- the impact of failure to fully comply with Section 404 of the Sarbanes-Oxley Act of 2002;
- our ability to service our debt obligations or generate sufficient cash flow to pay preferred dividends;
- our indebtedness and financing arrangements and the terms, covenants and restrictions included in our senior secured term loans;
- the discontinuation, reform or replacement of LIBOR;
- exchange rate fluctuations;
- the impact of downgrades in our credit rating or the credit rating of our outstanding debt securities, and changes in our creditworthiness;
- our ability to access liquidity for the ongoing operation of our business and the execution of our business plan or any potential options, which may involve one or more of the use of cash on hand, the issuance of additional corporate debt or equity securities and the incurrence of privately-placed bank or institutional non-recourse operating level debt;
- unstable capital and credit markets;
- the anti-takeover protections in the British Columbia Business Corporations Act (the "BCBCA") and our Articles of Continuance;
- U.S., Canadian and/or global economic conditions and uncertainty;
- the impact of impairment of goodwill, long-lived assets or equity method investments; and
- increasing competition.

Material factors or assumptions that were applied in drawing a conclusion or making an estimate set out in the forward-looking information include third-party projections of regional fuel and electric capacity and energy prices that are based on assumptions about future economic conditions and courses of action. Although the forward-looking statements contained in this Quarterly Report on Form 10-Q are based upon what are believed to be reasonable assumptions, investors cannot be assured that actual results will be consistent with these forward-looking statements, and the differences may be material. Certain statements included in this Quarterly Report on Form 10-Q may be considered "financial outlook" for the purposes of applicable securities laws, and such financial outlook may not be appropriate for purposes other than this Quarterly Report on Form 10-Q. These forward-looking statements are made as of the date of this Quarterly Report on Form 10-Q and, except as expressly required by applicable law, we assume no obligation to update or revise them to reflect new events or circumstances.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of the financial condition and results of operations of Atlantic Power should be read in conjunction with the interim condensed consolidated financial statements and the related notes thereto included elsewhere in this Quarterly Report on Form 10-Q. All dollar amounts discussed below are in millions of U.S. dollars except per share amounts, or unless otherwise stated. The interim financial statements have been prepared in accordance with GAAP.

OVERVIEW

Atlantic Power is an independent power producer that owns power generation assets in eleven states in the United States and two provinces in Canada. Our power generation projects, which are diversified by geography, fuel type, dispatch profile and offtaker, sell electricity to utilities and other large customers predominantly under long-term PPAs, which seek to minimize exposure to changes in commodity prices. As of September 30, 2020, our portfolio consisted of twenty-one operating projects with an aggregate electric generating capacity of approximately 1,723 megawatts ("MW") on a gross ownership basis and approximately 1,327 MW on a net ownership basis. Sixteen of the projects are majority-owned by the Company.

We sell the majority of the capacity and energy from our power generation projects under PPAs to a variety of utilities and other parties. Under the PPAs, we receive payments for electric energy sold to our customers (known as energy payments), in addition to payments for electric generation capacity (known as capacity payments). Our PPAs have expiration dates ranging from December 16, 2020 (Calstock) to November 2043 (Allendale). We also sell steam from a number of our projects to industrial purchasers under steam sales agreements. Sales of electricity are generally higher during the summer and winter months, when temperature extremes create demand for either summer cooling or winter heating.

We directly operate and maintain sixteen of our operating power generation projects. We also partner with recognized leaders in the independent power industry to operate and maintain our other projects. Under these operation, maintenance and management agreements, the operator is typically responsible for operations, maintenance and repair services.

Available Information

Access to our Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K, Current Reports on Form 8-K, and amendments to these reports filed with or furnished to the Securities and Exchange Commission ("SEC") pursuant to Section 13(a) or 15(d) of the Exchange Act may be obtained free of charge through the Investors section of our website at https://investors.atlanticpower.com/corporate-profile as soon as is reasonably practical after we electronically file or furnish these reports. In addition, our filings with the SEC may be accessed through the SEC's website at www.sec.gov and our filings with the Canadian Securities Administrators ("CSA") may be accessed through the CSA's System for Electronic Document Analysis and Retrieval ("SEDAR") at www.sedar.com. Except for the documents specifically incorporated by reference into this Form 10-Q, information contained on our website or the SEC or CSA websites is not incorporated by reference in the Form 10-Q and should not be considered to be a part of the Form 10-Q. We have included our website address and that of the SEC and CSA only as inactive textual references and do not intend them to be active links to such websites. All statements made in any of our securities filings, including all forward-looking statements or information, are made as of the date of the document in which the statement is included, and we do not assume or undertake any obligation to update any of those statements or documents unless we are required to do so by applicable law. We are not a foreign private issuer, as defined in Rule 3b-4 under the Exchange Act.

RECENT DEVELOPMENTS

Cadillac Repair Update

On September 22, 2019, the Cadillac project experienced a malfunction in its steam turbine that began a cascade of events, sparking a fire that resulted in significant damage to the turbine, generator and other components in that area of the plant. The fire was contained by the plant's fire protection system and the local fire department and did not result in any injuries or known environmental violations. Reconstruction of Cadillac was completed in late July 2020 and the plant was recommissioned, tested and returned to service on August 20, 2020. Although the plant incurred significant damage, the financial impact has been limited by our comprehensive insurance coverage.

We received insurance proceeds of $7.0 million and $19.7 million for the three and nine months ended September 30, 2020, respectively, bringing the total cumulative proceeds received to $31.0 million. Proceeds were applied against the Cadillac insurance receivable, reducing the balance to zero as of September 30, 2020. Reimbursements for lost profits, or business interruption losses, were accounted for as a gain contingency because lost profits are not considered an incurred loss. During the third quarter 2020, we recorded business interruption proceeds of $6.2 million. These business interruption proceeds are included in other project income (loss) on our condensed consolidated statements of operations.

As of November 6, 2020, we estimate additional insurance recoveries related to business interruption losses and property losses in the range of $10.0 to $11.0 million in settlement of the claim. We expect all contingencies related to the remaining business interruption losses and property losses to be resolved once final payment is received from the insurers, which is when we will recognize the reimbursements on our condensed consolidated statement of operations.

In the nine months ended September 30, 2020, we recorded $21.8 million of capital additions related to repairs at Cadillac and cumulative additions of $26.8 million since the inception of the reconstruction.

Substantial Issuer Bid

On March 25, 2020, we commenced a SIB for the purchase of up to $25 million of common shares. This was equivalent to 12,820,512 common shares, or approximately 12% of our total issued and outstanding common shares based on a $1.95 per share purchase price (the minimum price per common share under the offer) as measured on the date of commencement. The SIB expired on April 30, 2020. During the time the SIB was active, the NCIB was suspended for the purchase of common shares and Series E Debentures, but not for the preferred shares of APPEL. We repurchased and cancelled 12,500,000 common shares under the SIB at a total cost of $25.8 million, including transaction costs, upon its expiration on April 30, 2020.

Share buybacks

Under the NCIB, we repurchased and cancelled 7,540,105 million shares at a cost of $15.8 million during the nine months ended September 30, 2020.

We also repurchased and cancelled 381,794 Series 1 Shares, 62,365 Series 2 Shares and 120,000 Series 3 Shares of APPEL at a total cost of $6.4 million. As a result of the repurchase, a $7.4 million loss was attributed to the preferred shares of a subsidiary company in the condensed consolidated statements of operations for the nine months ended September 30, 2020.

Status of Calstock and Oxnard PPAs

In May 2020, the PPA with the Ontario Electricity Financial Corporation for Calstock, which had been scheduled to expire in June 2020, was extended to December 16, 2020 under existing terms. The extension provides the provincial government additional time to evaluate the future role of the Calstock plant and biomass generation in the province.

Our Oxnard project is currently operating under a Reliability Must-Run (RMR) contract with the California Independent System Operator (CAISO) through December 31, 2020. The RMR contract is based upon the plant's cost of service and is subject to the approval of the Federal Energy Regulatory Commission (FERC), which is pending.

On August 28, 2020, we executed an agreement to sell Resource Adequacy (RA) capacity from the Oxnard plant effective January 1, 2021 through December 31, 2021. Capacity provided under the agreement will be used to satisfy the load obligations of a community choice aggregator. Under the RA agreement, Oxnard will receive a fixed monthly capacity payment. The capacity payment alone represents an improved outcome compared to a potential RMR alternative for 2021. The RA agreement also provides the opportunity for the plant to receive revenue from the potential sale of energy and ancillary services as well as other non-capacity revenues.

COVID-19 Pandemic

We are one of many companies providing essential services during this national emergency related to the COVID-19 pandemic. We have taken extra precautions for our employees who continue to work at our facilities and have implemented work-from-home policies where appropriate. Currently, we do not anticipate any employee layoffs and are continuing to maintain our high level of reliability and availability of our plants. We continue to implement strong physical and cybersecurity measures to ensure that our systems remain functional in order to serve our operational needs with a remote workforce and to keep our operations running to ensure uninterrupted service to our offtakers.

This is a rapidly evolving situation that could lead to extended disruption of economic activity. To date, we have not experienced significant issues to our business related to COVID-19. Nonetheless, as a result of the spread of COVID-19 in the United States and Canada, it is difficult to assess the impact on our customers, which may impact our financial results going forward. In addition, while we have not experienced significant supply chain issues so far, we continue to closely manage and monitor developments in our supply chain, particularly as it relates to fuel procurement. An extended slowdown of the U.S. economy, demand for commodities and/or material changes in governmental policy could result in lower demand for electricity and natural gas as well as adversely affect the ability of various customers, contractors, suppliers and other business partners to fulfill their obligations, which could have a material adverse effect on our results of operations, financial condition and prospects.

OUR POWER PROJECTS

The table below outlines our portfolio of power generating assets in operation as of November 6, 2020, including our interest in each facility. Management believes the portfolio is well diversified in terms of electricity and steam buyers, fuel type, regulatory jurisdictions and regional power pools, thereby partially mitigating exposure to market, regulatory or environmental conditions specific to any single region. Our customers are generally large utilities and other parties with investment-grade credit ratings, as measured by Standard & Poor's ("S&P"). For customers rated by Moody's, we substitute the corresponding S&P rating in the table below. Customers that have assigned ratings at the top end of the range of investment-grade have, in the opinion of the rating agency, the strongest capability for payment of debt or payment of claims, while customers at the lower end of the range of investment-grade have weaker capacity. Agency ratings are subject to change, and there can be no assurance that a rating agency will continue to rate the customers, and/or maintain their current ratings. A security rating may be subject to revision or withdrawal at any time by the rating agency, and each rating should be evaluated independently of any other rating. We cannot predict the effect that a change in the ratings of the customers will have on their liquidity or their ability to pay their debts or other obligations.

Project	Location	Type	MW	Economic Interest	Net MW	Primary Electric Purchasers	Power Contract Expiry	Customer Credit Rating (S&P)
Solid Fuel Segment								
Allendale	South Carolina	Biomass	20	100.00 %	20	South Carolina Public Service Authority	November 2043	A (1)
Cadillac	Michigan	Biomass	40	100.00 %	40	Consumers Energy	June 2028	A-
Calstock	Ontario	Biomass	35	100.00 %	35	Ontario Electricity Financial Corporation	December 2020 (2)	AA- (1)
Chambers(3)	New Jersey	Coal	262	40.00 %	89	Atlantic City Electric (4)	March 2024	A-
					16	Chemours Co.	March 2024	B+
Craven(3)	North Carolina	Biomass	48	50.00 %	24	Duke Energy Carolinas, LLC	December 2027	A-
Dorchester	South Carolina	Biomass	20	100.00 %	20	South Carolina Public Service Authority	October 2043	A (1)
Grayling(3)	Michigan	Biomass	37	30.00 %	11	Consumers Energy	December 2027	A-
Piedmont	Georgia	Biomass	55	100.00 %	55	Georgia Power	September 2032	A-
Williams Lake	British Columbia	Biomass	66	100.00 %	66	BC Hydro	September 2029	AAA (1)
Natural Gas Segment								
Frederickson(3)	Washington	Natural Gas	250	50.15 %	50	Benton Co. PUD	August 2022	AA- (1)
					45	Grays Harbor PUD	August 2022	A+ (1)
					30	Franklin Co. PUD	August 2022	A+ (1)
Kenilworth	New Jersey	Natural Gas	29	100.00 %	29	Merck & Co., Inc.	September 2021	AA-
						Merchant	N/A	NR
Manchief (5)	Colorado	Natural Gas	300	100.00 %	300	Public Service Company of Colorado	April 2022	A-
Morris (6)	Illinois	Natural Gas	177	100.00 %	100	Merchant	N/A	NR
					77	Equistar Chemicals, LP (7)	December 2034	BBB (8)
Nipigon	Ontario	Natural Gas	40	100.00 %	40	Independent Electricity System Operator	December 2022	AA- (1)
Orlando(3)	Florida	Natural Gas	129	50.00 %	65	Duke Energy Florida, LLC	December 2023	A-
Oxnard	California	Natural Gas	49	100.00 %	49	California Independent System Operator	December 2020 (9)	A+
Tunis	Ontario	Natural Gas	37	100.00 %	37	Independent Electricity System Operator	October 2033	AA- (1)
Hydroelectric Segment								
Curtis Palmer	New York	Hydro	60	100.00 %	60	Niagara Mohawk Power Corporation	December 2027 (10)	A-
Koma Kulshan	Washington	Hydro	13	100.00 %	13	Puget Sound Energy	March 2037	BBB
Mamquam(11)	British Columbia	Hydro	50	100.00 %	50	BC Hydro	September 2027	AAA (1)
Moresby Lake	British Columbia	Hydro	6	100.00 %	6	BC Hydro	August 2022	AAA (1)

(1) Customer is rated by Moody's but not S&P; therefore, the rating shown in the table is the S&P rating that corresponds to the actual Moody's rating.

(2) The PPA with the Ontario Electricity Financial Corporation, which had been scheduled to expire in June 2020, was extended to December 16, 2020 on existing terms. The extension provides the provincial government additional time to evaluate the future role of the Calstock plant and biomass generation in the province.

(3) Unconsolidated entities for which the results of operations are reflected in equity earnings of unconsolidated affiliates.

(4) The base PPA with Atlantic City Electric (“ACE”) makes up the majority of the revenue from the 89 Net MW. For sales of energy and capacity not purchased by ACE under the base PPA and sold to the spot market, profits are shared with ACE under a separate power sales agreement.

(5) In May 2019, we entered into an agreement to sell Manchief to PSCo following the expiration of the PPA in April 2022 for $45.2 million subject to working capital and other customary adjustments.

(6) Equistar has an option to purchase Morris that is exercisable in December 2020 and in December 2027.

(7) Equistar has the right under the PPA to take up to 77 MW, but on average has taken approximately 50 MW.

(8) Represents the credit rating of LyondellBasell, the parent company of Equistar Chemicals, as Equistar is not rated.

(9) The PPA with Southern California Edison expired on May 25, 2020 and was not renewed or extended. The Company executed an RMR contract with the California Independent System Operator that became effective June 1, 2020 and will expire December 31, 2020. The RMR contract is conditioned upon the approval of the FERC; the application for approval was submitted to the FERC on May 28, 2020 and is pending. On August 28, 2020, we executed an agreement to sell RA capacity from the Oxnard plant effective January 1, 2021 through December 31, 2021.

(10) The Curtis Palmer PPA expires at the earlier of December 2027 or the provision of 10,000 GWh of generation. From January 6, 1995 through September 30, 2020, the facility has generated 8,301 GWh under its PPA. Based on cumulative generation to date, we expect the PPA to expire prior to December 2027.

(11) BC Hydro has an option to purchase Mamquam that is exercisable in November 2021 and every five-year anniversary thereafter.

Non-operating Natural Gas Plants

In August 2018, we terminated discussions with the Navy regarding site control for our Naval Station, Naval Training Center (“NTC”) and North Island projects located in San Diego, California. We are in the process of decommissioning all three sites, which is a requirement of our land use agreements with the Navy.

Our Kapuskasing and North Bay projects are both 40 MW natural gas plants located in the Province of Ontario. These projects formerly had PPAs with the OEFC that expired in December 2017. These plants are currently being maintained, but do not operate because they do not have PPAs or a merchant market where operations would be profitable.

Consolidated Overview and Results of Operations

Performance highlights

The following table provides a summary of our consolidated results of operations for the three and nine months ended September 30, 2020 and 2019, which are analyzed in greater detail below:

(in millions of U.S. dollars, except as otherwise stated)	Three months ended September 30, 2020	Three months ended September 30, 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019
Project revenue	$ 65.2	$ 71.1	$ 200.3	$ 215.4
Project income	38.0	27.9	82.3	80.1
Net income attributable to Atlantic Power Corporation	16.2	12.6	40.0	22.7
Net cash provided by operating activities	27.8	36.4	72.1	104.5
Net cash used in investing activities	(6.5)	(29.1)	(9.4)	(28.0)
Net cash used in financing activities	(26.9)	(20.3)	(112.4)	(87.1)
Earnings per share attributable to Atlantic Power Corporation—basic	0.18	0.12	0.41	0.21
Earnings per share attributable to Atlantic Power Corporation—diluted	0.15	0.10	0.34	0.19
Project Adjusted EBITDA[1]	49.5	48.9	137.1	153.2

(1) See reconciliation and definition in Supplementary Non-GAAP Financial Information.

Project revenue decreased by $5.9 million to $65.2 million in the three months ended September 30, 2020 from $71.1 million in the three months ended September 30, 2019. The primary drivers of the decrease are as follows:

- *Oxnard* – the new RMR contract, which became effective in June 2020 and will expire in December 2020, provides for lower energy and capacity revenue than the previous contract, resulting in a decrease in project revenue of $6.0 million;

- *Cadillac* – the project was non-operational through August 20, 2020 following the fire in September 2019, resulting in a $1.6 million decrease in energy and capacity revenue;

- *Piedmont* – a combination of forced and planned maintenance outages at our Piedmont project resulted in a $1.4 million decrease in revenue from the comparable 2019 period; and

- *Curtis Palmer* – lower water flows resulted in a decrease in project revenue of $1.4 million from the comparable 2019 period.

These decreases in project revenue were partially offset by increases in project revenue resulting from:

- *Williams Lake* – a $1.8 million increase in revenue from the comparable 2019 period primarily due to the project's new energy purchase agreement that became effective in October 2019, and higher generation than the comparable 2019 period; and

- *Allendale and Dorchester* – the Allendale and Dorchester projects contributed $1.8 million of revenue in the three months ended September 30, 2020. The projects were purchased in July 2019.

Consolidated project income increased by $10.1 million to $38.0 million in the three months ended September 30, 2020 from $27.9 million in the three months ended September 30, 2019. The primary drivers of the increase are as follows:

- *Derivative instruments* – the change in the fair value of our derivative instruments increased $7.0 million from the comparable 2019 period;

- *Business interruption proceeds* – Insurance recoveries related to business interruption losses of $6.2 million were recognized at Cadillac; and

- *Fuel expenses* – fuel expenses decreased by $1.9 million from the comparable 2019 period primarily due to a decrease of $1.8 million at our Oxnard project, due to the new RMR contract and lower generation for the project.

These increases in project income were partially offset by a decrease in project income resulting from:

- *Project revenue* – project revenue decreased $5.9 million as discussed above.

Project revenue decreased by $15.1 million to $200.3 million in the nine months ended September 30, 2020 from $215.4 million in the nine months ended September 30, 2019. The primary drivers of the decrease are as follows:

- *Cadillac* – the project was non-operational through August 20, 2020 following the fire in September 2019, resulting in a $10.3 million decrease in energy and capacity revenue;

- *Oxnard* – the new RMR contract, effective from June 2020 through December 2020, provides for lower energy and capacity revenue than the previous contract, resulting in a decrease in project revenue of $9.7 million;

- *Curtis Palmer* – lower water flows resulted in a $7.4 million decrease in revenue from the comparable 2019 period;

- *Morris* – there was a $5.9 million decrease in project revenue at our Morris project due to lower fuel index prices than in 2019; and

- *Piedmont* – a combination of forced and planned maintenance outages at our Piedmont project resulted in a $3.0 million decrease in revenue from the comparable 2019 period.

These decreases in project revenue were partially offset by increases in project revenue resulting from:

- *Allendale and Dorchester* – the Allendale and Dorchester projects contributed $14.3 million of revenue in the nine months ended September 30, 2020. The projects were purchased in July 2019;

- *Williams Lake* – a $1.3 million increase in revenue from the comparable 2019 period primarily due to the project's new energy purchase agreement that became effective in October 2019;

- *Kenilworth* – a $1.2 million increase in revenue from the comparable 2019 period, primarily due to a steam revenue adjustment;

- *Mamquam* – higher water flows resulted in a $0.9 million increase in revenue from the comparable 2019 period; and

- *Nipigon* – a $0.9 million increase in capacity revenue due to contractual rate escalation and the project's savings pool shared by Nipigon and the offtaker.

Consolidated project income increased by $2.2 million to $82.3 million in the nine months ended September 30, 2020 from $80.1 million in the nine months ended September 30, 2019. The primary drivers of the increase are as follows:

- *Derivative instruments* – the change in the fair value of our derivative instruments increased $13.9 million from the comparable 2019 period;

- *Business interruption proceeds* – Insurance recoveries related to business interruption losses of $6.2 million were recognized at Cadillac;

- *Fuel expenses* – fuel expenses decreased by $3.9 million from the comparable 2019 period primarily due to a decrease of $6.1 million at our Morris project due to lower fuel index prices, a decrease of $3.2 million at our Oxnard project, due to the new RMR contract and lower generation for the project, and a decrease of $2.3 million at our Cadillac project, which was non-operational through August 20, 2020 following the fire in September 2019, partially offset by a combined increase of $6.9 million at our Allendale project and our Dorchester project; and

- *Depreciation and amortization* expense – depreciation and amortization expense decreased by $3.2 million from the comparable 2019 period primarily due to a decrease of $1.4 million at our Oxnard project and a decrease of $1.1 million at our Calstock project, as their PPA intangibles were fully amortized in June and May of 2020, respectively.

These increases in project income were offset by decreases in project income resulting from:

- *Project revenue* – project revenue decreased $15.1 million as discussed above; and

- *Operation and maintenance expenses* – operation and maintenance expenses increased by $9.4 million from the comparable 2019 period primarily due to an increase of $7.1 million at our Allendale project and our Dorchester project, which were purchased in July 2019, an increase of $2.8 million at our Williams Lake project due to extensive planned maintenance, including replacement of the project's cooling tower, and an increase of $1.6 million at our Morris project due to gas turbine maintenance expense. These increases were partially offset by a decrease of $3.3 million at our Oxnard project, which underwent a maintenance outage in the comparable 2019 period.

A detailed discussion of project income by segment is provided in Consolidated Overview and Results of Operations below. The discussion of Project Adjusted EBITDA by segment begins on page 57.

We have four reportable segments: Solid Fuel, Natural Gas, Hydroelectric and Corporate. We revised our reportable business segments in the fourth quarter of 2019 as the result of recent asset acquisitions, PPA expirations and project decommissioning, and in order to align with changes to management's structure, resource allocation and performance assessment in making decisions regarding our operations. Segment information for comparative 2019 period has been revised to conform to the new segment presentation. The segment classified as Corporate (formerly Un-Allocated Corporate) includes activities that support the executive and administrative offices, capital structure, costs of being a public registrant, costs to develop future projects and intercompany eliminations. These costs are not allocated to the operating segments when determining segment profit or loss. Project income is the primary GAAP measure of our operating results and is discussed below by reportable segment.

Three months ended September 30, 2020 compared to the three months ended September 30, 2019

The following table provides our consolidated results of operations:

	Three months ended September 30,			
	2020	2019	$ change	% change
Project revenue:				
Energy sales	$ 30.3	$ 29.2	$ 1.1	3.8 %
Energy capacity revenue	29.7	38.0	(8.3)	(21.8)%
Other	5.2	3.9	1.3	33.3 %
	65.2	71.1	(5.9)	(8.3)%
Project expenses:				
Fuel	17.5	19.4	(1.9)	(9.8)%
Operations and maintenance	21.2	19.5	1.7	8.7 %
Depreciation and amortization	14.5	16.2	(1.7)	(10.5)%
	53.2	55.1	(1.9)	(3.4)%
Project other income (loss):				
Change in fair value of derivative instruments	8.1	1.1	7.0	NM [1]
Equity in earnings of unconsolidated affiliates	12.1	12.1	—	— %
Interest expense, net	(0.4)	(0.3)	(0.1)	33.3 %
Insurance gain (loss)	6.2	(1.0)	7.2	NM
	26.0	11.9	14.1	NM
Project income	38.0	27.9	10.1	36.2 %
Administrative and other expenses (income):				
Administration	5.6	5.5	0.1	1.8 %
Interest expense, net	10.8	10.9	(0.1)	(0.9)%
Foreign exchange loss (gain)	5.1	(2.8)	7.9	NM
Other income, net	(3.8)	(0.2)	(3.6)	NM
	17.7	13.4	4.3	32.1 %
Income from operations before income taxes	20.3	14.5	5.8	40.0 %
Income tax expense	2.5	0.2	2.3	NM
Net income	17.8	14.3	3.5	24.5 %
Net income attributable to preferred shares of a subsidiary company	1.6	1.7	(0.1)	(5.9)%
Net income attributable to Atlantic Power Corporation	$ 16.2	$ 12.6	$ 3.6	28.6 %

[1] NM is defined as “not meaningful” and includes changes greater than 100%.

	Three months ended September 30, 2020				
	Solid Fuel	Natural Gas	Hydroelectric	Corporate	Consolidated Total
Project revenue:					
Energy sales	$ 14.3	$ 7.5	$ 8.5	$ —	$ 30.3
Energy capacity revenue	12.2	17.5	—	—	29.7
Other	0.2	4.1	0.7	0.2	5.2
	26.7	29.1	9.2	0.2	65.2
Project expenses:					
Fuel	9.4	8.1	—	—	17.5
Operations and maintenance	9.9	7.1	3.6	0.6	21.2
Depreciation and amortization	3.1	6.5	4.9	—	14.5
	22.4	21.7	8.5	0.6	53.2
Project other income (loss):					
Change in fair value of derivative instruments	—	6.3	—	1.8	8.1
Equity in earnings of unconsolidated affiliates	0.6	11.5	—	—	12.1
Interest expense, net	(0.3)	—	—	(0.1)	(0.4)
Insurance gain	6.2	—	—	—	6.2
	6.5	17.8	—	1.7	26.0
Project income	$ 10.8	$ 25.2	$ 0.7	$ 1.3	$ 38.0

	Three months ended September 30, 2019				
	Solid Fuel	Natural Gas	Hydroelectric	Corporate	Consolidated Total
Project revenue:					
Energy sales	$ 12.4	$ 7.7	$ 9.1	$ —	$ 29.2
Energy capacity revenue	13.7	24.3	—	—	38.0
Other	—	3.1	0.6	0.2	3.9
	26.1	35.1	9.7	0.2	71.1
Project expenses:					
Fuel	8.4	11.0	—	—	19.4
Operations and maintenance	7.8	7.8	3.4	0.5	19.5
Depreciation and amortization	3.7	7.6	4.9	—	16.2
	19.9	26.4	8.3	0.5	55.1
Project other income (loss):					
Change in fair value of derivative instruments	—	2.7	—	(1.6)	1.1
Equity in earnings of unconsolidated affiliates	0.5	11.6	—	—	12.1
Interest expense, net	(0.3)	—	—	—	(0.3)
Insurance loss	(1.0)	—	—	—	(1.0)
	(0.8)	14.3	—	(1.6)	11.9
Project income (loss)	$ 5.4	$ 23.0	$ 1.4	$ (1.9)	$ 27.9

Solid Fuel

Project income for the three months ended September 30, 2020 increased $5.4 million from the comparable 2019 period primarily due to:

- increased project income of $6.3 million at Cadillac primarily due to insurance proceeds of $6.2 million for business interruption losses as a result of the fire at the project in September 2019;
- increased project income of $1.3 million at Chambers primarily due to lower fuel consumption and improved heat rate than the comparable 2019 period; and
- increased project income of $1.0 million at Williams Lake primarily due to the project's new energy purchase agreement that became effective in October 2019, and higher generation than the comparable 2019 period, which resulted in a $1.8 million increase in project revenue from the comparable 2019 period.

These increases were partially offset by:

- decreased project income of $1.1 million at Piedmont due to maintenance outages in the current period;
- decreased project income of $0.8 million at Grayling due to a maintenance outage in the current period; and
- decreased project income of $0.6 million at Calstock primarily due to a $0.8 million increase in fuel expenses from the comparable 2019 period, partially offset by a $0.4 million decrease in intangible amortization as the project's PPA intangibles were fully amortized in May 2019.

Natural Gas

Project income for the three months ended September 30, 2020 increased $2.2 million from the comparable 2019 period primarily due to:

- increased project income of $5.0 million at Orlando primarily due to a $4.9 million increase in the fair value of natural gas swaps;
- increased project income of $0.6 million at Nipigon primarily due to a $0.6 million decrease in maintenance expense due to major maintenance at the project in the comparable 2019 period; and
- increased project income of $0.6 million at Manchief primarily due to higher dispatch than the comparable 2019 period.

These increases were partially offset by:

- decreased project income of $2.1 million at Morris due to increased gas turbine maintenance expense of $1.1 million and a lower gross margin from lower PJM pricing; and
- decreased project income of $2.0 million at Oxnard due to the new RMR contract, effective from June 2020 through December 2020, which provides for lower energy and capacity revenue than the previous contract.

Hydroelectric

Project income for the three months ended September 30, 2020 decreased $0.7 million from the comparable 2019 period primarily due to:

- decreased project income of $1.7 million at Curtis Palmer primarily due to lower water flows than the comparable 2019 period.

Corporate

Project income for the three months ended September 30, 2020 increased $3.2 million from the comparable 2019 period primarily due to a $5.4 million increase in the fair value of interest rate swap agreements related to the senior secured credit facility.

Administrative and other expenses (income)

Administrative and other expenses (income) include the income and expenses not attributable to any specific project and are allocated to the Corporate segment. These costs include the activities that support the executive and administrative offices, treasury function, costs of being a public registrant, costs to develop or acquire future projects, interest costs on our corporate obligations, the impact of foreign exchange fluctuations and corporate taxes. Significant non-cash items that impact Administrative and other expenses (income), and that are subject to potentially significant fluctuations include the non-cash impact of foreign exchange fluctuations from period to period on the U.S. dollar equivalent of our Canadian dollar-denominated obligations and the related deferred income tax expense (benefit) associated with these non-cash items.

Administration

Administration expense for the three months ended September 30, 2020 did not change materially from the three months ended September 30, 2019.

Interest expense, net

Interest expense for the three months ended September 30, 2020 did not change materially from the three months ended September 30, 2019.

Foreign exchange loss

Foreign exchange loss increased by $7.9 million to a $5.1 million loss in the three months ended September 30, 2020 from a $2.8 million gain in the comparable 2019 period, due to the revaluation of instruments denominated in Canadian dollars (primarily our MTNs and Series E Debentures). The Canadian dollar appreciated 2.1% against the U.S. dollar from June 30, 2020 to September 30, 2020, as compared to a 1.2% depreciation in the comparable 2019 period.

Other income, net

Other income, net increased by $3.6 million for the three months ended September 30, 2020 from the comparable 2019 period primarily due to a $3.5 million change in the fair value of the conversion option of the Series E Debentures.

Income tax expense

Income tax expense for the three months ended September 30, 2020 was $2.5 million. Expected income tax expense for the same period, based on the Canadian enacted statutory rate of 27%, was $5.5 million. The primary items impacting the tax rate for the three months ended September 30, 2020 were a net decrease to our valuation allowances of $2.7 million, consisting of $0.2 million increases in Canada due to the incurrence of operating losses and $2.9 million decreases in the United States due to the utilization of net operating losses, and $1.4 million relating to foreign exchange losses. These items were partially offset by $1.1 million relating to withholding, federal and state taxes.

Income tax expense for the three months ended September 30, 2019 was $0.2 million. Expected income tax expense for the same period, based on the Canadian enacted statutory rate of 27%, was $3.9 million. The primary item impacting the tax rate for the three months ended September 30, 2019 was a net decrease to our valuation allowances of $4.4 million, consisting of $1.0 million of decreases in Canada and $3.4 million of decreases in the United States due to the utilization of net operating losses in both jurisdictions. This item was partially offset by $0.5 million relating to withholding, federal and state taxes and $0.2 million of other permanent differences.

Nine months ended September 30, 2020 compared to the nine months ended September 30, 2019

The following table provides our consolidated results of operations:

	Nine months ended September 30,			
	2020	2019	$ change	% change
Project revenue:				
Energy sales	$ 102.1	$ 102.7	$ (0.6)	(0.6)%
Energy capacity revenue	84.8	99.8	(15.0)	(15.0)%
Other	13.4	12.9	0.5	3.9 %
	200.3	215.4	(15.1)	(7.0)%
Project expenses:				
Fuel	51.3	55.2	(3.9)	(7.1)%
Operations and maintenance	64.0	54.6	9.4	17.2 %
Depreciation and amortization	45.3	48.5	(3.2)	(6.6)%
	160.6	158.3	2.3	1.5 %
Project other income (loss):				
Change in fair value of derivative instruments	5.6	(8.3)	13.9	NM
Equity in earnings of unconsolidated affiliates	31.8	34.4	(2.6)	(7.6)%
Interest expense, net	(1.0)	(0.9)	(0.1)	11.1 %
Insurance gain (loss)	6.2	(1.0)	7.2	NM
Other expense, net	—	(1.2)	1.2	NM
	42.6	23.0	19.6	85.2 %
Project income	82.3	80.1	2.2	2.7 %
Administrative and other expenses (income):				
Administration	16.8	17.3	(0.5)	(2.9)%
Interest expense, net	31.7	33.0	(1.3)	(3.9)%
Foreign exchange (gain) loss	(6.2)	7.1	(13.3)	NM
Other (income) expense, net	(2.7)	0.7	(3.4)	NM
	39.6	58.1	(18.5)	(31.8)%
Income from operations before income taxes	42.7	22.0	20.7	94.1 %
Income tax expense	5.2	2.4	2.8	NM
Net income	37.5	19.6	17.9	91.3 %
Net loss attributable to preferred shares of a subsidiary company	(2.5)	(3.1)	0.6	(19.4)%
Net income attributable to Atlantic Power Corporation	$ 40.0	$ 22.7	$ 17.3	76.2 %

	Nine months ended September 30, 2020				
	Solid Fuel	Natural Gas	Hydroelectric	Corporate	Consolidated Total
Project revenue:					
Energy sales	$ 40.6	$ 18.4	$ 43.1	$ —	$ 102.1
Energy capacity revenue	26.2	58.6	—	—	84.8
Other	0.6	9.7	2.4	0.7	13.4
	67.4	86.7	45.5	0.7	200.3
Project expenses:					
Fuel	26.0	25.3	—	—	51.3
Operations and maintenance	33.5	18.9	9.8	1.8	64.0
Depreciation and amortization	9.4	21.1	14.7	0.1	45.3
	68.9	65.3	24.5	1.9	160.6
Project other income (loss):					
Change in fair value of derivative instruments	—	9.3	—	(3.7)	5.6
Equity in earnings of unconsolidated affiliates	0.7	31.1	—	—	31.8
Interest expense, net	(0.9)	—	—	(0.1)	(1.0)
Insurance gain	6.2	—	—	—	6.2
	6.0	40.4	—	(3.8)	42.6
Project income (loss)	$ 4.5	$ 61.8	$ 21.0	$ (5.0)	$ 82.3

	Nine months ended September 30, 2019				
	Solid Fuel	Natural Gas	Hydroelectric	Corporate	Consolidated Total
Project revenue:					
Energy sales	$ 30.7	$ 23.6	$ 48.4	$ —	$ 102.7
Energy capacity revenue	33.7	66.1	—	—	99.8
Other	0.1	9.9	2.2	0.7	12.9
	64.5	99.6	50.6	0.7	215.4
Project expenses:					
Fuel	21.6	33.6	—	—	55.2
Operations and maintenance	22.4	22.0	9.4	0.8	54.6
Depreciation and amortization	11.2	22.6	14.6	0.1	48.5
	55.2	78.2	24.0	0.9	158.3
Project other income (loss):					
Change in fair value of derivative instruments	(0.1)	—	—	(8.2)	(8.3)
Equity in earnings of unconsolidated affiliates	3.1	31.3	—	—	34.4
Interest (expense) income, net	(1.0)	0.1	—	—	(0.9)
Insurance loss	(1.0)	—	—	—	(1.0)
Other expense, net	—	(1.2)	—	—	(1.2)
	1.0	30.2	—	(8.2)	23.0
Project income (loss)	$ 10.3	$ 51.6	$ 26.6	$ (8.4)	$ 80.1

Solid Fuel

Project income for the nine months ended September 30, 2020 decreased $5.8 million from the comparable 2019 period primarily due to:

- decreased project income of $2.3 million at Craven as a result of extended rotor repairs at the project during 2020. The project was purchased in August 2019 and therefore had a limited impact on project income in the comparable 2019 period;

- decreased project income of $1.9 million at Williams Lake primarily due to a $2.3 million increase in maintenance expenses from replacement of the cooling tower and contractual curtailment of the project from April through July 2020 under the new PPA;

- decreased project income of $1.7 million at Grayling as a result of extended rotor and generator repairs at the project during 2020. The project was purchased in August 2019 and therefore had a limited impact on project income in the comparable 2019 period; and

- decreased project income of $1.5 million at Piedmont primarily due to maintenance outages.

  These decreases were partially offset by:

- increased project income of $1.6 million at Chambers primarily due to lower fuel consumption and improved heat rate than the comparable 2019 period.

Natural Gas

Project income for the nine months ended September 30, 2020 increased $10.2 million from the comparable 2019 period primarily due to:

- increased project income of $5.8 million at Nipigon primarily due to a $2.6 million increase in the fair value of the fuel agreement accounted for as a derivative financial instrument, a $1.2 million decrease in maintenance expense due to major maintenance at the project in the comparable 2019 period and a $0.9 million increase in capacity revenue due to contractual rate escalation and the project's savings pool shared by Nipigon and the offtaker;

- increased project income of $6.2 million at Orlando primarily due to a $7.9 million increase in the fair value of natural gas swaps, partially offset by a $1.9 million increase in fuel expense due to unfavorable fuel prices;

- increased project income of $1.0 million at Kenilworth primarily due to a steam revenue adjustment; and

- increased project income of $0.6 million, $0.7 million and $0.4 million at Naval Station, NTC and North Island, respectively, which ceased operations in February 2018, and incurred project losses in the comparable 2019 period primarily related to asset retirement obligations.

These increases were partially offset by:

- decreased project income of $2.8 million at Morris primarily due increased gas turbine maintenance expense of $1.3 million and a lower gross margin from lower PJM pricing; and

- decreased project income of $1.9 million at Oxnard primarily due to the new RMR contract, effective from June 2020 to December 2020, that provides for lower energy and capacity revenue than the previous contract.

Hydroelectric

Project income for the nine months ended September 30, 2020 decreased $5.6 million from the comparable 2019 period primarily due to:

- decreased project income of $8.0 million at Curtis Palmer primarily due to lower water flows than the comparable 2019 period.

This decrease was partially offset by:

- increased project income of $1.0 million at Mamquam primarily due to higher water flows than the comparable 2019 period.

Corporate

Project income for the nine months ended September 30, 2020 increased $3.4 million from the comparable 2019 period primarily due to a $4.5 million increase in the fair value of interest rate swap agreements related to the senior secured credit facility.

Administrative and other expenses (income)

Administrative and other expenses (income) include the income and expenses not attributable to any specific project and are allocated to the Corporate segment. These costs include the activities that support the executive and administrative offices, treasury function, costs of being a public registrant, costs to develop or acquire future projects, interest costs on our corporate obligations, the impact of foreign exchange fluctuations and corporate taxes. Significant non-cash items that impact Administrative and other expenses (income), and that are subject to potentially significant fluctuations include the non-cash impact of foreign exchange fluctuations from period to period on the U.S. dollar equivalent of our Canadian dollar-denominated obligations and the related deferred income tax expense (benefit) associated with these non-cash items.

Administration

Administration expense for the nine months ended September 30, 2020 did not change materially from the nine months ended September 30, 2019.

Interest expense, net

Interest expense decreased by $1.3 million to $31.7 million in the nine months ended September 30, 2020 from $33.0 million in the comparable period in 2019, primarily due to lower outstanding debt balances than the comparable 2019 period, as well as a lower interest rate on our senior secured credit facility.

Foreign exchange (gain) loss

Foreign exchange loss decreased by $13.3 million to a $6.2 million gain in the nine months ended September 30, 2020 from a $7.1 million loss in the comparable 2019 period, due to the revaluation of instruments denominated in Canadian dollars (primarily our MTNs and Series E Debentures). The Canadian dollar depreciated 2.7% against the U.S. dollar from December 31, 2019 to September 30, 2020, as compared to a 2.9% appreciation in the comparable 2019 period.

Other income, net

Other income, net for the nine months ended September 30, 2020 increased by $3.4 million primarily due to a $3.3 million change in the fair value of the conversion option of the Series E Debentures.

Income tax expense

Income tax expense for the nine months ended September 30, 2020 was $5.2 million. Expected income tax expense for the same period, based on the Canadian enacted statutory rate of 27%, was $11.5 million. The primary item impacting the tax rate for the nine months ended September 30, 2020 was a net decrease to our valuation allowances of $11.6 million, consisting of $3.6 million decreases in Canada and $8.0 million decreases in the United States due to the utilization of net operating losses in both jurisdictions. This item was offset by $2.7 million related to changes in estimates due to tax filings, $1.7 million relating to withholding, federal and state taxes and $0.9 million of other permanent differences.

Income tax expense for the nine months ended September 30, 2019 was $2.4 million. Expected income tax expense for the same period, based on the Canadian enacted statutory rate of 27%, was $5.9 million. The primary items impacting the tax rate for the three months ended September 30, 2019 was a net decrease to our valuation allowances of $4.5 million, consisting of $4.4 million of increases in Canada due to the incurrence of operating losses and $8.9 million of decreases in the United States due to the utilization of net operating losses. In addition, the rate was further impacted by $1.0 million relating to foreign exchange. These items were partially offset by $1.3 million relating to withholding, federal and state taxes and $0.7 million of other permanent differences.

Project Operating Performance

Two of the primary metrics we utilize to measure the operating performance of our projects are generation and availability. Generation measures the net output of our proportionate project ownership percentage in megawatt hours ("MWh"). Availability is calculated by dividing the total scheduled hours of a project less forced outage hours by the total hours in the period measured. The terms of our PPAs require our projects to maintain certain levels of availability. The majority of our projects were able to achieve their respective capacity payments. For projects where reduced availability adversely impacted capacity payments, the impact was not material for the three and nine months ended September 30, 2020, with the exception of the Cadillac project. While the reduction in availability at the Cadillac project impacted capacity payments for the period ended September 30, 2020, we recovered these capacity payments through the business interruption insurance recoveries for the period. The terms of our PPAs provide for certain levels of planned and unplanned outages. All references below are denominated in net Gigawatt hours ("net GWh").

Generation

	Generation		
	Three months ended September 30,		
(in Net GWh)	2020	2019	% change 2020 vs. 2019
Segment			
Solid Fuel	370.6	390.6	(5.1)%
Natural Gas	673.0	772.4	(12.9)%
Hydroelectric	110.8	105.3	5.2 %
Total	1,154.4	1,268.3	(9.0)%

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Aggregate power generation for the three months ended September 30, 2020 decreased 9.0% from the comparable 2019 period primarily due to:

- decreased generation in the Natural Gas segment primarily due to a 108.5 net GWh decrease in generation at Frederickson due to lower dispatch than the comparable 2019 period and a 38.2 net GWh decrease in generation at Oxnard under the new RMR contract, effective from June 2020 through December 2020, as the project runs only when it is called upon to operate. These decreases were partially offset by a 63.7 net GWh increase at Manchief due to higher dispatch than the comparable 2019 period; and

- decreased generation in the Solid Fuel segment primarily due to a 27.7 net GWh decrease at Piedmont due to maintenance outages and an 11.8 net GWh decrease at Cadillac due to an extended outage as a result of the fire in September 2019. These were partially offset by a combined 25.4 net GWh increase at Allendale and Dorchester, which were acquired in July 2019.

These decreases were partially offset by:

- increased generation in the Hydroelectric segment primarily due to an 8.7 net GWh increase in generation at Mamquam due to snowpack remaining slightly higher than the historical average, and increased generation of 4.3 and 3.4 net GWh at Koma Kulshan and Moresby Lake, respectively. This was partially offset by a 10.9 net GWh decrease in generation at Curtis Palmer due to lower water flows in the current period.

(in Net GWh)	Generation Nine months ended September 30, 2020	 2019	 % change 2020 vs. 2019
Segment			
Solid Fuel	1,049.7	1,121.4	(6.4)%
Natural Gas	1,718.5	1,871.7	(8.2)%
Hydroelectric	497.1	506.3	(1.8)%
Total	3,265.3	3,499.4	(6.7)%

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Aggregate power generation for the nine months ended September 30, 2020 decreased 6.7% from the comparable 2019 period primarily due to:

- decreased generation in the Natural Gas segment primarily due to a 90.9 net GWh decrease in generation at Frederickson due to lower dispatch than the comparable 2019 period, a 58.5 net GWh decrease in generation at Oxnard under the new RMR contract, effective from June 2020 through December 2020, as the project runs only when it is called upon to operate, and a 39.3 net GWh decrease in generation at Morris due to lower PJM pricing in the period. These decreases were partially offset by a 71.6 net GWh increase in generation at Manchief due to higher dispatch than the comparable 2019 period;

- decreased generation in the Solid Fuel segment of 145.0 net GWh at Williams Lake primarily due to the contractual curtailment during the months of May, June and July under the new PPA. The extended outage at Cadillac due to a fire in September 2019 and outages at Piedmont accounted for an additional 139.0 decrease in net GWh, with generation decreases of 74.6 and 64.4 net GWh, respectively. These decreases were partially offset by a combined generation increase of 228.5 net GWh at Allendale, Dorchester, Craven and Grayling, which were acquired in July 2019; and

- decreased generation in the Hydroelectric segment, primarily due to a 56.1 net GWh decrease at Curtis Palmer as a result of lower water flows than in 2019. These decreases were partially offset by increased generation at Mamquam of 31.3 net GWh, Koma Kulshan of 8.9 net GWh, and Moresby Lake of 6.7 net GWh due to higher water flows than the comparable 2019 period.

Availability

	Availability Three months ended September 30, 2020	 2019	 % change 2020 vs. 2019
Segment			
Solid Fuel	75.4 %	79.9 %	(4.5)%
Natural Gas	96.8 %	98.8 %	(2.0)%
Hydroelectric	93.4 %	97.8 %	(4.4)%
Weighted average	87.3 %	95.1 %	(7.8)%

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Aggregate power availability for the three months ended September 30, 2020 decreased 7.8% from the comparable 2019 period primarily due to:

- decreased availability in the Solid Fuel segment primarily due to the fire at Cadillac in September 2019 and outages at Piedmont in the current quarterly period;

- decreased availability in the Hydroelectric segment primarily due to planned outages at Curtis Palmer, partially offset by increased availability at Mamquam and Moresby Lake due to forced outages in the comparable 2019 period; and

- decreased availability in the Natural Gas segment primarily due to planned outages at Kenilworth in the current quarterly period, partially offset by increased availability at Nipigon due to maintenance outages in the comparable 2019 period.

	Availability		
	Nine months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Segment			
Solid Fuel	75.3 %	90.1 %	(14.8)%
Natural Gas	94.6 %	98.0 %	(3.4)%
Hydroelectric	85.3 %	94.6 %	(9.3)%
Weighted average	85.0 %	95.8 %	(10.8)%

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Aggregate power availability for the nine months ended September 30, 2020 decreased 10.8% from the comparable 2019 period primarily due to:

- decreased availability in the Solid Fuel segment primarily due to the fire at Cadillac in September 2019 and outages at Piedmont in the period;

- decreased availability in the Hydroelectric segment primarily due to forced outages at Koma Kulshan in the period; and

- decreased availability in the Natural Gas segment primarily due to planned outages at Kenilworth and Orlando in the period.

Supplementary Non-GAAP Financial Information

The key measurement we use to evaluate the results of our business is Project Adjusted EBITDA. Project Adjusted EBITDA is defined as project income (loss) plus interest, taxes, depreciation and amortization, impairment charges, insurance loss (gain), other (income) expenses and changes in fair value of derivative instruments. Project Adjusted EBITDA is not a measure recognized under GAAP and does not have a standardized meaning prescribed by GAAP and is therefore unlikely to be comparable to similar measures presented by other companies. We believe that Project Adjusted EBITDA is a useful measure of financial results at our projects because it excludes non-cash impairment charges, gains or losses on the sale of assets and non-cash mark-to-market adjustments, all of which can affect year-to-year comparisons. Project Adjusted EBITDA is before corporate overhead expense. The most directly comparable GAAP measure to Project Adjusted EBITDA is Project income. A reconciliation of Net income (loss) to Project income and to Project Adjusted EBITDA is provided under "Project Adjusted EBITDA" below. Project Adjusted EBITDA for our equity method investments in unconsolidated affiliates is presented on a proportionately consolidated basis in the table below.

Project Adjusted EBITDA

	Three months ended September 30, 2020	Three months ended September 30, 2019	$ change 2020 vs 2019	Nine months ended September 30, 2020	Nine months ended September 30, 2019	$ change 2020 vs 2019
Net income	$ 17.8	$ 14.3	$ 3.5	$ 37.5	$ 19.6	$ 17.9
Income tax expense	2.5	0.2	2.3	5.2	2.4	2.8
Income from operations before income taxes	20.3	14.5	5.8	42.7	22.0	20.7
Administration	5.6	5.5	0.1	16.8	17.3	(0.5)
Interest expense, net	10.8	10.9	(0.1)	31.7	33.0	(1.3)
Foreign exchange loss (gain)	5.1	(2.8)	7.9	(6.2)	7.1	(13.3)
Other (income) expense, net	(3.8)	(0.2)	(3.6)	(2.7)	0.7	(3.4)
Project income	$ 38.0	$ 27.9	$ 10.1	$ 82.3	$ 80.1	$ 2.2
Reconciliation to Project Adjusted EBITDA						
Depreciation and amortization	18.8	20.2	(1.4)	58.3	60.6	(2.3)
Interest expense, net	0.8	0.8	—	2.1	2.0	0.1
Change in the fair value of derivative instruments	(8.1)	(1.0)	(7.1)	(5.6)	8.3	(13.9)
Insurance loss	—	1.0	(1.0)	—	1.0	(1.0)
Other expense, net	—	—	—	—	1.2	(1.2)
Project Adjusted EBITDA	$ 49.5	$ 48.9	$ 0.6	$ 137.1	$ 153.2	$ (16.1)
Project Adjusted EBITDA by segment						
Solid Fuel	17.1	13.2	3.9	23.3	31.5	(8.2)
Natural Gas	27.1	29.6	(2.5)	79.1	80.6	(1.5)
Hydroelectric	5.6	6.3	(0.7)	35.7	41.2	(5.5)
Corporate	(0.3)	(0.2)	(0.1)	(1.0)	(0.1)	(0.9)
Total	$ 49.5	$ 48.9	$ 0.6	$ 137.1	$ 153.2	$ (16.1)

Solid Fuel

The following table summarizes Project Adjusted EBITDA for our Solid Fuel segment for the periods indicated:

	Three months ended September 30, 2020	Three months ended September 30, 2019	% change 2020 vs. 2019
Solid Fuel			
Project Adjusted EBITDA	$ 17.1	$ 13.2	30 %

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Project Adjusted EBITDA for the three months ended September 30, 2020 increased $3.9 million from the comparable 2019 period primarily due to increased Project Adjusted EBITDA of:

- $5.0 million at Cadillac primarily due to insurance proceeds of $6.2 million for business interruption losses, a portion of which related to losses incurred in 2019, as a result of the fire at the project in September 2019;

- $1.2 million at Chambers due to lower fuel consumption and improved heat rate than the comparable 2019 period; and

- $1.1 million at Williams Lake primarily due to the project's new energy purchase agreement that became effective in October 2019, and higher generation than the comparable 2019 period.

These increases were partially offset by decreases in Project Adjusted EBITDA of:

- $1.1 million at Calstock due to higher biomass fuel prices; and

- $1.1 million at Piedmont due to maintenance outages in the current quarterly period.

	Nine months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Solid Fuel			
Project Adjusted EBITDA	$ 23.3	$ 31.5	(26)%

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Project Adjusted EBITDA for the nine months ended September 30, 2020 decreased $8.2 million from the comparable 2019 period primarily due to decreased Project Adjusted EBITDA of:

- $2.6 million at Cadillac, which was non-operational from September 2019 to August 20, 2020 due to a fire at the project. This resulted in a decrease of $8.8 million from the comparable 2019 period, partially offset by insurance proceeds of $6.2 million for business interruption losses, a portion of which related to losses incurred in 2019;

- $1.8 million at Craven, primarily due to rotor repairs at the project during 2020. The project was purchased in August 2019 and therefore had limited impact on project income in the comparable 2019 period;

- $1.7 million at Williams Lake, primarily due to a $2.3 million increase in maintenance expenses from replacement of the cooling tower, and contractual curtailment of the project from April through July 2020;

- $1.5 million at Piedmont primarily due to maintenance outages; and

- $1.4 million at Grayling primarily due to extended rotor and generator repairs at the project during 2020. The project was purchased in August 2019 and therefore had a limited impact on project income in the comparable 2019 period.

These decreases were partially offset by increases in Project Adjusted EBITDA of:

- $1.4 million at Chambers due to lower fuel consumption and improved heat rate than the comparable 2019 period.

Natural Gas

The following table summarizes Project Adjusted EBITDA for our Natural Gas segment for the periods indicated:

	Three months ended September 30,		
	2020	**2019**	**% change 2020 vs 2019**
Natural Gas			
Project Adjusted EBITDA	$ 27.1	$ 29.6	(8)%

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Project Adjusted EBITDA for the three months ended September 30, 2020 decreased $2.5 million from the comparable 2019 period primarily due to decreased Project Adjusted EBITDA of:

- $3.0 million at Oxnard due to the new RMR contract, effective from June 2020 through December 2020, which provides for lower energy and capacity revenue than the previous contract; and

- $1.9 million at Morris due to increased gas turbine maintenance expense of $1.1 million and a lower gross margin from lower PJM pricing.

  These decreases were partially offset by an increase in Project Adjusted EBITDA of:

- $1.6 million at Nipigon due to major maintenance at the project in the comparable period and the project's savings pool shared by Nipigon and the offtaker.

	Nine months ended September 30,		
	2020	**2019**	**% change 2020 vs 2019**
Natural Gas			
Project Adjusted EBITDA	$ 79.1	$ 80.6	(2)%

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Project Adjusted EBITDA for the nine months ended September 30, 2020 decreased $1.5 million from the comparable 2019 period primarily due to decreased Project Adjusted EBITDA of:

- $3.2 million at Oxnard due to the new RMR contract, effective from June 2020 through December 2020, which provides for lower energy and capacity revenue than the previous contract;

- $1.7 million at Orlando primarily due to planned major maintenance at the project; and

- $1.5 million at Morris primarily due to increased gas turbine maintenance expense of $1.3 million and a lower gross margin from lower PJM pricing.

These decreases were partially offset by increases in Project Adjusted EBITDA of:

- $3.2 million at Nipigon due to contractual rate escalation and major maintenance at the project in the comparable 2019 period; and

- $1.0 million at Kenilworth primarily due to a steam revenue adjustment.

Hydroelectric

The following table summarizes Project Adjusted EBITDA for our Hydroelectric segment for the periods indicated:

	Three months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Hydroelectric			
Project Adjusted EBITDA	$ 5.6	$ 6.3	(11)%

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Project Adjusted EBITDA for the three months ended September 30, 2020 decreased $0.7 million from the comparable 2019 period primarily due to decreased Project Adjusted EBITDA of:

- $1.7 million at Curtis Palmer primarily due to lower water flows than the comparable 2019 period.

	Nine months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Hydroelectric			
Project Adjusted EBITDA	$ 35.7	$ 41.2	(13)%

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Project Adjusted EBITDA for the nine months ended September 30, 2020 decreased $5.5 million from the comparable 2019 period primarily due to decreased Project Adjusted EBITDA of:

- $8.0 million at Curtis Palmer primarily due to lower water flows than the comparable 2019 period.

This decrease was partially offset by an increase in Project Adjusted EBITDA of:

- $1.1 million at Mamquam primarily due to higher water flows than the comparable 2019 period.

Corporate

The following table summarizes Project Adjusted EBITDA for our Corporate segment for the periods indicated:

	Three months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Corporate			
Project Adjusted EBITDA	$ (0.3)	$ (0.2)	50 %

Three months ended September 30, 2020 compared with three months ended September 30, 2019

Project Adjusted EBITDA for the three months ended September 30, 2020 did not change materially from the comparable 2019 period.

	Nine months ended September 30,		
	2020	2019	% change 2020 vs. 2019
Corporate			
Project Adjusted EBITDA	$ (1.0)	$ (0.1)	NM

Nine months ended September 30, 2020 compared with nine months ended September 30, 2019

Project Adjusted EBITDA for the nine months ended September 30, 2020 did not change materially from the comparable 2019 period.

Liquidity and Capital Resources

	September 30, 2020	December 31, 2019
Cash and cash equivalents	$ 30.3	$ 74.9
Restricted cash	2.6	7.7
Total	32.9	82.6
Revolving credit facility availability [(1)]	102.0	121.7
Total liquidity	$ 134.9	$ 204.3

(1) On March 18, 2020, the borrowing capacity under the Revolver was reduced to $180 million under the amendment to extend the Revolver maturity to April 2025.

Overview

Our primary sources of liquidity are distributions from our projects and availability under our Revolver. Our liquidity depends in part on our ability to successfully enter into new PPAs at projects when PPAs expire or terminate. PPAs in our portfolio have expiration dates ranging from December 16, 2020 (Calstock) to November 2043 (Allendale). Calstock is currently the one project operating under a PPA with an expiration date in 2020. When a PPA expires or is terminated, it may be difficult for us to secure a new PPA, if at all, or the price received by the project for power under subsequent arrangements may be reduced significantly. As a result, this may reduce the cash received from project distributions and the cash available for further debt reduction, identification of and investment in accretive growth opportunities (both internal and external), to the extent available, and other allocation of available cash. See "Risk Factors—Risks Related to Our Financial Position and Economic and Financial Market Conditions —We may not generate sufficient cash flow to service our debt obligations or implement our business plan, including financing internal or external growth opportunities" in our Annual Report on Form 10-K for the year ended December 31, 2019.

Consolidated Cash Flow Discussion

The following table reflects the changes in cash flows for the periods indicated:

	Nine months ended September 30,		
	2020	2019	Change
Net cash provided by operating activities	$ 72.1	$ 104.5	$ (32.4)
Net cash used in investing activities	(9.4)	(28.0)	18.6
Net cash used in financing activities	(112.4)	(87.1)	(25.3)

Operating Activities

Cash flow from our projects may vary from period to period based on working capital requirements and the operating performance of the projects, as well as changes in prices under the PPAs, fuel supply and transportation agreements, steam sales agreements and other project contracts, and the transition to merchant or re-contracted pricing following the expiration of PPAs. Project cash flows may have some seasonality and the pattern and frequency of distributions to us from the projects during the year can also vary, although such seasonal variances do not typically have a material impact on our business.

For the nine months ended September 30, 2020, the net decrease in cash provided by operating activities of $32.4 million was primarily the result of the following:

- *Cadillac* – following the fire in September 2019, the project was non-operational through August 20, 2020, which resulted in an $8.8 million negative impact on cash flows provided by operations. This decrease was partially offset by insurance proceeds. We received insurance proceeds of $19.7 million related to the

Cadillac fire, of which $7.0 million related to operating activities, including $6.2 million for business interruption losses and $0.8 million for fuel inventory losses;

- *Working capital* – changes in working capital resulted in a $14.3 million decrease in cash flows from operating activities from the comparable 2019 period. The unfavorable change in working capital is primarily due to the timing of cash disbursements for payables at Cadillac for repair work and at Morris in preparation for a maintenance outage later in 2020;

- *Hydrological conditions* – lower water flows at our Curtis Palmer project, partially offset by higher water flows at our Mamquam project, had a $5.5 million negative impact on cash flows provided by operating activities;

- *Distributions from unconsolidated affiliates* – we received $4.1 million less in distributions from our unconsolidated affiliates than the comparable 2019 period, primarily at Chambers which began repaying principal on its project-level debt in the fourth quarter of 2019; and

- *New contracts* – A $3.2 million negative impact on cash flows provided by operating activities at Oxnard due to the new RMR contract, effective from June 2020 through December 2020, which provides for lower energy and capacity revenue than the previous contract; and a $1.7 million negative impact on cash flows provided by operating activities at Williams Lake, primarily due to contractual curtailment of the project from April through July 2020 in accordance with the project's new energy purchase agreement that became effective in October 2019 and a $2.3 million increase in maintenance expenses associated with replacement of the cooling tower.

Investing Activities

For the nine months ended September 30, 2020, the net decrease in cash used in investing activities of $18.6 million was primarily the result of the following:

- *Insurance proceeds* – we received insurance proceeds of $19.7 million related to the Cadillac fire, of which $12.7 million related to property, plant and equipment;

- *Investment in unconsolidated affiliates* – we paid $18.7 million in the comparable 2019 period to acquire a 50% interest in Craven and a 30% interest in Grayling in August 2019; and

- *Acquisitions* – we paid $10.0 million in the comparable 2019 period to complete the acquisition of Dorchester and Allendale in July 2019.

These decreases were partially offset by the following increase in cash used in investing activities:

- *Capitalized plant additions* – capitalized plant additions were $22.1 million higher in the nine months ended September 30, 2020 than the comparable 2019 period, primarily due to repairs at Cadillac.

Financing Activities

For the nine months ended September 30, 2020, the net increase in cash used in financing activities of $25.3 million was primarily the result of the following:

- *Common share repurchases* – we paid $41.6 million (which includes $25.8 million for the SIB, including transaction costs) in the nine months ended September 30, 2020 to repurchase and cancel common shares as compared to $0.8 million in the comparative 2019 period;

- *Corporate and project-level debt repayments* – we made $4.8 million greater principal payments than the comparable 2019 period; and

- *Deferred financing costs* – we incurred $1.6 million of deferred financing costs related to amending the Term Loan and the Revolver in the nine months ended September 30, 2020.

These increases were partially offset by the following decreases in cash flows used in financing activities:

- *Convertible debenture redemptions* – we paid $18.5 million to redeem and cancel the Series D Debentures in the comparable 2019 period;

- *Preferred share repurchases* – we paid $6.4 million to repurchase and cancel preferred shares as compared to $8.0 million in the comparable 2019 period; and

- *Vested LTIP* – we made $1.3 million of lower cash payments for vested LTIP tax withholdings than in the comparable 2019 period.

Corporate Debt

The following table summarizes the maturities of our corporate debt at September 30, 2020:

	Maturity Date	Interest Rates	Remaining Principal Repayments	2020	2021	2022	2023	2024	Thereafter
Senior secured term loan facility[(1)]	April 2025	4.73%	$ 326.0	$ 18.5	$ 93.0	$ 106.0	$ 60.0	$ 36.0	$ 12.5
MTNs	June 2036	5.95%	157.4	—	—	—	—	—	157.4
Convertible Debenture	January 2025	6.00%	86.2	—	—	—	—	—	86.2
Total Corporate Debt			$ 569.6	$ 18.5	$ 93.0	$ 106.0	$ 60.0	$ 36.0	$ 256.1

(1) The Term Loan Facility contains a mandatory amortization feature determined by using the greater of (i) 50% of the cash flow of APLP Holdings and its subsidiaries that remains after the application of funds, in accordance with a customary priority, to operations and maintenance expenses of APLP Holdings and its subsidiaries, debt service on the Term Loan Facility and the 5.95% MTNs, letters of credit costs to meet the requirements of the debt service reserve account, debt service on other permitted debt of APLP Holdings and its subsidiaries, capital expenditures permitted under the Term Loan Facility, and payment on the preferred equity issued by APPEL, a subsidiary of APLP Holdings or (ii) such other amount up to 100% of the cash flow described in clause (i) above that is required to reduce the aggregate principal amount of the Term Loan Facility outstanding to achieve a target principal amount that declines quarterly based on a pre-determined specified schedule. Note that failing to meet the mandatory amortization requirements is not an event of default, but could result in APLP Holdings being unable to make distributions to Atlantic Power Corporation and APPEL being unable to pay dividends to its shareholders. The amortization profile in the table above is based on principal payments according to the targeted principal amount described in (ii) above through 2022 based on the schedule as amended in January 2020. After 2022, the amortization profile is based on (i) above and is an estimate, subject to change. See Note 5, *Long-term debt* for more information on our Credit Facilities.

Project-Level Debt

Project-level debt of our consolidated projects is secured by the respective project and its contracts with no other recourse to us. Project-level debt generally amortizes during the term of the respective revenue-generating contracts of the projects. The following table summarizes the maturities of project-level debt. The amounts represent our share of the non-recourse project-level debt balances at September 30, 2020. Project-level debt agreements contain covenants that restrict the amount of cash distributed by the project if certain debt service coverage ratios are not attained. At November 6, 2020, all of our projects except for Cadillac were in compliance with the covenants contained in project-level debt. Projects that do not meet their debt service coverage ratios are limited from making distributions, but are not callable or subject to acceleration under the terms of their debt agreements.

The Cadillac Term Loan contains various affirmative and negative covenants which relate to, including, among other things, the operation of the Cadillac plant, compliance with laws, incurrence of additional debt and restricted payments (as defined in the Cadillac Term Loan). One of the negative covenants requires the Cadillac project to meet certain key financial ratios, including a debt service coverage ratio (as defined in the Cadillac Term Loan). Beginning March 31, 2020, and as of September 30, 2020, we determined that the Cadillac project did not fulfill the debt service coverage ratio as required by the Cadillac Term Loan. Due to the breach of the covenant, the Cadillac project is prevented from making restricted payments (as defined in the Cadillac Term Loan) until several conditions are met, including, among other things, (i) the debt service coverage ratio for the most-recently ended period of four consecutive fiscal quarters is at least 1.2 to 1.0, and (ii) the projected debt service coverage ratio for the four consecutive fiscal quarters immediately following the period described in (i) is at least 1.2 to 1.0. We have not made any restricted payments (as defined in the Cadillac Term Loan) since July 31, 2019.

The range of interest rates presented represents the rates in effect at September 30, 2020. The amounts listed below are in millions of U.S. dollars, except as otherwise stated.

	Maturity Date	Range of Interest Rates	Total Remaining Principal Repayments	2020	2021	2022	2023	2024	Thereafter
Consolidated Projects:									
Cadillac	August 2025	6.26 % - 6.38 %	$ 15.6	$ 0.8	$ 2.7	$ 3.3	$ 3.3	$ 3.7	$ 1.8
Total Consolidated Projects			15.6	0.8	2.7	3.3	3.3	3.7	1.8
Equity Method Projects:									
Chambers[(1)]	December 2023	5.00 %	34.6	3.9	8.8	10.1	11.8	—	—
Total Equity Method Projects			34.6	3.9	8.8	10.1	11.8	—	—
Total Project-Level Debt			$ 50.2	$ 4.7	$ 11.5	$ 13.4	$ 15.1	$ 3.7	$ 1.8

(1) The above table does not include our $0.8 million proportionate share of issuance premiums.

Uses of Liquidity

Our requirements for liquidity and capital resources, other than operating our projects, consist primarily of principal and interest on our outstanding Series E Debentures, Term Loan Facility, MTNs and other corporate and project-level debt; funding the repurchase of shares of our common stock, our Series E Debentures, and our preferred shares (to the extent we choose to pursue any such repurchases); collateral and investment in our projects through capital expenditures, including major maintenance and business development costs; and dividend payments to preferred shareholders of a subsidiary company.

Capital and Maintenance Expenditures

Capital expenditures and maintenance expenses for the projects are generally paid at the project level using project cash flows and project reserves. Therefore, the distributions that we receive from the projects are made net of capital expenditures and maintenance expenditures needed at the projects. The operating projects which we own consist of large capital assets that have established commercial operations. Ongoing capital expenditures for assets of this nature are generally not significant because most expenditures relate to planned repairs and maintenance and are expensed when incurred.

Excluding reconstruction costs at Cadillac, we expect to reinvest approximately $4.0 million in 2020 (of which $2.6 million was reinvested in the nine months ended September 30, 2020) in our portfolio, including equity method investments, in the form of project capital expenditures, and incur $32.8 million of maintenance expenses (of which $24.4 million was incurred in the nine months ended September 30, 2020). Such investments are generally paid at the project level. See “Liquidity and Capital Resources—Capital and Maintenance Expenditures” in our Annual Report on Form 10-K for the year ended December 31, 2019. We do not expect any other material or unusual requirements for cash outflows for 2020 for capital expenditures or other required investments. We believe that we will be able to generate sufficient amounts of cash and cash equivalents to maintain our operations and meet obligations as they become due for at least the next 12 months.

We believe one of the benefits of our diverse fleet is that plant overhauls and other expenditures do not occur in the same year for each facility. Recognized industry guidelines and original equipment manufacturer recommendations provide a source of data to assess maintenance needs. In addition, we utilize predictive and risk-based analysis to refine our expectations, prioritize our spending and balance the funding requirements necessary for these expenditures over time. Future capital expenditures and maintenance expenses may exceed the projected level in 2020 as a result of the timing of more infrequent events such as steam turbine overhauls and/or gas turbine and hydroelectric turbine upgrades.

Recently Adopted and Recently Issued Accounting Guidance

See Note 1 to the consolidated financial statements in this Quarterly Report on Form 10-Q.

Off-Balance Sheet Arrangements

As of September 30, 2020, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to financial market risk results primarily from fluctuations in interest and currency rates and fuel and electricity prices. There have been no material changes to our market risks as disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer have evaluated our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act as of the end of the period covered by this report, and they have concluded that these controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There have been no changes in internal control over financial reporting during the three months ended September 30, 2020, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Internal Control over Financial Reporting

Because of their inherent limitations, our disclosure controls and procedures and our internal control over financial reporting may not prevent material errors or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. The effectiveness of our disclosure controls and procedures and our internal control over financial reporting are subject to risks, including that the control may become inadequate because of changes in conditions or that the degree of compliance with our policies or procedures may deteriorate.

ITEM 1A. RISK FACTORS

During the quarter ended September 30, 2020, there have been no material changes from the risk factors previously in “Item 1A. Risk Factors” of our Annual Report on Form 10-K for the year ended December 31, 2019 except as follows:

Our business, results of operations, financial condition, cash flows and stock price can be adversely affected by pandemics, epidemics or other public health emergencies, such as the recent COVID-19 pandemic.

Our business, results of operations, financial condition, cash flows and stock price can be adversely affected by pandemics, epidemics or other public health emergencies, such as the COVID-19 pandemic which has spread from China to many other countries, including the United States. In March 2020, the World Health Organization characterized COVID-19 as a pandemic, and the President of the United States declared the COVID-19 outbreak a national emergency. The COVID-19 pandemic has resulted in governments around the world implementing increasingly stringent measures to help control the spread of the virus, including quarantines, “shelter in place” and “stay at home” orders, travel restrictions, business curtailments, school closures, and other measures. In addition, governments and central banks in several parts of the world have enacted fiscal and monetary stimulus measures to counteract the impacts of COVID-19. Although certain governments have begun the process of easing their respective restrictions on individuals and businesses, there is material variation in the requirements to lift and reimpose restrictions and the pace at which those restrictions are being lifted and reimposed between jurisdictions. In some jurisdictions, increases in new cases of COVID-19 have led to reinstatement of restrictions on individuals and businesses.