
INDEPENDENT ELECTRICITY SYSTEM OPERATOR

2017 Annual Report

2017: Ontario's Electricity Sector at a Glance

Generation

36,853 MW

Installed generation capacity
(transmission-connected)

3,880 MW

Installed generation capacity
(distribution-connected)

Demand

132.1 TWh

Total demand

Imports/Exports

6,627 GWh

Total imports

Customers

524

Total number of
market participants

21,786 MW

Highest recorded
2017 peak demand,
on September 25

19,098 GWh

Total exports

5 million

Residential and small
business customers
served by 67 local
distribution companies

Price

1.58¢/kWh

Weighted average
wholesale price of
electricity (Hourly
Ontario Energy Price)

9.97¢/kWh

Average Global
Adjustment
Class B rate

Market Transactions

\$17 billion

Financial transactions
settled by the IESO
wholesale market*

Conservation

950,000 MWh**

Net energy savings
from conservation
programs delivered
by local distribution
companies and
the IESO

Table of Contents

- 1 Note from the President & CEO and the Chair
- 2 2017 Year in Review
- 6 Management Report
- 7 Independent Auditors' Report
- 8 Statement of Financial Position
- 9 Statement of Operations and Accumulated Surplus
- 10 Statement of Remeasurement Gains and Losses
- 11 Statement of Change in Net Debt
- 12 Statement of Cash Flows
- 13 Notes to Financial Statements
- 31 Executive Compensation at the IESO
- 36 Executive Leadership Team, Board of Directors and Advisory Committees to the Board

* Includes a combination of commodity charges (Hourly Ontario Energy Price and Global Adjustment), wholesale market service charges, wholesale transmission charges and other associated charges

** Unverified incremental first year

Note from the President & CEO and the Chair



Peter Gregg



Tim O'Neill

The transformation in the energy sector is reshaping the landscape, not only in Ontario but beyond our borders too. System planners and operators in Canada, the United States and other jurisdictions around the globe are adapting to new supply mixes and new operating environments. The rapid growth in distributed energy resources has resulted in power flows between the distribution and transmission systems that are becoming more variable and less predictable. At the same time, new relationships are emerging between electricity consumers and the grid that supplies their homes, businesses and institutions.

The pace of change continues to accelerate as well. To support reliability despite the changing environment, the IESO is seeking ways to find – and deliver – continuous improvement. Whether externally focused, like the Market Renewal Program or the Conservation First Framework Mid-Term Review, or internally focused, like the corporate reorganization initiated in 2017, the IESO is taking steps to enhance the way it does business.

The IESO continues to examine its systems and processes to assess how effectively they are meeting current needs – and the extent to which they will support future ones. We're seeking new ways to find efficiencies, contain costs, optimize outcomes and results, and deliver value.

This focus on improvement is not happening in isolation. Throughout 2017, the IESO worked closely with market participants, stakeholders, communities, the public and government to identify innovative, optimal solutions to the challenges that face the organization – and the sector. In this way, all parties affected by the IESO's policies, programs and processes can help define the path forward.

This path will see the IESO working with existing partners as well as new ones. In 2017, for example, the IESO launched a public engagement related to the smart meter data held within the Meter Data Management/Repository (MDM/R). With nearly five million smart meters sending hourly data to the MDM/R, and more than 60 local distribution companies integrated into the system, Ontario's MDM/R is one of the largest shared systems in the world. By including new voices in the conversation, the IESO will ensure the full value of Ontario's energy consumption data can be leveraged while respecting privacy obligations.

The integrated nature of North America's power system means that operationally, what happens in Ontario has ripple effects in other parts of the continent – and vice versa. Cyber threats are growing in volume, velocity and variety, and the impact goes beyond just Ontario. To an increasing extent, they are intended to exploit the complexity and connectivity of critical infrastructure systems on which Ontario and its neighbours depend. As online systems are exposed to more frequent and more sophisticated attacks, there's a growing need for a robust, integrated and flexible approach to cybersecurity management. As a result, the IESO is working with partners inside and outside the electricity industry to identify new cybersecurity risks and develop shared strategies to mitigate their impact.

Amidst all these changes, the IESO's relationships – with stakeholders, customers, Indigenous and other communities, government and other system operators – are also evolving. We are building on these relationships and on the engagements that inform our decision making to ensure they continue to provide a solid foundation for the organization. We will leverage them both to meet our corporate objectives and maintain the operation of a reliable, sustainable and cost-effective electricity system.

Peter Gregg
President & CEO

Tim O'Neill
Chair, Board of Directors

2017 Year in Review

Building on a Solid Foundation: Future-Proofing Ontario's Power System and Wholesale Electricity Markets through Collaboration, Innovation and Vision

A decade and a half after Ontario's wholesale electricity markets opened in May 2002, the landscape today looks very different. Coal-fired generation has been replaced by renewable resources like wind and solar, natural gas and refurbished nuclear. Conservation and demand response are playing a growing role in meeting Ontario's energy needs. Consumers are taking a more active role in monitoring and managing their consumption. Generation is becoming increasingly decentralized. And policy changes and emerging technologies, including energy storage, are transforming the way the electricity sector impacts individuals and organizations – including the IESO.

For all that has changed, one thing hasn't: the IESO's focus on reliability. In an increasingly connected world, where power-consuming devices are found in virtually every home and workplace across the province, customers expect a reliable supply of electricity.

As a result, the IESO is accelerating its efforts to support reliability in a changing world. In practical terms, that work requires the organization to manage what exists today and plan for what needs to exist tomorrow.

Delivering Reliability in a Changing Environment

When it comes to managing a highly complex network like a power system, new resources, policies and technologies call for new systems, processes and tools on the part of the system operator. While the IESO's commitment to maintaining reliability remains unchanged over the past 15 years, the manner in which it achieves this outcome continues to evolve.

The composition of Ontario's resource mix is changing. The increasing amount of variable generation, the integration of distributed energy resources (DERs), and the growing sophistication and interconnectedness of the grid are creating new challenges. There are now more than 4,300 MW of DERs in service and under development. The IESO needs to ensure it has visibility of their operation, is able to forecast their output over different timeframes, can study their impact on the system and can coordinate their operation to ensure reliability.

DERs offer greater customer choice and present opportunities to optimize overall system investments and provide grid reliability services. The IESO is assessing these opportunities, working with stakeholders to understand the impact on the transmission/distribution interface and exploring areas for further collaboration and data sharing.

Market Renewal

Underpinning the IESO's efforts to plan and prepare for the future is the Market Renewal project, which was formally launched in 2017. The market design that was appropriate for 2002 is showing its age, necessitating improvements that will enable it to better meet the needs of today and tomorrow. Fundamental changes are required to address known inefficiencies and lay the foundations for a robust, flexible and efficient market that will serve Ontarians well.

The province is currently enjoying a strong, stable supply position, though planned nuclear refurbishments and the retirement of the Pickering nuclear facility will create needs in the early to mid-2020s. This period of stability is an ideal time for the IESO to push ahead with the most significant changes to the structure of Ontario's wholesale electricity markets since their creation nearly 16 years ago.

At a high level, Market Renewal is intended to refine the way in which the IESO procures, schedules, dispatches and compensates providers of energy, capacity and other essential grid services, which will reduce overall system costs. When fully implemented, Market Renewal is expected to result in up to \$5.2 billion in efficiency improvements over a 10-year period.

Engagement activities for Market Renewal are well underway. Stakeholder groups reviewing the first two Market Renewal initiatives – conversion of the current two-schedule market to a single-schedule market and implementation of an incremental capacity auction – met often throughout 2017. High-level design work is underway and will conclude in 2018, while detailed design and implementation will begin later in the year.

Engagement

Engagement with stakeholders and communities is a priority for all aspects of the IESO's business. It can take many forms. Historically, the IESO's engagement has focused on traditional sector partners like generators, transmitters, distributors and large-volume consumers. Today, however, it frequently involves Indigenous communities and organizations, municipalities, tech companies and app developers, as well as academic institutions and research networks.

The IESO has a number of formal and informal channels through which to seek input. These include established groups like the Stakeholder Advisory Committee and the Technical Panel, as well as other content- and audience-specific working groups, committees and forums. By seeking input prior to making decisions, and by acting on the feedback that's provided, the IESO makes sound decisions in a way that considers all parties' needs and interests.

The IESO's approach to engagement broadened in 2017, bringing a fresh set of ideas and opinions into consideration. New in-person engagement mechanisms – including, for example, five regional forums and an Indigenous Community Energy Symposium co-hosted with the Ministry of Energy – complemented existing mechanisms and initiative-specific engagements. On the digital front, the corporate website, www.ieso.ca, underwent a complete redesign and now includes a new section for content related to energy innovation known as "Powering Tomorrow."

Seeking Cost Efficiencies

The IESO is leading efforts to create a more competitive and cost-efficient electricity system through Market Renewal, consumer opportunities and new approaches to transmission development. A more competitive and cost-efficient system will drive down costs for Ontario ratepayers, create opportunities for stakeholders and stimulate innovation. Increased efficiency is a priority for the organization and can take many forms. For example, the 2017 demand response (DR) auction completed in December resulted in increased consumer participation and lower prices. Thirty-five organizations were registered as auction participants, more than double the number of participants in the first DR auction, which was held in 2015. The average annual clearing price set through the 2017 auction was 16.6 percent lower than in 2015.

In addition to changes on the demand side, the Feed-in Tariff (FIT) and microFIT procurements of renewable generation came to an end in 2017. These programs have contributed thousands of megawatts to the province's supply of clean, renewable generation, but the conclusion of these procurements is an important milestone in the evolution of the IESO's resource acquisition model.

New competition in the IESO's reliability services markets is also helping to drive costs down. In November 2017, the IESO announced that two new energy storage facilities had been selected through a competitive process to help support the reliability, flexibility and efficiency of the province's electricity grid. The successful parties will provide a combined 55 megawatts of regulation service, an important grid-balancing function that corrects for short-term changes in electricity use that might affect the reliability of the power system. These projects represent one of the largest reductions in per-unit regulation costs since Ontario's electricity market opened.

Enabling Conservation

Ontario continues to make steady progress towards its 2020 conservation target of 8.7 terawatt-hours (TWh) of energy savings through the Conservation First Framework (CFF) programs and the Industrial Accelerator Program (IAP). The CFF is on target and under budget at the halfway mark, having achieved 3.85 TWh (55% of the CFF target¹) of energy savings in the first half of the framework. When combined with an additional 0.640 TWh achieved through the IAP, a total of about 4.5 TWh of energy savings has been achieved – the equivalent of powering close to half a million homes for a year. While 2017 conservation numbers are still preliminary, total demand from grid-connected resources was about nine percent lower in 2016 than it was 10 years earlier – due in large part to conservation programs, innovation, new technologies and ongoing changes in energy-use behaviour.

Conservation remains the most cost-effective supply resource available, at just over two cents per kWh, providing value to the broader system while helping consumers to manage their costs. The conservation efforts of the last 10 years have helped avoid investments in more expensive electricity infrastructure and new generation. A priority in 2017 was the mid-term review of the current Conservation First Framework, which began in 2016 and will be completed in 2018. The focus of the review is the cost-effective delivery of both local distribution company (LDC) and transmission-connected customer conservation programs, and assurance that LDC and directly connected customer program progress is in line to achieve the 2020 energy-savings targets.

The IESO's expertise in developing and delivering customer-focused electricity conservation programs is well established. The company is now collaborating with the Ministry of the Environment and Climate Change to support the design and delivery of Green Ontario Fund (GreenON) programs. GreenON's focus is on developing greenhouse gas saving programs and initiatives. Through a collaboration agreement, GreenON and the IESO are working to design and deliver new programs that complement and build on the success of existing energy-efficiency programs.

Organizational Alignment

Policy and innovation can open up new opportunities for consumers and stakeholders, drive down costs and lead to a more efficient and effective electricity grid. Together with its stakeholders, the IESO informs and implements policy while creating an environment where innovation can thrive.

To support its efforts in this area, the IESO underwent an organizational realignment in the fourth quarter of 2017. The new Policy, Engagement and Innovation group aligns the various IESO resources to more effectively develop policy that reflects the broader objectives of the IESO and Ontario's electricity sector, including the need to foster innovation. This group is also responsible for leading the IESO's engagement efforts with customers and stakeholders, the energy regulator, the government and others to ensure their input is actively sought and considered as new initiatives are advanced.

The new Planning, Acquisition and Operations group brings together functions that are responsible for a reliable and efficient province-wide power system both today and in the future. This includes planning, Market Renewal, resource and transmission procurement, and real-time operations and engineering.

Other changes to the IESO's structure include a new standalone business unit and senior executive leading the Human Resources function and a group called Legal Resources and Corporate Governance that includes contract management. The new vice-president of Information & Technology Services will also serve as Chief Information Officer and lead the company's efforts in the area of cybersecurity. As part of its efforts to increase efficiency, provide better service to internal and external customers, and deliver greater value to ratepayers, the IESO is adopting an enterprise-wide view of its operations. Consistent with that shift, a centralized team responsible for the prioritization, governance and delivery of enterprise change at the IESO has been created and reports through the Vice-President of Corporate Services and Chief Financial Officer. This new organizational structure sets a clear corporate direction that will enable the IESO to deliver on its mandate while managing the changes that are reshaping Ontario's energy sector.

1. Preliminary unverified results for the first half of the framework (2015-2017), which includes verified results for 2015 and 2016 in the amount of 2.81 TWh for CFF.

Looking Ahead

Although activities to support the ongoing sector-wide changes are underway across the organization, some initiatives are more visible than others. Consulting with stakeholders to establish the processes and safeguards required to leverage the full value of Ontario's smart meter data was another priority in 2017. The province has nearly five million smart meters sending vast amounts of data to the IESO's Meter Data Management/Repository. This central hub processes, stores and protects the electricity consumption data of residential and small business customers used for consumer billing by Ontario's LDCs.

The IESO has begun to work with stakeholders to define the rules for how third parties can gain access to that data while protecting privacy and confidentiality. This work includes the creation of a Data Strategy Advisory Council with representatives from various sectors to help design the Third-Party Access Implementation Plan and help realize the potential of big data.

In today's increasingly connected world, protecting online assets is essential. Cybersecurity is a fundamental component of the IESO's role in maintaining the safe and sustainable operation of Ontario's power grid. The IESO ensures it is compliant with North American industry standards and invests in new technology, techniques and training to ensure that the organization is equipped with the best resources to combat cyber threats. The organization also incorporates a "cybersecurity by design" approach into IT program development.

In 2017, the IESO continued to play a leadership role in the field of cybersecurity by leading collaborative forums to share best practices and by hosting executive level cybersecurity briefings to share lessons from experts around the world. The IESO implemented new detection technology in 2017 to further protect confidential information and is currently expanding its cybersecurity governance framework over the next two to three years to meet the National Institute of Standards and Technology Cybersecurity Framework, which will establish effective security governance around external vendors.

Drawing heavily on the models, data and analysis contained within the IESO's *Ontario Planning Outlook*, published in 2016, the Minister of Energy released the government's *Long-Term Energy Plan* (LTEP) in October 2017. The IESO has since worked with stakeholders and communities to develop an implementation plan - *Putting Ontario's Long-Term Energy Plan Into Action* - that supports many of the initiatives identified in the LTEP, which touch on many of the IESO's core functions. The work described in this plan will take place over several years, requiring regular engagement and collaboration by the IESO and its partners.

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 27, 2018.

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 KPMG LLP, a firm of independent external auditors appointed by the Board of Directors. The external auditors' responsibility is to express their opinion on whether the financial statements are fairly presented in accordance with generally accepted accounting principles in Canada. The Auditors' Report, which follows, outlines the scope of their examination and their opinion.

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

On behalf of management,



Peter Gregg
President and Chief Executive Officer
Toronto, Canada
March 27, 2018



Kimberly Marshall
Vice-President, Corporate Services
and Chief Financial Officer
Toronto, Canada
March 27, 2018

Independent Auditors' Report

To the Board of Directors of the Independent Electricity System Operator (IESO)

We have audited the accompanying financial statements of IESO, which comprise the statement of financial position as at December 31, 2017, the statements of operations and accumulated surplus, remeasurement gains and losses, change in net debt and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility 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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of IESO as at December 31, 2017, and its results of operations and the changes in its net debt and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

The image shows a handwritten signature in black ink that reads "KPMG LLP". The signature is written in a cursive, slightly slanted style. Below the signature, there is a single horizontal line that underlines the text.

Chartered Professional Accountants, Licensed Public Accountants

March 27, 2018
Waterloo, Canada

Statement of Financial Position

As at (in thousands of Canadian dollars)	December 31, 2017	December 31, 2016
	\$	\$
FINANCIAL ASSETS		
Cash	64,214	38,914
Accounts receivable	41,429	25,194
Regulated assets (Note 3)	39,529	65,064
Long-term investments (Note 4)	45,276	40,355
Market accounts – assets (Note 5)	2,005,167	1,692,752
TOTAL FINANCIAL ASSETS	2,195,615	1,862,279
LIABILITIES		
Accounts payable and accrued liabilities (Note 6)	37,264	38,963
Accrued interest on debt	-	315
Rebates due to market participants (Note 7)	1,422	12,551
Debt (Note 8)	120,000	90,000
Accrued pension liability (Note 9)	29,229	34,620
Accrued liability for employee future benefits other than pension (Note 9)	96,216	90,251
Market accounts – liabilities (Note 5)	2,005,167	1,692,752
TOTAL LIABILITIES	2,289,298	1,959,452
NET DEBT	(93,683)	(97,173)
NON-FINANCIAL ASSETS		
Net tangible capital assets (Note 10)	100,794	105,047
Prepaid expenses	6,809	6,614
TOTAL NON-FINANCIAL ASSETS	107,603	111,661
ACCUMULATED SURPLUS		
Accumulated surplus from operations	3,436	6,582
Accumulated remeasurement gains	10,484	7,906
ACCUMULATED SURPLUS (Note 7)	13,920	14,488

Contingencies (Note 16)

See accompanying notes to financial statements

On behalf of the Board:



Tim O'Neill
Chair
Toronto, Canada



Carole Workman
Director
Toronto, Canada

Statement of Operations and Accumulated Surplus

For the year ended December 31 (in thousands of Canadian dollars)	2017	2017	2016
	Budget \$	Actual \$	Actual \$
IESO CORE OPERATIONS			
System fees	190,790	180,102	185,531
Other revenue (Note 11)	574	4,145	2,531
Interest and investment income	2,100	2,312	2,157
Core operation revenues	193,464	186,559	190,219
Core operating expenses (Note 12)	(193,464)	(185,137)	(177,668)
Core operations surplus/(deficit) before rebates	-	1,422	12,551
Rebates due to market participants	-	(5,422)	(12,551)
Core operations deficit	-	(4,000)	-
OTHER GOVERNMENT PROGRAMS			
Government transfer (Note 12)	-	2,696	-
Government transfer expenses (Note 12)	-	(2,696)	-
Government transfer surplus	-	-	-
SMART METERING ENTITY			
Smart metering charge	31,536	25,655	27,426
Smart metering expenses (Note 12)	(31,536)	(24,716)	(27,426)
Smart metering entity surplus	-	939	-
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	4,219	3,176	3,889
Customer education and market enforcement expenses (Note 12)	(4,513)	(3,261)	(3,655)
Market sanctions and payment adjustments surplus/(deficit)	(294)	(85)	234
(DEFICIT)/SURPLUS	(294)	(3,146)	234
ACCUMULATED SURPLUS FROM OPERATIONS, BEGINNING OF PERIOD	6,582	6,582	6,348
ACCUMULATED SURPLUS FROM OPERATIONS, END OF PERIOD	6,288	3,436	6,582

See accompanying notes to financial statements

Statement of Remeasurement Gains and Losses

For the year ended December 31 (in thousands of Canadian dollars)	2017	2016
	Actual \$	Actual \$
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	7,906	7,658
UNREALIZED GAINS ATTRIBUTABLE TO:		
Foreign exchange - other	456	477
Portfolio investments (Note 4)	2,599	286
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange - other	(477)	(515)
NET REMEASUREMENT GAINS FOR THE PERIOD	2,578	248
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	10,484	7,906

See accompanying notes to financial statements

Statement of Change in Net Debt

For the year ended December 31 (in thousands of Canadian dollars)	2017	2017	2016
	Budget \$	Actual \$	Actual \$
SURPLUS/(DEFICIT)	(294)	(3,146)	234
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(27,500)	(16,774)	(24,769)
Amortization of tangible capital assets	23,126	21,027	23,438
Change in prepaid expenses	-	(195)	(417)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	(4,374)	4,058	(1,748)
NET REMEASUREMENT GAINS FOR THE PERIOD	-	2,578	248
CHANGE IN NET DEBT	(4,668)	3,490	(1,266)
NET DEBT, BEGINNING OF PERIOD	(97,173)	(97,173)	(95,907)
NET DEBT, END OF PERIOD	(101,841)	(93,683)	(97,173)

See accompanying notes to financial statements

Statement of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
OPERATING TRANSACTIONS		
Change in accumulated surplus/(deficit):		
(Deficit)/surplus	(3,146)	234
	(3,146)	234
Changes in non-cash items:		
Amortization	21,027	23,438
Pension expense	8,111	11,610
Other employee future benefits expense	8,601	8,127
	37,739	43,175
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(202)	(7,495)
Change in accounts receivable	(16,235)	8,005
Change in rebates due to market participants	(11,129)	2,956
Change in regulated assets	25,535	23,138
Change in prepaid expenses	(195)	(417)
	(2,226)	26,187
Other:		
Contribution to pension fund	(13,502)	(13,052)
Payment of employee future benefits	(2,636)	(2,377)
	(16,138)	(15,429)
Cash provided by operating transactions	16,229	54,167
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(16,774)	(24,769)
Change in accounts payable and accrued liabilities	(1,812)	(2,410)
Cash applied to capital transactions	(18,586)	(27,179)
INVESTING TRANSACTIONS		
Purchase of long-term investments	(2,322)	(2,751)
Cash applied to investing transactions	(2,322)	(2,751)
FINANCING TRANSACTIONS		
Issuance of debt	30,000	-
Cash provided by financing transactions	30,000	-
INCREASE IN CASH	25,321	24,237
CASH - BEGINNING OF PERIOD	38,914	14,715
Unrealized foreign exchange (losses) for the period	(21)	(38)
CASH - END OF PERIOD	64,214	38,914

See accompanying notes to financial statements

Notes to Financial Statements

1. NATURE OF OPERATIONS

a) 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 predecessor IESO and the Ontario Power Authority (OPA) were amalgamated by statute effective January 1, 2015, and continues as the Independent Electricity System Operator. As set out in the *Electricity Act, 1998*, the IESO operates pursuant to a licence granted by the Ontario Energy Board (OEB). The amalgamation was effected pursuant to Bill 14, *Building Opportunity and Securing Our Future Act (Budget Measures), 2014*, which received Royal Assent on July 24, 2014. IESO's services and the market IESO operates are subject to regulation by the OEB, under the authority granted by the *Ontario Energy Board Act, 1998*. The OEB has regulatory oversight of electricity matters in Ontario. The objects of the IESO as contained in the *Electricity Act, 1998*, and Ontario Regulation 288/14 are as follows:

- to exercise the powers and perform the duties assigned to it under this Act, the regulations, directions, the market rules and its licence
- to enter into agreements with transmitters to give it authority to direct the operation of their transmission systems
- to direct the operation and maintain the reliability of the IESO-controlled grid to promote the purposes of this Act
- to participate in the development by any standards authority of criteria and standards relating to the reliability of the integrated power system
- to establish and enforce criteria and standards relating to the reliability of the integrated power system
- to work with the responsible authorities outside of Ontario to co-ordinate the IESO's activities with the activities of those authorities
- to operate the IESO-administered markets (IAM) to promote the purposes of this Act
- to engage in activities related to contracting for the procurement of electricity supply, electricity capacity and conservation resources
- to engage in activities related to settlements, payments under a contract entered into under the authority of this Act and payments provided for under this Act or the *Ontario Energy Board Act, 1998*
- to engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario
- to forecast electricity demand and the adequacy and reliability of electricity resources for Ontario for the short term, medium term and long term
- to conduct independent planning for electricity generation, demand management, conservation and transmission
- to engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources
- to engage in activities in support of system-wide goals for the amount of electricity to be produced from different energy sources
- to engage in activities that facilitate load management
- to engage in activities that promote electricity conservation and the efficient use of electricity
- to assist the Board by facilitating stability in rates for certain types of consumers
- to collect and make public information relating to the short-term, medium-term and long-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs
- to engage in such other objects as may be prescribed by the regulations.

b) The IESO was designated the Smart Metering Entity (SME) by Ontario Regulation 393/07 under the *Electricity Act, 1998*, on March 28, 2007. The regulation came into effect on July 26, 2007.

The objects of the SME, as contained in the *Electricity Act, 1998*, are as follows:

- to plan and implement and, on an ongoing basis, oversee, administer and deliver any part of the smart metering initiative as required by regulation under this or any Act or directive made pursuant to sections 28.3 or 28.4 of the *Ontario Energy Board Act, 1998*, and, if so authorized, to have the exclusive authority to conduct these activities
- to collect and manage and to facilitate the collection and management of information and data and to store the information and data related to the metering of consumers' consumption or use of electricity in Ontario, including data collected from distributors and, if so authorized, to have the exclusive authority to collect, manage and store the data
- to establish, to own or lease and to operate one or more databases to facilitate collecting, managing, storing and retrieving smart metering data
- to provide and promote non-discriminatory access, on appropriate terms and subject to any conditions in its licence relating to the protection of privacy, by distributors, retailers and other persons,
 - i. to the information and data referred to above, and
 - ii. to the telecommunication system that permits the SME to transfer data about the consumption or use of electricity to and from its databases, including access to its telecommunication equipment, systems and technology and associated equipment, systems and technologies.
- to own or to lease and to operate equipment, systems and technology, including telecommunication equipment, systems and technology that permit the SME to transfer data about the consumption or use of electricity to and from its databases, including owning, leasing or operating such equipment, systems and technology and associated equipment, systems and technologies, directly or indirectly, including through one or more subsidiaries, if the SME is a corporation
- to engage in such competitive procurement activities as are necessary to fulfill its objects or business activities
- to procure, as and when necessary, meters, metering equipment, systems and technology and any associated equipment, systems and technologies on behalf of distributors, as an agent or otherwise, directly or indirectly, including through one or more subsidiaries, if the SME is a corporation
- to recover, through just and reasonable rates, the costs and an appropriate return approved by the OEB associated with the conduct of its activities
- to undertake any other objects that are prescribed by associated regulation.

c) The IESO is required to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* (FHP) and to engage in activities to facilitate the implementation of FHP, including,

- i. entering into agreements or arrangements with any person for the purposes of the FHP
- ii. engaging in activities related to making payments to and receiving payments as contemplated under the FHP and related settlement activities
- iii. engaging in activities related to the transfer and administration of the regulatory asset created under the FHP, which activities may include:
 - a) incurring liabilities in relation to the regulatory asset
 - b) transferring the regulatory asset under section 26 of the FHP for consideration
 - c) acting as a recovery agent under the FHP.

d) The IESO is required to submit its proposed expenditures, revenue requirements and fees for the coming year to the OEB for review and approval. The submission may be made only with the approval or deemed approval of the IESO business plan by the Minister of Energy (Minister).

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 (PSAB) and reflect the following significant accounting policies.

b) Revenue recognition

System fees earned by the IESO are based on approved rates for each megawatt of electricity withdrawn from the IESO-controlled grid (including scheduled exports) and embedded generation. System fees are recognized as revenue at the time the electricity is withdrawn. Rebates are recognized in the year in which the regulatory deferral account, before such rebates, exceeds regulated limits.

The Smart Metering Charge that is earned by the IESO is based on a rate approved by the OEB for each installed smart meter in the province. Revenue is recognized in the year as it is earned.

These financial statements reflect the revenue and expenses of the financial transactions of market participants within the IAM on a net basis.

Other revenue represents amounts that accrue to the IESO relating to investment income on funds passing through market settlement accounts, as well as application fees. Such revenue is recognized as it is earned.

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 revenues 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 arising from resolved settlement disputes. Such revenue is recognized as it is earned.

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 surplus 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 amounts due to and from market participants, accounts payable and debt at amortized cost.

d) Regulated assets and liabilities

As a rate-regulated entity, the IESO, in appropriate circumstances, establishes regulated assets or liabilities and thereby defers the impact on the statement of operations of certain expenses or revenues because they are probable to be collected or refunded to market participants through future billings. The IESO has applied guidance from United States Generally Accepted Accounting Principles (US GAAP) Topic 980, *Regulated Operations*, in this policy.

e) Market accounts – assets and liabilities

The IESO records the market accounts, assets, liabilities and amounts due to and from market participants held on behalf of the IAM in its statements of financial position. The IESO-administered markets are a balancing system and, as such, the net position of market accounts will settle to a \$nil balance in accordance with market rules.

f) 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 IESO capitalizes applicable interest as part of the cost of tangible capital assets.

g) Assets under construction

Assets under construction generally relates to the costs of physical facilities, 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.

h) Amortization

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 2017	Estimated Average Service Life 2016
Facilities	5 to 50	5 to 50
Market systems and applications	4 to 12	4 to 12
Infrastructure and other assets	4 to 10	4 to 10
Meter data management/repository	10	10

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

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 2017.

i) 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 (OPEB) plans and the related costs, net of plan assets. Pension and OPEB 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 rate used to value liabilities is based on the expected rate of return on plan assets as at the measurement date of September 30.

The expected return on plan assets is based on management's long-term best estimate using a market-related value of 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 OPEB expenses are recorded during the year in which employees render services. Pension and OPEB 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 15 years (2016 – 15 years) and OPEB plan is 16.2 years (2016 – 16.2 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.

j) 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 accumulated surplus as remeasurement gains and losses and shown in the statement of financial position and 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.

k) 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, accrued pension liability and accrual for employee future benefits other than pensions. Actual results could differ from those estimates.

3. REGULATED ASSETS

The IESO recognizes two regulated assets: 1) unrecovered smart metering expenses and 2) unrecovered PSAB transition items.

The smart metering expenses result from the IESO's role as the SME. As such, the IESO funds its SME operating costs and capital investment in the meter data management/repository (MDM/R) through fees from users of smart meters in Ontario. The OEB approves the SME Charge, which is intended to cover the costs of developing and operating the MDM/R.

In 2017, the smart metering expenses were fully recovered, resulting in a \$nil balance in the regulated asset account.

The unrecovered PSAB transition items result from the IESO's adoption of Canadian public sector accounting standards effective January 1, 2011. The adoption of PSAB 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 \$80,617 thousand at the date of transition.

Regulated assets consist of the following:

As of December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Unrecovered smart metering expenses	-	21,623
Unrecovered PSAB transition items	39,529	43,441
Closing balance	39,529	65,064

The IESO also records regulated assets/liabilities within its market accounts (Note 5).

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 \$44,811 thousand (2016 - \$39,972 thousand). As at December 31, the market value allocation of these long-term investments was 62.8% equity securities and 37.2% debt securities (2016 - 62.3% and 37.7%, respectively).

Balanced portfolio of pooled funds

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Opening balance	39,972	37,019
Net purchase of investments	2,240	2,667
Change in fair value	2,599	286
Closing balance	44,811	39,972

In addition to the balanced portfolio of pooled funds, the IESO has a long-term deposit with Canada Revenue Agency in the amount of \$465 thousand (2016 - \$383 thousand) pertaining to the Retirement Compensation Arrangements Trust (Note 8).

5. MARKET ACCOUNTS

a) In 2017, the Government of Ontario announced its Fair Hydro Plan (FHP), which was implemented through the *Fair Hydro Act, 2017*. Under the FHP, the IESO continues to settle the market and recover Global Adjustment from customers, but as a result of the fair adjustment applicable to specified consumers (defined in the Ontario *Fair Hydro Plan Act, 2017*), the IESO collects less than the full amount of the Global Adjustment. The IESO records the shortfall together with the costs of financing the shortfall, the amounts charged to the IESO by the Fair Hydro Trust in respect of the carrying costs of the Fair Hydro Trust, when applicable, and certain other amounts in a Deferred Global Adjustment Variance account. The Regulated Price Plan Variance account balance as of July 1, 2017, was included in the Deferred Global Adjustment Variance. The FHP also shifted the cost of the Ontario Electricity Support Program (OESP) and most of the Rural or Remote Rate Protection (RRRP) program costs from ratepayer- to taxpayer-funded programs. These accounts comprise the market-regulated assets.

The cumulative amount recorded in the Deferred Global Adjustment Variance account to the end of December 2017 was \$1,378,000 thousand. On December 21, 2017, a regulatory asset in the amount of \$1,179,000 thousand was transferred to the Fair Hydro Trust. As a result, as at December 31, the Deferred Global Adjustment Variance account balance was \$199,475 thousand, including interest and carrying charges.

In consideration of the implementation of the FHP, on May 1, 2017, the OEB rescinded the OESP charge and determined to fund the program through the credit balance in the Ontario Electricity Support Program Variance account. Therefore only payments to OESP-eligible customers are currently being made, and the balance in the Ontario Electricity Support Program Variance account at December 31, 2017, was in a credit position of \$24,892 thousand, net of interest.

A new rate for the RRRP program under the FHP was effective July 1, 2017. The balance in the RRRP variance account to June 30, 2017, was \$6,626 thousand. The new rate has resulted in a further under-collection of \$5,994 thousand (net of interest) in the second half of the year, resulting in a cumulative balance in the variance of \$12,620 thousand as at December 31, 2017.

Components of the market accounts are as follows:

As of December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Cash, restricted for market activities	454,174	244,755
Amounts due from market participants	1,253,417	1,384,407
Interest receivable	217	186
HST receivable	110,156	25,531
Regulated assets/liabilities	187,203	37,873
Total Market Assets	2,005,167	1,692,752
Market debt	(13,252)	(150,501)
Amounts due to market participants	(1,855,206)	(1,385,790)
Other net liabilities	(136,709)	(156,461)
Total Market Liabilities	(2,005,167)	(1,692,752)
Closing balance	-	-

Regulated assets/liabilities consist of the following:

As of December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Deferred Global Adjustment Variance	199,475	-
Regulated Price Plan Variance	-	134,988
Ontario Electricity Support Program Variance	(24,892)	(92,443)
Rural or Remote Rate Protection Variance	12,620	(4,672)
Closing balance	187,203	37,873

b) Market Debt

\$475 Million Credit Facility with OFA

The IESO has an unsecured credit facility agreement with the Ontario Financing Authority (OFA), which will make available to the IESO an amount up to \$475,000 thousand. Advances are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing plus 0.25% per annum. The credit facility expires December 31, 2019. As at December 31, 2017, \$12,281 thousand was outstanding (2016 - \$150,501 thousand).

\$2 Billion Credit Facility with OFA

During 2017, the IESO entered into a new unsecured credit facility agreement with the OFA, which will make available to the IESO an amount up to \$2,000,000 thousand for the purpose of supporting the IESO's role in the Ontario FHP. Advances are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing plus 0.25% per annum. The credit facility expires September 30, 2022. As at December 31, 2017, \$971 thousand was outstanding.

\$150 Million Credit Facility with TD Bank

The IESO has an unsecured credit facility agreement with TD Bank, which will make available to the IESO an amount up to \$150,000 thousand. Advances are payable at a variable interest rate equal to that of banker's acceptance plus a margin per annum. The credit facility expires April 30, 2020. As at December 31, 2017, no amount was drawn on the credit facility (2016 - \$nil).

c) Related Party Transactions

The IESO records the market accounts, assets, liabilities and amounts due to and from market participants held on behalf of the IAM in its statement of financial position. Included in these accounts are amounts due to and from related parties.

The Province of Ontario is a related party as it is the controlling entity of the IESO. The Ontario Electricity Financial Corporation (OEFC), OEB, Hydro One, Ontario Power Generation Inc. (OPG), Fair Hydro Trust and Ministry of Energy are related parties of the IESO, through the common control of the Province of Ontario. Transactions between these parties and the IAM were as follows:

As of December 31, 2017, the IAM had a payable balance due to the OEFC for \$31,025 thousand (2016 - \$65,711 thousand).

As of December 31, 2017, the IAM had a payable balance with the OEB for \$57 thousand (2016 - \$ nil).

As of December 31, 2017, the IAM had a receivable balance with Hydro One of \$25,018 thousand (2016 - \$75,610 thousand).

As of December 31, 2017, the IAM had a payable balance with OPG for \$356,611 thousand (2016 - \$430,432 thousand).

In 2017 the Fair Hydro Trust paid \$1,179,000 thousand and received \$6,000 thousand. As at December 31, 2017, the IAM had a payable balance of \$3,620 thousand (2016 - \$nil).

As of December 31, 2017, the IAM had a receivable balance with Ministry of Energy for \$93,854 thousand (2016 - \$153 thousand).

6. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Relating to operations	35,743	35,630
Relating to tangible capital assets	1,521	3,333
Closing balance	37,264	38,963

7. REBATES DUE TO MARKET PARTICIPANTS AND ACCUMULATED SURPLUS

In 2017, the IESO recognized \$5,422 thousand in rebates due to market participants of system fees (2016 - \$12,551 thousand). As at December 31, 2017, rebates due to market participants were \$1,422 thousand (2016 - \$12,551 thousand).

The IESO's approved regulatory deferral account balance has been historically maintained at a maximum of \$10,000 thousand. However, in 2017 the IESO received a decision and order by the OEB to reduce the regulatory deferral account to \$6,000 thousand. The 2017 approved regulatory deferral account balance at \$6,000 thousand was approved by the OEB on October 31, 2017. In December 2017, the IESO rebated \$4,000 thousand to market participants.

Prior to 2014, unrealized gains and losses from portfolio investments and foreign exchange were included in the balance of the regulatory deferral account (life-to-date total: \$4,144 thousand). As of January 1, 2014, only realized gains and losses are included in this balance.

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

Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Regulatory deferral account (a)	6,000	10,000
Smart Metering Entity (b)	939	-
Accumulated market sanctions and payment adjustments (c)	641	726
Remeasurement gains	6,340	3,762
Accumulated surplus - end of year	13,920	14,488

a) Regulatory Deferral Account

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Accumulated surplus - beginning of year	10,000	10,000
OEB decision and order	(4,000)	-
Revenues (before rebates due to market participants)	186,559	190,219
Rebates due to market participants	(1,422)	(12,551)
Core operation expenses	(185,137)	(177,668)
Accumulated surplus - end of year	6,000	10,000

b) Smart Metering Entity - Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Accumulated surplus - beginning of year	-	-
Smart metering charge	25,655	-
Smart metering expenses	(24,716)	-
Accumulated surplus - end of year	939	-

c) Accumulated Market Sanctions and Payment Adjustments

As at December 31 (in thousands of Canadian dollars)	2017	2016
	\$	\$
Accumulated surplus – beginning of year	726	492
Market sanctions and payment adjustments	3,176	3,889
Customer education and market enforcement expenses	(3,261)	(3,655)
Accumulated surplus – end of year	641	726

8. DEBT

Note payable to Ontario Electricity Financial Corporation (OEFC)

In April 2017, the IESO entered into a note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 1.767% per annum and is repayable in full on June 30, 2020. Interest accrues daily and is payable in arrears semi-annually in June and December of each year. As at December 31, 2017, the note payable to the OEFC was \$120,000 thousand (2016 – \$90,000 thousand).

For the year ended December 31, 2017, the interest expense on the note payable was \$2,018 thousand (2016 – \$1,841 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 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, with draws, repayments and interest payments due monthly. The credit facility expires June 30, 2020. As at December 31, 2017, no amount was drawn on the credit facility (December 31, 2016 – \$nil).

For the year ended December 31, 2017, the interest expense on the credit facility was \$nil (2016 – \$nil).

Retirement Compensation Arrangements Trust

In July 2013, the IESO established a Retirement Compensation Arrangements (RCA) 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, 2017, the IESO has provided the RCA trustee with a bank letter of credit of \$33,141 thousand (2016 – \$30,466 thousand) the trustee can draw upon if the IESO is in default under the terms of this plan.

9. POST-EMPLOYMENT BENEFIT PLANS

The IESO provides pension 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 to the funded, registered pension plan, the IESO provides certain non-registered defined benefit pensions through an unfunded, indexed, non-registered 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)	2017 Pension Benefits	2016 Pension Benefits	2017 Other Benefits	2016 Other Benefits
	\$	\$	\$	\$
Accrued benefit obligation	547,410	507,724	97,358	91,014
Fair value of plan assets	545,400	523,756	-	-
Funded status as of measurement date	(2,010)	16,032	(97,358)	(91,014)
Employer contribution/other benefits payments after measurement date	2,418	2,416	753	588
Unrecognized actuarial (gain)/loss	(29,637)	(53,068)	389	175
Accrued liability recognized in the statement of financial position	(29,229)	(34,620)	(96,216)	(90,251)
Market-related value of plan assets (as at September 30, 2017)	537,587	506,791	-	-

Registered pension plan assets

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:

	2017	2016
Canadian equity securities	20.6%	20.2%
Foreign equity securities	38.0%	39.9%
Canadian debt securities	34.7%	39.8%
Global infrastructure	4.8%	0.0%
Canadian real estate	1.3%	0.0%
Cash equivalents	0.1%	0.4%
Forward foreign exchange contracts	0.5%	(0.3%)
	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:

	2017 Pension Benefits	2016 Pension Benefits	2017 Other Benefits	2016 Other Benefits
Discount rate at the end of the period	5.50%	5.75%	5.50%	5.75%
Rate of compensation increase	3.50%	3.50%	3.50%	3.50%
Rate of indexing	2.00%	2.00%	2.00%	2.00%

The assumed prescription drug inflation was 8.00% for 2016, grading down to an ultimate rate 4.50% per year in 2030. 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)	2017 Pension Benefits	2016 Pension Benefits	2017 Other Benefits	2016 Other Benefits
	\$	\$	\$	\$
Current service cost (employer)	10,089	11,117	3,247	3,107
Interest cost	29,487	29,292	5,343	5,120
Expected return on plan assets	(29,058)	(27,626)	-	-
Amortization of net actuarial loss/(gain)	(2,407)	(1,173)	11	(100)
Benefit cost	8,111	11,610	8,601	8,127

(in thousands of Canadian dollars)	2017 Pension Benefits	2016 Pension Benefits	2017 Other Benefits	2015 Other Benefits
	\$	\$	\$	\$
Employer contribution/other benefit payments	13,502	13,052	2,636	2,377
Plan participants' contributions	6,253	5,811	-	-
Benefits paid	25,457	23,317	2,636	2,377

The most recent actuarial valuation of the registered pension plan for accounting purposes was at September 30, 2017.

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

	2017 Pension Benefits	2016 Pension Benefits	2017 Other Benefits	2016 Other Benefits
Discount rate at the beginning of the period	5.75%	6.00%	5.75%	6.00%
Rate of compensation increase	3.50%	3.75%	3.50%	3.75%
Rate of indexing	2.00%	2.25%	2.00%	2.25%

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, 2016	Additions	Disposals	As at December 31, 2017
	\$	\$	\$	\$
Facilities	55,973	631	(39)	56,565
Market systems and applications	306,993	3,825	-	310,818
Infrastructure and other assets	63,355	1,294	(32)	64,617
Meter data management/repository	36,911	906	-	37,817
Total cost	463,232	6,656	(71)	469,817

Accumulated Amortization

(in thousands of Canadian dollars)	As at December 31, 2016	Amortization Expense	Disposals	As at December 31, 2017
	\$	\$	\$	\$
Facilities	(24,301)	(1,694)	39	(25,956)
Market systems and applications	(263,546)	(12,134)	-	(275,680)
Infrastructure and other assets	(52,772)	(4,375)	32	(57,115)
Meter data management/repository	(29,190)	(2,824)	-	(32,014)
Total accumulated amortization	(369,809)	(21,027)	71	(390,765)

Net Book Value

(in thousands of Canadian dollars)	As at December 31, 2016	As at December 31, 2017
	\$	\$
Facilities	31,672	30,609
Market systems and applications	43,447	35,138
Infrastructure and other assets	10,583	7,502
Meter data management/repository	7,721	5,803
Total net book value	93,423	79,052
Assets under construction	11,624	21,742
Net tangible capital assets	105,047	100,794

In 2017, there were no adjustments to management's estimates of remaining asset service lives (2016 - \$nil). Interest capitalized to assets under construction during 2017 was \$170 thousand (2016 - \$260 thousand).

11. OTHER REVENUE

In its administration of the IAM, the IESO directs the investment of market funds in highly rated, short-term investments throughout the settlement cycle. The IESO is entitled to receive the investment interest and investment gains, net of investment losses earned on funds passing through the real-time market settlement accounts. The IESO is not entitled to the principal on real-time market investments.

The IESO recognized investment income earned in the market settlement accounts of \$3,441 thousand in 2017 (2016 - \$ 2,508 thousand).

12. SEGMENT EXPENSES

Expenses by object for 2017 are comprised of the following:

(in thousands of Canadian dollars)	2017 Core Operations	2017 Other Government Programs	2017 Smart Metering Entity	2017 Market Sanctions & Payment Adjustments	2017 Total
	\$	\$	\$	\$	\$
Compensation & benefits	114,502	212	2,803	2,151	119,668
Professional & consulting	19,516	2,445	14,209	407	36,577
Operating & administration	34,890	39	4,641	703	40,273
Amortization	18,204	-	2,825	-	21,029
Interest	1,801	-	238	-	2,039
Less: Recoveries	(3,776)	-	-	-	(3,776)
Total Expenses	185,137	2,696	24,716	3,261	215,810

In 2017, the IESO signed an agreement with the Minister of the Environment and Climate Change (MOECC) to deliver conservation and energy-efficiency programs. The IESO recognized government transfers revenue of \$2,696 thousand in 2017 (2016 - \$nil).

Expenses by object for 2016 are comprised of the following:

(in thousands of Canadian dollars)	2016 Core Operations	2016 Other Government Programs	2016 Smart Metering Entity	2016 Market Sanctions & Payment Adjustments	2016 Total
	\$	\$	\$	\$	\$
Compensation & benefits	107,402	-	2,661	2,180	112,243
Professional & consulting	18,810	-	14,659	770	34,239
Operating & administration	34,386	-	5,705	705	40,796
Amortization	19,577	-	3,861	-	23,438
Interest	1,341	-	540	-	1,881
Less: Recoveries	(3,848)	-	-	-	(3,848)
Total Expenses	177,668	-	27,426	3,655	208,749

13. RELATED PARTY TRANSACTIONS

The Province of Ontario is a related party as it is the controlling entity of the IESO. The OEFC, OEB, Hydro One, OPG and the MOECC are related parties of the IESO, through the common control of the Province of Ontario. Transactions between these parties and the IESO were as follows:

The IESO holds a note payable and an unsecured credit facility agreement with the OEFC (Note 8). Interest payments made by the IESO in 2017 for the note payable were \$2,018 thousand (2016 - \$1,841 thousand) and for the credit facility were \$nil (2016 - \$nil). As of December 31, 2017, the IESO had an accrued interest payable balance with the OEFC of \$nil (2016 - \$315 thousand).

Under the *Ontario Energy Board Act, 1998*, the IESO incurs registration and license fees. The total of the transactions with the OEB was \$3,146 thousand in 2017 (2016 - \$1,747 thousand).

The IESO performed connection and bulk electric system exception assessments for Hydro One in 2017. In 2017, the IESO invoiced Hydro One \$694 thousand (2016 - \$610 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 2017, the IESO incurred costs of \$184 thousand (2016 - \$188 thousand) for these services. As of December 31, 2017, the IESO had a net receivable balance with Hydro One of \$137 thousand (2016 - \$4 thousand).

The IESO performs connection assessment and approvals for OPG, delivers telecommunication services to market participants to connect to the real-time market systems and provides market-related training courses. In 2017, OPG was invoiced \$92 thousand (2016 - \$124 thousand). As of December 31, 2017, the IESO had a net receivable balance with OPG of \$61 thousand (2016 - \$5 thousand).

For 2017, the IESO invoiced MOECC \$2,257 thousand (2016 - \$nil). As of December 31, 2017, the IESO had a net receivable balance with MOECC of \$4,101 thousand (2016 - \$nil).

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, 2017, 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 \$659 thousand as at December 31, 2017 (2016 - \$602 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, 2017, would have resulted in a change for the year of approximately \$8,440 thousand (2016 - \$7,468 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, 2017, included no material items past due and substantially all of the balance was collected within 30 days from December 31, 2017. The long-term Canadian bond pooled fund is comprised of primarily investment-grade securities.

Market participants are required to provide non-voluntary pre-payments to reduce their electricity financial exposures as determined by the IESO. If collateral is not sufficient to remedy a default amount, the IESO undertakes a default allocation process that recovers the default amount from all remaining non-defaulting market participants.

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.

i) Market Settlements

In cases where a market participant fails to pay, the IESO will utilize credit facilities to settle the market. If the IESO has exhausted the availability of its credit facilities, then the IESO will pay market creditors on a pro rata basis in proportion to the amounts owed to each market creditor.

ii) Fair Hydro - regulatory asset

In accordance with the *Ontario Fair Hydro Plan Act, 2017*,

- the IESO will establish a regulatory asset as it continues to settle the market and recover Global Adjustment from customers, but as a result of the fair adjustment applicable to specified consumers the IESO collects less than the full amount of the Global Adjustment. The IESO records the shortfall together with the costs of financing the shortfall, the amounts charged to the IESO by the Fair Hydro Trust in respect of the carrying costs of the Fair Hydro Trust, when applicable, and certain other amounts, in a Deferred Global Adjustment Variance account (such amount a regulatory asset)
- the IESO utilizes its credit facilities to fund the amounts recorded in the Deferred Global Adjustment variance account, and
- the IESO is permitted to: a) transfer all or a portion of the regulatory asset to a financing entity, and b) after May 2021 fully recover any non-transferred asset from specified consumers.

As a result of the Fair Hydro Plan, the IESO will be required to borrow the amounts to be recorded in the Deferred Global Adjustment Variance Account (see the bulletin above). The IESO has a current \$2 billion line of credit with the OFA (see Debt Note 5) with a maturity date of September 30, 2022, to fund these amounts. The IESO expects to continue to transfer the regulatory asset to the financing entity and use the funds of such transfer to reduce the amounts borrowed. However, the financing entity is not obligated to purchase any transfer(s) offered by the IESO, and therefore the IESO is potentially subject to liquidity risk.

Pursuant to regulation the IESO will pay carrying costs to the Fair Hydro Trust monthly during the period beginning on December 1, 2017 and ending on July 31, 2021.

The IESO has provided security for the IESO's current monthly obligation to pay these carrying costs. The security provides the Fair Hydro Trust first priority over IESO receivables due from LDCs and electricity retailers.

15. COMMITMENTS

Operating commitments

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

As at December 31 (thousands of Canadian dollars)

	\$
2018	5,942
2019	4,972
2020	4,202
2021	718
2022	649

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.

17. COMPARATIVE FIGURES

Certain of the comparative figures have been amended to reflect adjustments made in the current year. As a result, cash has increased and accounts receivable has decreased by \$5,909 thousand. There was no impact to the annual surplus for the year ended December 31, 2016, or the net liabilities and accumulated deficit at December 31, 2016. Other figures have been reclassified to conform with the current year's presentation.

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
- 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 be adequate enough to attract and retain the skills and competencies necessary to carry out the IESO'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 comprised of 10 independent, external Directors, appointed by the Minister of Energy, with broad experience in the electricity industry and public sector organizations, and the President and Chief Executive Officer of the IESO. Their experience includes many years of dealing with human resource matters including the setting and implementation of compensation policies and programs.

In carrying out their mandate the Board members have access to the Management's analysis and recommendations as well as those 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. Annually 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 latter 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 the 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 the 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.

Prior to the amalgamation of the IESO with the OPA, the Ministry of Energy had retained the Korn Ferry Hay Group, a global management consulting firm, to evaluate and market price the CEO position for the new organization. Subsequent to the CEO's appointment on January 1, 2015, the decision was made to adopt a similar approach to evaluate and market price all other executive roles using the Hay point system.

As part of this process, the comparator group was redefined consistent with the recommendations of the Agency Review Panel (the Arnett report) and is currently comprised of 13 public sector and 11 private sector organizations, with the comparator data weighted on a 50/50 public/private sector basis. The comparator group represents a range of industries, core business activities and roles that are similar to IESO: electricity, energy, asset management, financial services, infrastructure procurement, engineering and large-scale, complex IT functions. The list of organizations can be viewed in the 2015 Annual Report. As part of the 2016 Executive Compensation Framework Regulation, the IESO completed a review of its executive compensation against public sector organizations. The document is available on the IESO website and will replace the current compensation plan for executives in 2018.

The job evaluation was independently conducted by the Hay Group using its point system and the following executive positions were covered by this review:

- President & CEO;
- VP Corporate Services & CFO;
- VP Market & Resource Development;
- VP Market & System Operations & COO;
- VP Conservation & Corporate Relations;
- VP Information and Technology Services and CIO;
- VP Planning, Legal, Indigenous Relations and Regulatory Affairs.

The 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 new salary structure was developed. The executive positions were then mapped into the new structure based upon their evaluated points.

Using the market information from the above peer group, the mid-point of the range of points for each executive salary grade was determined as the market price point for comparison purposes.

The mid-points of the new salary ranges were defined as the total direct cash compensation (annual base salaries plus annual short-term and long-term target incentive awards) of the hybrid market's price point at the 50th percentile for each salary grade.

The minimums and maximums of each salary range were calculated using typical salary range spreads at executive levels. In accordance with the *Broader Public Sector Accountability Act (2010)*, executive compensation rates have remained the same in 2017 and will be reviewed with the Executive Compensation Framework legislated effective 2018.

Program Description

The IESO program includes fixed and variable compensation, core and flex benefit plans, and pension provisions. IESO Human Resources staff participates in and reviews results from various compensation surveys and monitors economic trends such as inflation and unemployment rates, which impact on compensation, as well as internal compensation relativities. Based on this data and the IESO business priorities, Human Resources staff develops recommendations on compensation programs. External specialized compensation, benefit and pension consultants are utilized to ensure accurate, representative market compensation data is obtained, that current industry compensation trends are being utilized, as well as 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, political savvy and managing vision and purpose. Assessments are based upon demonstrated competency. Each individual is awarded a fixed compensation level within his or her band based upon his or her assessed competency.

Program Description – Variable Compensation

In order to promote a results orientation in the executive team, the variable pay plan forms part of the total compensation of executives. The IESO Board annually establishes a robust set of performance measures that are evaluated each year.

The IESO Board assesses the corporate performance results and the CEO's individual performance results. Under the plan, having assessed the results against target, the Board does have the ability to use some discretion in determining the final performance rating – however in the past, the Board has relied upon the directly assessed results 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 below the capped amount depending on the performance results achieved. The 2017 annual award was paid on December 29, 2017.

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. The flexible element provides all non-represented employees including executives the option of adjusting their benefits to meet their individual/family needs including vacation above core amounts, levels of life insurance, health coverage and other components.

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 Canadian Revenue Agency limits the amount of pension payable from a registered plan, the IESO has a secured supplemental employee retirement plan to provide required pension income to meet the commitments of the plan above that payable from the registered plan.

The plan also provides several options including member's life only or joint and survivor pensions, as well as pre-retirement death benefits to provide benefits to surviving spouses or beneficiaries.

Performance Measures & Impact on Compensation

The IESO annually establishes corporate performance measures relating to its business priorities during the 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 above the corporate results achieved each year impact on each executive's variable pay.

For 2017, the Board assessed the corporate results and determined that the IESO substantially met expectations. In addition to the corporate measures, each executive also had an individual set of measures and targets for the year that aligned with the corporate performance objectives and IESO's business priorities, and these were similarly assessed. The Board assessed the results of the CEO's performance and the CEO assessed the performance of the Vice-Presidents, which were 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 individual arrangements are sometimes established relating to terms of employment and the possibility of future termination.

Bruce Campbell, the CEO, retired in 2017 and was replaced by an external candidate after an extensive search was completed. Peter Gregg, the new CEO, began his tenure with the IESO on June 20, 2017.

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* (BPSAA) imposes a general freeze on designated executives' salary, variable pay, benefits and perquisites subject to very limited exceptions.

Following the amalgamation of the two former organizations (IESO and OPA) on January 1, 2015, the total 2015 variable performance pay amount awarded to all employees and office holders became the cap for total variable performance pay to be paid out in future years as long as the BPSAA remains in effect. The total variable compensation paid in 2017 was within this maximum.

Executive Compensation Structure Alignment

With the appointment on January 1, 2015 of Mr. Campbell as the CEO of the merged organization, the IESO aligned the compensation plan for its Vice-Presidents with the structure established for the new CEO. Accordingly, in both cases, the variable pay component was capped at 10% of fixed compensation with no deferral. There were no salary adjustments for executives in 2017.

The figures reported as 2017 "Salary Paid" in the 2017 Public Sector Salary Disclosure for the executives include the 2017 earned variable compensation that was paid on December 29, 2017.

Executive Compensation Statement

The table below details the annual compensation for the year ended December 29, 2017, for the executives listed.

2017 Summary Compensation Table

Name & Position	Base Salary	Variable Pay ²	Other Annual Compensation ³	Total Cash Compensation ⁴
Bruce Campbell ¹ Retired President & CEO	\$438,890	\$279,734	\$31,239	\$749,863
Peter Gregg ⁵ New President & CEO	\$319,846	\$33,233	\$5,389	\$358,468
Kimberly Marshall VP Corporate Services & CFO	\$268,460	\$18,792	\$433	\$287,685
Terence Young VP Conservation & Corporate Relations	\$307,037	\$27,633	\$19,783	\$354,454
Leonard Kula VP Market & System Operations & COO	\$313,705	\$31,288	\$7,315	\$352,307
Michael Lyle VP Planning, Legal, Indigenous Relations & Regulatory Affairs	\$269,562	\$21,565	\$5,830	\$296,957

1. Bruce Campbell retired in September 2017. Base salary and variable pay have been pro-rated to reflect time in job. Variable pay also includes a final payment in January 2017 from a closed deferred compensation plan.

2. 2017 earned variable compensation is calculated on annualized base pay and was paid in December 2017 (excluding the deferred payment described in (1)).

3. Represents remaining flex credits paid out at year end as taxable income.

4. These amounts will be reported as "Salary Paid" under the Annual Public Sector Salary Disclosure.

5. Peter Gregg hired June 20, 2017, as new CEO. Base salary and variable pay have been pro-rated to reflect time in job.

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

Executive Leadership Team

Peter Gregg
President and Chief Executive Officer

Sorana Ionescu
Acting 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

Kimberly Marshall
Vice-President, Corporate Services,
and Chief Financial Officer

Terry Young
Vice-President, Policy, Engagement
and Innovation

Board of Directors

Timothy O'Neill
Chairman of the Board
*Retired from BMO Financial Group,
where he served as Executive
Vice-President and Chief Economist;
President of O'Neill Strategic Economics*

Peter Gregg
President and Chief Executive Officer,
Independent Electricity System
Operator

Cynthia Chaplin
Director
*Former Vice-Chair of the Ontario
Energy Board*

Murray Elston
Director
*Former Chair of the Electricity
Distribution Panel; former President
of the Canadian Nuclear Association;
former Ontario Minister of Health*

Susanna Han
Director
Chief Financial Officer, LiUNA Local 183

Christopher Henderson
Director
*President of Lumos Clean Energy
Advisors; Executive Director of the
Indigenous Clean Energy (ICE) Social
Enterprise; author of Aboriginal Power
(2013)*

Margaret Kelch
Director and Chair, Human Resources
and Governance Committee
*Director of the Board, DST Engineering
Group, Chair of the Human Resources
and Governance Committee; former
Board member Nature Conservancy
of Canada, Chair of the Conservation
Committee; former Board member
Electrical Safety Authority, Chair of the
Regulatory and Human Resources and
Governance Committees; former Board
member Guelph Hydro; other various
board assignments*

Glenn Rainbird
Director
*Member, Board of Governors of the
Royal Military College of Canada and
the Board of Directors of VIA Rail
Canada Inc.; RCAF Honorary Colonel;
Officer of the Order of Canada; recipient
of the Queen Elizabeth II Diamond
Jubilee Medal*

Ersilia Serafini
Director
*President and CEO of Summerhill;
former Executive Director of the Clean
Air Foundation; former Vice-Chair of the
IESO's Stakeholder Advisory Committee*

Deborah S. Whale
Director
*Vice-President, Clovermead Farms
Inc.; Past Vice-President, Ontario
Farm Products Marketing Commission;
Vice-President, Grand River Raceway;
Livestock Research and Innovation
Corporation, Emerging and Critical
Issues Committee*

Carole Workman
Director and Chair, Audit Committee
*Former Chair of the Ottawa Hospital
Board of Directors; Board member of
Allstate Insurance of Canada; former
Director of Hydro Ottawa and several
other organizations*

* As of December 31, 2017

Stakeholder Advisory Committee

Brian Bentz (Chair)

President & Chief Executive Officer
Alectra
Representing: Distributors & Transmitters

Steve Baker

President
Union Gas Limited
Representing: Energy-related Businesses and Services

John Beaucage

Principal
Counsel Public Affairs Inc.
Representing: Ontario Communities

Darlene Bradley

Vice-President, Planning
Hydro One Networks Inc.
Representing: Distributors & Transmitters

David Butters

President & Chief Executive Officer
Association of Power Producers of Ontario
Representing: Generators

Brandy Giannetta

Regional Director
The Canadian Wind Energy Association
Representing: Generators

Julie Girvan

Consumers Council of Canada
Representing: Consumers

Jim Hogan

President & Chief Executive Officer
Entegrus
Representing: Distributors and Transmitters

Rachel Ingram

Vice-President & General Counsel
Rodan Energy Solutions
Representing: Energy Related Businesses and Services

Frank Kallonen

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

Ted Leonard

Vice-President &
Chief Financial Officer
NRStor Inc.
Representing: Energy-related Businesses and Services

Paul Norris

President
Ontario Waterpower Association
Representing: Generators

Mark Passi

Manager, Energy
Glencore
Representing: Consumers

Mark Schembri

Vice-President
Supermarket Systems & Store Maintenance
Loblaw Properties Limited
Representing: Consumers

James Scongack (Vice-Chair)

Vice-President, Corporate Affairs
Bruce Power
Representing: Generators

John Sherin

Representing: Ontario Communities

Terry Young

Vice-President, Policy,
Engagement and Innovation
Independent Electricity System Operator
Representing: IESO

Technical Panel

Chuck Farmer (Chair)

Director, Stakeholder & Public Affairs
Independent Electricity System Operator

Robert Bieler

Representing: Consumers

Ron Collins

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

David Dent

Manager, Strategic and Power Markets
Union Gas Limited
Representing: Natural Gas

Barbara Ellard

Director, Markets
Independent Electricity System Operator
Representing: IESO

Sarah Griffiths

Director, Regulatory Affairs
EnerNOC Ltd.
Representing: Other Market Participants

Robert Lake

Representing: Residential Consumers

Phil Lasek

Shell Canada Products
Representing: Market Participant Consumers

Sushil Samant

Director, Gas and Electricity Marketing
Northland Power
Representing: Market Participant Generators

Joe Saunders

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

Bill Wilbur

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

Julien Wu

Manager, Regulatory Affairs,
Quebec-Ontario
Brookfield Energy Marketing
Representing: Wholesalers

Bing Young

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

Technical Panel Secretariat

Jason Grbavac

John Rattray

Ontario Energy Board Liaison

David Brown

Senior Policy Advisor
Wholesale Power Policy,
Regulatory Policy Development
Ontario Energy Board

**Independent Electricity
System Operator**

1600-120 Adelaide Street West
Toronto, ON M5H 1T1

Phone: 905.403.6900

Toll-free: 1.888.448.7777

Email: customer.relations@ieso.ca

 [@IESO_Tweets](https://twitter.com/IESO_Tweets)

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