
INDEPENDENT ELECTRICITY SYSTEM OPERATOR

2020 Annual Report

Table of Contents

- 1** Message from the Interim
President & CEO
- 3** Management Report
- 4** Independent Auditor's Report
- 6** Statement of
Financial Position
- 7** Statement of Operations and
Accumulated Deficit
- 8** Statement of Remeasurement
Gains and Losses
- 9** Statement of Change
in Net Debt
- 10** Statement of Cash Flows
- 11** Notes to Financial Statements
- 26** Executive Compensation
at the IESO
- 31** Executive Leadership Team,
Board of Directors
and Advisory Committees
to the Board

Message from the Interim President and CEO



With the impacts of COVID-19 upending virtually every aspect of our society and our lives, 2020 was a year like no other in recent memory. Despite the many challenges posed by the pandemic, the IESO remained focused on ensuring Ontario could count on a reliable, sustainable and cost-effective electricity system.

From the beginning, we prioritized the health and welfare of our employees. In mid-March, non-essential staff started working from home, with access to our three office locations restricted. We relied on guidance from public health officials as well as our existing pandemic planning protocols and took all precautions necessary to ensure that IESO staff could safely support the ongoing operation of the power grid and the wholesale electricity markets. In addition, we implemented new technologies to safely and securely support remote work, including new communication and collaboration tools, as well as measures to mitigate against emerging cybersecurity risks.

Ensuring the safe and reliable operation of Ontario's power system requires us to work with partners across the sector, including generators, transmitters, distributors, energy service providers and large consumers, among others. Managing the effects of COVID-19 has been a sector-wide priority, and we've come together to share vital information about resource availability, system conditions and emerging demand patterns. This collaboration was critical to maintaining the reliability of the electricity system.

Forecasting demand for electricity during the year was a challenge but patterns gradually emerged, with agricultural and residential consumption increasing, commercial and institutional demand decreasing, and industrial usage staying fairly flat. Although total electricity consumption dropped by 2.1% as a result of prolonged stay-at-home measures, the hourly demand peak in 2020 reached 24,446 megawatts on

July 9 – the highest hourly peak since 2013. This can be attributed in part to higher-than-normal air conditioning load as people worked from home during a prolonged period of hot weather as well as a temporary hiatus of the Industrial Conservation Initiative.

Despite the challenges associated with managing the pandemic from an operational perspective, the IESO remained steadfast in our focus on delivering value. Costs have been contained by deferring lower priority projects, actively managing staffing requirements and reducing expenditures. After maintaining flat revenue requirement levels from 2017-2019, the IESO reduced its revenue requirement for 2020 in response to the emergence of COVID-19.

We have a long history of working proactively with stakeholders and communities, whose input helps us make better decisions and achieve better outcomes. In response to feedback about our engagement processes, we developed a new framework that provides more clarity and predictability to stakeholders. To ensure the safety and wellbeing of our participants during the pandemic, all stakeholder engagements were moved online, resulting in a 40% increase in participation.

Although the IESO's stakeholder engagement framework has been very effective in helping us reach our core audience of market participants and other industry representatives, the ongoing changes in the sector – which include greater consumer and community engagement – have made it important for us to broaden our reach.

In late December 2020, we launched IESO Connects, an online engagement platform to enable ongoing discussions with Regional Electricity Network members and Indigenous communities across Ontario about their region-specific electricity issues and priorities. The new platform offers a variety of features, including a forum for providing feedback that will deepen our understanding of local energy needs. Prior to launching the platform, we also hosted two well-attended webinars to engage with First Nations across the province. Attendee feedback will directly inform the design of new First Nations programming, including conservation.

Effective engagement is one of the prerequisites for advancing our priorities, which also include enabling competition and accelerating the evolution of Ontario's electricity markets. Through an active,

multi-year engagement process, the Market Renewal - Energy project reached a major milestone in 2020 by publishing the final detailed design documents that describe the structure and processes of the renewed market. When fully implemented, the initiative is expected to deliver \$800 million in net benefits in the first 10 years alone.

The IESO is committed to expanding participation in the electricity markets and using competition to drive down costs. Building on the existing Demand Response Auction, we implemented a Capacity Auction in the fall of 2020 that attracted participation from energy storage, non-contracted generators, demand response and imports - resulting in a 26% decrease in the clearing price for the summer 2021 obligation period. Going forward, capacity auctions will be a vital mechanism to help us meet the province's near-term needs.

While capacity auctions will be the primary mechanism to meet short-term needs, it is clear that a variety of solutions are needed to address the province's growing capacity needs. The release of the Annual Planning Outlook in December shows that capacity needs will grow mid-decade as generator contracts expire and the Pickering Nuclear Generating Station retires. In 2020, the IESO worked with stakeholders to develop a high-level resource adequacy framework to competitively acquire capacity to meet system needs across all time frames.

We also continued to invest in innovative projects that could help defer the need for new infrastructure while enabling businesses to earn new revenue streams. For example, homeowners, supermarket operators, manufacturers and other organizations competed and were selected to participate in a pilot project in York Region. By generating electricity on site or reducing their electricity use, these resources will help test how these new supply options could address growing demand in the region.

The IESO's Save on Energy conservation programs also played a key role in meeting system needs in 2020. Businesses and institutions, Indigenous peoples, and income-eligible residential customers participating in Save on Energy conservation programs helped to reduce or delay the need for new infrastructure, while lowering their own energy costs. The IESO adjusted program delivery to stop all home and business visits due to the pandemic, and spent most of 2020 preparing to implement a new conservation framework that was launched in January 2021. Over the next four years, up to \$692 million will be invested, enabling Ontario's electricity consumers to improve the energy efficiency of their homes, businesses, institutions and industrial facilities.

Looking ahead, ensuring a reliable and cost-effective supply of electricity will be critical to individual, organizational and community well-being in 2021. We will continue to engage with stakeholders and communities, provide clear and transparent insights into our operations, explore new and different ways of doing our work more efficiently, and ensure Ontario has the electricity where and when it is needed to help put the province firmly on the path to a sustainable economic recovery.



Terry Young,
Interim President and Chief Executive Officer

Management Report

Management's Responsibility for Financial Reporting

The accompanying financial statements of the Independent Electricity System Operator are the responsibility of management and have been prepared in accordance with Canadian public sector accounting standards. The significant accounting policies followed by the Independent Electricity System Operator are described in the Summary of Significant Accounting Policies contained in Note 2 in the financial statements. The preparation of financial statements necessarily involves the use of estimates based on management's judgement, particularly when transactions affecting the current accounting period cannot be finalized with certainty until future periods. The financial statements have been prepared within reasonable limits of materiality and in light of information available up to March 10, 2021.

Management maintained a system of internal controls designed to provide reasonable assurance that the assets were safeguarded and that reliable information was available on a timely basis. The system included formal policies and procedures and an organizational structure that provided for the appropriate delegation of authority and segregation of responsibilities.

These financial statements have been examined by Grant Thornton LLP, a firm of independent external auditors appointed by the Board of Directors. The auditor's responsibility is to express an opinion on whether the financial statements are fairly presented in accordance with generally accepted accounting principles in Canada. The Independent Auditor's Report, which follows, outlines the scope of their examination and opinion.

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

On behalf of management,



Terry Young
Interim President and Chief Executive Officer
Toronto, Canada
March 10, 2021



Barbara Anderson
Chief Financial Officer and Vice-President,
Corporate Services
Toronto, Canada
March 10, 2021

Independent Auditor's Report

To the Board of Directors of the Independent Electricity System Operator

Opinion

We have audited the financial statements of the Independent Electricity System Operator ("IESO"), which comprise the statement of financial position as at December 31, 2020, and the statements of operations and accumulated deficit, remeasurement gains and losses, change in net debt and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the IESO as at December 31, 2020, and its results of operations, remeasurement gains and losses, changes in its net debt, and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

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 the IESO 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.

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

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, 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 IESO's ability to continue as a going concern, disclosing, as applicable, matters related to a going concern and using the going concern basis of accounting unless management either intends to liquidate the IESO or to cease operations, or has no realistic alternative but to do so.

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

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 IESO'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 IESO's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the 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 IESO 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.

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.

The logo for Grant Thornton LLP, featuring the company name in a stylized, cursive script.

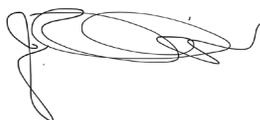
Grant Thornton, LLP
Chartered Professional Accountants
Licensed Public Accountants

Mississauga, Canada
March 10, 2021

Statement of Financial Position

As at (in thousands of Canadian dollars)	December 31, 2020	December 31, 2019
	\$	\$
FINANCIAL ASSETS		
Cash	79,355	69,049
Accounts receivable (Note 3)	104,951	142,582
Long-term investments (Note 4)	55,570	50,316
TOTAL FINANCIAL ASSETS	239,876	261,947
LIABILITIES		
Accounts payable and accrued liabilities (Note 5)	116,103	130,647
Rebates due to market participants (Note 7)	2,459	-
Debt (Note 8)	120,000	120,000
Accrued pension liability (Note 9)	25,120	26,296
Accrued liability for employee future benefits other than pension (Note 9)	150,961	140,841
TOTAL LIABILITIES	414,643	417,784
NET DEBT	(174,767)	(155,837)
NON-FINANCIAL ASSETS		
Tangible capital assets (Note 10)	149,813	116,567
Prepaid expenses	8,695	8,312
TOTAL NON-FINANCIAL ASSETS	158,508	124,879
ACCUMULATED DEFICIT		
Accumulated deficit from operations	(31,076)	(43,014)
Accumulated rereasurement gains	14,817	12,056
ACCUMULATED DEFICIT (Note 6)	(16,259)	(30,958)
Commitments (Note 15)		
Contingencies (Note 16)		
See accompanying notes to financial statements		

On behalf of the Board:



Joe Oliver
Chair
Toronto, Canada



Cynthia Chaplin
Director
Toronto, Canada

Statement of Operations and Accumulated Deficit

For the year ended December 31 (in thousands of Canadian dollars)	2020	2020	2019
	Budget \$	Actual \$	Actual \$
IESO CORE OPERATIONS			
System fees	189,568	188,602	190,950
Other revenue (Note 11)	2,780	3,651	6,888
Interest and investment income	2,004	2,989	4,772
Core operation revenues	194,352	195,242	202,610
Core operation expenses (Note 12)	(194,352)	(189,714)	(194,990)
Core operations surplus	-	5,528	7,620
OTHER GOVERNMENT PROGRAMS			
Government transfer	-	888	105,631
Government transfer expenses (Note 12)	-	(888)	(105,631)
Government transfer surplus	-	-	-
SMART METERING ENTITY			
Smart metering charge	34,116	35,249	34,911
Smart metering expenses (Note 12)	(33,318)	(25,997)	(30,622)
Smart metering entity surplus before rebates	798	9,252	4,289
Rebates issued to market participants (Note 7)	-	(2,459)	-
Smart metering entity surplus	798	6,793	4,289
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	11,080	10,056	9,067
Customer education and market enforcement expenses (Note 12)	(11,080)	(10,439)	(9,186)
Market sanctions and payment adjustments deficit	-	(383)	(119)
SURPLUS	798	11,938	11,790
ACCUMULATED DEFICIT FROM OPERATIONS, BEGINNING OF PERIOD	(43,014)	(43,014)	(54,804)
ACCUMULATED DEFICIT FROM OPERATIONS, END OF PERIOD	(42,216)	(31,076)	(43,014)

See accompanying notes to financial statements

Statement of Remeasurement Gains and Losses

For the year ended December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	12,056	7,569
UNREALIZED GAINS/LOSSES ATTRIBUTABLE TO:		
Foreign exchange - other	567	562
Portfolio investments	2,756	5,344
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange - other	(562)	(579)
Portfolio investments	-	(840)
NET REMEASUREMENT GAINS FOR THE PERIOD	2,761	4,487
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	14,817	12,056

See accompanying notes to financial statements

Statement of Change in Net Debt

For the year ended December 31 (in thousands of Canadian dollars)	2020	2020	2019
	Budget \$	Actual \$	Actual \$
SURPLUS	798	11,938	11,790
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(53,500)	(56,292)	(36,541)
Amortization of tangible capital assets	24,979	23,046	23,926
Change in prepaid expenses	-	(383)	(2,078)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	(28,521)	(33,629)	(14,693)
NET REMEASUREMENT GAINS FOR THE PERIOD			
	-	2,761	4,487
CHANGE IN NET DEBT	(27,723)	(18,930)	1,584
NET DEBT, BEGINNING OF PERIOD	(155,837)	(155,837)	(157,421)
NET DEBT, END OF PERIOD	(183,560)	(174,767)	(155,837)

See accompanying notes to financial statements

Statement of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
OPERATING TRANSACTIONS		
Surplus	11,938	11,790
Changes in non-cash items:		
Amortization	23,046	23,926
Unrealized foreign exchange gains/(losses) for the period	5	(17)
Pension expense	(1,176)	(4,270)
Other employee future benefits expense	10,120	9,317
Gain on disposal of long-term investments	-	(840)
	31,995	28,116
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(15,896)	68,493
Change in accounts receivable	37,631	(31,325)
Change in rebates due to market participants	2,459	-
Change in prepaid expenses	(383)	(2,078)
	23,811	35,090
Cash provided by operating transactions	67,744	74,996
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(56,292)	(36,541)
Change in accounts payable and accrued liabilities related to tangible capital assets	1,352	772
Cash applied to capital transactions	(54,940)	(35,769)
INVESTING TRANSACTIONS		
Purchase of long-term investments	(2,498)	(2,425)
Proceeds on sale of long-term investments	-	1,123
Cash applied to investing transactions	(2,498)	(1,302)
FINANCING TRANSACTIONS		
Debt Repayment	-	(125,000)
Cash applied to financing transactions	-	(125,000)
INCREASE (DECREASE) IN CASH	10,306	(87,075)
CASH - BEGINNING OF PERIOD	69,049	156,124
CASH - END OF PERIOD	79,355	69,049

See accompanying notes to financial statements

Notes to Financial Statements

1. NATURE OF OPERATIONS

The Independent Electricity System Operator (IESO) is a not-for-profit, non-taxable corporation established pursuant to Part II of the *Electricity Act, 1998* (the Act). As set out in the Act, the IESO operates pursuant to a licence granted by the Ontario Energy Board (OEB).

The objects of the IESO are contained in the Act and associated Ontario regulations. The IESO ensures the reliability of the province's power system on behalf of all Ontarians, leveraging its expertise and purposeful engagement to advance energy policy that cost effectively achieves this goal. As part of its mandate, the IESO operates Ontario's electricity grid in real-time, governs electricity markets, prepares for the future to ensure electricity will be available when and where it is needed, and helps inform the decisions that will be critical to shaping the future of the sector.

The IESO operates the IESO-administered markets and the OEB has regulatory oversight of electricity matters in Ontario. In addition, in 2007 the IESO was designated the Smart Metering Entity (SME) by Ontario statute. In its role as the SME, the IESO maintains and operates the province's smart metering data repository, the central hub for processing, storing and protecting electricity consumption data used for consumer billing by local distribution companies.

In 2018, the IESO's licence was amended to require the organization to provide and promote centralized cybersecurity information services in conjunction with licenced transmitters and distributors. Under the amendment, these services include providing situational awareness of potential threats that may affect the electricity sector, and developing an information exchange mechanism for sharing cybersecurity best practices to improve sector understanding of associated risks and solutions.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) Basis of financial statement preparation

The accompanying financial statements have been prepared on a going-concern basis and in accordance with Canadian public sector accounting standards (PSAS) and reflect the following significant accounting policies.

These financial statements do not include the financial accounts and Government transfers for the IESO-administered markets as the IESO is an intermediary to facilitate the settlement of these transactions. A separate and distinct set of financial statements is prepared for the IESO-administered markets. The IESO-administered markets is as prescribed by the Act and associated Ontario regulations.

b) Revenue recognition

System fees earned by the IESO are based on rates approved by the OEB for each megawatt of electricity withdrawn from the IESO-controlled grid. System fees are recognized as revenue at the time the electricity is withdrawn.

The SME's charge is based on rates approved by the OEB for each installed smart meter in the province. Revenue is recognized by charging the OEB approved rate per smart meter per month.

Other revenue represents amounts that accrue to the IESO relating to investment income on funds passing through market settlement accounts, program revenue, as well as application fees. Investment income is recognized monthly. Program revenue and application fees are recognized when service is provided.

Interest and investment income represents realized interest income and investment gains or losses on cash, cash equivalents, short-term investments and long-term investments.

Government transfers are recognized as revenue in the financial statements in the period in which the events giving rise to the transfer occur, providing the transfers are authorized, any eligibility criteria have been met and reasonable estimates of the amounts can be made.

Market sanctions represent funds received to offset payments disbursed related to penalties, damages, fines and payment adjustments. Such revenue is recognized when settlement disputes are resolved.

c) Financial instruments

The IESO records cash and cash equivalents, long-term investments and foreign currency exchange forward contracts at fair value. The cumulative change in fair value of these financial instruments is recorded in accumulated deficit as remeasurement gains and losses and is included in the value of the respective financial instrument shown in the statement of financial position and the statement of remeasurement gains and losses. Upon disposition of the financial instruments, the cumulative remeasurement gains and losses are reclassified to the statement of operations, and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations. Transaction costs are charged to operations as incurred.

Cash and cash equivalents comprise cash, term deposits and other short-term, highly rated investments with original maturity dates of less than 90 days.

The IESO records accounts receivable, accounts payable and debt at amortized cost.

d) Tangible capital assets

Tangible capital assets are recorded at cost, which includes all amounts directly attributable to the acquisition, construction, development or betterment of the asset.

The estimated service lives of tangible capital assets are subject to periodic review. The effects of changes in the estimated lives are amortized on a prospective basis. The most recent review was completed in fiscal 2020.

An impairment loss on tangible capital assets is recognized when conditions indicate that the asset no longer contributes to the IESO's ability to provide services, or that the value of the future economic benefit associated with the tangible capital asset is less than its net book value.

Assets under construction generally relates to the costs of physical facilities, information technology hardware and software, and includes costs paid to vendors, internal and external labour, consultants and interest related to funds borrowed to finance the project. Costs relating to assets under construction are transferred to tangible capital assets when the asset under construction is deemed to be ready for use. The IESO capitalizes applicable interest as part of the cost of tangible capital assets.

The capital cost of tangible capital assets in service is amortized on a straight-line basis over their estimated service lives.

The estimated service lives, in years, from the date the assets were acquired are:

Class	Estimated Average Service Life 2020	Estimated Average Service Life 2019
Facilities and leasehold improvements	5 to 50	5 to 50
Market systems and applications	3 to 12	4 to 12
Information technology hardware and other assets	3 to 10	4 to 10
Meter data management / repository	4 to 10	4 to 10

Gains and losses on sales or premature retirements of tangible capital assets are charged to operations.

e) Pension, other post-employment benefits and compensated absences

The IESO's post-employment benefit programs include pension, group life insurance, health care, long-term disability and workers' compensation benefits.

The IESO accrues obligations under pension and other post-employment benefit plans and the related costs, net of plan assets. Pension and other post-employment benefit expenses and obligations are determined annually by independent actuaries using the projected benefit method and management's best estimate of expected return on plan assets, salary escalation, retirement ages of employees, mortality and expected health-care costs. The discount rates utilized to value liabilities as at the measurement date of September 30 are based on the expected rate of return on plan assets for the registered pension plan and the IESO's estimated cost of borrowing for the supplemental employee retirement and other post-employment benefit plans.

The expected return on plan assets is based on management's long-term best estimate using a market-related value of registered pension plan assets. The market-related value of plan assets is determined using the average value of assets over three years as at the measurement date of September 30.

Pension and other post-employment benefit expenses are recorded during the year in which employees render services. Pension and other post-employment benefit expenses consist of current service costs, interest expense on liabilities, expected return on plan assets and the cost of plan amendments in the period. Actuarial gains (losses) arise from, among other things, the difference between the actual rate of return on plan assets for a period and the expected long-term rate of return on plan assets for that period or from changes in actuarial assumptions used to determine the accrued benefit obligations.

Actuarial gains (losses) are amortized over the expected average remaining service life of the employees covered by the plan. The expected average remaining service life of employees covered by the pension plans is 14.5 years (2019 – 14.5 years) and other post-employment benefit plan is 17.2 years (2019 – 16.7 years).

The IESO sick pay benefits accumulate but do not vest. The IESO accrues sick pay benefits based on the expectation of future utilization and records the accrual within accounts payable and accrued liabilities.

f) Foreign currency exchange

Transactions denominated in foreign currencies are converted into Canadian dollars at the rate of exchange prevailing on the date of the transaction. Items on the statement of financial position denominated in foreign currency are converted to Canadian dollars at the rate of exchange as of the date of the financial statements. The cumulative unrealized foreign currency exchange gains and losses of items continuing to be recognized on the statement of financial position are recorded in the statement of remeasurement gains and losses. Upon settlement of the item denominated in a foreign currency, the cumulative remeasurement gains and losses are reclassified to the statement of operations, and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations.

g) Use of estimates

The preparation of the financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosure of contingent assets and liabilities as at the date of the financial statements. The IESO's accounts that involve a greater degree of uncertainty include the carrying values of tangible capital assets, accrual for contract cancellation costs (Note 13 (f)), accrued pension liability and accrual for employee future benefits other than pensions. Actual results could differ from those estimates.

3. ACCOUNTS RECEIVABLE

Accounts receivable includes an amount of \$25,222 thousand (2019 - \$40,080 thousand) due from the IESO-administered markets which are managed by the IESO.

4. LONG-TERM INVESTMENTS

Long-term investments in a balanced portfolio of pooled funds are valued by the pooled funds manager based on published price quotations and amount to \$54,834 thousand (2019 - \$49,707 thousand). As at December 31, the market value allocation of these long-term investments was 61.6% equity securities and 38.4% debt securities (2019 - 62.1% and 37.9%, respectively). In addition to the balanced portfolio of pooled funds, the IESO has a long-term deposit with Canada Revenue Agency in the amount of \$736 thousand (2019 - \$609 thousand) pertaining to the Retirement Compensation Arrangements Trust (Note 8).

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Opening balance - pooled funds	49,707	43,131
Purchase of investments	2,371	2,355
Sale of investments	-	(1,123)
Change in fair value	2,756	5,344
Sub-total - Balanced portfolio of pooled funds' closing balance	54,834	49,707
Canada Revenue Agency's Retirement Compensation Arrangements amount	736	609
Total	55,570	50,316

Fair value measurements of long-term investments are categorized using a fair value hierarchy that reflects the significance of inputs used in determining the fair values.

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

There were no transfers from Level 1, Level 2, or Level 3 during fiscal 2020 or during fiscal 2019.

The following tables illustrate the classification of the long-term investments within the fair value hierarchy as at year-end:

Fair value as at December 31, 2020

(in thousands of Canadian dollars)	Level 1	Level 2	Level 3	Total
Cash Deposits - Canada Revenue Agency	736	-	-	736
TD Emerald Pooled Funds	-	54,834	-	54,834
	736	54,834	-	55,570

Fair value as at December 31, 2019

(in thousands of Canadian dollars)	Level 1	Level 2	Level 3	Total
Cash Deposits - Canada Revenue Agency	609	-	-	609
TD Emerald Pooled Funds	-	49,707	-	49,707
	609	49,707	-	50,316

5. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Relating to operations	111,185	127,081
Relating to tangible capital assets	4,918	3,566
Closing balance	116,103	130,647

6. ACCUMULATED DEFICIT

The IESO's regulatory deferral account balance is subject to OEB orders. During 2020, the IESO received a decision and order by the OEB to maintain the regulatory deferral account at a maximum of \$10,000 thousand (2019 - \$10,000 thousand).

As at December 31, the components of the accumulated deficit were as follows:

Total - Accumulated Deficit

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Regulatory deferral account (a)	1,250	(1,020)
Smart Metering Entity (b)	18,130	11,337
Accumulated market sanctions and payment adjustments (c)	-	383
Remeasurement gains (d)	10,673	7,912
PSAS transition items (e)	(46,312)	(49,570)
Accumulated deficit - end of year	(16,259)	(30,958)

a) Regulatory Deferral Account - Accumulated Surplus/(Deficit)

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Accumulated deficit - beginning of year	(1,020)	(4,728)
Core operation revenues	195,242	202,610
Core operation expenses	(189,714)	(194,990)
Recovery of annual PSAS transition items*	(3,258)	(3,912)
Accumulated surplus / (deficit) - end of year	1,250	(1,020)

b) Smart Metering Entity Account - Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Accumulated surplus - beginning of year	11,337	7,048
Smart metering charge (before rebates due to market participants)	35,249	34,911
Smart metering expenses	(25,997)	(30,622)
Rebates due to market participants (Note 7)	(2,459)	-
Accumulated surplus - end of year	18,130	11,337

c) Market Sanctions and Payment Adjustments - Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Accumulated surplus - beginning of year	383	502
Market sanctions and payment adjustments	10,056	9,067
Customer education and market enforcement expenses	(10,439)	(9,186)
Accumulated surplus - end of year	-	383

d) Remeasurement Gains

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Accumulated remeasurement gains - beginning of year	7,912	3,425
Net remeasurement gains	2,761	4,487
Accumulated remeasurement gains - end of period	10,673	7,912

e) PSAS Transition Item - Accumulated Deficit

As at December 31 (in thousands of Canadian dollars)	2020	2019
	\$	\$
Accumulated deficit - beginning of year	(49,570)	(53,482)
Recovery of annual PSAS transition items*	3,258	3,912
Accumulated deficit - end of year	(46,312)	(49,570)

*Effective January 1, 2011, the IESO adopted Canadian public sector accounting standards (PSAS) with a transition date of January 1, 2010. The adoption of PSAS was accounted for by retroactive application with restatement of prior periods subject to the requirements in Section PS 2125, First-time Adoption by Government Organizations. The corresponding change to pension and other-post employment benefits resulted in previously unrecognized actuarial losses and past service costs of \$98,832 thousand at the date of transition being charged to the PSAS Transition Item's accumulated deficit. Each year, the IESO recovers a portion of the PSAS Transition Item's deficit through the IESO's annual system fees revenue. The annual amount recovered is transferred from the Regulatory Deferral Account to the PSAS Transition Item accumulated deficit each year.

7. REBATES DUE TO MARKET PARTICIPANTS

In 2020, the IESO recognized \$2,459 thousand (2019 - \$nil) in rebates due to market participants regarding the SME in accordance with an OEB order. The OEB has ordered that the SME can accumulate up to a maximum operating reserve balance including certain OEB approved adjustments and timelines. The OEB will regularly order the SME to rebate to market participants any amount that exceeds the maximum operating reserve balance. As at December 31, 2020, the rebates due to market participants were \$2,459 thousand (2019 - \$nil).

8. DEBT

Note payable to Ontario Electricity Financial Corporation (OEFC)

In June 2020, the IESO entered into a note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 1.132% per annum and is repayable in full on June 30, 2023. Interest accrues daily and is payable in arrears semi-annually in June and December of each year. As at December 31, 2020, the note payable to the OEFC was \$120,000 thousand (2019 - \$120,000 thousand). For the year ended December 31, 2020, the interest expense on the note payable was \$1,739 thousand (2019 - \$2,120 thousand).

Credit facility with OEFC

The IESO has an unsecured credit facility agreement with the OEFC, which will make available to the IESO an amount up to \$160,000 thousand. Advances and monthly rollover amounts are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing for a 30-day term plus 0.50% per annum. The credit facility expires June 30, 2023. As at December 31, 2020, the credit facility payable to the OEFC was \$nil (2019 - \$nil).

For the year ended December 31, 2020, the interest expense on the credit facility was \$nil thousand (2019 - \$269 thousand).

Retirement Compensation Arrangements Trust

In July 2013, the IESO established a Retirement Compensation Arrangements Trust to provide security for the IESO's obligations under the terms of the supplemental employee retirement plan for its employees. As at December 31, 2020, the IESO has provided the Retirement Compensation Arrangements' trustee with a bank letter of credit of \$42,390 thousand (2019 - \$35,171 thousand) the trustee can draw upon if the IESO is in default under the terms of this plan.

Workplace Safety and Insurance Board - Ontario

During 2020, the IESO provided the Workplace Safety and Insurance Board with a bank letter of credit of \$20 thousand (2019 - \$20 thousand) for the IESO's obligation under the *Workplace Safety and Insurance Act*.

9. POST-EMPLOYMENT BENEFIT PLANS

The IESO provides pensions and other employee post-employment benefits, comprising group life insurance, long-term disability and group medical and dental plans, for the benefit of current and retired employees.

Pension plans

The IESO provides a contributory defined benefit, indexed, registered pension plan. In addition, the IESO provides certain non-registered defined benefit pensions through an unfunded, indexed, supplemental employee retirement plan.

Other employee future benefits

The group life insurance, long-term disability and group medical and dental benefits are provided through unfunded, non-registered defined benefit plans.

Summary of accrued benefit obligations and plan assets

(in thousands of Canadian dollars)	2020 Pension Benefits	2019 Pension Benefits	2020 Other Benefits	2019 Other Benefits
	\$	\$	\$	\$
Accrued benefit obligation	(650,289)	(618,876)	(165,698)	(145,316)
Fair value of plan assets	663,464	632,234	-	-
Funded status as of measurement date	13,175	13,358	(165,698)	(145,316)
Employer contribution/other benefit payments after measurement date	346	2,584	614	644
Deferred asset (gain)	(7,689)	(18,100)	-	-
Unamortized actuarial (gain) loss subject to amortization	(30,952)	(24,138)	14,123	3,831
Accrued liability recognized in the statement of financial position	(25,120)	(26,296)	(150,961)	(140,841)
Actuarial value of plan assets (as at September 30)	655,774	614,134	-	-

Registered pension plan assets

The one-year actual return on the registered pension plan's assets as at September 30, 2020 was 6.2% per annum (2019: 9.3% per annum).

As at the measurement date of September 30, the proportion of the fair value of registered pension plan assets held in each asset class was as follows:

	2020	2019
Canadian equity securities	15.4%	16.3%
Foreign equity securities	35.7%	34.4%
Canadian debt securities	30.2%	30.3%
Global infrastructure	9.3%	9.2%
Canadian real estate	8.9%	9.3%
Cash equivalents	0.3%	0.6%
Forward foreign exchange contracts	0.2%	-0.1%
	100.0%	100.0%

Principal assumptions used to calculate benefit obligations at the end of the year are determined at that time and are as follows:

	2020 Registered Pension Benefits	2019 Registered Pension Benefits	2020 Supplemental Pension Benefits	2019 Supplemental Pension Benefits	2020 Other Benefits	2019 Other Benefits
Discount rate at the end of the period	5.50%	5.50%	2.60%	2.90%	2.60%	2.90%
Rate of compensation increase	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Rate of indexing	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

The assumed prescription drug inflation was 6.20% in 2020, grading down to an ultimate rate of 4.00% per year in 2031. Dental costs are assumed to increase by 4.00% per year.

Benefit costs and plan contributions for pension and other plans are summarized as follows:

(in thousands of Canadian dollars)	2020 Pension Benefits	2019 Pension Benefits	2020 Other Benefits	2019 Other Benefits
	\$	\$	\$	\$
Current service cost (employer)	13,942	11,317	7,629	5,723
Interest cost	33,311	31,668	4,396	5,776
Expected return on plan assets	(33,612)	(31,543)	-	-
Amortization of net actuarial (gain) loss	(1,665)	(2,184)	223	477
Benefit cost	11,976	9,258	12,248	11,976

(in thousands of Canadian dollars) (as at September 30)	2020 Pension Benefits	2019 Pension Benefits	2020 Other Benefits	2019 Other Benefits
	\$	\$	\$	\$
Employer contribution/other benefit payments	15,390	14,524	2,158	2,600
Plan participants' contributions	8,793	8,313	-	-
Benefits paid	30,181	26,262	2,158	2,600

The most recent actuarial valuation of the IESO registered pension plan for regulatory funding purposes was completed as at January 1, 2019.

Principal assumptions used to calculate benefit costs for the year are determined at the beginning of the period and are as follows:

	2020 Registered Pension Benefits	2019 Registered Pension Benefits	2020 Supplemental Pension Benefits	2019 Supplemental Pension Benefits	2020 Other Benefits	2019 Other Benefits
Discount rate at the beginning of the period	5.50%	5.50%	2.90%	4.00%	2.90%	4.00%
Rate of compensation increase	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Rate of indexing	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%

10. TANGIBLE CAPITAL ASSETS

Net tangible capital assets consist of the following:

Cost of Tangible Capital Assets

(in thousands of Canadian dollars)	As at December 31, 2019	Additions	Disposals	As at December 31, 2020
	\$	\$	\$	\$
Facilities and leasehold improvements	56,424	-	-	56,424
Market systems and applications	338,405	8,587	-	346,992
Information technology hardware and other assets	77,009	6,734	(120)	83,623
Meter data management/repository	45,636	13,936	-	59,572
Total cost	517,474	29,257	(120)	546,611

Accumulated Amortization

(in thousands of Canadian dollars)	As at December 31, 2019	Amortization Expense	Disposals	As at December 31, 2020
	\$	\$	\$	\$
Facilities and leasehold improvements	(28,494)	(1,459)	-	(29,953)
Market systems and applications	(302,901)	(13,346)	-	(316,247)
Information technology hardware and other assets	(64,288)	(4,842)	120	(69,010)
Meter data management/repository	(41,399)	(3,399)	-	(44,798)
Total accumulated amortization	(437,082)	(23,046)	120	(460,008)

Net Book Value

(in thousands of Canadian dollars)	As at December 31, 2019	As at December 31, 2020
	\$	\$
Facilities and leasehold improvements	27,930	26,471
Market systems and applications	35,504	30,745
Information technology hardware and other assets	12,721	14,613
Meter data management/repository	4,237	14,774
Total net book value	80,392	86,603
Assets under construction	36,175	63,210
Net tangible capital assets	116,567	149,813

In 2020, there were no adjustments to management's estimates of remaining asset service lives. Interest capitalized to assets under construction during 2020 was \$668 thousand (2019 - \$467 thousand).

11. OTHER REVENUE

In its administration of the IESO-administered markets, the IESO directs the investment of market funds in investments throughout the IESO-administered markets settlement cycle. The IESO is entitled to receive the investment income and investment gains, net of investment losses earned on funds passing through the IESO-administered markets settlement accounts. The IESO is not entitled to the principal on IESO-administered markets investments.

The IESO recognized investment income earned in the settlement accounts of \$2,938 thousand in 2020 (2019 - \$6,266 thousand).

The IESO also recognized application fees of \$23 thousand in 2020 (2019 - \$22 thousand) and program revenue of \$690 thousand (2019 - \$600 thousand).

12. EXPENSES BY OBJECT

Expenses by object for 2020 are comprised of the following:

(in thousands of Canadian dollars)	2020 Core Operations	2020 Other Government Programs	2020 Smart Metering Entity	2020 Market Sanctions & Payment Adjustments	2020 Total
	\$	\$	\$	\$	\$
Compensation and benefits	126,768	340	3,777	6,655	137,540
Professional and consulting	13,099	715	12,992	1,697	28,503
Operating and administration	34,144	62	5,829	2,087	42,122
Amortization	19,647	-	3,399	-	23,046
Interest	1,216	-	-	-	1,216
Foreign exchange gain	110	-	-	-	110
Contract cancellation costs (Note 13 (f))	-	(229)	-	-	(229)
Less: Recoveries	(5,270)	-	-	-	(5,270)
Total Expenses	189,714	888	25,997	10,439	227,038

Expenses by object for 2019 are comprised of the following:

(in thousands of Canadian dollars)	2019 Core Operations	2019 Other Government Programs	2019 Smart Metering Entity	2019 Market Sanctions & Payment Adjustments	2019 Total
	\$	\$	\$	\$	\$
Compensation and benefits	122,334	632	3,112	5,402	131,480
Professional and consulting	18,133	2,522	16,488	1,927	39,070
Operating and administration	36,871	164	6,136	1,857	45,028
Amortization	19,060	-	4,866	-	23,926
Interest	2,064	87	20	-	2,171
Foreign exchange gain	(9)	-	-	-	(9)
Contract cancellation costs (Note 13 (f))	-	102,226	-	-	102,226
Less: Recoveries	(3,463)	-	-	-	(3,463)
Total Expenses	194,990	105,631	30,622	9,186	340,429

13. RELATED PARTY TRANSACTIONS

The Province of Ontario controls the IESO by virtue of its ability to appoint the IESO's Board of Directors.

The OEFC, OEB, Hydro One, Ontario Power Generation, the Ministry of Energy, Northern Development and Mines (ENDM), and the Ministry of the Environment, Conservation and Parks (MECP) are related parties of the IESO through the common control of the Province of Ontario. Transactions between related parties and the IESO are outlined below.

All related party transactions were measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

- a) The IESO holds a note payable and an unsecured credit facility agreement with the OEFC (Note 8). Interest payments made by the IESO in 2020 for the note payable were \$1,739 thousand (2019 - \$2,120 thousand) and for the credit facility were \$nil (2019 - \$269 thousand). As of December 31, 2020, the IESO had an accrued interest payable balance with the OEFC of \$nil (2019 - \$nil).
- b) Under the *Ontario Energy Board Act, 1998*, the IESO incurs registration and license fees. The total of the transactions with the OEB was \$1,803 thousand in 2020 (2019 - \$1,728 thousand).
- c) The IESO performed connection and bulk electric system exception assessments for Hydro One in 2020, and invoiced Hydro One \$560 thousand (2019 - \$188 thousand). The IESO procures short circuit studies and protection impact assessments as part of connection assessments, approvals and meter services on IESO-owned interconnected revenue meters from Hydro One. In 2020, the IESO incurred costs of \$128 thousand (2019 - \$157 thousand) for these services and as of December 31, 2020, had a net payable balance with Hydro One of \$12 thousand (2019 - \$52 thousand net receivable).
- d) The IESO performs connection assessment and approvals for Ontario Power Generation, delivers telecommunication services to market participants to connect to the real-time market systems and provides market-related training courses. In 2020, Ontario Power Generation was invoiced \$87 thousand (2019 - \$112 thousand) and as of December 31, 2020, the IESO had a receivable balance with Ontario Power Generation of \$nil (2019 - \$44 thousand).
- e) The IESO has entered into transfer payment agreements with the MECP to design and deliver, directly or through contracted third parties, various programs funded through the Green Ontario Fund. For 2020, under these agreements, the IESO accrued or received amounts from MECP of \$17 thousand (2019 - \$1,925 thousand) and as of December 31, 2020, the IESO had a net receivable balance with MECP of \$17 thousand (2019 - \$53 thousand).
- f) In 2018, under the directive from the ENDM, the IESO exercised its termination rights under certain renewable energy contracts that had not yet reached an advanced stage in their development. The IESO and ENDM entered into agreements in which ENDM will compensate for the related costs to support the termination of these contracts. For 2020, under these agreements, the IESO accrued from ENDM \$874 thousand (2019 - \$104,305 thousand) and as of December 31, 2020 the IESO had a net receivable balance with ENDM of \$77,018 thousand (2019 - \$100,424 thousand).

14. FINANCIAL RISK MANAGEMENT

The IESO is exposed to financial risks in the normal course of its business operations, including market risks resulting from volatilities in equity, debt and foreign currency exchange markets, as well as credit risk and liquidity risk. The nature of the financial risks and the IESO's strategy for managing these risks has not changed significantly from the prior year.

a) Market Risk

Market risk refers to the risk that the fair value or future cash flows of a financial instrument will fluctuate to cause changes in market prices. The IESO is primarily exposed to three types of market risk: currency risk, interest rate risk and equity risk. The IESO monitors its exposure to market risk fluctuations and may use financial instruments to manage these risks as it considers appropriate. The IESO does not use derivative instruments for trading or speculative purposes.

i) Currency Risk

The IESO conducts certain transactions in U.S. dollars, primarily related to vendors' payments, and maintains a U.S. dollar-denominated bank account. From time to time, the IESO may utilize forward purchase contracts to purchase U.S. dollars for delivery at a specified date in the future at a fixed exchange rate. In addition, the IESO utilizes U.S. dollar spot rate purchases in order to satisfy any current accounts. As at December 31, 2020 (2019 - \$nil), the IESO did not have any outstanding forward purchase contracts.

ii) Interest Rate Risk

The IESO is exposed to movements or changes in interest rates primarily through its short-term variable rate credit facility, cash equivalents' securities and long-term investments. Long-term investments include investments in a pooled Canadian bond fund. The potential impact to the securities' value had the prevailing interest rates changed by 25 basis points, assuming a parallel shift in the yield curve with all other variables held constant, is estimated at \$899 thousand as at December 31, 2020 (2019 - \$777 thousand).

iii) Equity Risk

The IESO is exposed to changes in equity prices through its long-term investments. Long-term investments include investments in pooled equity funds. A 30% change in the valuation of equities as at December 31, 2020, would have resulted in a change for the year of approximately \$10,139 thousand (2019 - \$9,261 thousand). The fair values of all financial instruments measured at fair value are derived from quoted prices (unadjusted) in active markets for identical assets.

b) Credit Risk

Credit risk refers to the risk that one party to a financial instrument may cause a financial loss for the other party by failing to meet its obligations under the terms of the financial instrument. The IESO is exposed directly to credit risk related to cash equivalents' securities and accounts receivable, and indirectly through its exposure to the long-term investments in a Canadian bond pooled fund. The IESO manages credit risk associated with cash equivalents' securities through an approved management policy that limits investments to primarily investment-grade investments with counterparty-specific limits. The accounts receivable balance as at December 31, 2020 included no material items past due and substantially all of the balance is expected to be collected within 60 days from December 31, 2020. The long-term Canadian bond pooled fund is comprised of primarily investment-grade securities.

c) Liquidity Risk

Liquidity risk refers to the risk that the IESO will encounter financial difficulty in meeting obligations associated with its financial liabilities when due. The IESO manages liquidity risk by forecasting cash flows to identify cash flows and financing requirements. Cash flows from operations, short-term investments, long-term investments and maintaining appropriate credit facilities help to reduce liquidity risk. The IESO's long-term investments are normally able to be redeemed within two business days; however, the investment manager of the pooled funds has the authority to require a redemption in-kind rather than cash and has the ability to suspend redemptions if deemed necessary.

The maturities for accounts payable and accrued liabilities generally range between 30 days to 365 days, and the maturities of other financial liabilities are provided in the notes to financial statements related to these liabilities.

15. COMMITMENTS

Operating commitments

The obligations of the IESO with respect to non-cancellable operating leases over the next five years and thereafter are as follows:

As at December 31 (in thousands of Canadian dollars)

	\$
2021	7,100
2022	6,857
2023	6,857
2024	6,624
2025 and thereafter	4,779
Total	32,217

16. CONTINGENCIES

The IESO is subject to various claims, legal actions and investigations that arise in the normal course of business. While the final outcome of such matters cannot be predicted with certainty, management believes that the resolution of such claims, actions and investigations will not have a material impact on the IESO's financial position or results of operations.

The 2020 system fees are based on 2019 rates approved by the OEB for electricity withdrawn from the IESO-controlled grid during 2020. The 2020 rates have not yet been approved by the OEB. The estimated impact to 2021 system fees with the pending OEB approval is \$966 thousand.

The IESO may be liable under additional terminated renewable energy contracts to a maximum of \$3,580 thousand; however, the likelihood or amount of any liability under these contracts cannot be reasonably determined and therefore no liability has been accrued in these financial statements.

Executive Compensation at the IESO

Program Objectives

The IESO compensation program for executives was designed to attract, retain and motivate the calibre of executives required to support the achievement of the IESO's statutory mandate, business objectives and corporate vision. Accordingly, the compensation philosophy and programs were built on the following objectives:

- To focus executives on meeting the IESO's business objectives;
- To attract and retain qualified employees needed to carry out the IESO's mandate;
- To have the flexibility to reward results and demonstrated competencies; and,
- To have compensation levels that are reasonable, responsible and in compliance with provincial regulations.

The philosophy underlying these objectives is that total compensation for executives should enable the IESO to recruit and retain strong leaders with the skills and competencies necessary to carry out the organization's mandate.

Program Governance

The IESO Board establishes the compensation objectives for the following year's program. It delegates the responsibility to thoroughly review the compensation objectives, policies and programs to the Human Resources and Governance Committee of the Board (HRGC), which makes recommendations to the full Board for approval.

The Board is composed of eight independent, external Directors, appointed by the Minister of Energy, Northern Development and Mines, and the President and Chief Executive Officer of the IESO. The Board has broad experience in the electricity industry and public sector organizations, as well as in dealing with human resource matters, including the setting and implementation of compensation policies and programs.

In carrying out its mandate, the Board has access to management's analysis, as well as the recommendations of expert consultants in the compensation field. These programs are reviewed annually with regard to business needs, program objectives and design, industry compensation trends, internal compensation relativities, and external market relativities.

The Board also assesses risks associated with the establishment and implementation of compensation policies and programs. Each year, the Board presides over and approves the IESO's Business Plan. An important component of this process is consideration of, and the implementation of mitigating actions associated with enterprise risk management. This overarching process includes the assessment of all significant risks to the IESO, including risks associated with its compensation policies and programs.

In addition to the formal governance and oversight structure in place for compensation matters, the IESO discloses compensation levels annually for staff earning \$100,000 or more as part of its public sector salary disclosure. For the IESO, a further level of public review and assurance is provided through a statutorily required annual review of the IESO's expenditures, revenue requirements and fees. Information related to compensation matters, including executive/management compensation and market relativities, is subject to Ontario Energy Board review. A range of small and large consumers, assisted by their legal and professional advisors, are represented in these public proceedings.

Market Comparisons

The IESO reviews the competitiveness of executive compensation levels in relation to a peer group of Canadian organizations and general industry companies every other year at a minimum. The objective is to compare IESO executive compensation levels to those in the marketplace, particularly in relation to the median of the market. The IESO uses the Hay job evaluation methodology for both the executive and management group. The most recent review was completed in 2020.

Prior to 2018, the comparator group used to benchmark the executive jobs was a hybrid of public and private sector employers. Based on changes required under the *Broader Public Sector Executive Compensation Act, 2014* (the “2016 Executive Compensation Framework Regulation”), the comparator group was changed to Canadian Public Sector organizations.

The comparator group represents a range of industries, core business activities and roles that are similar to the IESO: electricity, energy, asset management, financial services, infrastructure procurement, engineering and large-scale, complex IT functions.

To comply with the 2016 Executive Compensation Framework, the job evaluation was independently conducted by the Korn Ferry Hay Group using its point system. The Korn Ferry Hay Group evaluated the Vice-President positions based on the job documents and additional information gathered from the CEO. Based on the evaluation points, a salary structure was developed, and executive positions were mapped into it.

Using the market information from the Canadian Public Sector peer group, the maximums for each executive salary grade were determined as the market price point for comparison purposes. The maximums of the salary ranges are defined as the total direct cash compensation (annual base salaries plus annual short-term and long-term target incentive awards) of the target market’s price point at the 50th percentile for each salary grade. The minimums and maximums of each salary range are calculated using typical salary range spreads at executive levels.

Program Description

The IESO program includes fixed and variable compensation, core and flex benefit plans, and pension provisions. IESO Human Resources staff participate in and review results from various compensation surveys and monitor economic trends (such as inflation and unemployment rates) that affect compensation, as well as internal compensation relativities. Based on this data and the IESO business priorities, Human Resources develops recommendations on compensation programs. External specialized compensation, benefit and pension consultants are engaged to ensure accurate, representative market compensation data is obtained and that current industry compensation trends are being considered, as well as to provide insight and recommended adjustments to current programs.

Program Description – Fixed Compensation

Within the IESO salary ranges, individuals are assessed relative to an established competency model. This model consists of behavioural competencies, such as strategic agility, building effective teams, command skills, sizing up people and managing with vision and purpose. Assessments are based upon demonstrated competencies. Each individual is awarded a fixed compensation level within their band based upon their assessed competencies.

Program Description – Variable Compensation

To promote a results orientation, the variable pay plan forms part of the total executive compensation package. The IESO Board annually establishes a robust set of performance measures, which are evaluated each year.

The IESO Board assesses corporate performance results and the CEO's individual performance results. Under the plan, having assessed the results against target, the Board has discretion in determining the final performance rating. The Board considers the assessed results, which have been verified through an internal audit process, to award variable compensation.

The variable compensation award for the CEO and Vice-Presidents is capped at 10% of fixed compensation. The plan provides for awards at or below the capped amount depending on the performance results achieved.

Program Description – Group Benefits

The group benefit plan provides a core level of health and dental benefits, life insurance, disability coverage and vacation, which can be adjusted by individual employees through a flexible component within the plan. This element gives executives and all other non-represented employees the flexibility to adjust their benefits to meet their individual/family needs.

Program Description – Pension Plan

A defined benefit pension plan provides annual retirement income calculated as 2% of pensionable earnings during the highest paid 60 consecutive months of service multiplied by years of service (36 months for the pension earned prior to January 1, 2017 by the former IESO executives), to a maximum of 35 years. The pension formula is integrated with the Canada Pension Plan (CPP) to provide a level income stream before and after age 65, when the IESO pension is reduced to reflect benefits from CPP. The Plan also has early retirement provisions, as well as commuted value, pension deferral and reciprocal transfer options.

The Plan provides a maximum benefit of 70% of highest paid, pre-retirement pensionable earnings. As the Canada Revenue Agency limits the amount of pension payable from a registered plan, the IESO has a secured supplemental employee retirement plan (SERP) to provide required pension income to meet the commitments of the Plan above that payable from the registered plan.

The Plan also provides other options, including member's life only or joint and survivor pensions, as well as pre-retirement death benefits for surviving spouses or beneficiaries.

Performance Measures & Impact on Compensation

The IESO establishes corporate performance measures aligned with its business priorities during its annual business planning process. These are approved, monitored and assessed by the IESO Board of Directors each year. Individual performance measures supporting one or more corporate performance measures are also developed for each executive. As outlined previously, the corporate results achieved each year impact each executive's variable pay.

For 2020, the Board assessed the corporate results and determined that overall the IESO met expectations for the measures and targets specified. In addition to the corporate measures, each executive also had an individual set of measures and targets aligned with the corporate performance objectives and the IESO's business priorities, which were similarly assessed. The Board assessed the results of the CEO's and Interim CEO's performance and the Interim CEO assessed the performance of the Vice-Presidents which was also reviewed with the Board.

Other Considerations

Compensation decisions may at times be impacted by market factors such as the recruitment of an executive with specialized skills/competencies or possessing unique talents within the industry. To this end, if required, approval of individual arrangements relating to terms of employment may be sought and established.

Compensation Restraints

The IESO executive compensation has been significantly impacted by the compensation restraint legislation in Ontario since 2010. The *Broader Public Sector Accountability Act, 2010* (BPSAA) imposed a general freeze on designated executives' salary, variable pay and benefits and subject to very limited exceptions.

The BPSAA was superseded by the *Broader Public Sector Executive Compensation Act, 2014* (BPSECA). The 2016 Executive Compensation Framework Regulation under the BPSECA came into effect for the IESO in February 2018 and permitted retroactive compensation adjustments to September 1, 2017. Subsequent to this, the government repealed this Framework Regulation and replaced it with the 2018 *Compensation Framework Regulation*, which imposed a compensation freeze on executive compensation at the levels in effect on August 13, 2018.

Executive Compensation Statement

The 2020 Summary Compensation Table details the annual compensation for the year ended December 31, 2020 for the executives listed. Note: The figures reported as 2020 "Salary Paid" in the 2020 Public Sector Salary Disclosure for the executives include the 2020 earned variable compensation, and deferred benefits such as 2020 vacation.

2020 SUMMARY COMPENSATION TABLE

Name & Position	Base Salary (2020 earnings)	Variable Pay Awarded ¹	Other Annual Compensation ²	Total Cash Compensation ³
Peter Gregg President and CEO	\$503,589 ⁴	\$34,334	\$26,303	\$564,226
Terence (Terry) Young VP, Policy, Engagement & Innovation/ Interim President and CEO	\$413,618 ⁵	\$28,024	\$21,210	\$462,851
Barbara Anderson VP, Corporate Services and CFO	\$296,134	\$23,331	\$0.46	\$319,466
Leonard Kula VP, Planning, Acquisition & Operations and COO	\$385,000	\$31,873	\$18,834	\$435,707
Alex Foord VP, Information & Technology Services and CIO	\$318,000	\$25,738	\$0.73	\$343,739

1. 2020 earned variable compensation is calculated on annualized base pay

2. Represents remaining flex benefit credits, including deferred earned vacation, paid out at year end as taxable income

3. These amounts will be reported as "Salary Paid" under the annual Public Sector Salary Disclosure (PSSD)

4. Peter Gregg's base salary prorated amount

5. Terence (Terry) Young's base salary includes an increase to compensate him for assuming the Interim President/CEO role, in September 2020

Executive Leadership Team, Board of Directors and Advisory Committees to the Board

Executive Leadership Team

Terry Young
Interim President and Chief Executive Officer

Barbara Anderson
Chief Financial Officer and Vice-President, Corporate Services

Alex Foord
Chief Information Officer and Vice-President, Information and Technology Services

Leonard Kula
Vice-President, Planning, Acquisition and Operations, and Chief Operating Officer

Michael Lyle
Vice-President, Legal Resources and Corporate Governance

Glenn McDonald
Vice-President, Market Assessment and Compliance

Julia McNally
Director, Internal Audit

Robin Riddell
Vice-President, Human Resources

Jessica Savage
Program Delivery Executive, Market Renewal Program

Board of Directors

Joe Oliver
Chairman of the Board
Former federal Minister of Finance, Minister of Natural Resources, Minister Responsible for the GTA and Member of Parliament for Eglinton-Lawrence; former president and CEO of the Investment Dealers Association of Canada and executive director of the Ontario Securities Commission, and founding CEO of the Mutual Fund Dealers Association

Terry Young
Interim President and Chief Executive Officer, Independent Electricity System Operator

Steve Baker
Director
Former president of Union Gas, Enbridge

Michael Bernstein
Director
President of Juno Advisors Ltd.; chair of CircuitMeter Inc., and a director of Biome Renewable

Tabatha Bull
Director
President and CEO, Canadian Council for Aboriginal Business

Simon Chapelle
Director
Corporate Director, The Chapelle Group; Kingston City Councillor

Cynthia Chaplin
Director
Executive Director of CAMPUT; former vice-chair of the Ontario Energy Board

Patricia Koval
Director
Former adjunct professor, University of Toronto; retired senior partner, Torys LLP

David Sinclair
Director
Former president and CEO of Kenora Hydro-Electric Corporation Ltd.; former chair of the Ontario Municipal Electric Association (now Electricity Distributors Association)

Stakeholder Advisory Committee

Brian Bentz (Chair)
President and Chief Executive Officer Alectra
Representing: Distributors and Transmitters

Nicolas Bossé
Senior Vice-President, Governmental & Regulatory Affairs
Brookfield Renewable
Representing: Energy-related Businesses and Services

David Butters
President and Chief Executive Officer Association of Power Producers of Ontario
Representing: Generators

Judy Dezell
Director, Enterprise Centre, Business Partnerships & LAS
Association of Municipalities of Ontario
Representing: Ontario Communities

Brandy Giannetta
Senior Director, Ontario and Atlantic Canada
Canadian Renewable Energy Association
Representing: Generators

Malini Giridhar
Vice-President, Business Development and Regulatory Affairs
Enbridge Gas Inc.
Representing: Energy-related Businesses and Services

Julie Girvan
Consumers Council of Canada
Representing: Consumers

Jim Hogan
President and Chief Executive Officer Entegrus
Representing: Distributors and Transmitters

Rachel Ingram
Vice-President and General Counsel
Rodan Energy Group
Representing: Energy-related Businesses and Services

Bruno Jesus

Vice-President of Planning and Engineering
Hydro One Networks Inc.
Representing: Distributors and Transmitters

Frank Kallonen

President and Chief Executive Officer
Greater Sudbury Hydro
Representing: Distributors and Transmitters

Paul Norris

President
Ontario Waterpower Association
Representing: Generators

Mark Passi

Manager, Energy
Glencore
Representing: Consumers

Mark Schembri

Vice-President, Supermarket Systems and Store Maintenance
Loblaws Properties Limited
Representing: Consumers

James Scongack (Vice-Chair)

Executive Vice-President, Corporate Affairs and Operational Services
Bruce Power
Representing: Generators

Hari Suthan

Chief Strategic Growth and Policy Officer
Opus One Solutions
Representing: Energy-related Businesses and Services

Annette Verschuren

Chair and CEO
NRStor Inc.
Representing: Energy-related Businesses and Services

Terry Young

Interim President and CEO
Independent Electricity System Operator
Representing: IESO

Technical Panel

Michael Lyle (Chair)

Vice-President, Legal Resources and Corporate Governance
Independent Electricity System Operator
Representing: IESO

Jason Chee-Aloy

Managing Director
Power Advisory LLC
Representing: Renewable Generators

Ron Collins

President and Chief Executive Officer
Sinopa Energy Inc.
Representing: Energy-related Businesses and Services

Rob Coulbeck

Special Advisor
Nexus Energy Canada
Representing: Importers/Exporters

Emma Coyle

Director of Regulatory and Environmental Policy
Capital Power
Representing: Market Participant Generators

David Forsyth

Technical Specialist
Association of Major Power Consumers in Ontario
Representing: Market Participant Consumers

Sarah Griffiths

Director, Regulatory Affairs
Enel X
Representing: Demand Response

Jennifer Jayapalan

Director, Energy Markets, Operations and Strategy
Workbench Energy
Representing: Energy Storage

Robert Reinmuller

Director, Transmission System Planning
Hydro One Networks Inc.
Representing: Transmitters

Joe Saunders

Vice-President, Regulatory Compliance and Asset Management
Burlington Hydro
Representing: Distributors

Jessica Savage

Program Delivery Executive, Market Renewal Program
Independent Electricity System Operator
Representing: IESO

Vlad Urukov

Director, Generation Revenue and Planning
Ontario Power Generation
Representing: Market Participant Generators

Technical Panel Secretariat

Agatha Pyrka

Independent Electricity System Operator

Ontario Energy Board Liaison

David Brown

Senior Advisor, Strategic Policy
Ontario Energy Board

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