitted \$100 million demand letter of credit facility, under which \$92 million (Dec. 31, 2018 - \$77 million) of letters of credit have been issued as at June 30, 2019.

We are subject to customary positive and negative covenants related to our debt. We are not in violation of any of these covenants.

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 first quarter test will remain there until the next debt service coverage ratio can be calculated in the third quarter of 2019. As at June 30, 2019, \$13 million of cash was subject to these financial restrictions (Dec. 31, 2018 - \$23 million).

Additionally, the Melancthon Wolfe Wind, Pingston, New Richmond and Kent Hills Wind 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 use letters of credit as at June 30, 2019 and Dec. 31, 2018. Accordingly, no cash was subject to these restrictions.

As at June 30, 2019, the Corporation had \$31 million (Dec. 31, 2018 - \$31 million) of cash related to its Kent Hills Wind bond financing that was held in a construction reserve account. The restricted cash was released from the construction reserve account in July 2019.

Share Capital

On June 30, 2019, we had approximately 264 million common shares issued and outstanding (Dec. 31, 2018 - 263 million). During the six months ended June 30, 2019, TransAlta Renewables issued 1.1 million shares under the dividend reinvestment plan, for total equity value of \$14 million.

On Aug. 7, 2019, we had approximately 265 million common shares issued and outstanding.

Other Consolidated Results

Interest Expense

The components of interest expense are shown below:

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Interest on long-term debt	9	10	18	18
Interest on TEA loan	—	2	—	3
Other interest ⁽¹⁾	1	5	2	6
Accretion of provisions	1	—	2	1
Interest expense	11	17	22	28

(1) Consists of letters of credit and guarantee fees, credit facility commitment fees, other interest and banking fees, net of capitalized interest.

For the three and six months ended June 30, 2019, interest expense decreased compared to the same periods in 2018, primarily due to interest expense on the TEA loan and higher other interest expense in 2018.

Income Taxes

Income tax expense for the three and six months ended June 30, 2019 decreased \$18 million and \$19 million, respectively, compared to the same periods in 2018. 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 lower tax rates 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.

Other Comprehensive Income (“OCI”)

During the three and six months ended June 30, 2019, we recognized a \$91 million and \$89 million decrease in net change in fair value in OCI, respectively (2018 - nil and \$4 million increase, respectively). The changes during the period are primarily attributable to the decrease in fair value on the investments in the preferred shares tracking adjusted TEA amounts and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level/Antrim, Lakeswind and Mass Solar. See Note 5 of our interim condensed 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:

	3 months ended June 30					Total
	Canadian Wind	Canadian Hydro	US Wind and Solar	Canadian Gas	Australian Gas	
2019 Total sustaining expenditures	3	1	—	6	2	12
2018 Total sustaining expenditures	1	—	—	6	—	7

6 months ended June 30

	Canadian Wind	Canadian Hydro	US Wind and Solar	Canadian Gas	Australian Gas	Total
2019 Total sustaining expenditures	4	2	1	11	2	20
2018 Total sustaining expenditures	2	1	1	9	—	13

Sustaining capital expenditures for the three and six months ended June 30, 2019 increased by \$5 million and \$7 million, respectively, compared with 2018, mainly due to higher routine and planned major maintenance spending at our Canadian Gas, Australian Gas, and Canadian Wind facilities.

2019 Outlook

The following table outlines our expectation on key financial targets for 2019:

Measure	Target
Comparable EBITDA	\$425 million to \$455 million
Adjusted funds from operations	\$320 million to \$350 million
Cash available for distribution	\$270 million to \$300 million

Operations

Production

In 2019, we expect renewable energy production from our wind, solar and hydro assets, including those owned through economic interests, to be in the range of 3,600 to 4,000 GWh. Our gas-fired generation primarily receives compensation for capacity, and accordingly, production is not a significant performance indicator of those businesses.

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 at most of our wind facilities to stabilize operations and maintenance costs. Operations and maintenance costs at the balance of our wind and hydro sites are managed by TransAlta on our behalf. 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 the Canadian and the Australian and US dollars as a result of our economic interests in the Australian Assets and the US Wind and Solar Assets. The securities acquired from TransAlta and the related dividends received are denominated in Canadian, Australian and US dollars. TransAlta provides us with protection against fluctuations in the exchange rates until June 30, 2020, on the 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 those currencies.

Our strategy is to mitigate foreign exchange risk on foreign-denominated cash flows to ensure our ability to meet dividend requirements. Cash flows relating to the Australian Assets are predominately hedged under agreements with TransAlta. In addition, we entered into foreign exchange forwards to hedge US dollar cash flows primarily related to the US Wind and Solar assets.

Interest Expense

Interest expense, including the impact of interest expense related to lease liabilities, for 2019 is expected to be similar to 2018. Our syndicated credit agreement gives us access to direct borrowings at a variable interest rate. In June 2019, the syndicated credit facility was increased to \$700 million. As a result, we have some exposure to interest rate risk, and changes in interest rates can affect the amount of net interest expense incurred.

Net Debt, Liquidity and Capital Resources

If there are low wind volumes, low hydro resources, low solar 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 26 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 on our owned assets. 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 CAFD and our dividend could decrease.

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 2019, our estimate for total sustaining capital expenditures for owned assets and those in which we own an economic interest ranges from \$30 million to \$40 million. We also expect to spend approximately \$5 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 Big Level and Antrim wind development projects. Cost estimates have been re-forecasted to US\$259 million due to weather related delays and higher interconnection costs in these projects. As at June 30, 2019, we have invested approximately US\$149 million. See the Significant and Subsequent Events section of this MD&A for further details.

Financing

Financing for these capital expenditures is expected to be provided primarily by cash flow from operating activities, capital markets transactions and our Credit Facility.

Contingencies

In the normal course of business, we may become party to litigation, proceedings, or regulatory investigations. While we are 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 our economic interest in the Australian Assets. We, 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. Our investment in the Australian Assets is through an economic interest which 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. We recognize 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.

Financial Instruments

Refer to Note 12 of our most recent annual consolidated financial statements and Note 8 of our interim condensed consolidated financial statements for the three and six months ended June 30, 2019 for details on Financial Instruments. Also, refer to the Financial Instruments section of our most recent annual MD&A for additional details.

Our risk management profile and practices have not changed materially since Dec. 31, 2018, except as follows: in 2019, our investment in the TEA MRPS, which was not recognized at fair value, was redeemed and we invested in preferred shares of a subsidiary of TransAlta that track the underlying economics of an amortizing term loan payable owed by TEA to another subsidiary of TransAlta and which are recognized at fair value through profit or loss. During the three and six months ended June 30, 2019, we recognized a \$2 million and \$33 million increase, respectively, in fair value in net earnings. This increase mainly resulted from lower forecast interest rates in the Australian market.

At June 30, 2019, Level III financial instruments were comprised of financial assets with a carrying value of \$824 million (Dec. 31, 2018 - \$918 million). The decrease is primarily due to the changes in fair value, foreign exchange losses and returns of capital on the preferred shares tracking adjusted TEA amounts, Wyoming Wind and Mass Solar, partially offset by the issuance of preferred shares of Big Level/Antrim.

Refer to Notes 5 and 8 in the interim condensed consolidated financial statements for the three and six months ended June 30, 2019 for additional information on these investments and fair value measurements.

Related-Party Transactions and Balances

Related-Party Transactions

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

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Revenue from TransAlta PPAs	8	9	15	18
Revenue from Green Attributes ⁽¹⁾	8	—	9	1
Finance income from investments in subsidiaries of TransAlta	13	48	39	75
Interest income from investments in and loans to subsidiaries of TransAlta	2	11	2	21
G&A Reimbursement Fee ⁽²⁾	4	4	8	8
Natural gas purchases	—	2	6	5
Financial power swap sales - losses (gains)	(1)	—	(1)	—
Interest expense on TEA loan	—	2	—	3
Asset optimization fee ⁽³⁾	—	—	1	1

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

(2) Includes portion charged directly to Wyoming Wind.

(3) A subsidiary of TransAlta provides asset management and optimization services for the Corporation's Sarnia facility. The Sarnia facility 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.

Related-Party Balances

Related-party balances include the following:

As at	June 30, 2019	Dec. 31, 2018
Accounts receivables	27	41
Accounts payable and accrued liabilities (including interest payable)	6	11
Dividends payable	38	38
Investments in subsidiaries of TransAlta	1,398	1,495
Big Level and Antrim promissory notes receivable ⁽¹⁾	136	23
Letters of credit issued by TransAlta on behalf of the Corporation ⁽²⁾	—	1
Guarantees provided by TransAlta on behalf of the Corporation ⁽²⁾	294	106
Long-term prepaid - management fee	2	2
Indemnification guarantee provided by the Corporation to TransAlta ⁽²⁾	514	538

(1) Includes interest income receivable.

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

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

Accounting Changes

Critical Accounting Estimates

The critical accounting estimates made were consistent with those outlined in our most recent annual MD&A for Dec. 31, 2018.

Current Accounting Changes

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 4 *Determining Whether an Arrangement Contains a Lease*. The Corporation has elected to adopt IFRS 16 using the modified retrospective approach on transition. Comparative information has not been restated and is reported under IAS 17.

In applying IFRS 16 for the first time, 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.

As a result, we recognized right-of-use assets of \$16 million and lease liabilities of \$16 million, primarily related to land leases at certain wind and hydro sites and buildings. Right-of-use assets also increased by \$7 million as existing assets under finance leases were reclassified.

Refer to Note 2 of the Corporation's interim condensed consolidated financial statements for a more detailed discussion of the Corporation's accounting policies and impact on the financial statements of adopting IFRS 16.

Selected Quarterly Information

	Q3 2018	Q4 2018	Q1 2019	Q2 2019
Revenue	90	140	127	111
Net earnings attributable to common shareholders	12	93	76	31
Cash flow from operating activities	78	103	131	52
AFFO	67	108	94	80
CAFD	65	85	92	57
Net earnings per share attributable to common shareholders, basic and diluted	0.05	0.35	0.29	0.12
CAFD per share	0.25	0.32	0.35	0.22

	Q3 2017	Q4 2017	Q1 2018	Q2 2018
Revenue	91	134	125	107
Net earnings (loss) attributable to common shareholders	(73)	33	66	65
Cash flow from operating activities	87	30	132	72
AFFO	70	111	97	73
CAFD	70	88	96	51
Net earnings (loss) per share attributable to common shareholders, basic and diluted	(0.30)	0.13	0.26	0.26
CAFD per share	0.29	0.35	0.38	0.20

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 Lakeswind wind farm and Mass Solar solar projects. In March 2019, we acquired an economic interest in the Antrim US wind development project. Our earnings after these investments include various effects arising from financial instruments:

- Positive change in fair value of financial instruments related to the investment in preferred shares tracking TEA amortizing term loan in the first and second quarters of 2019.
- Foreign exchange gains on Australian-dollar-denominated instruments in the first quarter of 2018 and fourth quarter of 2017, with losses in the first and second quarters of 2019, second, third and fourth quarters of 2018, and the third quarter of 2017.
- Foreign exchange gains on US-dollar-denominated instruments in the first quarter of 2019, the first, second and fourth quarters of 2018 and the fourth quarter of 2017, with losses in the second quarter of 2019, the third quarter of 2018 and the third quarter of 2017.
- In the third and fourth quarters of 2017, we recognized an impairment on the Australian Tracking Preferred Shares. Effective Jan. 1, 2018, with the adoption of IFRS 9, gains or losses recognized in OCI for investments in equity instruments designated at fair value through other comprehensive income are not reclassified subsequently to net earnings.

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 since our most recent annual MD&A for Dec. 31, 2018, 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 June 30, 2019, the end of the period covered by this report, our ICFR and DC&P were effective.

TransAlta Renewables Inc.
Condensed Consolidated Statements of Earnings
(in millions of Canadian dollars, except as otherwise noted)

Unaudited	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Revenues (Note 4)	108	95	233	206
Government incentives	3	5	5	10
Lease revenue (Note 2)	—	7	—	16
Total revenue	111	107	238	232
Fuel, royalties, and other costs	18	22	47	50
Gross margin	93	85	191	182
Operations, maintenance and administration	24	20	45	41
Depreciation and amortization	32	30	63	60
Taxes, other than income taxes	2	2	4	4
Insurance recovery	(4)	—	(4)	—
Operating income	39	33	83	77
Finance income related to subsidiaries of TransAlta (Note 5)	13	48	39	75
Interest income (Note 6)	3	11	4	22
Interest expense (Note 6)	(11)	(17)	(22)	(28)
Change in fair value of financial assets (Note 5)	2	(5)	33	(4)
Foreign exchange gain (loss)	(26)	2	(30)	8
Earnings before income taxes	20	72	107	150
Income tax expense (recovery) (Note 7)	(12)	6	(2)	17
Net earnings	32	66	109	133
Net earnings attributable to:				
Common shareholders	31	65	107	131
Non-controlling interest	1	1	2	2
	32	66	109	133
Weighted average number of common shares outstanding in the year (millions) (Note 13)				
	264	252	264	251
Net earnings per share attributable to common shareholders, basic and diluted				
	0.12	0.26	0.41	0.52

See accompanying notes.

TransAlta Renewables Inc.
Condensed Consolidated Statements of Comprehensive Income
(in millions of Canadian dollars)

Unaudited	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Net earnings	32	66	109	133
Other comprehensive income (loss)				
Gains on derivatives designated as cash flow hedges, net of tax	–	(1)	–	–
Net change in fair value of investments in subsidiaries of TransAlta (Note 5)	(91)	1	(89)	4
Total items that will not be reclassified subsequently to net earnings	(91)	–	(89)	4
Other comprehensive income (loss)	(91)	–	(89)	4
Total comprehensive income (loss)	(59)	66	20	137
Total comprehensive income (loss) attributable to:				
Common shareholders	(60)	65	18	135
Non-controlling interest	1	1	2	2
	(59)	66	20	137

See accompanying notes.

TransAlta Renewables Inc.
Condensed Consolidated Statements of Financial Position
(in millions of Canadian dollars)

Unaudited	June 30, 2019	Dec. 31, 2018 ⁽¹⁾
Cash and cash equivalents	19	73
Accounts receivable	98	115
Restricted cash (Note 12)	31	31
Prepaid expenses	7	2
Inventory	6	6
Current portion of other assets (Note 11)	136	23
Current portion of investments in subsidiaries of TransAlta (Note 5)	18	—
	315	250
Property, plant, and equipment (Note 9)		
Cost	2,846	2,842
Accumulated depreciation	(1,069)	(1,023)
	1,777	1,819
Right-of-use assets (Notes 2 and 10)	23	—
Intangible assets	119	124
Other assets (Note 11)	43	42
Investments in subsidiaries of TransAlta (Note 5)	1,380	1,495
Deferred income tax assets	16	17
Total assets	3,673	3,747
Accounts payable and accrued liabilities	37	47
Dividends payable (Note 13)	62	62
Risk management liabilities (Note 8)	1	1
Current portion of long-term debt and lease obligations (Notes 2 and 12)	50	49
	150	159
Long-term debt and lease obligations (Notes 2 and 12)	907	883
Contract liabilities	6	6
Decommissioning provisions and other provisions	48	44
Deferred revenues	1	1
Deferred income tax liabilities	255	258
Total liabilities	1,367	1,351
Equity		
Common shares (Note 13)	3,025	3,011
Deficit	(584)	(567)
Accumulated other comprehensive loss	(178)	(89)
Equity attributable to shareholders	2,263	2,355
Non-controlling interest	43	41
Total equity	2,306	2,396
Total liabilities and equity	3,673	3,747

(1) See Note 2B for information on prior period reclassification.

Commitments and contingencies (Note 14)

See accompanying notes.

TransAlta Renewables Inc.

Condensed Consolidated Statements of Changes in Equity

(in millions of Canadian dollars)

6 months ended June 30, 2019

Unaudited	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	—	107	—	107	2	109
Other comprehensive income:						
Net change in fair value of investments in subsidiaries of TransAlta (Note 5)	—	—	(89)	(89)	—	(89)
Total comprehensive income	—	107	(89)	18	2	20
Common share dividends (Note 13)	—	(124)	—	(124)	—	(124)
Dividend reinvestment program (Note 13)	14	—	—	14	—	14
Balance, June 30, 2019	3,025	(584)	(178)	2,263	43	2,306

See accompanying notes.

6 months ended June 30, 2018

Unaudited	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 to AOCI	—	137	(137)	—	—	—
Fair value adjustment on available-for-sale financial asset	—	3	—	3	—	3
Adjusted balance, Jan. 1, 2018	2,854	(561)	(129)	2,164	36	2,200
Net earnings	—	131	—	131	2	133
Other comprehensive income:						
Net change in fair value of investments in subsidiaries of TransAlta (Note 5)	—	—	4	4	—	4
Total comprehensive income	—	131	4	135	2	137
Completion of public share offering	145	—	—	145	—	145
Common share dividends	—	(121)	—	(121)	—	(121)
Acquisitions	—	3	—	3	—	3
Balance, June 30, 2018	2,999	(548)	(125)	2,326	38	2,364

See accompanying notes.

TransAlta Renewables Inc.
Condensed Consolidated Statements of Cash Flows
(in millions of Canadian dollars)

Unaudited	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Operating activities				
Net earnings	32	66	109	133
Depreciation and amortization	32	30	63	60
Accretion of provisions (Note 6)	1	—	2	1
Deferred income tax expense (Note 7)	(12)	5	(3)	14
Change in fair value of financial assets (Note 5)	(2)	5	(33)	4
Unrealized foreign exchange (gain) loss	24	(3)	28	(9)
Unrealized gain from risk management activities	—	—	(1)	(1)
Provisions	—	—	—	2
Other non-cash items	(4)	1	(4)	1
Cash flow from operations before changes in working capital	71	104	161	205
Change in non-cash operating working capital balances	(19)	(32)	22	(1)
Cash flow from operating activities	52	72	183	204
Investing activities				
Additions to property, plant and equipment (Note 9)	(9)	(23)	(17)	(28)
Loans to subsidiary of TransAlta (Note 11)	—	—	(115)	—
Proceeds on sale of assets	—	1	—	1
Proceeds on redemptions and return of capital of investments in subsidiaries of TransAlta (Note 5)	26	1	566	1
Investments in subsidiaries of TransAlta (Note 5)	(21)	(140)	(551)	(140)
Acquisitions (Note 3)	—	(39)	—	(39)
Recovery of property insurance settlements	4	—	4	—
Realized gain on financial instruments	—	—	1	—
Advances - loan receivable	(4)	—	(4)	—
Change in non-cash investing working capital balances	(18)	4	(21)	3
Other	1	(1)	1	(1)
Cash flow used in investing activities	(21)	(197)	(136)	(203)
Financing activities				
Net increase in borrowings under credit facility (Note 12)	16	91	34	64
Repayments of Canadian Assets working capital loan and TEA loan	—	(63)	—	(63)
Long-term debt repayments	(22)	(22)	(24)	(23)
Net proceeds on issuance of common shares	—	144	—	144
Dividends paid on common shares (Note 13)	(55)	(60)	(110)	(119)
Finance lease obligations - principal repayment	(1)	—	(1)	—
Cash flow (used in) from financing activities	(62)	90	(101)	3
Increase (decrease) in cash and cash equivalents	(31)	(35)	(54)	4
Cash and cash equivalents, beginning of period	50	59	73	20
Cash and cash equivalents, end of period	19	24	19	24
Cash income taxes paid	—	2	1	3
Cash interest paid	15	18	20	22

See accompanying notes.

Notes to Condensed Consolidated Financial Statements

(Unaudited)

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

1. Background and Accounting Policies

A. The Corporation

TransAlta Renewables Inc. (together with its subsidiaries "TransAlta Renewables" or the "Corporation"), a subsidiary of TransAlta Corporation ("TransAlta"), owns and operates 13 hydro facilities, 19 wind farms, and one gas plant, with a total gross generating capacity of 1,774 megawatts ("MW"), and holds economic interests in TransAlta's 140 MW Wyoming Wind wind farm, 50 MW Lakeswind wind farm, 21 MW Mass Solar solar projects, 90 MW Big Level US wind development project, 29 MW Antrim US wind development project (see Note 3), and 450 MW Australian gas-fired generation assets including a 270 kilometre gas pipeline. The Corporation's head office is located in Calgary, Alberta.

B. Basis of Preparation

These interim condensed consolidated financial statements have been prepared by management in compliance with International Accounting Standard ("IAS") 34 *Interim Financial Reporting* using the same accounting policies as those used in the Corporation's most recent annual consolidated financial statements, except as disclosed in Note 2(A). These interim condensed consolidated financial statements do not include all of the disclosures included in the Corporation's annual consolidated financial statements. Accordingly, these condensed consolidated financial statements should be read in conjunction with the Corporation's most recent annual consolidated financial statements which are available on SEDAR at www.sedar.com.

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

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

The interim condensed consolidated financial statements are presented in Canadian dollars, which is the Corporation's functional and presentation currency.

The interim condensed 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 months and lower in the warm summer months.

These interim condensed consolidated financial statements were authorized for issue by the Audit and Nominating Committee on behalf of the Board of Directors on Aug. 7, 2019.

C. Use of Estimates and Significant Judgments

The preparation of these interim condensed consolidated financial statements in accordance with IAS 34 requires management to use judgment and make estimates and assumptions that could affect the reported amounts of assets, liabilities, revenue, and expenses, and disclosures of contingent assets and liabilities. These estimates are subject to uncertainty. Actual results could differ from these estimates due to factors such as fluctuations in interest rates, foreign exchange rates, inflation and commodity prices, and changes in economic conditions, legislation, and regulations. Refer to Note 2(Q) of the Corporation's most recent annual consolidated financial statements for a more detailed discussion of the significant accounting judgments and key sources of estimation uncertainty.

Judgment was applied for the six months ended June 30, 2019 in relation to the assessment of dividends as income or return of capital, as follows:

The Corporation receives dividends from its investments in the preferred shares tracking adjusted TransAlta Energy (Australia) Pty Ltd ("TEA") amounts, the TEA preferred shares, the preferred shares tracking the amortizing term loan (see Note 3) and the preferred shares tracking earnings and distributions of Wyoming Wind, 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 represent 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. During the first and second quarters of 2019, the Corporation determined that a portion of the dividends earned in those quarters on the tracking preferred shares of Wyoming Wind and Mass Solar constituted a return of capital and in the second quarter, the dividends earned on the tracking preferred shares of TEA constituted a return of capital.

Judgment was applied for the six months ended June 30, 2019 in relation to the classification of investments in equity securities of subsidiaries of TransAlta, as follows:

The Corporation invests in tracking preferred shares which can have characteristics of both equity and debt instruments ("hybrid instruments") and therefore require judgment to determine if the shares are an equity instrument, a debt instrument, or a hybrid instrument, which determines if the changes in fair value should be recognized as fair value through profit or loss ("FVTPL"), or at fair value through other comprehensive income ("FVTOCI").

An investment in the preferred shares of a subsidiary of TransAlta tracking the amortizing term loan (see Note 5) was made in the first quarter of 2019. The Corporation determined that the shares are a hybrid instrument as they include a redemption option and are therefore classified as FVTPL.

2. Accounting Changes

A. Current Accounting Changes

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 4 *Determining Whether an Arrangement Contains a Lease*. As a result of the IFRS 16 adoption, the Corporation has changed its accounting policy for leases, which is outlined below.

The Corporation has elected to adopt IFRS 16 using the modified retrospective approach on transition. Comparative information has not been restated and is reported under IAS 17. Refer to the Corporation's most recent annual consolidated financial statements for information on its prior accounting policy.

In applying IFRS 16 for the first time, 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 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 and right-of-use assets.

The following table reconciles the Corporation's operating lease commitments at Dec. 31, 2018, as previously disclosed in the Corporation's 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
	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 statement of financial position. On Jan. 1, 2019, the Corporation recognized right-of-use assets of \$23 million, \$16 million for initial leases recognition and \$7 million transferred from property, plant and equipment and other assets for a pre-existing finance lease.

Refer to the discussion below, and to Note 10 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 do not meet the definition of a lease. Accordingly, revenues earned on the contracts, previously accounted for as an operating lease, are now accounted for under IFRS 15 *Revenues from Contracts with Customers*, commencing Jan. 1, 2019. There were no significant changes in the pattern of revenue recognition that arose. Contract liabilities under IFRS 15 of \$6 million relate to one of the contracts.

Impact of the new definition of a lease

The change in the definition of a lease mainly relates to the concept of control. Under IFRS 16, a contract contains a lease when the customer obtains the right to control the use of an identified asset for a period of time in exchange for consideration.

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. In preparation for the first time application of IFRS 16, all relevant contractual arrangements were reviewed to assess if the contract meets the new definition of a lease.

Impact on lessee accounting

For all contracts that meet the definition of a lease under IFRS 16 in which the Corporation is the lessee, 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 statement 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 statement of earnings;
- Recognizes the principal repayments on lease obligations as financing activities and interest payments on lease obligations as operating activities in the consolidated statement 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 those payments occurs.

For new leases beginning after Jan. 1, 2019, the right-of-use asset is initially measured at an amount equal to the lease liability and is adjusted for any payments made at or before the commencement date, plus any initial direct cost incurred 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, less any lease incentives.

For new leases beginning after Jan. 1, 2019, the lease liability is initially measured at the present value of the lease payments that are not paid at commencement and discounted using the Corporation's incremental borrowing rate or the rate implicit in the lease. 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.

Impact on lessor accounting

IFRS 16 does not substantially change lessor accounting. Under IFRS 16, a lessor continues to classify leases as either finance leases or operating leases and accounts for those two types of leases differently.

Leases for which the Corporation is lessor are classified as finance or operating leases. Whenever the terms of the lease transfers substantially all the risk and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as an operating lease.

B. Comparative Figures

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

3. Significant Events

US Wind Projects

On Feb. 20, 2018, the Corporation entered into an arrangement to acquire interests in two construction-ready projects in the Northeast United States. The wind development projects consist of: (i) a 90 MW project located in Pennsylvania ("Big Level") which has a 15-year Power Purchase Agreement with Microsoft Corp ("PPA") and (ii) a 29 MW project located in New Hampshire ("Antrim") with two 20-year PPAs, with counterparties that have a Standard & Poor's credit ratings of A+ or better. The commercial operation date for both projects is expected during the second half of 2019. A subsidiary of TransAlta acquired Big Level on March 1, 2018 and Antrim on March 28, 2019.

On Jan. 2, 2019, the Corporation funded \$45 million (US\$33 million) of construction costs for the Big Level wind development project by subscribing for an interest-bearing promissory note issued by the project entity, a subsidiary of TransAlta.

On March 29, 2019, the Corporation funded the acquisition and already incurred construction costs of the Antrim wind development project in the amount of \$63 million (US\$47 million) and funded the payment of the final holdback on the Big Level purchase price of \$7 million (US\$5 million), by subscribing for an interest-bearing promissory note issued by the project entity, a subsidiary of TransAlta. See Note 11 for more details on the terms of the promissory notes.

On June 28, 2019, the Corporation funded construction costs for the Big Level and Antrim wind development projects by subscribing for preferred shares tracking earnings and distributions of Big Level/Antrim in the principal amount of \$21 million (US\$16 million).

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

The Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AUD\$509 million and approximately AUD\$41 million of the preferred shares of TEA for cash consideration. Immediately following the redemptions, the Corporation subscribed for AUD\$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 tracking preferred shares will pay dividends, as declared, broadly equal to the interest payments on the underlying loan. See Note 5 for additional information.

4. Revenue from Contracts with Customers

Disaggregation of Revenue From Contracts with Customers

The majority of the Corporation's revenues are derived from the sale of electricity, capacity, and green attributes. The Corporation's revenue from contracts with customers is as follows:

3 months ended June 30, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Revenue from contracts with customers	53	10	44	107
Other revenue	—	—	1	1
Revenues	53	10	45	108

Timing of revenue recognition

At a point in time	7	—	—	7
Over time	46	10	44	100
Revenue from contracts with customers	53	10	44	107

6 months ended June 30, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Revenue from contracts with customers	123	12	96	231
Other revenue	—	—	2	2
Revenues	123	12	98	233

Timing of revenue recognition

At a point in time	10	—	—	10
Over time	113	12	96	221
Revenue from contracts with customers	123	12	96	231

3 months ended June 30, 2018	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Revenue from contracts with customers	42	7	45	94
Other revenue	1	—	—	1
Revenues	43	7	45	95

Timing of revenue recognition

At a point in time	—	—	—	—
Over time	42	7	45	94
Revenue from contracts with customers	42	7	45	94

6 months ended June 30, 2018	Canadian Wind	Canadian Hydro	Canadian Gas	Total
Revenue from contracts with customers	101	9	94	204
Other revenue	1	—	1	2
Revenues	102	9	95	206

Timing of revenue recognition

At a point in time	3	—	—	3
Over time	98	9	94	201
Revenue from contracts with customers	101	9	94	204

5. 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 TEA and TransAlta Wyoming Wind, and from May 31, 2018, Lakeswind and Mass Solar.

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Dividend income from investment in preferred shares of TEA	—	1	1	3
Fee income from indirect guarantee of TEA obligations	3	2	6	6
Dividend income from investment in preferred shares tracking adjusted TEA amounts	—	45	11	61
Dividend income from investment in preferred shares tracking amortizing term loan	8	—	15	—
Finance income related to TEA	11	48	33	70
Dividend income from investment in preferred shares tracking earnings and distributions of Mass Solar	1	—	3	—
Dividend income from investment in preferred shares tracking earnings and distributions of Lakeswind	1	—	2	—
Dividend income from investment in preferred shares tracking earnings and distributions of Wyoming Wind	—	—	1	5
Total finance income	13	48	39	75
Finance income related to TEA	11	48	33	70
Interest income from investment in mandatory redeemable preferred shares of TEA (Note 6)	—	11	—	21
Total income related to TEA	11	59	33	91

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

As at	June 30, 2019	Dec. 31, 2018
Investment in MRPS	—	489
Investment in preferred shares tracking adjusted TEA amounts	553	637
Investment in preferred shares of TEA	48	88
Investment in preferred shares tracking amortizing term loan	526	—
Total investments in subsidiaries related to TEA	1,127	1,214
Investment in preferred shares tracking earnings and distributions of Big Level and Antrim	61	42
Investment in preferred shares tracking earnings and distributions of Mass Solar	63	69
Investment in preferred shares tracking earnings and distributions of Lakeswind	31	33
Investment in preferred shares tracking earnings and distributions of Wyoming Wind	116	137
Total investments in subsidiaries of TransAlta	1,398	1,495
Less: current portion of investments in subsidiaries of TransAlta ⁽¹⁾	(18)	—
Total long-term investments in subsidiaries of TransAlta	1,380	1,495

(1) Current portion due to quarterly redemptions of the investment 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 ⁽¹⁾	Preferred shares tracking adjusted TEA amounts	Preferred shares of TEA ⁽²⁾	Preferred shares tracking amortizing term loan ⁽³⁾	Total
Investment balance at Dec. 31, 2018	489	637	88	—	1,214
Issuance	—	—	—	530	530
Redemption	(490)	—	(40)	(10)	(540)
Foreign exchange gain (loss) recognized in earnings	1	—	—	(27)	(26)
Return of capital	—	(17)	—	—	(17)
Net change in fair value recognized in earnings	—	—	—	33	33
Net change in fair value and foreign exchange recognized in OCI	—	(67)	—	—	(67)
Investment balance at June 30, 2019	—	553	48	526	1,127

(1) Principal amount as at June 30, 2019 and Dec. 31, 2018 was nil and AUD\$509 million, respectively.

(2) Principal amount as at June 30, 2019 and Dec. 31, 2018 was AUD\$45 million and AUD\$86 million, respectively.

(3) Principal amount as at June 30, 2019 was AUD\$540 million.

The Corporation and TransAlta executed a series of transactions in response to the enactment of anti-hybrid tax rules within Australia. In January 2019, TEA redeemed the remaining outstanding balance of the MRPS of AUD\$509 million and approximately AUD\$41 million of the preferred shares of TEA for cash consideration. Immediately following those redemptions, the Corporation subscribed for AUD\$550 million of preferred shares of a subsidiary of TransAlta that track the underlying economics of an amortizing term loan payable owed by TEA to another subsidiary of TransAlta. The tracking preferred shares will pay dividends, as declared, broadly equal to the interest payments on the underlying loan. 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, 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.

	MRPS ⁽¹⁾	Preferred shares tracking adjusted TEA amounts	Preferred shares of TEA ⁽²⁾	Total
Investment balance at Dec. 31, 2017	601	616	94	1,311
Unrealized foreign exchange loss recognized in earnings	(3)	—	—	(3)
Net change in fair value recognized in OCI	—	4	—	4
Investment balance at June 30, 2018	598	620	94	1,312

(1) Principal amount as at June 30, 2018 and Dec. 31, 2017 was AUD\$620 million.

(2) Principal amount as at June 30, 2018 and Dec. 31, 2017 was AUD\$86 million.

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 8(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. 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	June 30, 2019	Dec. 31, 2018
Discount rate	6.3%	6.7%
Quarterly cash flows	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 June 30, 2019	Change in fair value as at Dec. 31, 2018
Basis point change in discount rates	-10 basis points decrease	5	5
	+10 basis points increase	(5)	(5)
Quarterly cash flows	+1% increase	6	6
	- 1% decrease	(6)	(6)

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

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.

On May 31, 2018, the Corporation acquired an economic interest in each of the Lakeswind wind farm and the Mass Solar solar projects from TransAlta Corporation. The investments in preferred shares of a subsidiary of TransAlta related to Lakeswind and Mass Solar provide cumulative variable cash dividends, when declared, that are broadly equal to the pre-tax earnings and distributable profits of Lakeswind and Mass Solar.

The investments in preferred shares of a subsidiary of TransAlta relating to Wyoming Wind, Lakeswind and Mass Solar for the comparative period up to Sept. 30, 2018 were accounted for as at FVTPL. On Oct. 1, 2018, the TransAlta 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 net earnings.

The economic interest in the Big Level and Antrim wind development project 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 Big Level and Antrim. The Corporation has irrevocably elected to present changes in fair value of this investment as at FVTOCI.

Changes in the investment balances are detailed as follows:

For the 6 months ended	June 30, 2019				
	Preferred shares tracking earnings and distributions of Wyoming Wind ⁽¹⁾	Preferred shares tracking earnings and distributions of Big Level/Antrim ⁽²⁾	Preferred shares tracking earnings and distributions of Lakeswind ⁽³⁾	Preferred shares tracking earnings and distributions of Mass Solar ⁽⁴⁾	Total
Investment balance beginning of period	137	42	33	69	281
Issuance	—	21	—	—	21
Return of capital	(6)	—	—	(3)	(9)
Net change in fair value and foreign exchange recognized in OCI	(15)	(2)	(2)	(3)	(22)
Investment balance end of period	116	61	31	63	271

(1) Principal amount as at June 30, 2019 and Dec. 31, 2018 was US\$96 million and US\$100 million, respectively.

(2) Principal amount as at June 30, 2019 and Dec. 31, 2018 was US\$47 million and US\$31 million, respectively.

(3) Principal amount as at June 30, 2019 and Dec. 31, 2018 was US\$23 million.

(4) Principal amount as at June 30, 2019 and Dec. 31, 2018 was US\$48 million and US\$50 million, respectively.

For the 6 months ended

June 30, 2018

	Preferred shares tracking earnings and distributions of Wyoming Wind ⁽¹⁾	Preferred shares tracking earnings and distributions of Big Level ⁽²⁾	Preferred shares tracking earnings and distributions of Lakeswind ⁽³⁾	Preferred shares tracking earnings and distributions of Mass Solar ⁽⁴⁾	Total
Investment balance beginning of period	126	—	—	—	126
IFRS 9 recognition at fair value	3	—	—	—	3
Adjusted balance, beginning of period	129	—	—	—	129
Additional/initial investments ⁽⁵⁾	—	41	30	69	140
Return of capital	(1)	—	—	—	(1)
Unrealized foreign exchange gain recognized in earnings or OCI	7	2	1	—	10
Net change in fair value recognized in earnings	(4)	—	—	—	(4)
Net change in fair value recognized in OCI	—	(2)	—	—	(2)
Investment balance end of period	131	41	31	69	272

(1) Principal amount as at June 30, 2018 and Dec. 31, 2017 was US\$100 million.

(2) Principal amount as at June 30, 2018 was US\$31 million.

(3) Principal amount as at June 30, 2018 was US\$23 million.

(4) Principal amount as at June 30, 2018 was US\$52 million.

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

The Corporation estimated the fair value of the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level/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 8(B)(I)(c). The forecasts extend over the expected operating lives of the underlying facilities, which ranges from 17 years to 32 years. Key assumptions in respect of significant unobservable inputs used in the Level III fair value measurements include the discount rate and the quarterly cash flows from the instruments. The table below summarizes quantitative data regarding these unobservable inputs:

Unobservable input as at June 30, 2019	Wyoming Wind	Big Level/Antrim ⁽¹⁾	Lakeswind	Mass Solar
Discount rate	5.6%	8.0%	8.5%	6.3%
Quarterly cash flows	Average of \$3	Average of \$5	Average of \$1	Average of \$1

(1) Projects under construction at June 30, 2019.

Unobservable input as at Dec. 31, 2018	Wyoming Wind	Big Level ⁽¹⁾	Lakeswind	Mass Solar
Discount rate	5.9%	8.0%	8.8%	6.5%
Quarterly cash flows	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 fair value as at June 30, 2019 ⁽¹⁾	Change in fair value as at Dec. 31, 2018 ⁽¹⁾
Basis point change in discount rates	-10 basis points decrease	2	2
	+10 basis points increase	(2)	(2)
Quarterly cash flows	+1% increase	3	3
	- 1% decrease	(3)	(3)

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

6. Interest Income and Interest Expense

The components of interest income are as follows:

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Interest income from investment in MRPS of TEA (Note 5)	–	11	–	21
Interest income on promissory notes due from subsidiaries of TransAlta (Note 11)	2	–	2	–
Other interest income	1	–	2	1
Interest income	3	11	4	22

The components of interest expense are as follows:

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Interest on long-term debt	9	10	18	18
Interest on TEA loan	–	2	–	3
Other net interest ⁽¹⁾	1	5	2	6
Accretion of provisions	1	–	2	1
Interest expense	11	17	22	28

(1) Consists of letters of credit and guarantee fees, credit facility commitment fees, other interest and banking fees (net of capitalized interest).

7. Income Taxes

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

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Current income tax expense	–	1	1	3
Deferred income tax expense related to the origination and reversal of temporary differences	6	5	16	14
Deferred income tax recovery resulting from the writedown of deferred tax assets	–	–	(1)	–
Deferred income tax recovery resulting from changes in tax rates	(18)	–	(18)	–
Income tax expense (recovery)	(12)	6	(2)	17

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 lower tax rates 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.

Presented in the Condensed Consolidated Statements of Earnings as follows:

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Current income tax expense	–	1	1	3
Deferred income tax expense (recovery)	(12)	5	(3)	14
Income tax expense (recovery)	(12)	6	(2)	17

8. Financial Instruments and Risk Management

A. Financial Assets and Liabilities – Measurement

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

B. Fair Value of Financial Instruments

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

As at	June 30, 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	–	553	–	637
Preferred shares tracking earnings and distributions of Wyoming Wind	–	116	–	137
Preferred shares tracking earnings and distributions of Big Level/Antrim	–	61	–	42
Preferred shares tracking earnings and distributions of Mass Solar	–	63	–	69
Preferred shares tracking earnings and distributions of Lakeswind	–	31	–	33
Preferred shares tracking amortizing term loan	526	–	–	–
Preferred shares of TEA	48	–	88	–
Net risk management liabilities	(1)	–	(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. In determining Level II fair values of the TEA preferred shares and the preferred shares tracking 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. The fair value of the TEA preferred shares 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/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/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/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 such differences may be material. Additional disclosures on these fair value measurements are presented in Note 5.

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 and capital project expenditures. 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 liabilities as at June 30, 2019 and Dec. 31, 2018:

	Cash flow hedges		Non-hedges	Total
	Level II	Level II	Level II	
Net risk management liabilities at June 30, 2019	–	(1)	(1)	(1)
Net risk management liabilities at Dec. 31, 2018	–	(1)	(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 statement 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	June 30, 2019		Dec. 31, 2018	
	Fair value Level II	Carrying value	Fair value Level II	Carrying value
MRPS	–	–	489	489
Loans and promissory notes receivable ⁽¹⁾	175	175	60	60
Long-term debt ⁽¹⁾	964	942	916	932

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

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 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.

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

I. Credit Risk

The Corporation's maximum exposure to credit risk at June 30, 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, is detailed as follows:

Counterparty credit rating	Direct exposure	Indirect exposure ⁽²⁾
	Receivables ⁽¹⁾	Trade accounts receivable
Investment grade	206	30
Non-investment grade	28	20
No external rating	41	–

(1) Includes trade accounts receivable, distributions receivable from subsidiaries of TransAlta, risk management assets, and loans receivable (see Note 11).

(2) Includes accounts receivable of TEA and other economic interest investments.

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 personal 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, the preferred shares tracking amortizing term loan, and the preferred shares tracking earnings and distributions of Wyoming Wind, Big Level/Antrim, Lakeswind and Mass Solar. A one per cent increase (decrease) in the value of these securities would result in a \$5 million increase (decrease) in net income and a \$9 million increase (decrease) in other comprehensive income as at June 30, 2019.

III. Liquidity Risk

The following table presents the contractual maturities of the Corporation's financial liabilities as at June 30, 2019:

	2019	2020	2021	2022	2023	2024 and thereafter	Total
Accounts payable and accrued liabilities	37	—	—	—	—	—	37
Long-term debt	25	51	52	54	301	468	951
Net risk management liabilities	1	—	—	—	—	—	1
Lease obligations	—	—	—	1	—	14	15
Interest on long-term debt and lease obligations ⁽¹⁾	26	36	34	32	26	101	255
Dividends payable	62	—	—	—	—	—	62
Total	151	87	86	87	327	583	1,321

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

The Corporation manages liquidity risk associated with its long-term debt by preparing and revising long-term external financing plans reflecting business plans and market availability of capital.

IV. Foreign Currency Rate Risk

The possible effect on net earnings and OCI, 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 four cent (2018 – four cent) increase or decrease in these currencies relative to the Canadian dollar is a reasonably possible change over the next quarter.

6 months ended June 30	2019		2018	
	Net earnings increase ⁽¹⁾	OCI gain ⁽¹⁾	Net earnings increase ⁽¹⁾	OCI gain ⁽¹⁾
USD	4	13	6	7
AUD	19	20	15	11
Total	23	33	21	18

(1) These calculations assume an increase in the value of this currency relative to the Canadian dollar. A decrease would have the opposite effect.

9. Property, Plant, and Equipment

A reconciliation of the changes in the carrying amount of property, plant, and equipment is as follows:

	Hydro generation	Wind generation	Gas generation	Capital spares and other	Total
As at Dec. 31, 2018	183	1,317	306	13	1,819
Transfer to right-of-use assets	—	(4)	—	—	(4)
Additions	1	4	5	7	17
Disposals and retirements	(1)	(2)	—	—	(3)
Revisions and additions to decommissioning costs	—	1	2	—	3
Depreciation	(4)	(34)	(17)	—	(55)
Transfers	—	1	7	(8)	—
As at June 30, 2019	179	1,283	303	12	1,777

10. Leases

The Corporation leases land 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.

Right-of-Use Assets

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

	Land	Equipment	Total
New leases recognized on Jan. 1, 2019	16	–	16
Transfers ⁽¹⁾	–	7	7
As at June 30, 2019	16	7	23

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

For the six months ended June 30, 2019, the Corporation paid \$1 million related to recognized lease liabilities, consisting of \$0.4 million in interest and \$0.6 million in principal repayments.

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. For the three and six months ended June 30, 2019, the Corporation expensed \$1 million and \$2 million, respectively, in variable land lease payments for these leases.

For further information regarding leases see Notes 2, 8 and 12.

11. Other Assets

As at	June 30, 2019	Dec. 31, 2018
Big Level/Antrim promissory notes (I)	136	23
Kent Hills Wind LP loan receivable (II)	41	37
Long-term prepaids	2	5
Total other assets	179	65
Less: current portion	(136)	(23)
Total long-term other assets	43	42

The promissory notes and loan receivable are classified as debt instruments at amortized cost under IFRS 9, as the contractual cash flows are solely payments of principal and interest and the Corporation manages the loans under a business model in which it will collect the contractual cash flows.

I. Big Level and Antrim Wind Development Projects

The following promissory notes are outstanding:

Date of issuance	Principal amount (\$US)	Canadian amount	
		June 30, 2019	Dec. 31, 2018
Sept. 28, 2018	17	22	23
Jan. 2, 2019	33	44	–
March 29, 2019	52	68	–
Total principal balance	102	134	23
Interest income receivable		2	–
Total Big Level/Antrim promissory notes		136	23

Refer to Note 3 in our interim condensed consolidated financial statements for details on the promissory note issuances. The interest-bearing promissory notes are issued by the project entity, a subsidiary of TransAlta, and bear interest at the US LIBOR 1 month rate plus 170 basis points per annum. The outstanding principal and accrued interest are due to be repaid to the Corporation upon the earlier of: (i) 45 days from the commercial operation of the projects; (ii) the receipt of the tax equity financing proceeds by the projects; and (iii) Sept. 28, 2021, Oct. 2, 2021 and Sept. 30, 2021, respectively.

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.

12. Long-Term Debt and Lease Obligations

A. Amounts Outstanding

As at	June 30, 2019			Dec. 31, 2018		
	Carrying value	Face value	Interest ⁽¹⁾	Carrying value	Face value	Interest ⁽¹⁾
Credit facility	200	200	3.41%	165	165	3.67%
Pingston bond	45	45	2.95%	45	45	2.95%
Melancthon Wolfe Wind bond	315	319	3.83%	332	336	3.83%
New Richmond bond	137	139	3.96%	140	142	3.96%
Kent Hills Wind bond	245	248	4.45%	250	252	4.45%
	942	951		932	940	
Lease obligations	15			—		
	957			932		
Less: current portion of long-term debt	(50)			(49)		
Total long-term debt and lease obligations	907			883		

(1) Interest rate reflects the stipulated rate or the average rate weighted by principal amounts outstanding.

As at June 30, 2019, the Corporation had a \$700 million (Dec. 31, 2018 - \$500 million) committed syndicated credit facility, of which \$500 million was available (Dec. 31, 2018 - \$335 million). The Corporation is in compliance with the terms of the credit facility. As at June 30, 2019, there was \$200 million (Dec. 31, 2018 - \$165 million) drawn on the facility. The Corporation also had an uncommitted \$100 million demand letter of credit facility, under which \$92 million (Dec. 31, 2018 - \$77 million) of letters of credit have been issued as at June 30, 2019.

In the second quarter of 2019, the credit facility was amended from \$500 million to \$700 million and extended. The credit facility is the primary source of 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 and expires 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 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 third quarter of 2019. As at June 30, 2019, \$13 million of cash was subject to these financial restrictions (Dec. 31, 2018 - \$23 million).

C. Security

The Melancthon Wolfe Wind, Pingston, New Richmond, and Kent Hills Wind bonds are secured by a first ranking charge over all of the respective assets, including property, plant and equipment with a total carrying amount of \$996 million (Dec. 31, 2018 - \$1,022 million) of the Corporation's subsidiaries that issued the bonds, being Melancthon Wolfe Wind L.P., Pingston Power Inc., New Richmond Wind L.P. and Kent Hills Wind L.P., respectively.

D. Restricted Cash

As at June 30, 2019, the Corporation had \$31 million (Dec. 31, 2018 - \$31 million) of cash related to its Kent Hills Wind bond financing, which was held in a construction reserve account. The restricted cash was released from the reserve account in July 2019.

Additionally, the Melancthon Wolfe Wind, Pingston, New Richmond, and Kent Hills Wind 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 use letters of credit as at June 30, 2019. Accordingly, no cash was subject to these restrictions.

13. 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 number of common shares issued and outstanding was approximately 264 million as at June 30, 2019, 263 million as at Dec. 31, 2018 and 262 million as at June 30, 2018. During the six months ended June 30, 2019, TransAlta Renewables issued 1.1 million shares under the dividend reinvestment plan, for total equity value of \$14 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
6 months ended June 30, 2019	0.46998	124	75	49
6 months ended June 30, 2018	0.46998	121	76	45

On April 25, 2019, the Corporation declared a monthly dividend of \$0.07833 per common share payable on each of July 31, 2019, Aug. 30, 2019 and Sept. 30, 2019.

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.

14. Commitments and Contingencies

A. 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 ("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 our 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 earnings before interest, taxes, depreciation and amortization ("EBITDA") on an annual basis. The Corporation's investment in the Australian Assets is through an economic interest which 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.

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. As at June 30, 2019, the total amounts guaranteed by the Corporation were \$514 million (Dec. 31, 2018 - \$538 million).

C. 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. Cost estimates have been re-forecasted to US\$259 million due to weather related delays and higher interconnection costs in these projects. To date, the Corporation funded approximately US\$149 million (see Notes 3, 5 and 11).

15. Related-Party Transactions and Balances

The Corporation has entered into certain agreements and transactions with TransAlta, which are discussed in more detail in Note 25 of the Corporation's most recent annual consolidated financial statements, and in Note 3.

A. Related-Party Transactions

Related-party transactions include the finance income related to investments in subsidiaries of TransAlta (Note 5) and interest income in 2018 related to investments in subsidiaries of TransAlta and the interest income in 2019 on promissory notes due from subsidiaries of TransAlta (Note 6). 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:

	3 months ended June 30		6 months ended June 30	
	2019	2018	2019	2018
Revenue from TransAlta PPAs	8	9	15	18
Revenue from Green Attributes ⁽¹⁾	8	—	9	1
G&A Reimbursement Fee ⁽²⁾	4	4	8	8
Natural gas purchases	—	2	6	5
Financial power swap sales - losses (gains)	(1)	—	(1)	—
Interest expense on TEA loan	—	2	—	3
Asset optimization fee ⁽³⁾	—	—	1	1

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

(2) Includes portion charged directly to the Wyoming Wind farm.

(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 these transactions are with TransAlta or subsidiaries of TransAlta.

B. Related-Party Balances

Related-party balances include the investments in subsidiaries of TransAlta disclosed in Note 5, the risk management assets and liabilities disclosed in Note 8, the Big Level and Antrim loans receivable disclosed on Note 11, and the guarantees provided by the Corporation on behalf of TransAlta and TEA disclosed in Note 14.

Related-party balances that are not otherwise presented elsewhere consist of the following:

As at	June 30, 2019	Dec. 31, 2018
Accounts receivables	27	41
Accounts payable and accrued liabilities (including interest payable)	6	11
Dividends payable	38	38
Letters of credit issued by TransAlta on behalf of the Corporation	—	1
Guarantees provided by TransAlta on behalf of the Corporation	294	106
Long-term prepaid - management fee	2	2

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

16. Segment Disclosures

3 months ended June 30, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	53	10	45	—	108
Government incentives	3	—	—	—	3
Total revenue	56	10	45	—	111
Fuel, royalties and other costs	3	1	14	—	18
Gross margin	53	9	31	—	93
Operations, maintenance and administration	9	1	8	6	24
Depreciation and amortization	21	2	9	—	32
Taxes, other than income taxes	1	1	—	—	2
Insurance recovery	(4)	—	—	—	(4)
Operating income (loss)	26	5	14	(6)	39
Finance income related to subsidiaries of TransAlta					13
Interest income					3
Interest expense					(11)
Change in fair value of financial assets					2
Foreign exchange loss					(26)
Earnings before income taxes					20

6 months ended June 30, 2019	Canadian Wind	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	123	12	98	—	233
Government incentives	5	—	—	—	5
Total revenue	128	12	98	—	238
Fuel, royalties and other costs	6	1	40	—	47
Gross margin	122	11	58	—	191
Operations, maintenance and administration	17	2	15	11	45
Depreciation and amortization	41	5	17	—	63
Taxes, other than income taxes	3	1	—	—	4
Insurance recovery	(4)	—	—	—	(4)
Operating income (loss)	65	3	26	(11)	83
Finance income related to subsidiaries of TransAlta					39
Interest income					4
Interest expense					(22)
Change in fair value of financial assets					33
Foreign exchange loss					(30)
Earnings before income taxes					107

3 months ended June 30, 2018	Canadian Wind ⁽¹⁾	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	43	7	45	—	95
Government incentives	5	—	—	—	5
Lease revenue	5	2	—	—	7
Total revenue	53	9	45	—	107
Fuel, royalties and other costs	3	1	18	—	22
Gross margin	50	8	27	—	85
Operations, maintenance and administration	7	1	8	4	20
Depreciation and amortization	19	3	8	—	30
Taxes, other than income taxes	2	—	—	—	2
Operating income (loss)	22	4	11	(4)	33
Finance income related to subsidiaries of TransAlta					48
Interest income					11
Interest expense					(17)
Change in fair value of financial assets					(5)
Foreign exchange gain					2
Earnings before income taxes					72

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

6 months ended June 30, 2018	Canadian Wind ⁽¹⁾	Canadian Hydro	Canadian Gas	Corporate	Total
Revenues	102	9	95	—	206
Government incentives	10	—	—	—	10
Lease revenue	13	3	—	—	16
Total revenue	125	12	95	—	232
Fuel, royalties and other costs	7	1	42	—	50
Gross margin	118	11	53	—	182
Operations, maintenance and administration	15	2	15	9	41
Depreciation and amortization	37	5	18	—	60
Taxes, other than income taxes	3	1	—	—	4
Operating income (loss)	63	3	20	(9)	77
Finance income related to subsidiaries of TransAlta					75
Interest income					22
Interest expense					(28)
Change in fair value of financial assets					(4)
Foreign exchange gain					8
Earnings before income taxes					150

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

Glossary of Key Terms

Australian Assets – TransAlta's 450 MW Australian gas-fired generation assets that are fully operational and contracted under long-term contracts, as well as the 270-kilometre Fortescue River Gas pipeline.

Australian Tracking Preferred Shares – Preferred shares of a TransAlta subsidiary, which provide cumulative variable dividends broadly equal to the underlying net distributable profits of TEA.

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

Credit Facility - The \$700 million external syndicated credit facility that is fully committed and expires in 2023. The facility is subject to a number of customary covenants and restrictions in order to maintain access to the funding commitments.

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 affairs of the Corporation.

Gigawatt - A measure of electric power equal to 1,000 MW.

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

Greenhouse Gases (GHG) - Gases having potential to retain heat in the atmosphere, including water vapour, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons and perfluorocarbons.

Green Attributes – Renewable energy certificates 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.

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 which 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.

PPA – A power purchase and sale agreement between a power generator and a third-party acquirer of electricity.

South Hedland or South Hedland Power Station – The 150 MW combined-cycle gas power station located in South Hedland, Western Australia.

TEA – TransAlta Energy (Australia) Pty Ltd, an Australian subsidiary of TransAlta.

TransAlta PPAs - PPAs between TransAlta and the Corporation providing for the purchase by TransAlta, for a fixed price, 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.

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

US Wind Development Projects - The wind development projects consisting of the 90 MW project located in Pennsylvania which has a 15-year PPA and the 29 MW project located in New Hampshire with two 20-year PPAs.

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