PRESCRIBED FACILITIES OF ONTARIO POWER GENERATION INC.

FINANCIAL STATEMENTS

DECEMBER 31, 2019 AND 2018

ONTARIO POWER GENERATION

Independent auditor's report

To the management of
Ontario Power Generation Inc.

Opinion

We have audited the financial statements of the **Prescribed Facilities of Ontario Power Generation Inc.,** as defined under Ontario Regulation 53/05 pursuant to the Ontario Energy Board Act, 1998 ("Prescribed Facilities"), which comprise the balance sheets as at December 31, 2018 and 2019, and the statements of income, statements of comprehensive income, statements of changes in excess of assets over liabilities and statements of cash flows of the Prescribed Facilities for the years then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements of **Prescribed Facilities of Ontario Power Generation Inc**.,which present the financial position of the Prescribed Facilities as at December 31, 2018 and 2019, its financial performance and its cash flows for the year then ended are prepared, in all material respects in accordance with United States generally accepted accounting principles.

Basis for opinion

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

Other matter - Restriction on use

These financial statements are prepared to assist Ontario Power Generation Inc. to meet its regulatory requirements to file financial statements for the Prescribed Facilities with the Ontario Energy Board. Our auditor's report is intended solely for Ontario Power Generation Inc. and for filing with the Ontario Energy Board as part the regulatory process and should not be used for any other purpose.

Responsibilities of management and those charged with governance for the financial statements

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

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

Those charged with governance are responsible for overseeing the financial reporting process for the Prescribed Facilities.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance

with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

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

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

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the OPG's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Prescribed Facilities' ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Prescribed Facilities to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Prescribed Facilities to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

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

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

Ernst & Young LLP (signed)
Chartered Professional Accountants
Licensed Public Accountants

Toronto, Canada
December 22, 2020

STATEMENTS OF INCOME

Years Ended December 31 *(millions of dollars)*	**2019**	**2018**
Revenue *(Notes 3 and 16)*	**5,148**	4,696
Fuel expense *(Note 16)*	**576**	562
Gross margin *(Note 16)*	**4,572**	4,134
Expenses *(Note 16)*		
Operations, maintenance and administration *(Note 2)*	**2,535**	2,633
Depreciation and amortization *(Note 6)*	**829**	597
Accretion on nuclear fixed asset removal and nuclear waste management liabilities *(Note 10)*	**526**	505
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 10)*	**(478)**	(450)
Property taxes *(Note 3)*	**14**	14
	3,426	3,299
Income before other losses, interest, and income taxes	**1,146**	835
Other losses *(Note 16)*	**1**	5
Income before interest and income taxes	**1,145**	830
Net interest expense *(Notes 8 and 9)*	**240**	250
Income before income taxes	**905**	580
Income tax expense *(Notes 2 and 11)*	**198**	106
Net income	**707**	474

See accompanying notes to the financial statements

STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31 *(millions of dollars)*	**2019**	**2018**
Net income	**707**	474
Other comprehensive income, net of income taxes		
Reclassification to income of losses on derivatives designated as cash flow hedges [1]	**8**	10
Other comprehensive income for the year	**8**	10
Comprehensive income	**715**	484

[1] Net of income tax expenses of nil for each of 2019 and 2018.

See accompanying notes to the financial statements

STATEMENTS OF CASH FLOWS

Years Ended December 31 *(millions of dollars)*	**2019**	**2018**
Operating activities		
Net income	**707**	474
Adjust for non-cash items:		
Depreciation and amortization *(Note 6)*	**829**	597
Accretion on nuclear fixed asset removal and nuclear waste management liabilities *(Note 10)*	**526**	505
Earnings on nuclear fixed asset removal and nuclear waste management funds *(Note 10)*	**(478)**	(450)
Pension and other post-employment benefit costs *(Note 12)*	**405**	362
Deferred income taxes *(Note 11)*	**(10)**	23
Regulatory assets and liabilities	**277**	(36)
Other losses	**1**	5
Other	**3**	8
Contributions to nuclear fixed asset removal and nuclear waste management funds *(Note 10)*	**(102)**	(102)
Expenditures on nuclear fixed asset removal and nuclear waste management *(Note 10)*	**(147)**	(151)
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management *(Note 10)*	**44**	49
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans *(Note 12)*	**(273)**	(286)
Net changes to other long-term assets and liabilities	**3**	55
Net changes to non-cash working capital balances *(Note 17)*	**(21)**	509
Cash flow provided by operating activities	**1,764**	1,562
Investing activities		
Investment in property, plant and equipment and intangible assets	**(1,855)**	(1,613)
Cash flow used in investing activities	**(1,855)**	(1,613)
Financing activities		
Net increase in long-term debt *(Note 8)*	**403**	40
Net (decrease) increase in short-term debt *(Note 9)*	**(115)**	67
Cash flow provided by financing activities	**288**	107
Net increase in cash, cash equivalents and restricted cash	**197**	56
Cash, cash equivalents and restricted cash, beginning of year	**153**	97
Cash, cash equivalents and restricted cash, end of year	**350**	153

See accompanying notes to the financial statements

BALANCE SHEETS

As at December 31 *(millions of dollars)*	**2019**	**2018**
Assets		
Current assets		
Cash, cash equivalents and restricted cash *(Note 2)*	**350**	153
Receivables from related parties *(Notes 2 and 18)*	**426**	443
Prepaid expenses *(Note 2)*	**124**	109
Nuclear fixed asset removal and nuclear waste management funds *(Notes 10 and 16)*	**20**	10
Fuel inventory *(Notes 2 and 16)*	**196**	253
Materials and supplies *(Notes 2 and 16)*	**91**	101
Regulatory assets *(Note 7)*	**486**	490
Other current assets *(Note 2)*	**22**	39
	1,715	1,598
Property, plant and equipment *(Notes 2, 4, and 16)*	**24,438**	22,670
Less: accumulated depreciation	**7,367**	6,927
	17,071	15,743
Intangible assets *(Notes 2, 4, and 16)*	**57**	48
Less: accumulated amortization	**30**	26
	27	22
Other assets		
Nuclear fixed asset removal and nuclear waste management funds *(Notes 10 and 16)*	**9,760**	9,234
Long-term materials and supplies *(Notes 2 and 16)*	**390**	343
Regulatory assets *(Note 7)*	**6,316**	6,390
Other long-term assets	**16**	16
	16,482	15,983
	35,295	33,346

See accompanying notes to the financial statements

BALANCE SHEETS

As at December 31 *(millions of dollars)*	**2019**	**2018**
Liabilities		
Current liabilities		
Accounts payable, accrued charges and other payables *(Note 2)*	**765**	845
Short-term debt *(Note 9)*	**49**	164
Due to Ontario Power Generation Inc. *(Notes 2, 8, and 9)*	**3,206**	3,420
Income taxes payable *(Notes 2 and 3)*	**182**	73
Regulatory liabilities *(Note 7)*	**103**	36
	4,305	4,538
Long-term debt *(Note 8)*	**6,220**	5,817
Other liabilities		
Nuclear fixed asset removal and nuclear waste management liabilities *(Notes 10 and 16)*	**10,425**	9,968
Pension liabilities *(Note 12)*	**3,388**	3,453
Other post-employment benefit liabilities *(Note 12)*	**2,677**	2,308
Long-term accounts payable and accrued charges *(Note 2)*	**191**	167
Deferred income taxes *(Note 11)*	**1,071**	979
Regulatory liabilities *(Note 7)*	**949**	762
	18,701	17,637
Excess of assets over liabilities		
Net capital *(Note 2)*	**6,083**	5,376
Accumulated other comprehensive loss *(Note 2)*	**(14)**	(22)
	6,069	5,354
	35,295	33,346

Commitments and Contingencies (Notes 8, 9, 11, 12, and 15)

See accompanying notes to the financial statements

On behalf of Ontario Power Generation Inc.

John Mauti (signed)
Chief Financial Officer and Senior Vice President – Finance

STATEMENTS OF CHANGES IN EXCESS OF ASSETS OVER LIABILITIES

Years Ended December 31 *(millions of dollars)*	**2019**	**2018**
Net capital		
Balance at beginning of year	**5,376**	4,902
Net income	**707**	474
Balance at end of year	**6,083**	5,376
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	**(22)**	(32)
Other comprehensive income	**8**	10
Balance at end of year	**(14)**	(22)
	6,069	5,354

See accompanying notes to the financial statements

NOTES TO THE FINANCIAL STATEMENTS

For the years ended December 31, 2019 and 2018

1. DESCRIPTION OF THE BUSINESS

Ontario Regulation 53/05, a regulation pursuant to the *Ontario Energy Board Act, 1998*, provides that, effective April 1, 2005, Ontario Power Generation Inc. (OPG) receives regulated prices for electricity generated from Sir Adam Beck 1, 2 and Pump generating station (GS), DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and Pickering and Darlington nuclear facilities (collectively, the Previously Regulated Facilities). Effective April 1, 2008, the regulated prices for the production from the Previously Regulated Facilities are determined by the Ontario Energy Board (OEB). In November 2013, the Province of Ontario (the Province) amended *Ontario Regulation 53/05* to prescribe for rate regulation by the OEB 48 of OPG's previously unregulated hydroelectric generating facilities (the Newly Regulated Hydroelectric Facilities) beginning in 2014. The amended regulation requires the OEB to establish regulated prices for the production from these facilities. The Previously Regulated Facilities and the Newly Regulated Hydroelectric Facilities (collectively, the Prescribed Facilities) comprise the business.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998,* the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Ontario Ministry of Energy, Northern Development and Mines. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

The Prescribed Facilities have no separate legal status and are a part of OPG. OPG was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province. OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity.

2. BASIS OF PRESENTATION

These financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP). These financial statements have been prepared primarily through specific identification of assets, liabilities, accumulated other comprehensive income (AOCI), revenues, expenses, extraordinary items, and other comprehensive income (OCI) of OPG and the Nuclear Waste Management Organization (NWMO) that relate to the Prescribed Facilities. All dollar amounts are presented in Canadian dollars.

As required by *Ontario Regulation 395/11,* as amended, under the *Financial Administration Act* (Ontario), OPG's consolidated financial statements are prepared in accordance with US GAAP.

As OPG primarily maintains pooled bank accounts for the use of all of its operations, OPG's cash balance cannot be assigned specifically to the Prescribed Facilities. OPG's cash balance that could not be specifically assigned was allocated to the Prescribed Facilities based on the cash receipts from the Independent Electricity System Operator (IESO) in the month of December of the reporting year. The NWMO's cash balance was directly assigned to the Prescribed Facilities.

Accounts receivable from related parties include the receivable balance from the IESO attributable to the Prescribed Facilities. The portion of OPG's receivable balance from the IESO was attributed to the Prescribed Facilities using direct assignment. The majority of the other accounts receivable, prepaid expenses and other current assets balances reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items. Fuel inventory, current and long-term materials and supplies, property,

plant and equipment (PP&E), intangible assets and related fuel and depreciation and amortization expenses represent a direct assignment of OPG's respective balances to the Prescribed Facilities. The full balance of OPG's current and non-current regulatory assets and regulatory liabilities representing deferral and variance accounts authorized by the OEB and related amortization expense are reflected in the Prescribed Facilities' financial statements, as discussed in Note 7.

The liabilities for pension and other post-employment benefits (OPEB) and related costs, regulatory assets and AOCI and OCI balances were determined using a combination of specific identification and allocation to the Prescribed Facilities of the respective amounts in OPG's consolidated financial statements, as discussed in Note 12.

The nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) that relate to the Prescribed Facilities were determined using a combination of specific identification and allocation of amounts in OPG's consolidated financial statements, as discussed in Note 10. The associated accretion expense was computed directly on the balance of the liabilities attributed to the Prescribed Facilities. The nuclear fixed asset removal and nuclear waste management funds, including the current portion, and associated earnings were directly assigned to the Prescribed Facilities, as described in Note 10.

The Prescribed Facilities' short-term debt and long-term debt balances represent amounts owing to OPG. The derivation of debt balances was based on the methodology approved in the OEB's decisions and orders under case number EB-2016-0152, which established regulated prices for the electricity generation from the Prescribed Facilities effective June 1, 2017 (the OEB Decision), as discussed in Notes 8 and 9. For the purposes of determining the long-term debt balance, this methodology considers the portion of OPG's project-related long-term debt incurred to finance the net PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's non-specific long-term debt. This allocation is primarily based on the net PP&E and intangible asset balances of the Prescribed Facilities relative to those of OPG. The Prescribed Facilities' accrued interest payable represents the portion of OPG's accrued interest payable for project-related and non-specific long-term debt attributed to the Prescribed Facilities. The accrued interest payable is included in accounts payable, accrued charges and other payables.

The short-term debt was derived based on the methodology approved in the OEB Decision that considers a portion of OPG's short-term borrowings, if any, including those related to OPG's securitized receivables, attributed to the Prescribed Facilities on the basis of construction and development in progress and non-cash working capital balances of the Prescribed Facilities relative to those of OPG. OPG's project-related short-term debt is directly assigned on the basis of the assets it was incurred to finance.

The net interest expense on the Prescribed Facilities' short-term and long-term debt was determined using the methodology approved by the OEB Decision, as discussed in Notes 8 and 9.

Amounts reported as due to Ontario Power Generation Inc. represent the impact of implicit transactions between the Prescribed Facilities and OPG resulting from the methodologies and assumptions underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses and OCI reported in these financial statements.

Income taxes payable/recoverable, deferred income tax assets and liabilities and income tax expense, discussed in Note 11, and the regulatory asset for deferred income taxes, discussed in Note 7, were determined as though the Prescribed Facilities were a separate taxable entity and were calculated based on the financial position and results of operations of the Prescribed Facilities reported in these financial statements.

The majority of the long-term accounts payable and accrued charges balance reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items.

The financial impact of OPG's hedging instruments recorded in OPG's AOCI and OCI is attributed to the Prescribed Facilities on the basis of the underlying hedged items and is reflected as components of AOCI and OCI reported in these financial statements.

Net capital of the Prescribed Facilities represents the excess of assets over liabilities, excluding AOCI, as reported in these financial statements.

Operations, maintenance and administration (OM&A) expenses primarily consist of expenses specific to the Prescribed Facilities and a portion of OPG's corporate support services and centrally held expenses. OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities consistent with the methodology outlined in independent cost allocation studies submitted to the OEB in OPG's applications under case numbers EB-2013-0321 and EB-2010-0008, the results of which were reflected in the regulated prices established by the OEB in those proceedings and, most recently, in the EB-2016-0152 proceeding. According to this methodology, OPG's corporate support services and centrally-held OM&A expenses were directly assigned to the Prescribed Facilities based on specific identification and management estimates, where possible. Where specific identification was not possible, expenses were allocated based on cost drivers exhibiting a causal relationship.

Accounts payable, accrued charges and other payables associated with OPG's OM&A expenses specific to the Prescribed Facilities were directly assigned to the Prescribed Facilities. Accounts payable, accrued charges and other payables associated with OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities on the same basis as the expenses.

The statements of cash flows were prepared using methodologies and assumptions that are consistent with those underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses and OCI reported in these financial statements.

As a result of the above basis of presentation, the statements of income, statements of comprehensive income, statements of cash flows, balance sheets, and statements of changes in excess of assets over liabilities of the Prescribed Facilities will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a standalone basis. These financial statements have been prepared solely for the use of OPG's management and for filing with the OEB, and are considered by management to be a reasonable representation of the financial results of the Prescribed Facilities for the purpose of filing with the OEB. The methodologies and assumptions used to attribute OPG's amounts to the Prescribed Facilities in these financial statements are considered by management to be reasonable and consistent with the above purpose.

The consolidated financial statements of OPG as at and for the year ended December 31, 2019, including the 2018 comparative period, have been prepared in accordance with US GAAP and filed with the Ontario Securities Commission.

3. SIGNIFICANT ACCOUNTING POLICIES AND ESTIMATES

a) New Accounting Standards Effective in 2019

Lease Accounting

In February 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-02, *Leases* (Topic 842) to replace existing lease accounting guidance under *Leases* (Topic 840). The update included comprehensive changes to existing guidance, particularly for lessees, with the aim of increasing transparency and comparability among organizations by requiring the recognition of right-of-use assets and lease liabilities on the balance sheet.

Effective January 1, 2019, OPG adopted Topic 842, utilizing the optional transition method wherein any cumulative impact from adopting the new standard is recognized as an adjustment to opening balances in the initial period of adoption, with comparative periods continuing to be presented in accordance with Topic 840, including disclosures. In transitioning to Topic 842, OPG elected to adopt the package of practical expedients, which permitted OPG to continue the established classification of leases under Topic 840, and did not require a reassessment of the existence of leases within existing or expired contracts nor the treatment of related indirect costs for previously established leases. OPG also adopted the practical expedient within ASU No. 2018-01, *Land Easement Practical Expedient for Transition to Topic 842*, permitting OPG not to undertake an evaluation of existing or expired land easements under this accounting standard prior to its adoption. Any new land easements entered into following adoption of the new standard, along with modification of existing land easements, will be assessed under Topic 842.

A contract is determined to contain a lease if it consists of an identified asset, and the customer in the arrangement has the right to control the use of the asset for a period of time in exchange for consideration. PP&E that is physically distinct or whose capacity is substantially received by the customer is representative of an identified asset. The customer's right to control the use of an identified asset is signified by its rights to obtain substantially all of the economic benefits from the use of the asset and to direct the use of the asset, throughout the period of use. A customer is able to direct the use of the asset if they have the decision-making rights that will most impact the economic benefits derived. Unless explicitly stated, it is presumed an arrangement does not contain substantive substitution rights, wherein it is impractical for the supplier to substitute alternative assets throughout the period of use or obtain any economic benefits from substituting.

As a practical expedient for leasing arrangements in which OPG is the lessee, the lease and non-lease components, if any, are combined and accounted for as a single lease cost. Similarly, as a practical expedient for leasing arrangements in which OPG is the lessor, OPG combines the lease and any non-lease components, and accounts for it as a single lease component. OPG does not account for any non-lease components separately from the combined component.

For arrangements in which OPG is the lessor, OPG has excluded all taxes assessed by a governmental authority on the lease revenue producing transaction, from the consideration in the contract and from variable payments not included in the consideration in the contract.

As permitted by the short-term lease exemption in the standard, OPG has elected not to apply the recognition requirements prescribed by Topic 842 for its short-term leases. Such arrangements include leases that have a term of 12 months or less at the commencement date and do not contain an option to purchase the underlying asset that the entity is reasonably certain to exercise.

When determinable, the rate implicit in the lease is used as the discount rate to calculate the present value of the lease payments related to arrangements in which OPG is the lessee. Otherwise, the incremental borrowing rate is used, which represents the rate of interest OPG would have to pay to borrow on a collateralized basis over a similar term an amount equal to the lease payments in a similar economic environment. The incremental borrowing rate for

each lease is determined on inception of the leasing arrangement by obtaining an appropriate reference rate, to which any financing spread and lease specific adjustments are applied. The discount rate is reassessed if the respective lease liability is required to be re-measured because of changes in key assumptions or modifications in the underlying contract.

As at January 1, 2019, on implementation of Topic 842, the following was recognized in the financial statements of the Prescribed Facilities:

(millions of dollars)	**January 1, 2019**	**Balance Sheet Line Item**
Right-of-use asset		
Current	**13**	Other current assets
Non-current	**57**	Property, plant and equipment
	70	
Operating lease liabilities		
Current	**13**	Accounts payable, accrued charges and other payables
Non-current	**61**	Long-term accounts payable and accrued charges
	74	

The right-of-use assets and lease liabilities balances reported in the Prescribed Facilities' financial statements represent a direct assignment of OPG's balances based on the nature of use of the underlying arrangements.

b) New Accounting Standards Effective in 2018

i) Revenue from Contracts with Customers

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which superseded nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of Topic 606 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services.

Effective January 1, 2018, OPG adopted Topic 606 for all contracts not completed as at this date of initial application, including relevant practical expedients, utilizing the modified retrospective approach to implement the transition. No differences in the timing or amount of revenue recognition were identified as a result of the adoption of the new standard for the Prescribed Facilities' financial statements. The adoption of Topic 606 has required OPG, and therefore the Prescribed Facilities, to amend its accounting policy with respect to revenue recognition. The amended policy is disclosed in Note 3 under the heading *Revenue Recognition*.

ii) Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost

In March 2017, the FASB issued ASU No. 2017-07, *Compensation – Retirement Benefits* (Topic 715): *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. Under the new guidance, employers that sponsor defined benefit plans for pensions and/or other postretirement benefits are required to present the service cost component of net periodic benefit cost in the same statement of income line item as other employee compensation costs arising from services rendered during the period. The other components of the net periodic benefit cost are to be presented separately from the line item that includes the service cost and outside of any subtotal of income from operations, if such a subtotal is presented. In addition, the new guidance requires that only the service cost component of net benefit cost be eligible for capitalization.

Effective January 1, 2018, OPG adopted the new provisions of Topic 715. Adoption of these provisions did not impact OPG and the Prescribed Facilities' financial statements, as OPG capitalized only the service cost component of postretirement benefits costs prior to the adoption of the new guidance. Additionally, OPG previously included the service cost component of postretirement benefit costs with other compensation costs within OM&A expenses in the statements of income and did not show a subtotal of income from operations prior to the adoption of the new guidance. As such, the new guidance did not affect the presentation of the Prescribed Facilities' financial statements or result in changes in the accounting policies.

c) Consolidation

The financial statements of the Prescribed Facilities include amounts attributable to the Prescribed Facilities in the accounts of OPG and a variable interest entity (VIE), the NWMO, where OPG is the primary beneficiary. All intercompany balances and intercompany transactions have been eliminated on consolidation.

d) Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. Amounts attributable to the Prescribed Facilities in the accounts of OPG's VIEs are reflected in the financial statements of the Prescribed Facilities. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to OPG. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in either OPG or the Prescribed Facilities' financial statements. VIEs are deconsolidated when facts and circumstances arise which indicate that OPG is no longer deemed to be the primary beneficiary.

In 2002, OPG and other Canadian nuclear waste producers established a separately incorporated NWMO in accordance with the *Nuclear Fuel Waste Act* (Canada) (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel in Canada. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan in accordance with the NFWA. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of intercompany transactions, are consolidated by OPG and therefore the Prescribed Facilities.

e) Use of Management Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the end of the reporting periods, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the estimate is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and OPEB balances, asset retirement obligations (AROs) and associated asset retirement costs capitalized as part of PP&E, income taxes (including deferred income taxes), contingencies, regulatory assets and regulatory liabilities, valuation of investments in segregated funds, depreciation and amortization expenses and inventories. Actual results may differ significantly from these estimates. The preparation of the financial statements of the Prescribed Facilities also includes significant estimates in determining the allocation of OPG's balances to the Prescribed Facilities.

f) Cash, Cash Equivalents, Restricted Cash and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. Restricted cash primarily includes amounts set aside pursuant to requirements of various debt and financing agreements. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market value.

g) Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

h) Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses when incurred. Repairs and maintenance costs are expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers, which are depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

As at December 31, 2019 and December 31, 2018, the amortization periods of PP&E and intangible assets are as follows:

Nuclear generating stations and major components	15 to 59 years [1]
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers – declining balance	40% per year
Major application and computer software	5 years
Service equipment	5 to 10 years

[1] As at December 31, 2019 and December 31, 2018, the end of station life for depreciation purposes for the Darlington and Pickering nuclear generating stations ranged between 2022 and 2052. Major components are depreciated over the lesser of the station life and the life of the components.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological and economic factors. OPG reviews the estimated useful lives for its PP&E and intangible assets, including end-of-life assumptions for major generating assets, on a regular basis.

For nuclear generating stations operated by OPG, establishing station end-of-life assumptions primarily involves an assessment of operating lives of major life-limiting components such as fuel channel assemblies, taking into account expectations of future ability to economically operate and, as appropriate, refurbish the station for continued use. Expected operating lives of major life-limiting components are established through technical assessments of their fitness-for-service. Expectations of future ability to operate the station may be affected by operating licence requirements, ability to recover capital, operating and decommissioning costs and government policy, among other factors.

Although there is a link between the age of a hydroelectric facility and the capital investment required to maintain that facility, age does not generally establish an overall upper limit on the expected useful life of a hydroelectric generating

station. Regular maintenance and the replacement of specific components typically allow hydroelectric stations to operate for very long periods. An estimated useful life not exceeding 100 years is used by OPG to depreciate dams and other major hydroelectric station structures.

i) Asset Impairment

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

j) Rate Regulated Accounting

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When OPG assesses that there is sufficient assurance that incurred costs in respect of the Prescribed Facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset in the consolidated financial statements of OPG and, as applicable, the Prescribed Facilities. When OPG is required to refund amounts to customers in the future in respect of the Prescribed Facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, a regulatory liability is recorded.

Certain of the regulatory assets and regulatory liabilities recognized in the Prescribed Facilities' financial statements relate to deferral and variance accounts (regulatory accounts) authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. Deferral and variance accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and regulatory liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and regulatory liabilities for deferral and variance account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods.

In addition to regulatory assets and regulatory liabilities for deferral and variance accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive loss (AOCL) in respect of pension and OPEB obligations, deferred income taxes, and, as applicable, differences between interim regulated prices charged to customers during an interim rate period and final regulated prices authorized or to be authorized by the OEB for that period, to reflect the expected recovery or repayment of amounts attributed to the Prescribed Facilities through future regulated prices to be charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to the Prescribed Facilities, and assumptions made with respect to final regulated prices to be authorized by the OEB for an interim rate period.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCL has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in the financial statements of OPG and the Prescribed Facilities. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans recognized in AOCL generally would not be reflected in regulated prices until they have been reclassified from AOCL

and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

Since November 1, 2014, the OEB has limited amounts for pension and OPEB costs included in the approved revenue requirements and regulated prices to the regulated business portion of OPG's cash expenditures for its pension and OPEB plans. The difference between actual pension and OPEB costs determined using the accrual method applied in OPG's audited consolidated financial statements and OPG's actual cash expenditures for these plans is captured in the OEB-authorized Pension & OPEB Cash Versus Accrual Differential Deferral Account for future consideration by the OEB.

In 2017, the OEB issued a report outlining the guiding principles and policy for recovery mechanisms of pension and OPEB costs of rate regulated utilities in the Ontario electricity and natural gas sectors. The report established the accrual basis of accounting as the method of determining pension and OPEB amounts for rate-setting purposes, unless the OEB finds that this method does not result in just and reasonable rates in the circumstances of a particular utility. The OEB's report and the OEB's December 28, 2017 decision on OPG's application for new regulated prices under case number EB-2016-0152 require OPG to continue to record differences between pension and OPEB accrual costs and cash payments in the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

The OEB's February 2019 decision and order on the settlement agreement reached by OPG and interveners on OPG's August 2018 application to disposition deferral and variance account resulted in approval to recover the balance of $614 million recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account as of December 31, 2017, without adjustments. In making that decision and order, the OEB approved that the accrual method is the appropriate regulatory accounting and cost recovery basis for the December 31, 2017 pension and OPEB-related balances in the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

It is OPG's position that the OEB's November 2014 and December 2017 decisions on OPG's applications for regulated prices and the OEB's 2017 report in this area do not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. Taking into account the basis of those decisions, the OEB's subsequent report that established the accrual basis of accounting as the default method of determining pension and OPEB amounts for rate-setting purposes, and the approvals in the OEB's February 2019 decision and order, OPG continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices. Similarly, OPG continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices and that amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account subsequent to December 31, 2017, which remain subject to future approval by the OEB, will be recovered. Therefore, OPG and the Prescribed Facilities have recognized regulatory assets for these balances.

The OEB's decision and order on OPG's August 2018 application and the Pension & OPEB Cash Versus Accrual Differential Deferral Account are discussed further in Note 7.

k) Revenue Recognition

Provided OPG maintains a valid generation licence from the OEB, and continues to remain in compliance with the IESO Market Rules, its regulated nuclear and regulated hydroelectric generating facilities can continue to offer electricity into the wholesale energy market. OPG's current generation licence is valid until October 2023. Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that include base regulated prices and, as applicable, rate riders for the recovery or repayment of approved regulatory account balances. The revenue from the regulated hydroelectric facilities is also subject to the OEB-approved hydroelectric

incentive mechanism that provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

All of the Prescribed Facilities' electricity generation is offered into the real-time energy spot market administered by the IESO. Electricity generation revenue is directly assigned to the Prescribed Facilities on the basis of the underlying generation of OPG's nuclear and regulated hydroelectric facilities.

For electricity generated from the Prescribed Facilities, OPG receives payment from the IESO on a monthly basis based on regulated prices authorized by the OEB. OPG's performance obligation with respect to regulated generation is to supply electricity generated from the Prescribed Facilities to the wholesale energy market in Ontario. OPG has determined that this performance obligation is satisfied over time; OPG, and therefore the Prescribed Facilities, utilize the output method to recognize revenue by applying the relevant base regulated price and rate riders as applicable to each unit of electricity generated and metered to the IESO. This methodology reflects the real time nature of electricity generation and the underlying performance obligation, of which no portion remains unsatisfied at the end of the applicable reporting period.

During any interim rate periods authorized by the OEB, revenue is recognized on the basis of interim regulated prices set by the OEB. In instances where a subsequent OEB decision results in a difference between final regulated prices retroactively effective for the interim period and the interim regulated prices, OPG, and therefore the Prescribed Facilities, record the resulting adjustment to revenue in connection with that period based on the OEB's decision as a regulatory asset or regulatory liability. Any resulting revenue shortfall in connection with the interim rate period is collected prospectively from the IESO in the manner authorized by the OEB.

Electricity generation receivable balances of the Prescribed Facilities are part of electricity-related receivables from the IESO, representing OPG's unconditional right to payment for satisfying its performance obligation wherein only the passage of time is required before payment is received.

The base regulated prices in effect since June 1, 2017 were established by the OEB's December 2017 decision and March 2018 payment amounts order on OPG's application for regulated prices for the 2017-2021 period. Pursuant to the decision, the base regulated prices are determined using an incentive ratemaking methodology for the hydroelectric facilities and a custom incentive regulation framework for the nuclear facilities. For the hydroelectric facilities, the base regulated prices in effect since June 1, 2017 are determined by annually escalating the base regulated prices in effect prior to June 1, 2017, with some adjustments, using an approved formula equal to an industry-specific weighted inflation factor based on indices published annually by the OEB, less a stretch factor adjustment.

For the nuclear facilities, the base regulated prices have been set for the period to December 31, 2021, under a rate smoothing approach that may defer a portion of the approved nuclear revenue requirement for future collection in the Rate Smoothing Deferral Account, with the objective of making more stable changes in OPG's overall production-weighted average regulated price year over year, consistent with the requirements of *Ontario Regulation 53/05*. The nuclear revenue requirement for each of the years is based on the OEB-allowed level of operating costs and a return of and on rate base, less a stretch factor adjustment. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital. See Note 7 for further information on the March 2018 payment amounts order and the Rate Smoothing Deferral Account.

Non-energy revenue recognized in the financial statements of the Prescribed Facilities includes isotope sales, heavy water sales and heavy water detritiation services. Revenue from these activities is recognized as services are provided or when products are delivered, satisfying OPG's respective performance obligations in accordance with the terms stipulated in the respective contracts.

l) Fixed Asset Removal and Nuclear Waste Management Liabilities

The Prescribed Facilities' financial statements recognize AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for nuclear fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the Nuclear Liabilities are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level irradiated waste (L&ILW) are charged to OM&A expenses. Variable expenses relating to the management and storage of used nuclear fuel are charged to fuel expense. The liabilities may also be adjusted due to changes in the estimated amount or timing of the underlying future cash flows, with resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets in service.

A number of significant assumptions used in the calculation of Nuclear Liabilities are subject to inherent uncertainty and judgment as nuclear fixed asset removal and nuclear waste management programs evolve. As a result, changes to the underlying operational and technical factors and other assumptions underlying these estimates could change significantly over time, and may result in material changes to increase or decrease the costs for these programs.

A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted future cash flows are recorded as an adjustment to the liabilities. Upward revisions in the Nuclear Liabilities represent the present value of increases in future undiscounted cash flows determined using a current credit-adjusted risk-free rate. Downward revisions in the Nuclear Liabilities represent the present value of decreases in future undiscounted cash flows determined using the weighted average discount rate reflected in the existing liability. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the Nuclear Liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets in service. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities, and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, neither OPG's nor the Prescribed Facilities' financial statements recognize a liability for the decommissioning of hydroelectric generating facilities.

m) Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG has established and sets aside funds in a Used Fuel Segregated Fund and a Decommissioning Segregated Fund (together the Nuclear Segregated Funds). The Used Fuel Segregated Fund is intended to fund expenditures associated with the long-term management of used nuclear fuel bundles and certain costs of used fuel storage incurred after the nuclear stations are shut down. The Decommissioning Segregated Fund was established to fund the costs of nuclear fixed asset removal and long-term L&ILW management, and certain costs of used fuel storage incurred after the nuclear stations are shut down. OPG's funding obligations and resulting contributions to the Nuclear Segregated Funds are determined based on periodically updated reference plans approved by the Province under the ONFA. OPG

maintains the Nuclear Segregated Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets. The segregated funds include amounts associated with the nuclear stations of the Prescribed Facilities. Separate segregated funds are not maintained for the Prescribed Facilities.

OPG's investments in the Nuclear Segregated Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Segregated Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the real assets portfolio, using appropriate valuation techniques as outlined in Note 14, with realized and unrealized gains and losses recognized in the statements of income.

n) Derivatives

All derivatives attributed to the Prescribed Facilities, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

o) Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 14 for a discussion of fair value measurements and the fair value hierarchy.

p) Research and Development

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, for which specific provisions have already been made, such as the Nuclear Liabilities, are charged to the related liability.

q) Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the statements of income on a straight-line basis over the lease term. Where the amount of rent expense

recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the balance sheets.

r) Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs covering most of the regular employees consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's and the Prescribed Facilities' financial results. Unless otherwise noted, information on OPG's post-employment benefit programs is presented on a consolidated basis. OPG does not maintain separate pension and OPEB plans for the employees and pensioners associated with the Prescribed Facilities.

OPG recognizes the funded status of its defined benefit plans on the consolidated balance sheets. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis

The obligations for defined benefit pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Defined benefit pension and OPEB obligations are impacted by factors including demographic (e.g. mortality, retirement) and economic (e.g. discount rates, salary levels, inflation and health care cost escalation) assumptions, experience gains or losses, and adjustments arising from plan amendments. Defined benefit pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure defined benefit pension and OPEB obligations and related effects on operations. Discount rate, inflation rate, and changes in salary levels are three key assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a key assumption in the determination of defined benefit registered pension plan cost and the health care cost trend rate is a key assumption in the determination of OPEB cost and obligations. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods, as discussed below.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for OPG's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. OPG uses a full yield curve approach to estimate the service and interest cost components of defined benefit pension and OPEB costs, whereby specific spot rates along the yield curve used in the determination of the projected benefit obligations are applied to the relevant projected cash flows. The expected rate of return on plan assets is based on the pension fund's asset allocation and the expected return considering long-term risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include domestic and international equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG or its subsidiaries. Pension fund assets of defined benefit pension plans are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The

market-related value for pension fund assets of the OPG defined benefit pension plan recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Defined benefit pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, recognition of past service costs or credits and recognition of actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from defined benefit pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), for each plan is amortized over the expected average remaining service life of the employees covered by the plan, which represents the period during which the associated economic benefits are expected to be realized by OPG. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. These unamortized amounts in AOCL are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG, and therefore the Prescribed Facilities, record an offsetting regulatory asset or regulatory liability for the portion of the adjustments to AOCL that is attributable to the Prescribed Facilities in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to the Prescribed Facilities, OPG records a corresponding change in this regulatory asset or regulatory liability for the amount of the increases or decreases in OCI and for the reclassification of AOCL amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

Where defined benefit costs are eligible for capitalization, only the service cost component is capitalized.

s) Income Taxes and Investment Tax Credits

OPG is exempt from income tax on its operations under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG paying taxes similar to those imposed under the federal and Ontario tax acts.

OPG's payments in lieu of corporate income taxes are made on an aggregate basis for all of its operations. Income taxes payable/recoverable, deferred income tax assets, deferred income tax liabilities and income tax expense reflected in these financial statements are calculated as though the Prescribed Facilities were a standalone taxable entity.

OPG, and therefore the Prescribed Facilities, follow the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG, and therefore the Prescribed Facilities, recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense and are primarily attributed to the Prescribed Facilities on the basis of the underlying expenditures giving rise to the credits. Interest and penalties associated with unrecognized tax benefits are classified as income tax expense.

OPG makes payments in lieu of property tax on certain of its generating assets to the OEFC, and also pays property taxes to municipalities. These payments are determined on an individual facility basis, and those pertaining to the Prescribed Facilities are reflected in these financial statements.

OPG pays charges on gross revenue derived from the annual generation of electricity from its hydroelectric generating assets. The gross revenue charge (GRC) includes a fixed percentage charge applied to the annual hydroelectric generation derived from stations located on provincial Crown lands, in addition to graduated rate charges applicable to all hydroelectric stations. The GRC costs and the associated assets and liabilities reflected in these financial statements represent amounts directly attributed to the electricity generation derived from the regulated hydroelectric stations. GRC costs are reported in fuel expense. GRC prepayments or liabilities are included in other accounts receivable and prepaid expenses or accounts payable, accrued charges and other payables, respectively.

t) Accounting Pronouncements Not Yet Adopted

i) Changes to Disclosure Requirements for Defined Benefit Plans

In August 2018, the FASB issued ASU No. 2018-14, *Compensation – Retirement Benefits – Defined Benefit Plans – General* (Subtopic 715-20): *Disclosure Framework – Changes to the Disclosure Requirements for Defined Benefit Plans* as part of its ongoing efforts to improve the effectiveness of disclosures in notes to financial statements for stakeholders. As part of this update, entities will be required to include additional disclosures such as narrative descriptions of the reasons for significant gains and losses related to changes in the benefit obligations for the period. The update also removed guidance that currently requires disclosures on the amounts in AOCL expected to be recognized as components of net periodic benefit cost over the next fiscal year, and for public entities, the effects of a one percent change in assumed health care trend rates on the net periodic benefit costs and benefit obligation for OPEB. Changes instituted by this update are effective retrospectively for all periods presented for fiscal years ending after December 15, 2020 with early adoption permitted. OPG is in the process of evaluating the impact from this update on OPG's disclosures for its post-employment benefit programs.

ii) Changes to Disclosure Requirements for Fair Value Measurement

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement* (Topic 820): *Disclosure Framework – Changes to Disclosure Requirements for Fair Value Measurement* to continue to improve the effectiveness of disclosures in financial statements for users. Under the new guidance prescribed in this update, entities must disclose additional information regarding Level 3 fair value measurements held at the end of the reporting period. This amendment also clarified existing guidance around measurement uncertainty and investments in entities that

calculate net asset value (NAV). This update is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019 with early adoption permitted. Additional disclosures stemming from this update will be applied prospectively. OPG is assessing its current fair value measurements to determine the impact from the changes in this update.

iii) Changes to Credit Losses on Financial Instruments

In June 2016, the FASB issued ASU 2016-13, *Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), an update to Topic 326, *Financial Instruments – Credit Losses*. ASU 2016-13 requires financial assets measured at amortized cost to be presented at the net amount expected to be collected, through an allowance for credit losses to be deducted from the amortized cost basis of the asset. Available-for-sale debt securities will also require the use of an allowance to record estimated credit losses. In November 2019, the FASB issued ASU 2019-11, *Codification Improvements to Topic 326, Financial Instruments – Credit Losses* which clarified that ASU 2016-13 is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. The revised guidance will be applied through a cumulative catch-up adjustment to retained earnings in the period of adoption. OPG is assessing the impact of this update on its consolidated and Prescribed Facilities' financial statements.

iv) Changes to Income Tax Requirements

In December 2019, the FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes*, which affects general principles within Topic 740, *Income Taxes*. The FASB has stated that the ASU is being issued as part of its Simplification Initiative, which is meant to reduce complexity in accounting standards by improving certain areas of US GAAP. The new guidance eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences. It also clarifies and simplifies other aspects of the accounting for income taxes. ASU 2019-12 is effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years, with early adoption permitted. OPG is assessing the impact of this update on its consolidated and Prescribed Facilities' financial statements.

4. CASH, CASH EQUIVALENTS AND RESTRICTED CASH

Cash, cash equivalents and restricted cash as at December 31 consist of the following:

(millions of dollars)	**2019**	**2018**
Cash and cash equivalents	**350**	78
Restricted cash	**-**	75
Total cash, cash equivalents and restricted cash	**350**	153

Restricted cash represents the portion of proceeds from green bond issuances held in segregated accounts to finance or re-finance eligible investments as defined by OPG's Green Bond Framework that was directly assigned to the Prescribed Facilities on the basis of the underlying investments being financed or re-financed.

5. RIGHT-OF-USE ASSETS AND LEASE LIABILITIES

OPG has entered into operating lease arrangements for office space to house key operational activities and personnel. OPG is also party to water power leases and Parks Canada licences that provide OPG with a right-of-use to the underlying lands on which most of its hydroelectric generating stations in Ontario are constructed. In addition, OPG leases vehicles and rail cars for use at its regulated and unregulated generating stations. OPG, and therefore the Prescribed Facilities, do not have any sales-type or direct financing lease arrangements.

While OPG's office leases are subject to fixed base rental charges, the arrangements also contain variable payments to reimburse lessors for provision of common area maintenance services during each year of the lease term. Payments in connection with OPG's water power leases and Parks Canada licences are entirely variable, based on the amount of electricity produced by the hydroelectric generating stations during each year of the lease term. These variable amounts are not included in the measurement of the Prescribed Facilities' lease liabilities, but are recognized as a variable lease expense when incurred. Lease payments related to OPG's leased vehicles qualify for the short-term lease recognition exemption given the nature of the arrangement and therefore no right-of-use asset or lease liability has been recognized in the Prescribed Facilities' financial statements.

In leasing arrangements where OPG has the option to extend the lease term, payments associated with renewing the leases are not included in the measurement of the associated lease liabilities or right-of-use assets recognized in the Prescribed Facilities' financial statements as they are not reasonably certain of being exercised. Similarly, in leasing arrangements where OPG has the option to terminate the lease prior to the end of the term, payments associated with terminating these leases are not included in the measurement of the lease liabilities or right-of-use assets as they are not reasonably certain of being exercised. OPG, and therefore the Prescribed Facilities, have not provided residual value guarantees within its leases, nor is OPG, and therefore the Prescribed Facilities, subject to any restrictions or covenants as a result of entering into these leasing arrangements.

The following represents the portion of corresponding amounts incurred by OPG for the year ended December 31 that is attributed to the Prescribed Facilities:

(millions of dollars)	**2019**
Variable lease costs	**68**
Fixed lease costs	**13**
Short-term lease costs	**5**
Total operating lease expenses	**86**
Cash outflows related to operating lease liabilities	**15**

For the year ended December 31, 2019, OPG entered into new operating lease arrangements resulting in the recognition of $4 million of right-of-use assets and related operating lease liabilities in the Prescribed Facilities' financial statements. A weighted-average remaining lease term of 6.0 years and a weighted-average discount rate in its leasing arrangements of 2.72 percent as at December 31, 2019 were attributed to the Prescribed Facilities.

A maturity analysis of the leasing arrangements attributed to the Prescribed Facilities in which OPG is the lessee has been summarized below, along with a reconciliation to the Prescribed Facilities' operating lease liabilities:

(millions of dollars)	**1 Year**	**2 Years**	**3 Years**	**4 Years**	**5 Years**	**Thereafter**	**Total**
Operating lease payments	11	10	9	6	5	8	49
Impact of discounting							(4)
Total operating lease liabilities							45

Corresponding current and long-term operating lease liabilities of $11 million and $34 million as at December 31, 2019 were recognized in the Prescribed Facilities' financial statements, respectively. Current and long-term right-of-use assets under operating lease arrangements of $11 million and $30 million as at December 31, 2019 were recognized in the Prescribed Facilities' financial statements, respectively. The right-of-use assets and lease liabilities balances reported in the Prescribed Facilities' financial statements represent a direct assignment of OPG's balances based on the nature of the underlying arrangements.

6. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

PP&E as at December 31 consists of the following:

(millions of dollars)	**2019**	**2018**
Nuclear generating stations	**8,608**	7,921
Hydroelectric generating stations	**9,915**	9,702
Other property, plant and equipment	**30**	-
Construction in progress	**5,885**	5,047
	24,438	22,670
Less: accumulated depreciation		
Nuclear generating stations	**4,912**	4,585
Hydroelectric generating stations	**2,455**	2,342
	7,367	6,927
	17,071	15,743

Construction in progress as at December 31 consists of the following:

(millions of dollars)	**2019**	**2018**
Darlington Refurbishment	**5,366**	4,552
Other	**519**	495
	5,885	5,047

Interest capitalized to construction in progress during 2019 was $214 million (2018 – $186 million), at an average rate of four percent (2018 – five percent).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	**2019**	**2018**
Nuclear generating stations	**44**	28
Hydroelectric generating stations	**7**	7
Development in progress	**6**	13
	57	48
Less: accumulated amortization		
Nuclear generating stations	**24**	20
Hydroelectric generating stations	**6**	6
	30	26
	27	22

Depreciation and amortization expenses, including amounts recognized in regulatory accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	**2019**	**2018**
Depreciation	**473**	460
Amortization of intangible assets	**4**	4
Amortization of regulatory assets and regulatory liabilities *(Note 7)*	**259**	46
Amounts recognized in regulatory deferral and variance accounts	**93**	87
	829	597

7. REGULATORY ASSETS AND REGULATORY LIABILITIES

The regulatory assets and regulatory liabilities recorded as at December 31 are as follows:

(millions of dollars)	**2019**	**2018**
Regulatory assets		
Deferral and variance accounts authorized by the OEB		
Pension & OPEB Cash Versus Accrual Differential Deferral Account	**885**	783
Pension and OPEB Cost Variance Account	**490**	673
Hydroelectric Surplus Baseload Generation Variance Account	**448**	449
Bruce Lease Net Revenues Variance Account	**165**	141
Rate Smoothing Deferral Account	**104**	-
Other deferral and variance accounts [1]	**62**	118
	2,154	2,164
Interim Period Revenue Shortfall	**167**	519
Pension and OPEB Regulatory Asset *(Note 12)*	**3,667**	3,514
Deferred Income Taxes *(Note 11)*	**814**	683
Total regulatory assets	**6,802**	6,880
Less: current portion	**486**	490
Non-current regulatory assets	**6,316**	6,390
Regulatory liabilities		
Deferral and variance accounts authorized by the OEB		
Pension & OPEB Cash Payment Variance Account	**348**	220
Hydroelectric Water Conditions Variance Account	**216**	191
Impact Resulting from Changes to Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account	**251**	124
Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account	**92**	103
Other deferral and variance accounts	**145**	160
Total regulatory liabilities	**1,052**	798
Less: current portion	**103**	36
Non-current regulatory liabilities	**949**	762

[1] Represents amounts for the Nuclear Liability Deferral Account, the Nuclear Deferral and Variance Over/Under Recovery Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Nuclear Development Variance Account, the Fitness for Duty Deferral Account and the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account.

[2] Represents amounts for the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, the Hydroelectric Incentive Mechanism Variance Account, the SR&ED ITC Variance Account, the Pension & OPEB Cash Versus Accrual Differential Carrying Charges Account and the Capacity Refurbishment Variance Account.

In the March 2018 payment amounts order on OPG's application for regulated prices for the 2017-2021 period, the OEB approved OPG's request to recover a net amount totalling $305 million related to previously recorded deferral and variance account balances, without adjustments. With the exception of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension and OPEB Cost Variance Account, the approval provided for the recovery or repayment of the December 31, 2015 balances in all of OPG's deferral and variance accounts, less amounts previously approved for recovery or repayment for these accounts in 2016, over a 34-month period from March 1, 2018 to December 31, 2020. The recovery of the Pension & OPEB Cash Versus Accrual Differential Deferral Account was not considered. The recovery of the Pension and OPEB Cost Variance Account included in the $305 million approved amount was based on recovery periods as previously authorized by the OEB, being recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024 and recovery of amounts recorded in the account in 2013 and 2014 over a 72-month period to June 30, 2021. The OEB authorized OPG to collect 15 percent of the $305 million amount between March 1, 2018 and December 31, 2018, 50 percent between January 1, 2019 and December 31, 2019 and 35 percent between January 1, 2020 and December 31, 2020, through rate riders on OPG's nuclear and regulated hydroelectric electricity production.

In February 2019, the OEB issued a decision and order that approved a full settlement agreement reached by OPG and interveners on OPG's requested disposition of regulatory accounts in an application filed in August 2018. The decision and order approved recovery of a net total of $1,322 million comprising certain amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account as at December 31, 2017, other regulatory account balances accumulated between January 1, 2016 and December 31, 2017 and associated income tax impacts, without adjustments. The OEB's decision and order authorized OPG to collect $535 million of the approved balances through incremental rate riders on nuclear and regulated hydroelectric electricity production over the January 1, 2019 to December 31, 2021 period. The remaining approved balances will be collected after 2021. The income tax impacts approved for recovery were previously recorded as part of the regulatory asset for deferred income taxes.

The specific approvals in the OEB's February 2019 decision and order included:

- Recovery of $307 million in the Pension & OPEB Cash Versus Accrual Differential Deferral Account related to post-employment benefit plan costs other than the registered pension plan and $102 million in associated income tax impacts over six years from January 1, 2019 to December 31, 2024;
- Recovery of $433 million in the Pension and OPEB Cost Variance Account over periods to December 31, 2024 as previously authorized by the OEB, which are set out above;
- Recovery of $168 million in the Bruce Lease Net Revenues Variance Account over eight years from January 1, 2019 to December 31, 2026;
- Recovery of $307 million in the Pension & OPEB Cash Versus Accrual Differential Deferral Account related to registered pension plan costs and $102 million in associated income tax impacts, which has been deferred to OPG's next application for regulated prices; and
- Recovery of other regulatory account balances over three years from January 1, 2019 to December 31, 2021.

During the years ended December 31, 2019 and 2018, amortization of regulatory assets and regulatory liabilities for regulatory account balances approved for disposition was recorded on a straight-line basis, based on the portion of the balances authorized to be collected by the respective OEB decision and orders during the applicable period. OPG did not recover or repay any regulatory account balances and therefore did not record any amortization related to these accounts during the period from January 1, 2018 to February 28, 2018.

Differences in recovery or repayment of the approved balances due to differences between forecasted electricity production used to set the rate riders and actual electricity production upon which the rate riders are collected are recorded in the Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account authorized by the OEB.

During the years ended December 31, 2019 and 2018, regulatory assets and regulatory liabilities were recognized for additions recorded in the regulatory accounts consistent with the applicable OEB decision and orders, relative to amounts reflected in the regulated prices in effect during those periods.

Where authorized by the OEB, recorded was recorded interest on unamortized balances in the regulatory accounts at an OEB-prescribed interest rate ranging from 2.18 to 2.45 percent per annum during the year ended December 31, 2019 (2018 – 1.50 to 2.17 percent per annum).

The changes in the regulatory assets and regulatory liabilities during 2019 and 2018 are as follows:

(millions of dollars)	**Pension & OPEB Cash Versus Accrual Differential Deferral**	**Pension and OPEB Cost Variance**	**Hydro-electric Surplus Baseload Generation Variance**	**Bruce Lease Net Revenues Variance**	**Rate Smoothing Deferral Account**	**Pension & OPEB Cash Payment Variance**	**Hydro-electric Water Conditions Variance**	**Changes to Pickering Station End-of-Life Dates Deferral**	**Changes in Station End-of-Life Dates Deferral**	**Interim Period Revenue Shortfall**	**Pension and OPEB Regulatory Asset**	**Deferred Income Taxes**	**Other Deferral and Variance (net)**	**Total**
	(a)	**(b)**	**(c)**	**(d)**	**(e)**	**(f)**	**(g)**	**(h)**	**(i)**	**(j)**	**(k)**	**(l)**	**(m)**	
Net regulatory assets (liabilities) January 1, 2018	614	716	360	121	(63)	(140)	(150)	-	(103)	544	3,855	588	(19)	6,323
Increase (decrease)	169	-	94	12	62	(73)	(40)	(124)	-	(25)	(341)	95	(27)	(198)
Interest	-	-	7	1	1	(3)	(3)	-	-	-	-	-	-	3
Amortization	-	(43)	(12)	7	-	(4)	2	-	-	-	-	-	4	(46)
Net regulatory assets (liabilities) December 31, 2018	783	673	449	141	-	(220)	(191)	(124)	(103)	519	3,514	683	(42)	6,082
Increase (decrease)	**153**	**-**	**98**	**4**	**102**	**(130)**	**(61)**	**(127)**	**-**	**(352)**	**153**	**131**	**(46)**	**(75)**
Interest	**-**	**-**	**10**	**3**	**2**	**(6)**	**(5)**	**-**	**-**	**-**	**-**	**-**	**(2)**	**2**
Amortization	**(51)**	**(183)**	**(109)**	**17**	**-**	**8**	**41**	**-**	**11**	**-**	**-**	**-**	**7**	**(259)**
Net regulatory assets (liabilities) December 31, 2019	**885**	**490**	**448**	**165**	**104**	**(348)**	**(216)**	**(251)**	**(92)**	**167**	**3,667**	**814**	**(83)**	**5,750**

a) Pension & OPEB Cash Versus Accrual Differential Deferral Account

The Pension & OPEB Cash Versus Accrual Differential Deferral Account was originally established by the OEB's November 2014 decision and December 2014 order and was continued by the OEB's decisions in 2017 related to OPG's application for 2017-2021 regulated prices. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. As discussed in Note 3, OPG, and therefore the Prescribed Facilities, have recognized the amount set aside in the deferral account as a regulatory asset.

In accordance with US GAAP requirements, OPG, and therefore the Prescribed Facilities, recognize a regulatory asset for the OPRB portion of deferred costs recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account to the extent that the recovery of these costs commences within five years and is completed in full within 20 years of the period in which the costs were incurred, provided that the pattern of recovery within these constraints does not result in rate increases for a future year that is higher than the previous year. Taking into account approvals for recovery of the December 31, 2017 balance in the Pension & OPEB Cash Versus Accrual Differential Deferral Account per the OEB's February 2019 decision and order on OPG's August 2018 application requesting disposition of regulatory account balances, the above requirements for continued recognition of the regulatory asset for the OPRB portion of deferred costs continue to be satisfied.

b) Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the Prescribed Facilities determined on an accrual basis and related tax impacts for the regulated business, and corresponding forecast amounts reflected in the regulated prices then in effect. Based on its November 2014 and December 2017 decisions that determined that the pension and OPEB amounts reflected in OPG's regulated prices established by those decisions effective November 1, 2014 and June 1, 2017, respectively, would be limited to OPG's estimated contributions to its registered pension plan attributed to the Prescribed Facilities and a forecast of expenditures on the OPEB and supplementary pension plans attributed to the Prescribed Facilities, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization since November 1, 2014, as applicable.

c) Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of forgone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions.

d) Bruce Lease Net Revenues Variance Account

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with the two nuclear generating stations on lease to Bruce Power (Bruce nuclear generating stations) in the determination of the regulated prices for production from OPG's regulated nuclear facilities. Based on *Ontario Regulation 53/05* requirements, the OEB has established a variance account that captures differences between OPG's actual revenues and costs related to these stations and the corresponding forecasts included in approved nuclear regulated prices, including the costs associated with OPG's Nuclear Liabilities and the earnings from the portion of the Nuclear Segregated Funds related to the Bruce nuclear generating stations.

Variances between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in the nuclear regulated prices are recognized by the Prescribed Facilities as increases or decrease to the regulatory asset for the Bruce Lease Net Revenues Variance Account. The changes in the regulatory asset are not recognized in the statements of income of the Prescribed Facilities and are charged to OPG through the due to/from account with OPG. OPG reports the impact of these variances in its consolidated statements of income as part of the revenues and expenses to which they relate.

The OEB had previously ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability then embedded in the terms of the lease agreement between OPG and Bruce Power related to the Bruce nuclear generating stations (Bruce Lease) to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for the Bruce Lease Net Revenues Variance Account. Amounts OPG collected from customers for the derivative liability for December 2015 and the year 2016, which were authorized by the OEB prior to the amendments to the Bruce Lease, have been recognized as a regulatory liability as part of the variance account balance and were approved for disposition as part of the OEB's 2017 decisions and March 2018 payment amounts order.

e) Rate Smoothing Deferral Account

The Rate Smoothing Deferral Account was established by the OEB's December 2017 decision and March 2018 payment amounts order pursuant to *Ontario Regulation 53/05.* The deferral account records, for future recovery, a portion of the annual OEB-approved revenue requirement for OPG's nuclear facilities during the period from January 1, 2017 to the end of the Darlington Refurbishment project. *Ontario Regulation 53/05* requires this deferred portion to be determined in a manner that makes changes in OPG's overall production-weighted regulated price more stable year over year. The regulation requires the OEB to determine the deferred portion on a five-year basis for the ten-year period beginning on January 1, 2017. Per the regulation, the Rate Smoothing Deferral Account records interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually. The regulation requires the OEB to authorize recovery of the balance in the account on a straight-line basis over a period not to exceed ten years following the end of the Darlington Refurbishment project.

OPG, and therefore the Prescribed Facilities, recognize positive or negative amounts deferred under rate smoothing and recorded in the Rate Smoothing Deferral Account as an increase or decrease in the regulatory asset for the deferral account and an increase or decrease in revenue in the period to which the underlying approved revenue requirement relates, respectively.

The March 2018 payment amounts order set a rate smoothing approach and resulting nuclear base regulated prices such that $102 million of approved nuclear revenue requirement was deferred in the Rate Smoothing Deferral Account for future collection in 2019 and $391 million is to be deferred in 2020. The OEB determined that no portion of the nuclear revenue requirement was to be deferred for 2017, 2018 and 2021.

In the fourth quarter of 2017, OPG, and therefore the Prescribed Facilities, recognized a regulatory liability and a corresponding reduction in revenue for the Rate Smoothing Deferral Account to reflect management's best estimate of the impact of rate smoothing for 2017, based on the draft payment amounts order filed by OPG in January 2018 following the issuance of the OEB's December 2017 decision. As the final rate smoothing approach approved in the March 2018 payment amounts order did not result in any amounts being recorded in the deferral account for 2017, the regulatory liability for the Rate Smoothing Deferral Account was reversed in the first quarter of 2018.

f) Pension & OPEB Cash Payment Variance Account

The Pension & OPEB Cash Payment Variance Account records the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plan plans for the Prescribed Facilities, and such forecast amounts reflected in the regulated prices.

g) Hydroelectric Water Conditions Variance Account

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

h) Impact Resulting from Changes to Pickering Station End-of-Life Dates Deferral Account

The Impact Resulting from Changes to Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account was established by the OEB effective January 1, 2018 in response to an application by OPG for an accounting order to establish a new deferral account to record the revenue requirement impact on the Darlington and Pickering nuclear generating stations of changes to the Nuclear Liabilities and depreciation expense arising from the extension in the estimated useful lives of the Pickering nuclear GS (Pickering GS), for accounting purposes, effective December 31, 2017. These impacts were not reflected in the regulated prices effective June 1, 2017. The deferral account will record these impacts until such time as new regulated prices reflecting the impacts of these changes in Nuclear Liabilities and depreciation expense take effect.

i) Impact Resulting from Changes in Station End-of-Life Dates Deferral Account

The Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account was established by the OEB effective January 1, 2016 in response to an application by OPG for an accounting order to establish a new deferral account to record the revenue requirement impact on the Darlington and Pickering nuclear generating stations of changes to the Nuclear Liabilities and depreciation expense arising from extensions in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015. These impacts were not reflected in the regulated prices in effect prior to June 1, 2017. The deferral account recorded these impacts until the effective date of June 1, 2017 for the regulated prices established by the OEB's December 2017 decision and March 2018 payment amounts order that reflect the impacts of these changes in Nuclear Liabilities and depreciation expense.

j) Interim Period Revenue Shortfall

The Interim Period Revenue Shortfall regulatory asset reflects the uncollected portion of the revenue shortfall arising from the difference between previously approved regulated prices that continued to be charged to customers for electricity generation from the Prescribed Facilities for the June 1, 2017 to February 28, 2018 interim period and the new regulated prices authorized by the OEB's December 2017 decision and March 2018 payment amounts order effective June 1, 2017. The payment amounts order authorized separate rate riders on nuclear and regulated hydroelectric production for the collection of the interim period revenue shortfall over the period March 1, 2018 to December 31, 2020, with 15 percent of the balance to be recovered between March 1, 2018 and December 31, 2018, 50 percent between January 1, 2019 and December 31, 2019, and 35 percent between January 1, 2020 and December 31, 2020. The Interim Period Revenue Shortfall regulatory asset is reduced as these riders are collected.

In the fourth quarter of 2017, OPG, and therefore the Prescribed Facilities, recognized a regulatory asset and a corresponding increase to revenue for the Interim Period Revenue Shortfall to reflect management's best estimate of new regulated prices for the June 1, 2017 to December 31, 2017 period, based on the draft payment amounts order filed by OPG in January 2018. As the final regulated prices approved in the March 2018 payment amounts order varied from those proposed by OPG in the draft payment amounts order, OPG, and therefore the Prescribed Facilities, partially reversed the regulatory asset for the Interim Period Revenue Shortfall in the first quarter of 2018.

k) Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reduced as underlying unamortized balances are amortized as components of benefit costs. For further details, refer to Note 3 under the heading, *Rate Regulated Accounting*. The AOCL amounts related to pension and OPEB plans are presented in Note 12.

l) Deferred Income Taxes

OPG, and therefore the Prescribed Facilities, are required to record a regulatory asset or regulatory liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities. In addition, OPG, and therefore the Prescribed Facilities, are required to recognize a deferred income tax liability or asset for the regulatory asset or regulatory liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to customers. Income taxes are discussed in Note 11.

m) Other Deferral and Variance Accounts

As at December 31, 2019 and 2018, regulatory assets and regulatory liabilities for other deferral and variance accounts included amounts for:

Regulatory asset	Description
Nuclear Liability Deferral Account	Pursuant to *Ontario Regulation 53/05*, the OEB has authorized this account in connection with changes to OPG's liabilities for used nuclear fuel management and nuclear decommissioning and L&ILW management associated with the Darlington and Pickering nuclear generating stations. The deferral account records the revenue requirement impact associated with changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA.
Nuclear Deferral and Variance Over/Under Recovery Variance Account Hydroelectric Deferral and Variance Over/Under Recovery Variance Account	These accounts record differences in recovery of the approved balances in the deferral and variance accounts due to differences between forecasted electricity production used to set rate riders for recovery or repayment of these balances and the actual electricity production upon which the rate riders are collected.
Nuclear Development Variance Account	Pursuant to *Ontario Regulation 53/05*, this account records variances between actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.
Fitness for Duty Deferral Account	This account records, effective June 1, 2017, OPG's costs related to implementing the Canadian Nuclear Safety Commission's (CNSC) new fitness for duty requirements.
Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account	This account was established pursuant to the OEB's January 2016 decision on OPG's motion that requested the OEB to review and vary parts of its November 2014 decision that established regulated prices in effect prior to June 1, 2017, including the disallowed Niagara Tunnel project capital costs. The account captures the revenue requirement impact of the portion of the original disallowance related to Niagara Tunnel project capital costs reversed by the OEB in the January 2016 decision.

Regulatory Liability	Description
Ancillary Services Net Revenue Variance Account	This account has been authorized by the OEB to capture differences between actual net revenue earned from ancillary services provided by the Prescribed Facilities to maintain the reliability of the electricity system and the forecast amounts of such revenue approved by the OEB in setting regulated prices.
Income and Other Taxes Variance Account	This account records deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.
Hydroelectric Incentive Mechanism Variance Account	This account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.
SR&ED ITC Variance Account	This account records the income tax expense impact for the nuclear generating facilities as a result of differences between actual scientific research & experimental development investment tax credits earned by OPG and such forecast amounts reflected in the regulated prices effective June 1, 2017.
Pension and OPEB Forecast Cash versus Accrual Differential Carrying Charges Variance Account	This account, established on a generic basis by the OEB's 2017 policy report on regulatory treatment of pension and OPEB costs, records asymmetric carrying charges in favour of customers on differences between pension and OPEB accrual costs recovered in regulated prices and cash payments made in respect of pension and OPEB. For OPG, the account currently records carrying charges on amounts recovered from the Pension & OPEB Cash Versus Accrual Differential Deferral Account as approved by the OEB's February 2019 decision and order.
Capacity Refurbishment Variance Account	Pursuant to *Ontario Regulation 53/05*, the OEB has authorized this account to capture variances from forecasts reflected in regulated prices for capital and non-capital costs incurred to increase the output of, refurbish or add operating capacity to one or more of OPG's regulated generated facilities, including cost variances related to the refurbishment of the Darlington nuclear GS, life extension initiatives at the Pickering GS and other projects.

8. LONG-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' long-term debt is due to OPG and is derived based on the methodology approved in the OEB Decision. This debt is reflected as long-term debt in these financial statements because the methodology approved in the OEB Decision takes into account OPG's long-term debt. The methodology establishes the total amount of debt based on a deemed capital structure for the Prescribed Facilities, which was set by the OEB Decision at 55 percent debt and 45 percent.

The long-term debt portion of the total debt established using the deemed capital structure includes project-related long-term debt incurred by OPG to finance the PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's long-term debt not attributed to specific projects or investments (non-specific debt or non-specific long-term debt). The allocation of the non-specific long-term debt is primarily based on the net PP&E balances, excluding those financed by project-related or other non-specific debt, of the Prescribed Facilities relative to those of OPG. The Other component of the Prescribed Facilities' long-term debt is derived as the difference between total debt per the deemed capital structure and the sum of the portion of OPG's actual short-term debt and long-term debt attributed to the Prescribed Facilities.

The following table summarizes the components of the long-term debt of the Prescribed Facilities as at December 31:

(millions of dollars)	**2019**	**2018**
OPG's project-related debt for the Prescribed Facilities	**1,018**	1,160
Allocated portion of OPG's non-specific debt	**2,919**	2,886
Other	**2,283**	1,771
Total long-term debt	**6,220**	5,817

OPG's project-related long-term debt included in the derivation of the Prescribed Facilities' long-term debt as at December 31, 2019 primarily consists of outstanding debt financing of $575 million for the Niagara Tunnel project provided by the OEFC (December 31, 2018 – $725 million) and $418 million of green bonds issuances under OPG's Medium Term Note Program to finance or refinance eligible investments of the Prescribed Facilities (December 31, 2018 – $414 million).

As at December 31, 2019, OPG's total non-specific long-term debt consisted of senior and subordinated notes payable to the OEFC totaling $3,060 million (2018 – $3,060 million). Approximately 95 percent of this amount was allocated to the Prescribed Facilities as at December 31, 2019 (2018 – approximately 94 percent) based on the methodology per the OEB Decision.

OPG's total long-term debt payable to the OEFC as at December 31, 2019 included $1,400 million outstanding under OPG's $2,350 million general corporate credit facility agreement with the OEFC that expired on December 31, 2018. In the first quarter of 2018, OPG issued a total of $600 million senior notes payable to the OEFC maturing in 2048. The interest rates on these notes ranged from 3.87 percent to 4.00 percent.

On July 17, 2019, OPG established a new $800 million general corporate credit facility agreement with the OEFC expiring on December 31, 2021. The coupon rate will be set at the time OPG draws funds from the credit facility, based on the prevailing market rate at that time. In August 2019, OPG issued senior notes payable to the OEFC totalling $100 million against this facility and maturing in August 2039 with a coupon rate of 3.49 percent, a portion of which was allocated to the Prescribed Facilities and is included in the above noted non-specific debt payable to the OEFC.

In June 2018, OPG issued an inaugural green bond offering of $450 million under its Medium Term Note Program maturing in 2048, a portion of which was directly assigned to the Prescribed Facilities as project-related debt on the

basis of the underlying eligible investments being financed or re-financed under OPG's Green Bond Framework. The interest rate on these notes was 3.84 percent.

The net interest expense on the Prescribed Facilities' long-term debt for the year ended December 31, 2019 was calculated pursuant to the methodology approved by the OEB Decision at an effective rate of 4.33 percent per annum (2018 – 4.48 percent). The calculation of the effective rates reflects the actual interest cost of the weighted average amount of applicable OPG debt issues outstanding during the year that are attributed to the Prescribed Facilities, taking into account the impact of any related effective interest rate hedging instruments entered into by OPG.

The following table summarizes the net interest expense on the Prescribed Facilities' long-term debt for the years ended December 31:

(millions of dollars)	**2019**	**2018**
OPG's project-related debt for the Prescribed Facilities	**37**	44
Allocated portion of OPG's non-specific debt	**134**	125
Other	**84**	92
Interest related to regulatory assets and regulatory liabilities	**(20)**	(15)
Net interest expense on long-term debt	**235**	246

9. SHORT-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' short-term debt is due to OPG and is derived based on the methodology approved in the OEB Decision that considers the following:

- a portion of OPG's short-term borrowings, if any, excluding project-related short-term debt directly assigned on the basis of the assets it is incurred to finance; and
- a portion of securitized borrowings, if any, allocated to the Prescribed Facilities on the basis of construction and development in progress, fuel inventory, and materials and supplies balances attributed to the Prescribed Facilities relative to those of OPG.

OPG maintains a $1 billion revolving committed bank credit facility, which is divided into two $500 million multi-year term tranches. The $50 million tranche of the credit facility matures in May 2023 and the $950 million tranche matures in May 2024. There was $50 million of commercial paper outstanding under OPG's commercial paper program as at December 31, 2019 (2018 – $170 million), of which $49 million was allocated to the Prescribed Facilities (2018 – $164 million). The commercial paper program is used to provide short-term funding for OPG, at interest rates of approximately two percent and for less than one year in duration.

OPG's short-term, uncommitted credit facilities included an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement was $150 million. As at December 31, 2019 and December 31, 2018, with the exception of Letters of Credit outstanding under this agreement of $150 million in support of OPG's supplementary pension plans, there were no amounts outstanding under this agreement and therefore, none were reflected in the Prescribed Facilities' short-term debt. The securitization facility expired on November 1, 2020.

The net interest expense on the Prescribed Facilities' short-term debt for the year ended December 31, 2019 was calculated pursuant to the methodology established by the OEB Decision at an effective rate of 1.96 percent per annum (2018 – 1.67 percent) plus the portion of the cost of maintaining OPG's commercial bank credit facility attributed to the Prescribed Facilities. The calculation of the effective rate is based on the cost of funds associated with OPG's securitized receivables during the year, excluding Letters of Credit, if any, and the interest cost of the

weighted average amount of OPG's commercial paper outstanding during the year, as allocated to the Prescribed Facilities.

The following table summarizes the net interest expense on the Prescribed Facilities' short-term debt for the years ended December 31:

(millions of dollars)	**2019**	**2018**
Commercial paper	**3**	2
Bank credit facility cost	**2**	2
Net interest expense on short-term debt	**5**	4

10. NUCLEAR FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The portion of OPG's Nuclear Liabilities on a present value basis attributed to the Prescribed Facilities consists of the following as at December 31:

(millions of dollars)	**2019**	**2018**
Liability for used nuclear fuel management	**5,128**	4,870
Liability for nuclear decommissioning and L&ILW management	**5,297**	5,098
Nuclear fixed asset removal and nuclear waste management liabilities	**10,425**	9,968

The changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	**2019**	**2018**
Liabilities, beginning of year	**9,968**	9,546
Increase in liabilities due to accretion [1]	**532**	512
Increase in liabilities due to used nuclear fuel and nuclear waste management expenses [1]	**72**	61
Liabilities settled by expenditures on nuclear fixed asset removal and nuclear waste management during the year	**(147)**	(151)
Liabilities, end of year	**10,425**	9,968

[1] Excludes the impact of regulatory accounts.

OPG's Nuclear Liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of its nuclear facilities. Costs will be incurred for activities such as preparation for safe storage and safe storage of the nuclear stations, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of used nuclear fuel and L&ILW material.

The determination of the accrual for nuclear fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the Nuclear Liabilities is contained in the 2017-2021 ONFA reference plan approved by the Province effective January 1, 2017 in accordance with the ONFA (2017 ONFA Reference Plan). This update has been reflected in the Nuclear Liabilities since December 31, 2016.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2019 and 2018, and therefore the portion of these liabilities attributed to the Prescribed Facilities, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning activities are projected to occur over approximately the next 80 years.

The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2088 for placement of used fuel into the assumed long-term disposal repository, followed by extended monitoring.

A number of significant assumptions used in the calculation of the accrued liabilities are subject to inherent uncertainty and judgement. The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed, may result in significant changes to the value of the liabilities. With programs of this long-term duration and the evolving technology to handle the nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease materially over time.

The costs that are recognized as a liability by OPG and the method of attributing these costs for the purposes of determining the liabilities of the Prescribed Facilities are as follows:

- The present value of the costs of decommissioning the nuclear generating facilities after the end of their useful lives, with the costs determined primarily on an individual facility basis and directly assigned to the nuclear generating stations of the Prescribed Facilities;
- The present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed life of the nuclear generating stations, with the costs attributed to the Prescribed Facilities either on the basis of direct assignment or total expected waste volumes over the assumed lives of all of OPG's nuclear generating stations, depending on the nature of the waste management program; and
- The present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to-date by each of OPG's nuclear generating stations, with the underlying variable cost rates calculated using either the total waste volumes expected to be generated over the assumed life of each of the nuclear generating stations of the Prescribed Facilities or the total waste volumes expected to be generated over the assumed lives of all of OPG's nuclear generating stations, depending on the nature of the program.

Changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities during the years ended December 31, 2019 and 2018 were determined as follows:

- Accretion was computed directly on the balance of the liabilities attributed to the Prescribed Facilities using the discount rates applicable to OPG's total liabilities;
- Used nuclear fuel and nuclear waste management variable expenses were computed using applicable waste management program cost rates applied to waste volumes generated by each of the nuclear generating stations of the Prescribed Facilities; and
- With the exception of expenditures incurred in relation to the safe storage of Pickering GS Units 2 and 3 and the preparation for future safe storage of the remaining Pickering GS Units, which were directly assigned to the Prescribed Facilities, expenditures on nuclear fixed asset removal and nuclear waste management were primarily allocated to the Prescribed Facilities in proportions reflecting expected waste volumes for each of the nuclear generating stations over their assumed lives.

Liability for Used Nuclear Fuel Management Costs

The liability for used nuclear fuel management represents the cost of managing the used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs as specified in the NFWA. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel waste. To estimate its liability for used nuclear fuel management costs, OPG has adopted an approach consistent with Canada's Adaptive Phased Management concept approved by the Government of Canada.

Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will be de-watered and de-fuelled immediately after the station has ceased operations and thereafter will remain in a safe state condition for a 30-year period, prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The assumptions used to establish the obligation for these costs currently include an L&ILW deep geologic repository (DGR) facility to be constructed on the lands adjacent to the Western Waste Management Facility in Kincardine, Ontario and operated by OPG. In light of the SON community vote on January 31, 2020, not to support OPG's proposed L&ILW DGR at this site, OPG has begun a process to evaluate potential alternative solutions for the safe long-term management of the L&ILW and to assess the potential corresponding impact to the ARO. Due to significant uncertainties associated with potential alternative solutions and the estimation of their cost at the present time, including factors beyond OPG's control, no adjustment to the ARO has been recorded. OPG continues to evaluate the underlying assumptions and cost estimates for the L&ILW management liability based on available information.

Ontario Nuclear Funds Agreement

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its life cycle obligation for nuclear decommissioning and long-term nuclear waste management. The Nuclear Segregated Funds were established under the ONFA for this purpose. OPG makes contributions to the Nuclear Segregated Funds based on the approved ONFA reference plan in effect. ONFA reference plans are subject to approval by the Province.

The balances and earnings of the Nuclear Segregated Funds were attributed to the Prescribed Facilities primarily using direct assignment on the basis of the station-level opening balances of, and specified station-level contributions to the respective funds prescribed by the approved ONFA reference plan in effect. Disbursements from the funds were allocated on the basis of the cost estimates underlying the approved ONFA reference plan in effect.

As required under the ONFA reference plans in effect, OPG has been making contributions to the Used Fuel Segregated Fund over the assumed lives of its nuclear generating stations, as specified in the ONFA, including contributions to the Ontario NFWA Trust (NFWA Trust) established by OPG pursuant to the NFWA. The NFWA Trust forms part of the Used Fuel Segregated Fund, with any OPG contributions to the Used Fuel Segregated Fund, as well as any portion of the fund currently not in the NFWA Trust, being able to be applied towards the NFWA Trust's annual contribution requirements pursuant to the NFWA. ONFA requirements have resulted in the majority of the underlying used fuel management obligation being funded through OPG contributions over the initial estimated useful

lives of the nuclear generating stations assumed in the ONFA, which did not reflect subsequent extensions to the nuclear station lives to reflect refurbishment and life extension decisions.

OPG has not been required to make contributions to the Decommissioning Segregated Fund, which was fully funded at its inception through an initial contribution made by the OEFC, an agency of the Province, and, taking into account asset performance and changes in underlying funding obligation over time, at the time of every subsequent approved ONFA reference plan.

Based on the funded status of the Nuclear Segregated Funds reflecting the life cycle liability estimates per the 2017 ONFA Reference Plan, no overall contributions to either fund are currently required. As determined in accordance with the ONFA, the annual Used Fuel Segregated Fund contribution amount related to the Prescribed Facilities was a reduction of $142 million in each of 2018 and 2019 and a reduction of $142 million annually over the 2020-2021 period. The annual Decommissioning Segregated Fund contribution amount related to the Prescribed Facilities was $244 million in each 2018 and 2019 and $244 million annually over the 2020-2021 period. The negative contributions related to the Prescribed Facilities reflected the rebalancing of each of the funds via offsetting positive and negative station-level contribution amounts, consistent with the intent of the ONFA. Overall contributions may be required in the future should either or both of the funds be in an underfunded position when a new reference plan is prepared. The next ONFA reference plan update is scheduled to be completed by the end of 2021.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge its existing nuclear waste management and nuclear facilities decommissioning obligations. The CNSC process requires the CNSC financial guarantee requirement to be updated once every five years, with the most recent update covering the 2018-2022 period. Based on the most recent annual report, OPG expects that the CNSC financial guarantee requirement continues to be satisfied by the forecast fair market value of the Nuclear Segregated Funds without the requirement of a Provincial Guarantee for the 2020-2022 period. As provided for by the terms of the ONFA, the Province is committed to provide a Provincial Guarantee to the CNSC as required, on behalf of OPG, should there be a shortfall between the CNSC financial guarantee requirement and the fair market value of the Nuclear Segregated Funds during the 2020-2022 period, as it has done in the past. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount, if any, of the Provincial Guarantee.

The investments in the Nuclear Segregated Funds include a diversified portfolio of equity and fixed income securities, pooled funds, infrastructure, real estate and other investments. As the Nuclear Segregated Funds are invested to fund long-term liability requirements, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in the market value will occur, managing the long-term return of the Nuclear Segregated Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

Decommissioning Segregated Fund

Under the ONFA, OPG is wholly responsible for cost estimate changes and investment returns in the Decommissioning Segregated Fund.

Upon termination of the ONFA, the Province has the sole right to any excess funds in the Decommissioning Segregated Fund, which is the excess of the fair market value of the fund's assets over the underlying estimated future costs, as per the most recently approved ONFA reference plan. Accordingly, when the Decommissioning Segregated Fund is overfunded, OPG, and therefore the Prescribed Facilities, limits the fund earnings recognized in the financial statements by recording an amount due to the Province, such that the asset recognized for the fund on the balance sheets is equal to the cost estimate of the liability based on the most recently approved ONFA reference plan. Additionally, OPG, and therefore the Prescribed Facilities, recognize the portion of the surplus that it may direct to the Used Fuel Segregated Fund, which is possible when the surplus in the Decommissioning Segregated Fund is such that the underlying liabilities, as defined by the most recently approved ONFA reference plan, are at least 120 percent funded. In those circumstances, OPG may direct, at the time a new reference plan is approved, up to

50 percent of the surplus over 120 percent to the Used Fuel Segregated Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Segregated Fund is at least 120 percent funded, OPG, and therefore the Prescribed Facilities, recognize 50 percent of the excess greater than 120 percent in income, up to the amount by which the Used Fuel Segregated Fund is underfunded.

When the Decommissioning Segregated Fund is in an overfunded status of less than 120 percent, the above results in OPG and therefore the Prescribed Facilities recognizing annual earnings on the fund at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA reference plan, which is the rate of growth in the underlying funding liability. The same treatment is applied to the Decommissioning Segregated Fund when it is in an overfunded status of greater than 120 percent, if the Used Fuel Segregated Fund is fully funded. When the Decommissioning Segregated Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

As at December 31, 2019 and 2018, the Decommissioning Segregated Fund was in an overfunded position of greater than 120 percent based on the 2017 ONFA Reference Plan. As a result, OPG recognized a due to the Province amount such that the Decommissioning Segregated Fund asset on the balance sheets as at December 31, 2019 and 2018 is limited to the value of the underlying funding liability per the 2017 ONFA Reference Plan, plus 50 percent of the surplus over 120 percent up to the amount, if any, by which the Used Fuel Segregated Fund was underfunded. This payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Segregated Fund earns less than its target rate of return, a new ONFA reference plan is approved with a higher underlying funding liability, or the Used Fuel Segregated Fund's underfunded status increases.

Used Fuel Segregated Fund

OPG is responsible for cost increases in the funding liability for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, pursuant to which the Province limits OPG's total financial exposure for the first 2.23 million used nuclear fuel bundles at approximately $17.4 billion in present value dollars as at December 31, 2019. The graduated liability thresholds do not apply to used fuel bundles beyond the 2.23 million threshold.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Segregated Fund at 3.25 percent plus the change in the Ontario CPI, as defined by ONFA, for funding related to the first 2.23 million used fuel bundles (committed return). OPG, and therefore the Prescribed Facilities, recognize the committed return on the Used Fuel Segregated Fund as earnings on the Nuclear Segregated Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. This amount due to or due from the Province represents the amount that would be paid to or received from the Province if the committed return were to be settled as at the consolidated balance sheets date. The 2.23 million threshold represents the estimated total life cycle fuel bundles based on the initial estimated useful lives of the nuclear stations assumed in the ONFA.

As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the rate of return guaranteed by the Province, and earn a return based on changes in the market value of the assets of the Used Fuel Segregated Fund.

If there is a surplus in the Used Fuel Segregated Fund such that the liabilities, as defined by the most recently approved ONFA reference plan, are at least 110 percent funded after taking into account the committed return adjustment, the Province, has the right, at any time, to access the excess amount greater than 110 percent. Upon termination of the ONFA, the Province is entitled to any surplus in the fund, which is the excess of the fair market value of the Used Fuel Segregated Fund assets over the estimated future costs, as per the most recently approved ONFA reference plan. Neither OPG nor the Province has a right to direct any amounts from the Used Fuel Segregated Fund to the Decommissioning Segregated Fund. Therefore, when the Used Fuel Segregated Fund is overfunded after taking into account the committed return adjustment, OPG limits the earnings recognized by

recording an amount due to the Province, such that the asset recognized for the fund on the balance sheet is equal to the cost estimate of the funding liability per the most recently approved ONFA reference plan. When the fund is overfunded, this results in OPG recognizing annual earnings on the fund, after taking into account the committed return adjustment, at 3.25 percent plus the long-term Ontario CPI specified in the most recently approved ONFA reference plan, which is the rate of growth in the underlying funding liability.

Based on the 2017 ONFA Reference Plan, the Used Fuel Segregated Fund was in a marginally overfunded position as at December 31, 2019 and a marginally underfunded position as at December 31, 2018. The due to the Province amount recognized for the fund as at December 31, 2019 related to the committed return adjustment and the marginally overfunded position of the fund. The due to the Province amount recognized as at December 31, 2018 related solely to the committed return adjustment.

Nuclear Segregated Funds

The portion of OPG's nuclear fixed asset removal and nuclear waste management funds as at December 31 assigned to the Prescribed Facilities consists of the following:

	Fair Value	
(millions of dollars)	**2019**	**2018**
Decommissioning Segregated Fund	**6,431**	5,380
Due to Province – Decommissioning Segregated Fund	**(1,495)**	(902)
	4,936	4,478
Used Fuel Segregated Fund [1]	**6,269**	5,714
Due to Province – Used Fuel Segregated Fund	**(1,425)**	(948)
	4,844	4,766
Total Nuclear Segregated Funds	**9,780**	9,244
Less: current portion	**20**	10
Non-current Nuclear Segregated Funds	**9,760**	9,234

[1] The NFWA Trust is estimated to represent $2,044 million as at December 31, 2019 (2018 – $1,900 million) of the Prescribed Facilities' portion of the Used Fuel Segregated Fund on a fair value basis. As the NFWA does not provide a basis to assign OPG's contributions to the NFWA Trust to specific nuclear generating stations, this amount was estimated by allocating a portion of the total OPG amount related to the NFWA Trust in the same proportion as the total balance of the Used Fuel Segregated Fund was attributed to the Prescribed Facilities.

The total fair value of the securities invested by OPG in the Nuclear Segregated Funds as at December 31 is provided below. This information is not available for the Prescribed Facilities as the Nuclear Segregated Funds are managed on an aggregate basis.

	Fair Value	
(millions of dollars)	**2019**	**2018**
Cash and cash equivalents and short-term investments	**243**	213
Real assets	**3,855**	3,211
Pooled funds	**2,964**	2,685
Marketable equity securities	**10,353**	8,998
Fixed income securities	**6,295**	5,845
Net receivables/payables	**33**	27
	23,743	20,979
Less: Due to Province	**(5,451)**	(3,496)
	18,292	17,483

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Segregated Funds as of December 31, 2019 and 2018 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Segregated Funds are managed on an aggregated basis.

(millions of dollars)	**Decommissioning Segregated Fund**	**2019 Used Fuel Segregated Fund**	**Total**
Historical cost	**8,279**	**11,062**	**19,341**
Gross unrealized gains (losses)			
Aggregate appreciation	**2,007**	**2,455**	**4,462**
Aggregate depreciation	**(209)**	**(273)**	**(482)**
Foreign exchange	**176**	**246**	**422**
	10,253	**13,490**	**23,743**
Due to Province	**(2,384)**	**(3,067)**	**(5,451)**
Total fair value	**7,869**	**10,423**	**18,292**
Less: current portion	**(6)**	**(34)**	**(40)**
Non-current fair value	**7,863**	**10,389**	**18,252**

(millions of dollars)	**Decommissioning Segregated Fund**	**2018 Used Fuel Segregated Fund**	**Total**
Historical cost	7,863	10,557	18,420
Gross unrealized gains (losses)			
Aggregate appreciation	1,183	1,403	2,586
Aggregate depreciation	(376)	(499)	(875)
Foreign exchange	363	485	848
	9,033	11,946	20,979
Less: Due to Province	(1,514)	(1,982)	(3,496)
Total fair value	7,519	9,964	17,483
Less: current portion	(5)	(14)	(19)
Non-current fair value	7,514	9,950	17,464

Net realized and unrealized gains or losses from investments for the years ended December 31, 2019 and 2018 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Segregated Funds are managed on an aggregated basis.

(millions of dollars)	**Decommissioning Segregated Fund**	**2019 Used Fuel Segregated Fund**	**Total**
Net realized gains			
Net realized gains excluding foreign exchange	**233**	**297**	**530**
Net realized foreign exchange gains	**17**	**24**	**41**
Net realized gains	**250**	**321**	**571**
Net unrealized gains			
Net unrealized gains excluding foreign exchange	**996**	**1,299**	**2,295**
Net unrealized foreign exchange losses	**(192)**	**(260)**	**(452)**
Net unrealized gains	**804**	**1,039**	**1,843**

(millions of dollars)	Decommissioning Segregated Fund	2018 Used Fuel Segregated Fund	Total
Net realized gains			
Net realized gains excluding foreign exchange	378	472	850
Net realized foreign exchange gains	36	50	86
Net realized gains	414	522	936
Net unrealized gains			
Net unrealized gains excluding foreign exchange	(825)	(1,102)	(1,927)
Net unrealized foreign exchange losses	192	268	460
Net unrealized gains	(633)	(834)	(1,467)

The change in the Nuclear Segregated Funds attributed to the Prescribed Facilities for the years ended December 31 is as follows:

(millions of dollars)	Fair Value 2019	2018
Decommissioning Segregated Fund, beginning of year	**4,478**	4,036
Increase in fund due to contributions made	**244**	244
Increase in fund due to return on investments	**822**	32
Decrease in fund due to reimbursement of expenditures	**(15)**	(20)
(Increase) decrease in due to Province	**(593)**	186
Decommissioning Segregated Fund, end of year	**4,936**	4,478
Used Fuel Segregated Fund, beginning of year	**4,766**	4,705
(Decrease) increase in fund due to contributions made	**(142)**	(142)
Increase (decrease) in fund due to return on investments	**726**	(65)
Decrease in fund due to reimbursement of expenditures	**(29)**	(29)
(Increase) decrease in due to Province	**(477)**	297
Used Fuel Segregated Fund, end of year	**4,844**	4,766

The earnings on the Nuclear Segregated Funds attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	2019	2018
Decommissioning Segregated Fund	**229**	218
Used Fuel Segregated Fund	**249**	232
Total earnings	**478**	450

11. INCOME TAXES

OPG, and therefore the Prescribed Facilities, follow the liability method of accounting for income taxes, and record an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from the Prescribed Facilities.

A reconciliation between the statutory and the effective rate of income taxes for the Prescribed Facilities is as follows:

(millions of dollars)	**2019**	**2018**
Income before income taxes	**905**	580
Combined Canadian federal and provincial statutory enacted income tax rates	**26.5%**	26.5%
Statutory income tax rates applied to accounting income	**240**	154
(Decrease) increase in income taxes resulting from:		
Income tax expense deferred in regulatory assets and liabilities	**(10)**	(17)
Scientific Research and Experimental Development investment tax credits	**(31)**	(32)
Manufacturing and processing credit	**(14)**	(9)
Other	**13**	10
	(42)	(48)
Income tax expense	**198**	106
Effective rate of income taxes	**21.9%**	18.3%

Significant components of the income tax expense of the Prescribed Facilities are presented in the table below:

(millions of dollars)	**2019**	**2018**
Current income tax expense	**208**	83
Deferred income tax (recovery) expense	**(10)**	23
Income tax expense	**198**	106

The income tax effects of temporary differences that give rise to deferred income tax assets and deferred income tax liabilities of the Prescribed Facilities as at December 31 are as follows:

(millions of dollars)	**2019**	**2018**
Deferred income tax assets:		
Nuclear fixed asset removal and nuclear waste management liabilities	**2,606**	2,492
Other liabilities and assets	**1,982**	1,832
	4,588	4,324
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	**(1,582)**	(1,428)
Nuclear fixed asset removal and nuclear waste management funds	**(2,445)**	(2,311)
Other liabilities and assets	**(1,632)**	(1,564)
	(5,659)	(5,303)
Net deferred income tax liabilities	**(1,071)**	(979)

During 2019, the Prescribed Facilities' financial statements recorded an increase in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of $131 million (2018 – $95 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding increase to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2019 and 2018 was not impacted.

The following table summarizes the deferred income tax liabilities recorded by the Prescribed Facilities that are expected to be recovered through future regulated prices:

(millions of dollars)	**2019**	**2018**
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	**512**	441
Deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	**171**	147
	683	588
Changes during the year:		
Increase in deferred income tax liabilities on temporary differences related to regulated operations	**98**	71
Increase in deferred income tax liabilities on temporary differences related to the regulatory asset for the deferred income tax liabilities	**33**	24
Balance as at December 31	**814**	683

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

As OPG files income tax returns and pays income taxes on an aggregate basis for all of its operations, information on unrecognized tax benefits is provided on a total OPG basis. A reconciliation of the beginning and ending amount of OPG's total unrecognized tax benefits is provided in the table below.

(millions of dollars)	**2019**	**2018**
Unrecognized tax benefits, beginning of year	**82**	78
Additions based on tax positions related to the current year	**19**	21
Reductions for tax positions of prior years	**(22)**	(17)
Unrecognized tax benefits, end of year	**79**	82

As at December 31, 2019, OPG's unrecognized tax benefits were $79 million (2018 – $82 million), excluding interest and penalties, all of which, if recognized, would affect OPG's and the Prescribed Facilities' effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2019, OPG had recorded interest on unrecognized tax benefits of $10 million (2018 – $9 million). OPG considers its significant tax jurisdiction to be Canada. As at December 31, 2019, OPG remains subject to income tax examination for years after 2015 in Canada.

Cash income taxes are paid and tax refunds are received by OPG for all of its operations, including the Prescribed Facilities, on an aggregate basis. OPG paid $300 million in income taxes, net of tax refunds, during 2019 (2018 – $202 million).

12. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

Fund Assets

The OPG registered pension fund is managed on an aggregate basis for all of OPG's operations and the information on fund assets is presented below on this basis. There is no separate registered pension fund for the Prescribed Facilities.

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. As at December 31, 2019, the pension fund assets were invested in five categories of asset classes. The first category is fixed income assets, which offer exposure to real and nominal interest rates and credit, and contribute to hedging plan liabilities. The second category is return enhancing assets, which offer the potential for higher investment returns beyond returns generally expected for fixed income assets. The third category is real assets, which offer exposure to the combined characteristics from the fixed income and return enhancing assets. The fourth category is return diversifying assets, which offer the potential to improve the overall return of the pension fund while controlling the amount of downside market risk. The fifth category is special opportunities, which are investments that are designed to take advantage of unique mandates and/or market dislocations, while offering the potential for higher risk-adjusted returns and/or improved portfolio diversification.

To achieve the above objective, OPG's target strategic asset allocation was as follows as at December 31, 2019:

	Target
Asset Class	
Fixed Income Assets	33%
Return Enhancing Assets	26%
Real Assets	25%
Return Diversifying Assets	13%
Special Opportunities	3%

The plan may use derivatives for risk management or strategic purposes, where such activity is consistent with the plan's investment objectives.

Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, and corporate bonds. Equity securities are diversified across Canadian, US, and Global stocks. There are also real estate, infrastructure, and agriculture portfolios that are included as part of the total pension fund assets as at December 31, 2019. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which require that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

Risk Management

Risk management oversight with respect to the OPG pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines

Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 14 for a detailed discussion of fair value measurements and the fair value hierarchy.

The tables below present registered pension plan assets for all of OPG's operations measured at fair value in accordance with the fair value hierarchy. This information is not available separately for the Prescribed Facilities, as the OPG registered pension fund is managed on an aggregate basis for all of OPG's operations.

	December 31, 2019			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	**386**	**-**	**-**	**386**
Short-term investments	**-**	**12**	**-**	**12**
Fixed income				
Corporate debt securities	**-**	**1,918**	**-**	**1,918**
Government bonds	**31**	**2,855**	**-**	**2,886**
Equities				
Canadian	**628**	**351**	**-**	**979**
US	**882**	**-**	**-**	**882**
Global	**819**	**-**	**-**	**819**
Pooled funds	**497**	**770**	**-**	**1,267**
Forward exchange contracts	**-**	**18**	**-**	**18**
Futures contracts	**1**	**-**	**-**	**1**
	3,244	**5,924**	**-**	**9,168**
Investments measured at NAV [1]				**5,749**
				14,917 [2]

	December 31, 2018			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Cash and cash equivalents	331	-	-	331
Short-term investments	-	494	-	494
Fixed income				
Corporate debt securities	-	1,326	-	1,326
Government bonds	-	2,614	-	2,614
Equities				
Canadian	706	304	-	1,010
US	1,314	-	-	1,314
Global	1,043	-	-	1,043
Pooled funds	464	413	-	877
	3,858	5,151	-	9,009
Forward exchange contracts	-	(81)	-	(81)
Futures contracts	(5)	-	-	(5)
Investments measured at NAV [1]				4,790
				13,713 [2]

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to the total fair value of plan assets presented in tables following.
[2] The tables above exclude pension fund receivables and payables.

Plan Costs and Liabilities

OPG does not maintain separate pension and OPEB plans for the Prescribed Facilities. As of April 1, 2005, the effective date of the regulated prices established by the Province for the generation of the Previously Regulated Facilities prior to their regulation by the OEB, accrued assets and liabilities for pensions and OPEB recognized in OPG's consolidated financial statements, which were prepared in accordance with Canadian generally accepted accounting principles prior to January 1, 2012, were allocated among the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations. This allocation was determined on the basis of the number of regular OPG employees associated with the corresponding parts of OPG's business.

Subsequent to April 1, 2005, the majority of OPG's recognized post-employment benefit plan costs attributed to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations are determined using direct assignment, primarily on the basis of labour costs incurred by the employees associated with the corresponding parts of OPG's business. The post-employment benefit plan costs associated with OPG's corporate support services are allocated to each of OPG's operations as part of the allocation of corporate support services costs, consistent with the methodology outlined in independent cost allocation studies, the results of which were reflected in the regulated prices established by the OEB Decision.

Following OPG's adoption of US GAAP effective January 1, 2012, unamortized actuarial gains or losses and past service costs or credits for pension and OPRB plans are recognized in AOCI and reported on the balance sheet as part of pension and OPEB liabilities that represent the funded status of these plans. The accumulated unamortized amounts as of the balance sheet date are allocated to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations primarily in proportion to the allocation of the respective benefit costs for the year then ended.

As at December 31, 2013, a portion of OPG's pension and OPEB liabilities attributed to all of OPG's hydroelectric operations other than the regulated hydroelectric facilities prescribed for rate regulation prior to 2014 was allocated to the Newly Regulated Hydroelectric Facilities, primarily using a combination of the number of regular employees and

labour costs associated with these facilities. Subsequent to December 31, 2013, a portion of the costs and AOCI balances attributed to OPG's hydroelectric operations other than the previously regulated hydroelectric facilities is allocated to the Newly Regulated Hydroelectric Facilities primarily on the basis of the number of full-time equivalent employees.

The OCI activity reported by the Prescribed Facilities during the year with respect to pension and OPEB plans represents the change during that year in the corresponding unamortized AOCI balances attributed to the Prescribed Facilities.

Pension fund contributions and expenditures on OPEB and supplementary pension plans are primarily allocated to the Prescribed Facilities in proportion to the respective benefit costs, using the methodology reflected in the regulated prices established by the OEB Decision. For 2019, excluding the NWMO, $165 million of OPG's total contribution of $178 million to its registered pension plan was attributed to the Prescribed Facilities (2018 – $181 million of OPG's total contribution of $195 million). Excluding the NWMO, $17 million of OPG's total expenditures for its supplementary pension plan of $18 million in 2019 and $89 million of OPG's total OPEB plan expenditures of $96 million in 2019 were attributed to the Prescribed Facilities. For 2018, excluding the NWMO, $14 million of OPG's total expenditures for its supplementary pension plan of $15 million and $88 million of OPG's total OPEB plan expenditures of $96 million were attributed to the Prescribed Facilities.

Separate actuarial assumptions are not made to derive pension and OPEB costs and obligations for the Prescribed Facilities. The assumptions used to derive OPG's total pension and OPEB obligations and costs, and therefore such amounts attributed to the Prescribed Facilities, are presented in the table below. These assumptions include those relating to post-employment benefit plans of the NWMO.

	Registered and Supplementary Pension Plans		**Other Post-Employment Benefits**	
	2019	**2018**	**2019**	**2018**
Weighted Average Assumptions – Benefit Obligations at Year-End				
Discount rate for projected benefit obligation	**3.12%**	3.83%	**3.14%**	3.84%
Salary schedule escalation rate – initial rate [1]	**1.70%**	2.00%	**1.70%**	2.00%
– thereafter	**2.25%**	2.50%	**2.25%**	2.50%
Rate of cost of living increase to pensions	**1.75%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**3.83%**	3.82%
Ultimate health care trend rate	**n/a**	n/a	**4.05%**	4.05%
Year ultimate health care trend rate reached	**n/a**	n/a	**2040**	2040
Rate of increase in disability benefits	**n/a**	n/a	**1.75%**	2.00%

n/a – assumption not applicable.

[1] Average rate per year to December 31, 2026 for 2019 and per year to December 31, 2024 for 2018.

	Registered and Supplementary Pension Plans		**Other Post-Employment Benefits**	
	2019	**2018**	**2019**	**2018**
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	**6.00%**	6.00%	**n/a**	n/a
Discount rate for current service cost	**3.93%**	3.69%	**3.85%**	3.64%
Discount rate for interest on projected benefit obligation	**3.56%**	3.25%	**3.61%**	3.35%
Discount rate for interest on current service cost	**3.80%**	3.54%	**3.75%**	3.55%
Salary schedule escalation rate – initial rate [1]	**2.00%**	1.90%	**2.00%**	1.90%
– thereafter	**2.50%**	2.50%	**2.50%**	2.50%
Rate of cost of living increase to pensions	**2.00%**	2.00%	**n/a**	n/a
Initial health care trend rate	**n/a**	n/a	**3.82%**	5.80%
Ultimate health care trend rate	**n/a**	n/a	**4.05%**	4.32%
Year ultimate health care trend rate reached	**n/a**	n/a	**2040**	2030
Rate of increase in disability benefits	**n/a**	n/a	**2.00%**	2.00%
Expected average remaining service life for employees (years)	**12**	12	**13**	13

n/a – assumption not applicable.

[1] Average rate per year to December 31, 2024 for 2019 and per year to December 31, 2021 for 2018.

The components of OPG's post-employment benefit costs attributed to the Prescribed Facilities for the years ended December 31, including those related to the post-employment benefits of the NWMO, are provided below. The costs were attributed to the Prescribed Facilities using the methodology reflected in the regulated prices established by the OEB Decision.

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Components of Cost Recognized for the Year						
Current service costs	**289**	307	**8**	8	**66**	73
Interest on projected benefit obligation	**565**	525	**12**	11	**95**	100
Expected return on plan assets, net of expenses	**(766)**	(760)	**-**	-	**-**	-
Amortization of net actuarial loss [1]	**145**	183	**5**	6	**-**	7
Recognition of LTD past service credits	**-**	-	**-**	-	**(1)**	-
Recognition of LTD net actuarial loss (gain)	**-**	-	**-**	-	**10**	(2)
Costs recognized [2]	**233**	255	**25**	25	**170**	178

[1] The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 7.

[2] Excludes the impact of regulatory deferral and variance accounts discussed in Note 7.

Total post-employment benefit costs, attributed to the Prescribed Facilities for the years ended December 31, including the impact of the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, are as follows:

(millions of dollars)	**2019**	**2018**
Registered pension plans	**233**	255
Supplementary pension plans	**25**	25
Other post-employment benefits	**170**	178
Pension & OPEB Cash Payment Variance Account *(Note 7)*	**130**	73
Pension & OPEB Cash Versus Accrual Differential Deferral Account *(Note 7)*	**(153)**	(169)
Pension and other post-employment benefit costs	**405**	362

The following table provides the pension and OPEB liabilities reported by the Prescribed Facilities and their classification on the balance sheets as at December 31:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Current liabilities	**-**	-	**(15)**	(13)	**(88)**	(86)
Non-current liabilities	**(3,061)**	(3,155)	**(327)**	(298)	**(2,677)**	(2,308)
Total liabilities	**(3,061)**	(3,155)	**(342)**	(311)	**(2,765)**	(2,394)

OPG's total accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2019 are $16,808 million and $361 million, respectively (2018 – $15,803 million and $330 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation includes no assumption about future compensation levels.

The following table provides the components of the Prescribed Facilities' OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset discussed in Note 7 for the years ended December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial (gain) loss	**(16)**	309	**28**	(7)	**307**	(441)
Amortization of past service credits	**-**	-	**-**	-	**(16)**	(6)
Amortization of net actuarial loss	**(145)**	(183)	**(5)**	(6)	**-**	(7)
Total (increase) decrease in OCI	**(161)**	126	**23**	(13)	**291**	(454)
Less: (Decrease) increase in Pension and OPEB Regulatory Asset *(Note 7)*	**(161)**	126	**23**	(13)	**291**	(454)
Net increase in OCI (pre-tax)	-	-	-	-	-	-

The following table provides the components of the Prescribed Facilities' AOCL related to pension and OPEB plans that have not yet been recognized as components of benefit costs and the offsetting Pension and OPEB Regulatory Asset as at December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post-Employment Benefits	
(millions of dollars)	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**
Unamortized amounts recognized in AOCL						
Past service credits	**-**	-	**-**	-	**(18)**	(2)
Net actuarial loss (gain)	**3,356**	3,517	**119**	96	**210**	(97)
Total recognized in AOCL	**3,356**	3,517	**119**	96	**192**	(99)
Less: Pension and OPEB Regulatory Asset *(Note 7)*	**3,356**	3,517	**119**	96	**192**	(99)
Net recognized in AOCL (pre-tax)	**-**	-	**-**	-	**-**	-

The following table provides the components of the Prescribed Facilities' AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31, 2019 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset in 2020, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post-Employment Benefits
Past service credits	-	-	(2)
Net actuarial loss	150	6	-
Total increase (decrease) in AOCL	150	6	(2)
Less: estimated decrease in Pension and OPEB Regulatory Asset	150	6	(2)
Net increase in OCI (pre-tax)	-	-	-

The following table provides the components of the Prescribed Facilities' AOCL and the offsetting Pension and OPEB Regulatory Asset as at December 31, 2018 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset in 2019, on a pre-tax basis:

(millions of dollars)	**Registered Pension Plans**	**Supplementary Pension Plans**	**Other Post-Employment Benefits**
Net actuarial loss	145	5	-
Total increase in AOCL	145	5	-
Less: estimated decrease in Pension and OPEB Regulatory Asset	145	5	-
Net increase in OCI (pre-tax)	-	-	-

In September 2019, OPG filed an actuarial valuation for funding purposes of the OPG registered pension plan, as at January 1, 2019, with the Financial Services Regulatory Authority of Ontario (FSRA). Based on this valuation, as of December 31, 2019, OPG's required contribution to its registered pension plan was expected to be $181 million for 2020, of which $168 million is estimated to be attributable to the Prescribed Facilities. In September 2020, OPG filed an actuarial valuation for funding purposes of the OPG registered pension plan as at January 1, 2020, with the FSRA. The next filed funding valuation must have an effective date no later than January 1, 2023. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

As part of the actuarial valuation for funding purposes of the registered pension plan as at January 1, 2019, the plan's demographic and other assumptions were reviewed and revised, as necessary, by independent actuaries. Using updated demographic assumptions and demographic data as at January 1, 2019 consistent with the new funding valuation for the registered pension plan, OPG conducted a comprehensive actuarial valuation for accounting purposes of its defined benefit pension and OPEB plans in 2019. The results of this valuation were reflected in the 2019 year-end obligations reflecting appropriate assumptions for accounting purposes as at December 31, 2019.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling $392 million as at December 31, 2019 (2018 – $364 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2019 are presented in the table below. These benefit plans are managed on an aggregate basis for all of OPG's operations.

(millions of dollars)	**Registered Pension Plans**	**Supplementary Pension Plans**	**Other Post-Employment Benefits**
2020	715	17	104
2021	748	17	106
2022	748	18	108
2023	791	18	110
2024	780	18	113
2025 through 2029	4,363	97	631

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2018 are presented in the table below.

(millions of dollars)	**Registered Pension Plans**	**Supplementary Pension Plans**	**Other Post-Employment Benefits**
2019	688	15	101
2020	722	15	105
2021	748	16	105
2022	759	16	107
2023	809	16	109
2024 through 2028	4,471	86	604

A one percent increase or decrease in OPG's health care trend rate would result in an increase in the current service and interest components of the 2019 OPEB costs recognized in the Prescribed Facilities' financial statements of approximately $32 million (2018 – $41 million) or a decrease in the service and interest components of the 2019 OPEB costs recognized in the Prescribed Facilities' financial statements of approximately $24 million (2018 – $29 million).

A one percent increase or decrease in the health care trend rate would result in an increase in OPG's total projected OPEB obligation as at December 31, 2019 of $550 million (2018 – $461 million) or a decrease in OPG's total projected OPEB obligation as at December 31, 2019 of $422 million (2018 – $354 million).

13. RISK MANAGEMENT AND DERIVATIVES

The Prescribed Facilities are exposed to risks related to changes in market interest rates on debt expected to be issued in the future by OPG, movements in foreign currency that affect OPG's assets, liabilities, and forecasted transactions, and fluctuations in commodity prices. Select derivative instruments are used to manage such risks, and a portion of the financial impacts of these instruments is attributed to the Prescribed Facilities. OPG's derivatives attributed in whole or in part to the Prescribed Facilities are used as hedging instruments only.

Interest Rates

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG, and therefore for the Prescribed Facilities, through the debt and net interest expense derivation methodologies established by the OEB Decision, arises with OPG's need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives, a portion of the financial impact of which is included in the derivation of the Prescribed Facilities' net interest expense on the long-term debt, to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing. A portion of applicable gains and losses on OPG's interest rate hedges that are effective is reflected in the net interest expense of the Prescribed Facilities, using the methodology approved in the OEB Decision for the determination of interest expense.

Foreign Exchange

The Prescribed Facilities' financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are denominated in, or tied to, US dollars. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved corporate risk management policies. The financial impacts of hedging derivative instruments related to movements in foreign currency are attributed to the Prescribed Facilities on the basis of the underlying assets, liabilities, or forecasted transactions.

Commodity Prices

The Prescribed Facilities are exposed to fluctuations in commodity prices. Changes in the market prices of nuclear fuels used to produce electricity can adversely impact the Prescribed Facilities' earnings and cash flow from operations. To manage the risk of unpredictable increases in the price of fuels, OPG has fuel hedging programs, which include using fixed price and indexed contracts.

Credit

OPG's credit risk exposure is primarily a function of its electricity and other sales. The majority of OPG and the Prescribed Facilities' revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG and the Prescribed Facilities' accounts receivable, the risk is considered acceptable due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. The portion of OPG's allowance for doubtful accounts attributed to the Prescribed Facilities and reported in these financial statements as at December 31, 2019 was approximately $1 million (2018 – less than $1 million).

The following table shows the pre-tax amounts related to derivatives recorded in AOCL for the years ended December 31:

(millions of dollars)	**2019**	**2018**
Cash flow hedges		
Reclassification of losses from AOCI	**8**	10

Existing pre-tax net losses of $7 million deferred in AOCL as at December 31, 2019 are expected to be reclassified to net income within the next 12 months.

14. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices as at the balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market

prices or rates prevailing as at the balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Various other fund investments are valued at the unit values supplied by the fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

The following is a summary of OPG's financial instruments attributed to the Prescribed Facilities as at December 31, 2019 and 2018, the impact of which is reported in these financial statements:

	Fair Value		**Carrying Value** [1]		
(millions of dollars)	**2019**	**2018**	**2019**	**2018**	**Balance Sheet Line Item**
Nuclear Segregated Funds (includes current portion) [2]	**9,780**	9,244	**9,780**	9,244	Nuclear fixed asset removal and nuclear waste management funds
Long-term debt	**(6,220)**	(5,817)	**(6,220)**	(5,817)	Long-term debt
Other financial instruments	**(15)**	(13)	**(15)**	(13)	Long-term accounts payable and accrued charges

[1] The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other current assets, short-term debt, accounts payable, accrued charges and other payables, and due to Ontario Power Generation Inc. approximate their fair values due to the immediate or short-term maturity of these financial instruments.

[2] The Nuclear Segregated Funds are comprised of the Decommissioning Segregated Fund and the Used Fuel Segregated Fund. The fair value of the Nuclear Segregated Funds is set not to exceed an amount equal to the funding liability pursuant to the ONFA when the Nuclear Segregated Funds are in a surplus position. Refer to Note 10 for further information.

The following tables present financial assets and financial liabilities of the Prescribed Facilities measured at fair value in accordance with the fair value hierarchy. The net changes in amounts related to the Nuclear Segregated Funds for the respective years were estimated in proportion to the Prescribed Facilities' portion of OPG's total balance of each of the Nuclear Segregated Funds.

	December 31, 2019			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**2,798**	**2,479**	**-**	**5,277**
Investments measured at NAV [1]				**993**
				6,270
Due to Province				**(1,425)**
Used Fuel Segregated Fund, net				**4,845**
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	**2,869**	**2,483**	**-**	**5,352**
Investments measured at NAV [1]				**1,078**
				6,430
Due to Province				**(1,495)**
Decommissioning Segregated Fund, net				**4,935**
Liabilities				
Other financial liabilities	**(15)**	**-**	**-**	**(15)**

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the balance sheets.

	December 31, 2018			
(millions of dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Used Fuel Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	2,509	2,356	-	4,865
Investments measured at NAV [1]				849
				5,714
Due to Province				(948)
Used Fuel Segregated Fund, net				4,766
Decommissioning Segregated Fund				
Investments measured at fair value, excluding investments measured at NAV	2,360	2,165	-	4,525
Investments measured at NAV [1]				855
				5,380
Due to Province				(902)
Decommissioning Segregated Fund, net				4,478
Liabilities				
Other financial liabilities	(13)	-	-	(13)

[1] Represents investments measured at fair value using NAV as a practical expedient, which have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the balance sheets.

During the year ended December 31, 2019 and 2018, there were no transfers between Level 1 and Level 2 and into or out of Level 3.

Investments Measured at Net Asset Value

Nuclear Segregated Funds

Nuclear Segregated Funds investments classified as Level 3 consist of real estate, infrastructure, and agriculture investments within the alternative investment portfolio. The fair value of these investments is determined using financial information as provided by the general partners of the limited partnership funds in which the Nuclear Segregated Funds are invested. Direct investments are valued using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within OPG's total Nuclear Segregated Funds that are reported on the basis of NAV as at December 31, 2019 and December 31, 2018. This information is not available separately for the Prescribed Facilities as the Nuclear Segregated Funds are managed on a total basis for all of OPG's nuclear generating stations.

December 31, 2019 *(millions of dollars except where noted)*	**Fair Value**	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice**
Real Assets				
Infrastructure	**2,311**	**795**	**n/a**	**n/a**
Real Estate	**1,382**	**754**	**n/a**	**n/a**
Agriculture	**163**	**24**	**n/a**	**n/a**
Pooled Funds				
Short-term Investments	**43**	**n/a**	**Daily**	**1-5 Days**
Fixed Income	**1,974**	**n/a**	**Daily**	**1-5 Days**
Equity	**946**	**n/a**	**Daily**	**1-5 Days**
Total	**6,819**	**1,573**		

December 31, 2018 *(millions of dollars except where noted)*	**Fair Value**	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice**
Real Assets				
Infrastructure	1,803	622	n/a	n/a
Real Estate	1,258	588	n/a	n/a
Agriculture and Timberland	150	47	n/a	n/a
Pooled Funds				
Short-term Investments	19	n/a	Daily	1-5 Days
Fixed Income	1,823	n/a	Daily	1-5 Days
Equity	843	n/a	Daily	1-5 Days
Total	5,896	1,257		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The ownership interest in the respective funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their ownership to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Cash distributions fare received based on the operations of the underlying investments and/or as the underlying investments are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated.

Real Estate

This class includes investments whose investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Segregated Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreements and/or shareholders' agreements. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. Cash distributions are received based on the operations of the underlying investments and/or as the underlying investments are liquidated. It is not possible to estimate when the underlying assets in this class will be liquidated.

Agriculture

This class includes a diversified portfolio of global farmland. The investment objective is to provide a differentiated return source, income yield and inflation protection. The fair values of the investments in this class have been estimated using NAV of the Nuclear Segregated Funds' ownership interest in these investments. The investments in the respective funds are not redeemable. However, the Nuclear Segregated Funds may transfer any of their ownership interests to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Cash distributions are received based on the operations of the underlying investments and/or as the underlying investments are liquidated. It is not possible to estimate when the underlying assets in this call will be liquidated.

Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations, and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

15. COMMITMENTS AND CONTINGENCIES

Litigation

Various legal proceedings are pending against OPG and its subsidiaries covering a wide range of matters that arise in the ordinary course of their business activities. These proceedings may impact the Prescribed Facilities. Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably with respect to OPG and the Prescribed Facilities. While it is not possible to determine the ultimate outcome of the various pending actions, it is OPG's belief that their resolution is not likely to have a material adverse effect on the financial position of OPG or the Prescribed Facilities.

Contractual and Commercial Commitments

The portions of OPG's contractual obligations and other significant commercial commitments related to the Prescribed Facilities as at December 31, 2019 were determined primarily using specific identification, and are as follows:

(millions of dollars)	**2020**	**2021**	**2022**	**2023**	**2024**	**Thereafter**	**Total**
Fuel supply agreements	152	149	100	92	25	14	532
Contributions under the ONFA [1]	102	102	245	101	101	-	651
Contributions to the OPG registered pension plan [2]	168	170	-	-	-	-	338
Commitments related to Darlington Refurbishment project [3]	288	-	-	-	-	-	288
Operating licences	44	45	46	47	48	49	279
Operating lease obligations	7	6	5	3	3	-	24
Unconditional purchase obligations	55	5	-	-	-	-	60
Accounts payable and accrued charges	683	12	-	-	-	-	695
Other	23	22	6	5	5	60	121
Total	1,522	511	402	248	182	123	2,988

[1] Contributions under the ONFA are based on the 2017 ONFA Reference Plan contribution schedule approved in 2017 and effective January 1, 2017.

[2] The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2019, which was in effect as at December 31, 2019. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment and the timing of funding valuations. Funding requirements after 2021 are excluded due to significant variability in the assumptions required to project the timing of future cash flows as at December 31, 2019. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

[2] Represents estimated currently committed costs to close the project, including accruals for completed work, demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

16. BUSINESS SEGMENTS

The Prescribed Facilities have three reportable business segments. The business segments are Nuclear Generation, Nuclear Waste Management, and Hydroelectric.

As a result of the basis of presentation of these financial statements described in Note 2, the financial position and results of operations of the business segments reported in these financial statements will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a stand-alone basis, and may differ from the financial position and results of operations of the business segments reported in OPG's consolidated financial statements.

OM&A expenses of the Prescribed Facilities' generation business segments include a service fee for the use of certain PP&E and intangible assets held by OPG's unregulated operations. The service fee is recorded in OM&A expenses with a corresponding payable in the due to/from account with OPG. For the year ended December 31, 2019, the service fee was $48 million for the Nuclear Generation segment and $9 million for the Hydroelectric segment. For the year ended December 31, 2018, the service fee was $37 million for the Nuclear Generation segment and $7 million for the Hydroelectric segment.

Nuclear Generation Segment

The Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Darlington and the Pickering nuclear generating stations, both owned and operated by OPG. The business segment also includes revenue earned from heavy water sales, existing isotope sales contacts, detritiation services, and supply of ancillary services to the electricity system from the Darlington and Pickering generating stations.

Nuclear Waste Management Segment

The Nuclear Waste Management business segment reports the results of operations associated with the management of nuclear used fuel and L&ILW produced by the Darlington and Pickering nuclear generating stations, the decommissioning of the Darlington and Pickering nuclear generating stations, the management of the portion of OPG's Nuclear Segregated Funds attributable to the Prescribed Facilities, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the Nuclear Liabilities carried on the balance sheets in present value terms due to passage of time, on the Prescribed Facilities' portion of the Nuclear Liabilities and earnings from the Prescribed Facilities' portion of the Nuclear Segregated Funds are reported under this segment.

As the nuclear generating stations operate over time, incremental costs are incurred related to used nuclear fuel and L&ILW which increase the Nuclear Liabilities. These incremental costs are charged to current operations in the Nuclear Generation segment in order to reflect the cost of producing energy. Since the incremental costs increase the Nuclear Liabilities reported in the Nuclear Waste Management segment, an inter-segment charge is recorded between the Nuclear Generation and the Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on the statements of income and balance sheets of the Prescribed Facilities.

Hydroelectric Segment

The Hydroelectric business segment operates in Ontario, generating and selling electricity from 54 of OPG's hydroelectric generating facilities located across a number of major river systems in the province that are subject to rate regulation by the OEB. Additionally, the business segment includes revenue from supplying ancillary services to the electricity system and other revenue from the regulated hydroelectric stations.

Segment Income (Loss) for the Year Ended December 31, 2019 *(millions of dollars)*	**Nuclear Generation**	**Nuclear Waste Management**	**Hydroelectric**	**Elimination**	**Total**
Revenue from contracts with customers	**3,625**	**-**	**1,517**	**-**	**5,142**
Other revenue	**-**	**77**	**-**	**(71)**	**6**
Total revenue	**3,625**	**77**	**1,517**	**(71)**	**5,148**
Fuel expense	**240**	**-**	**336**	**-**	**576**
Gross margin	**3,385**	**77**	**1,181**	**(71)**	**4,572**
Operations, maintenance and administration	**2,194**	**77**	**335**	**(71)**	**2,535**
Depreciation and amortization	**605**	**-**	**224**	**-**	**829**
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	**-**	**526**	**-**	**-**	**526**
Earnings on nuclear fixed asset removal and nuclear waste management funds	**-**	**(478)**	**-**	**-**	**(478)**
Property taxes	**13**	**-**	**1**	**-**	**14**
Other losses	**-**	**-**	**1**	**-**	**1**
Income (loss) before interest and income taxes	**573**	**(48)**	**620**	**-**	**1,145**

Segment Income (Loss) for the Year Ended December 31, 2018 *(millions of dollars)*	**Nuclear Generation**	**Nuclear Waste Management**	**Hydroelectric**	**Elimination**	**Total**
Revenue from contracts with customers	3,264	-	1,428	-	4,692
Other revenue	-	65	-	(61)	4
Total revenue	3,264	65	1,428	(61)	4,696
Fuel expense	228	-	334	-	562
Gross margin	3,036	65	1,094	(61)	4,134
Operations, maintenance and administration	2,292	65	337	(61)	2,633
Depreciation and amortization	443	-	154	-	597
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	-	505	-	-	505
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(450)	-	-	(450)
Property taxes	13	-	1	-	14
Other losses	-	-	5	-	5
Income (loss) before interest and income taxes	288	(55)	597	-	830

Selected Balance Sheet Information as at December 31, 2019 *(millions of dollars)*	**Nuclear Generation**	**Nuclear Waste Management**	**Hydroelectric**	**Total**
Segment property, plant and equipment in-service, net	**3,696**	**-**	**7,460**	**11,156**
Segment construction in progress	**5,748**	**-**	**137**	**5,885**
Segment property, plant and equipment, net	**9,444**	**-**	**7,597**	**17,041**
Segment intangible assets in-service, net	**20**	**-**	**1**	**21**
Segment development in progress	**6**	**-**	**-**	**6**
Segment intangible assets, net	**26**	**-**	**1**	**27**
Segment fuel inventory	**196**	**-**	**-**	**196**
Segment materials and supplies inventory, net:				
Current	**91**	**-**	**-**	**91**
Long-term	**390**	**-**	**-**	**390**
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	**-**	**9,780**	**-**	**9,780**
Nuclear fixed asset removal and nuclear waste management liabilities	**-**	**(10,425)**	**-**	**(10,425)**

Selected Balance Sheet Information as at December 31, 2018 *(millions of dollars)*	**Nuclear Generation**	**Nuclear Waste Management**	**Hydroelectric**	**Total**
Segment property, plant and equipment in-service, net	3,336	-	7,360	10,696
Segment construction in progress	4,869	-	178	5,047
Segment property, plant and equipment, net	8,205	-	7,538	15,743
Segment intangible assets in-service, net	8	-	1	9
Segment development in progress	13	-	-	13
Segment intangible assets, net	21	-	1	22
Segment fuel inventory	253	-	-	253
Segment materials and supplies inventory, net:				
Current	101	-	-	101
Long-term	343	-	-	343
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	9,244	-	9,244
Nuclear fixed asset removal and nuclear waste management liabilities	-	(9,968)	-	(9,968)

Segment Capital Expenditure Information *(millions of dollars)*	**Nuclear Generation**	**Nuclear Waste Management**	**Hydroelectric**	**Total**
Year ended December 31, 2019				
Investment in property, plant and equipment, and intangible assets	**1,581**	**-**	**204**	**1,785**
Net change in accruals and other non-cash items				**70**
Investment in property, plant and equipment, and intangible assets – cash flow				**1,855**
Year ended December 31, 2018				
Investment in property, plant and equipment, and intangible assets	1,492	-	167	1,659
Net change in accruals and other non-cash items				(46)
Investment in property, plant and equipment, and intangible assets – cash flow				1,613

17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	**2019**	**2018**
Receivables from related parties	**17**	(133)
Prepaid expenses	**(7)**	(1)
Other current assets	**28**	8
Fuel inventory	**57**	12
Materials and supplies	**29**	19
Accounts payable, accrued charges and other payables	**(33)**	(131)
Due to Ontario Power Generation Inc.	**(221)**	662
Income taxes payable/recoverable	**109**	73
	(21)	509

18. RELATED PARTY TRANSACTIONS

Given the Province owns all of the shares of OPG, related parties of OPG, and therefore the Prescribed Facilities, include the Province and other entities controlled by the Province.

The related party transactions summarized below include transactions with the Province and the principal successors to the former Ontario Hydro's integrated electricity business, including Hydro One, the IESO and the OEFC. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. As one of several wholly-owned government business enterprises of the Province, OPG also has transactions in the normal course of business with various government ministries and organizations in Ontario that fall under the purview of the Province.

OPG's related party transactions were attributed to the Prescribed Facilities primarily using direct assignment of OPG's respective amounts as applicable, and are summarized below for the years ended December 31:

	2019		2018	
(millions of dollars)	**Income**	**Expenses**	**Income**	**Expenses**
Hydro One				
Electricity sales	**8**	**-**	11	-
Services	**-**	**9**	-	7
Province of Ontario				
Change in Decommissioning Segregated Fund amount due to Province [1]	**-**	**593**	-	(186)
Change in Used Fuel Segregated Fund amount due to Province [1]	**-**	**477**	-	(297)
Hydroelectric gross revenue charge	**-**	**104**	-	102
OEFC				
Hydroelectric gross revenue charge	**-**	**209**	-	208
Income taxes, net of investment tax credits	**-**	**268**	-	169
IESO				
Electricity-related revenue	**4,972**	**-**	4,516	-
	4,980	**1,660**	4,527	3

[1] The Nuclear Segregated Funds are reported on the balance sheets net of amounts recognized as due to the Province in respect of excess funding and, for the Used Fuel Segregated Fund, the Province's rate of return guarantee. As at December 31, 2019 and December 31, 2018, the Nuclear Segregated Funds were reported net of amounts due to the Province of $2,920 million and $1,850 million, respectively.

The receivables, payable and long-term debt balances between OPG and its related parties attributed to the Prescribed Facilities as at December 31 are summarized below:

(millions of dollars)	**2019**	**2018**
Receivables from related parties		
Hydro One	**1**	1
IESO − Electricity related receivables [1]	**425**	442
Accounts payable, accrued charges and other payables		
Hydro One	**1**	1
OEFC	**50**	44
Province of Ontario	**3**	5

[1] The balance is specifically identified to the Prescribed Facilities.

OPG may hold Province of Ontario bonds and treasury bills in the Nuclear Segregated Funds and the OPG registered pension fund. As at December 31, 2019, the Nuclear Segregated Funds held $1,426 million of Province of Ontario bonds (2018 − $1,399 million) and $11 million of Province of Ontario treasury bills (2018 − $2 million), on a total OPG basis. As of December 31, 2019, the registered pension fund held $67 million of Province of Ontario bonds (2018 – $41 million) and $7 million in Province of Ontario treasury bills (2018 − nil), on a total OPG basis. These Province of Ontario bonds and treasury bills are publicly traded securities and are measured at fair value. OPG jointly oversees the investment management of the Nuclear Segregated Funds with the Province.

19. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2019, research and development expenses of $114 million (2018 – $109 million) were charged to operations in the Prescribed Facilities' financial statements. The amount of expenses attributed to the Prescribed Facilities was primarily determined by direct assignment of OPG's total research and development expenses.

20. SUBSEQUENT EVENTS

Amendments to Ontario Regulation 53/05

In November 2020, the Province amended *Ontario Regulation 53/05* to set OPG's hydroelectric base regulated price for the period from January 1, 2022 to December 31, 2016 at the 2021 hydroelectric base regulated price, and to require OPG to establish a deferral account to record certain incurred costs associated with the shutdown of Pickering GS. In accordance with the regulation, the OEB is required to authorize recovery of amounts recorded in the deferral account and related income tax impacts over a period not to exceed ten years following the permanent cessation of electricity generation at the Pickering GS, subject to a prudence review. The deferral account will record any employment-related costs and non-capital costs related to third party service providers incurred by OPG that arise from any Pickering GS closure activities, whether incurred before or after the Pickering closure, other than costs that are eligible for reimbursement to OPG under the ONFA.

COVID-19

The outbreak of the disease caused by a novel strain of coronavirus, identified as "COVID-19", since the beginning of the 2020 year has resulted in governments worldwide enacting a range of emergency measures to combat the spread of the virus. These measures, which have included the implementation of lockdowns, travel bans, self-imposed quarantine periods and physical distancing requirements, have caused material disruption to many businesses globally, resulting in an economic slowdown and financial market volatility. Governments and central banks in Canada and the United States have reacted with significant monetary and fiscal interventions designed to stabilize economic conditions and promote economic recovery. The duration and ultimate impact of the COVID-19 pandemic is unknown at this time, as is the ultimate efficacy of the government and central bank interventions. It is not possible to reliably estimate the length and extent of these developments and the impact, if any, on the financial results and condition of OPG and the Prescribed Facilities in future periods.