Rating Report

Independent Electricity System Operator

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DBRS

Insight beyond the rating.

Ratings

Debt	Rating	Rating Action	Trend
Issuer Rating	A (high)	Confirmed	Stable

Rating Update

On March 8, 2018, DBRS Limited (DBRS) confirmed the Issuer Rating of the Independent Electricity System Operator (IESO) at A (high) with a Stable trend. The rating is based on (1) the implicit support provided by the Province of Ontario (the Province; rated AA (low) with a Stable trend by DBRS), (2) the comprehensive legislative framework and (3) the reasonable regulatory regime for the IESO, under which it can recover all its operating costs. The IESO also maintains sufficient liquidity in the form of credit facilities to meet its objectives. DBRS notes that as the IESO is a non-profit entity, the key credit metrics under DBRS's "Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Methodology" are not applicable to the rating of the IESO.

On March 2, 2017, the Province announced the Fair Hydro Plan. Under the Fair Hydro Plan, electricity rates in the Province decreased 25% beginning July 1, 2017, with the IESO recording the monthly shortfall (as a result of the rate reduction) in a regulatory variance account and funding this by drawing on a $2 billion credit facility provided by the Ontario Financing Authority (the OFA, an agency of the Province). Any drawn balance on the credit facility is expected to be reduced as the IESO transfers the regulatory asset to the Fair Hydro Trust (rated AAA (sf) by DBRS) in exchange for cash equal to the amounts transferred. For any regulatory asset balance not transferred, the IESO will be allowed to levy a charge on consumers, subject to approval by the Ontario Energy Board (the OEB), for its full recovery beginning May 1, 2021.

The Fair Hydro Plan is not expected to have a material impact on the IESO's rating as (1) the regulatory asset balance accumulated to the IESO is expected to be transferred on a periodic, if not monthly, basis and is not expected to exceed the credit facility limit; and (2) under Bill 132, *Fair Hydro Act, 2017* (the Fair Hydro Act), the IESO has the right to fully recover any amount recorded in its regulatory variance account from consumers. DBRS notes that, while unlikely, the balance accumulated to the IESO could increase beyond the current credit facility limit as the Fair Hydro Trust is not obligated to purchase the regulatory asset from the IESO. The current rating factors in DBRS's expectation that in the event the accumulated regulatory asset does grow toward, or above, $2 billion, the IESO can increase the limit on its Province-provided credit facility due to the strategic importance of the IESO and the Fair Hydro Plan to the Province, and as any disruptions to the IESO could negatively affect the functioning of the electricity market and the Province.

Additionally, with the implementation of the Fair Hydro Plan, DBRS now believes that the Province provides implicit support to the IESO as: (1) the Province had historically provided indirect financial support in the form of credit facilities and debt through its agents, the OFA and the Ontario Electricity Financial Corporation (the OEFC; rated AA (low) with a Stable trend by DBRS); (2) the right for the IESO to recover any shortfall accumulated in its regulatory variance account was enacted by the Province through legislature (the Fair Hydro Act); and (3) the Province provided the $2 billion credit facility, through the OFA, to the IESO.

Financial Information

Independent Electricity System Operator	**12 mos. to Sep. 30**	**For the year ended December 31**				
(CAD millions)	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**
Total revenue	196	203	208	213	149	120
Total debt	120	90	90	129	124	133
Total accumulated surplus/(deficit) (1)	13	14	14	(103)	(129)	(136)

(1) Total accumulated surplus/(deficit) is after OPA amalgamation adjustments and a change in liability for OPEB past service costs not included in Net Income. IESO began accounting the unrecovered SME expenses and PSAB transition items in regulated assets instead of accumulated deficit in 2015.

Note: Pre-2014 results do not include the OPA.

Issuer Description

The IESO is a not-for profit corporation without share capital created by the *Electricity Act, 1998 (Ontario)*. The IESO is not an agent of the Crown for any purpose and its liabilities are not guaranteed by the Crown. The Province appoints the IESO's board of directors and the Crown in right of Ontario is entitled to the property of the IESO in the event of the IESO's dissolution (after debts and liabilities are paid). The Province is therefore effectively, if not legally, the IESO's owner.

Rating Considerations

Strengths

(1) **Highly supportive regulatory framework**
The full costs of the IESO's market operations and smart metering entity (SME) activities are passed through to all electricity market participants under a cost-of-service regime overseen by the OEB. These costs include (but are not limited to) unrecoverable payment defaults by electricity market participants. Under the *Electricity Act, 1998 (Ontario)* (the Electricity Act), the IESO can impose charges on consumers to recover its costs and payments related to procurement contracts. Recovery related to procurement contracts is deemed to be approved by the OEB.

(2) **Province as primary creditor shifts risks to electricity consumers**
The Province does not guarantee the debts or financial obligations of the IESO, but does provide credit facilities on reasonable commercial terms. The provision of the credit facilities demonstrates the Province is supportive of the IESO's objectives. In the event that the IESO incurs costs that are perhaps not fully prudent and reasonable, there is no share capital to absorb any potential shortfall in cost recovery. DBRS believes that it is more likely that the Province will use its powers to cause the costs to be passed on to consumers, rather than absorbing the losses by taking write-downs on Province-provided credit facilities.

(3) **Asset-light business mix**
The IESO does not own the typical assets of regulated utilities, such as electricity transmission and distribution networks, generation or treatment plants or pipelines. The IESO had net tangible capital assets of approximately $100 million (as of September 30, 2017) and it projects base capital expenditures averaging $47.4 million per year over the next three years. By normal utility standards, these are relatively small numbers and indicate relative absence of asset-related risks and operating costs.

(4) **Good access to external financing**
The IESO has broad and general authorization to borrow for corporate and liquidity requirements, which include funding variance accounts and settlement payment timing differences. Although significant funding is currently provided by agents of the Province, it does and can also borrow from and establish overdraft capacity and services with Canadian Schedule I, II or III banks.

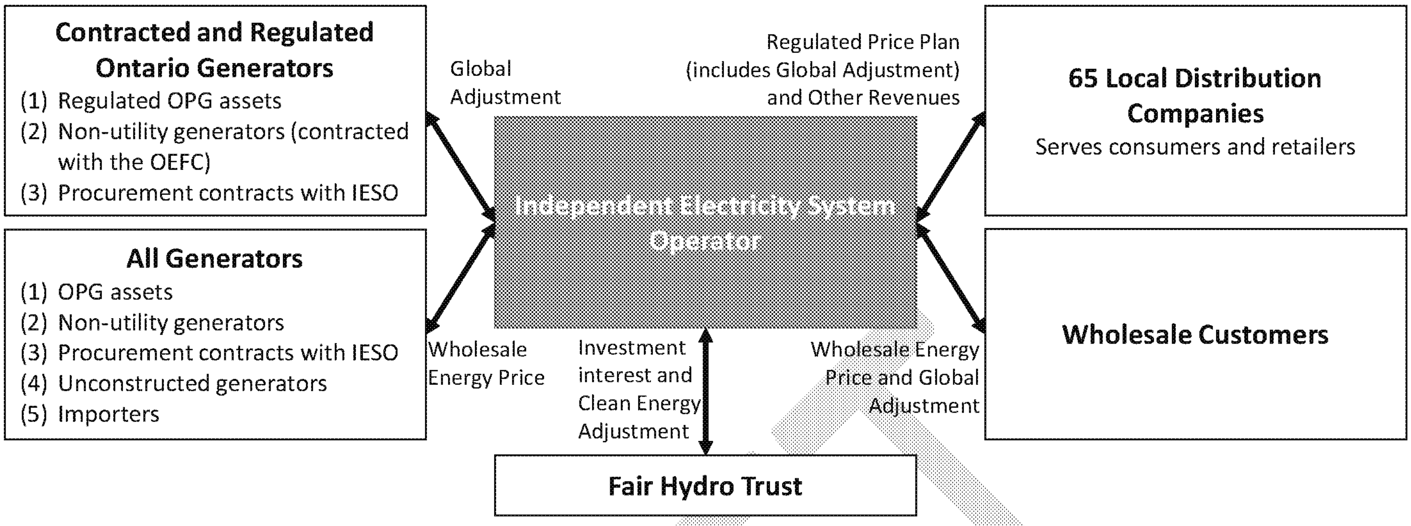
Challenges

(1) **Risk of political intervention or legislative changes**
The core functions of market operations and the SME incur a relatively low burden on electricity consumers. In contrast, the IESO is the legal counterparty to the direct procurement of significant levels of contracted energy generation at levels far above current market prices; this is a significant and growing cost passed through to Ontario electricity consumers. Other jurisdictions – notably Spain, Italy, the Czech Republic, Greece and Bulgaria – have enacted legal changes that retroactively change the environment for high-cost, contracted renewable energy generators. Although it is more likely that procurement contracts would be changed while enabling the IESO to still meet revised terms, the nature and effect of political intervention regarding energy procurement is very difficult to anticipate. Additionally, the Fair Hydro Plan is a creation of the Province through the Fair Hydro Act. DBRS believes it is unlikely the Province will amend or repeal the Fair Hydro Act though and reduce the ability for any party, including the IESO, to recover the regulatory asset as this could trigger a Protection Event under the Fair Hydro Trust's Change of Law Protection Agreement. Under this agreement, if a Protection Event occurs, the Province will be required under its limited guarantee to make payments in respect to the Fair Hydro Trust's currently outstanding $500 million 2018-1 Senior Notes (see the Fair Hydro Trust rating report dated February 9, 2018, for more details).

(2) **Higher debt balance associated with the Fair Hydro Plan**
The Fair Hydro Trust is not obligated to purchase the regulatory asset from the IESO; as such, the balance on the $2 billion credit facility from the OFA could increase significantly if the Fair Hydro Trust discontinues purchasing the regulatory asset. Additionally, the IESO cannot levy a charge on customers to recover the regulatory asset until May 1, 2021, at the earliest. DBRS does not expect the shortfall in the variance account held by the IESO to exceed $2 billion, but in the unlikely scenario it does, DBRS believes the IESO will be able to increase the limit on its Province-provided credit facility as any disruptions in the normal operations of the electricity market and the IESO will have a significant impact on the Province.

(3) **Absence of any loss-absorbing capital**
In the event that any of the IESO's expenses or liabilities are not recoverable from electricity market participants, either directly or through fees approved by the OEB, creditors are the only party with capital at risk. This gives no margin for error in terms of requiring full cost recovery, although the Province does have the ability (but not obligation) to purchase securities from or lend further funds to the IESO.

Summary Market Structure and Participants



IESO
The IESO directs the operation of the electricity transmission grid in Ontario and administers the market for electrical energy and ancillary services using that grid. Financially, it has two principal roles: to manage the settlement of transmitted electrical energy and to manage and settle the cash flows for non-market, contracted energy generation. Additionally, the IESO has also been designated as the SME to oversee and administer the Province's smart metering initiative.

As at September 30, 2017, the IESO was the direct counterparty for over 29,181 procurement contracts representing 24,324 MW of operational capacity. A further 3,016 MW of contracted capacity is under development. These responsibilities were inherited from the Ontario Power Authority (OPA) when it merged with the IESO on January 1, 2015.

Ontario Electricity Financial Corporation (OEFC; not shown)
The OEFC is an agent of the Crown in right of Ontario. It plays two roles with respect to the IESO and the electricity market structure in Ontario. First, it provides a $160 million Revolving Credit Facility and a $120 million Fourth Refinancing Note to the IESO. Both debts mature on June 30, 2020. Second, the OEFC is the counterparty to Non-Utility Generator contracts, for which the IESO manages the financial settlement through the Global Adjustment process.

Ontario Financing Authority (OFA; not shown)
The OFA is an agent of the Crown in right of Ontario. It has a $475 million Credit Agreement with the IESO. This is an operating line of credit, originally established for the OPA. In 2017, the IESO entered into an additional Credit Agreement with the OFA for a $2 billion credit facility to support the implementation and participation under the Fair Hydro Act.

Fair Hydro Plan
The Fair Hydro Act came into effect on June 1, 2017. Under Ontario's Fair Hydro Plan, electricity rates decreased by 25% effective July 1, 2017 (including an 8% HST rebate introduced in January 2017). Rate increases between May 1, 2018, and April 30, 2019, will also be limited by the rate of inflation. While not included in the Fair Hydro Act, the Province has indicated that until 2021, rate increases will be limited to inflation. Participants in the electricity market (such as distributors, transmitters and generators) will be kept whole during this period, resulting in a shortfall.

Each month, the IESO will determine the total shortfall as a result of the rate reduction, and together with the costs of financing the shortfall, it will record the combined amount in a variance account. Under the Fair Hydro Act, the IESO has the right to recover the balance recorded in the variance account from consumers, and such right is represented in the form of a regulatory asset. The IESO has entered into a new credit agreement of $2 billion with the OFA to finance the regulatory asset. The IESO may transfer portions of the regulatory asset to the Fair Hydro Trust in exchange for the cash purchase price equivalent to the amount transferred; the IESO will then use the proceeds to reduce the outstanding balance on its OFA credit facility.

The Fair Hydro Trust, however, has no obligation to purchase the regulatory asset from the IESO. Should the Fair Hydro Trust choose not to continue purchasing, the regulatory asset will grow on the IESO's balance sheet. The IESO will likely continue to fund the regulatory asset through the OFA credit facility until it can be recovered from consumers. Under the Fair Hydro Act, the IESO has the right to recover the regulatory asset, if not transferred to the Fair Hydro Trust, beginning May 1, 2021, from consumers through a charge to be approved by the OEB. The Fair Hydro Trust will recover its regulatory asset through a Clean Energy Adjustment charge beginning May 1, 2021.

Regulatory Framework

Licensing and Regulation by the Ontario Energy Board

The OEB has granted two licenses to the IESO:

- A license to (1) direct the operation of the transmission system(s) in accordance with Agreements and the Market Rules, (2) exercise its powers and perform its duties under the Electricity Act and (3) to operate the IESO administered markets. This license terminates on September 25, 2033.
- A Smart Metering Entity License to perform its duties under the Electricity Act as the exclusive authority to provide billing quantity data based on data received from all smart meters in Ontario. This license terminates on December 31, 2021.

The key provisions of the market operations licence include:

- The IESO may impose fees and charges to recover the cost of its activities in accordance with an order of the OEB, or as permitted by law.
- The IESO shall establish and maintain variance accounts to record all amounts payable or receivable by it.

The key provisions of the Smart Metering Entity licence include:

- The IESO shall keep its financial records associated with the smart metering initiative separate from the financial records associated with activities covered under the other license.
- The IESO may only charge for Smart Metering Entity services in accordance with a Rate Order of the OEB.

DBRS considers the IESO's separation of its independent system operator (ISO), procurement and SME activities as a material consideration in its rating. DBRS notes that the SME activities are not mandated to be kept separately, but are regulated by the OEB in a manner similar to the function of the ISO. As such, DBRS does not believe this represents a material incremental business risk.

Fee Approvals

The OEB can either approve the IESO's proposed expenditures, revenue requirements and fees, or it can refer the proposals back to the IESO for further consideration. The OEB cannot specifically deny proposals, and a lack of approvals for proposals means that previously agreed fees may either remain in effect or can be changed by order on an interim basis.

The IESO typically files its annual revenue requirement to the OEB following the approval of its three-year business plan by the Minister of Energy. In 2016, the Minister of Energy requested that the IESO resubmit its 2017–2019 Business Plan in order to include resourcing requirements for the Market Renewal project. The IESO resubmitted its 2017–2019 Business Plan on February 1, 2017, and was approved by the Minister of Energy on March 21, 2017.

The OEB issued its decisions on the IESO's Application for approval of 2017 revenue requirement, expenditures and fees on December 14, 2017. In its decisions, the OEB approved:

(1) Revenue requirement and expenditures of $190.8 million for 2017;

(2) For the $10 million operating reserve to be maintained; and

(3) Usage fees of $1.2187/MWh for domestic customers and $0.9872/MWh for export customers, effective as of January 1, 2017.

The IESO is expected to file an application for 2018 usage fees following the approval of its 2018–2020 Business Plan by the Minister of Energy.

For the activities under the Smart Metering Entity license, as per the OEB Decision and Order of March 1, 2018, the IESO shall collect a SME Charge of $0.57 per Residential and General Service <50kW customer per month for the period January 1, 2018, to December 31, 2022. The SME Charge is designed with the objective of exactly matching the total costs of approximately $170.6 million over the authorized period.

Procurement and Contract Management Activities

Since January 1, 2015, the IESO has inherited the Procurement Contracts signed by the OPA. These contracts were executed under the following schemes (with the start dates shown):

- 2004 – Renewable Energy Supply (RES) I
- 2005 – Bruce Power Refurbishment Implementation Agreement (BPRIA), Accelerated Clean Energy Supply (ACES), RES II and Early Movers Clean Energy Supply (EMCES)
- 2006 – Renewable Energy Standard Offer Program (RESOP)
- 2007 – Hydroelectric Energy Supply Agreement (HESA), RES III
- 2008 – Combined Heat and Power (CHP) I
- 2009 – CHP III, Hydroelectric Contract Initiative (HCI), Feed-in Tariff (FIT) 1 and microFIT
- 2010 – Atikokan Biomass Energy Supply Agreement (ABESA), Combined Heat and Power Standard Offer Program (CHPSOP)
- 2011 – microFIT, Green Energy Investment Agreement (GEIA)
- 2012 – FIT 2/microFIT program review
- 2013 – Hydroelectric Standard Offer Program (HESOP), Non-Utility Generator (NUG)
- 2014 – Thunder Bay Biomass Energy Supply Agreement (TBESA), FIT 3
- 2016 – Amended and Restarted BPRIA, Large Renewable Procurement (LRP)
- Lennox Energy Supply Agreement (LESA)
- Northern York Region Peaking Generation Contract (NYRP)

The liabilities of these Procurement Contracts and the cash flows settling them are not shown in any of the IESO's publicly available financial statements. The Electricity Act specifies that there is deemed approval by the OEB for the recovery of costs and payments related to Procurement Contracts from electricity consumers. This legislated provision takes the cost pass-through mechanism outside of regulatory oversight. According to the Electricity Act, where the IESO enters into a contract, arrangement or agreement based on the Market Rules, these are not a Procurement Contract and hence are directed by the provisions of the Market Rules.

The legislative framework for the pass-through of Procurement Contract costs and payment is very different from the IESO's activities in the wholesale market, and as the SME, the only other practical separation of activities are the keeping of separate accounts and restrictions on confidential information flows. Legally, there is only one IESO. In the event of any political interference with the Procurement Contract pass-through mechanism, DBRS believes that there is the potential for the IESO's other activities to be affected.

Financial Status

The IESO does not include financial information related to its procurement and contract management activities in its consolidated financial statements. As per the Electricity Act, these activities should be kept separate. The IESO maintains separate general ledgers for its fees and expenses, and for its market functions.

The IESO does provide a separate Statement of Operations and Accumulated Deficit for each of its OEB regulated segments: (1) Wholesale market operations; (2) Market Sanctions and payment adjustments; and (3) Smart Metering Entity.

As the IESO is a not-for-profit corporation without share capital, financial metrics based on the Statements of Operations are not a material consideration for the rating. This is an exception to the applicable DBRS methodology, which is primarily focused on profit-seeking enterprises which own and operate utility assets, as evidenced by the Financial Risk Assessment metrics listed in the methodology. However, the methodology's approach with respect to financial policy and liquidity is applicable.

Changes in the overall surplus generated by the IESO and the accumulated deficits or surpluses it runs are relevant to the rating in terms of assessing the adequacy of liquidity available. In parallel, the size of the credit facility to cover procurement contract imbalances is also highly relevant. The maximum drawn under the $975 million Revolving Credit Facility with the OFA has been $260 million. The $160 million Revolving Credit Facility with the OEFC was undrawn at September 30, 2017.

IESO (Wholesale and SME Activities)	**12 mos. to Sep. 30**	**For the year ended December 31**				
(CAD millions)	**2017**	**2016**	**2015**	**2014**	**2013**	**2012**
Wholesale revenue	169	176	182	167	119	120
SME charge	26	27	26	46	30	0
Total revenues	**196**	**203**	**208**	**213**	**149**	**120**
Wholesale operating costs (1)	(167)	(160)	(166)	(173)	(107)	(104)
SME costs	(22)	(23)	(22)	(22)	(21)	(19)
Other expenses	0	0	0	(11)	0	0
Other income (2)	6	6	7	5	5	1
EBITDA	**13**	**26**	**28**	**13**	**26**	**(1)**
Wholesale depreciation	(18)	(20)	(18)	(17)	(14)	(13)
SME depreciation	(4)	(4)	(4)	(5)	(4)	(4)
Net interest expense	(2)	(2)	(3)	(2)	(2)	(2)
Surplus before non-recurring items	**(12)**	**0**	**4**	**(11)**	**5**	**(19)**

(1) Customer Education and Market Enforcement expenses are included in wholesale segment.
(2) Other income is Market Sanctions and Payment Adjustments revenue and Interest & Investment Income.
Note: Pre-2014 results do not include the OPA.

2016 Summary

The IESO generated an annual surplus before non-recurring items of $0.2 million, representing the surplus from market sanctions and payment adjustments. Beginning January 1, 2016, the IESO began recognizing two regulated assets: (1) Unrecovered smart metering expenses, and (2) Unrecovered PSAB transition items. As under regulation, the IESO is allowed to recover all expenditures for the SME, annual surplus/(deficit) for the SME will be $0.

For the nine months ended September 30, 2017, the IESO recorded a deficit of $2.3 million for its Wholesale market operations, and a deficit of less than $0.1 million in Market Sanctions and payment adjustments.

Outlook

The OEB has approved for the IESO to apply its 2017 usage fees on an interim basis as of January 1, 2018, until the IESO's application for 2018 rates are submitted and approved. The IESO plans to hold the IESO's revenue requirement for 2018 at the 2017 approved level ($190.8 million).

Balance Sheet Analysis

The balance sheet below excludes all assets and liabilities related to the IESO's procurement activities. Market sanctions and payment adjustments are included in the "Wholesale" category. Effective January 1, 2016, the IESO changed its accounting policy regarding the recognition of market accounts assets and liabilities on its balance sheet. The market accounts reflect the assets and liabilities, and amounts due to and from market participants, held by the IESO on behalf of the IESO-administered markets.

Independent Electricity System Operator

(CAD millions)	**Sep. 30**	**Dec. 31**	**Dec. 31**
Assets	**2017**	**2016**	**2015**
Cash & equivalents	70	33	15
Accounts receivable	39	31	33
Prepaid expenses & other	7	7	6
Total current assets	116	71	54
Net fixed assets	100	105	104
Regulatory assets/liabilities (1)	46	65	88
Investments & others	43	105	126
Market accounts - Regulatory assets (2)	767	0	0
Market accounts - Other assets (2)	1,286	1,662	1,463
Total assets	2,356	2,008	1,835
Liab. & Accumulated Surplus			
Debt	120	90	90
Accounts payable	46	52	59
Pension & benefit liab.	124	125	121
Market accounts - Market debt (2)	615	151	13
Market accounts - Other liabilities (2)	1,437	1,511	1,451
Total liabilities	2,343	1,928	1,733
Accumulated surplus/deficit	13	14	14
Total liab. & accumulated surplus	2,356	1,943	1,747

(1) Consists of unrecovered SME expenses and PSAB transition items.
(2) Market accounts reflect assets, liabilities and amounts due to and from market participants held by the IESO on behalf of the IESO-administered markets.

The $120 million of debt held by the IESO is in the form of a note payable with the OEFC, repayable in full on June 30, 2020. DBRS notes that, until 2013, debt at the IESO had been increasing in order to fund capital expenditures and to fund the SME deficit.

Regulatory asset of $767 million of the Market represent the total shortfall from the Fair Hydro Plan as of September 30, 2017. In December 2017, approximately $980 million was transferred to the Fair Hydro Trust (approximately $1 million remained on the IESO's balance sheet following the transfer).

Market debt of $615 million as at September 30, 2017, represent amounts drawn on the $2 billion credit agreement with the OFA.

Overview of Debt Facilities and Borrowing Papers

DBRS has not been mandated to provide ratings of the IESO's specific debt facilities. The five facilities are:

- $475 million Revolving Credit Facility provided by the OFA
- $2 billion Revolving Credit Facility provided by the OFA
- $150 million Default Facility Agreement with The Toronto-Dominion Bank
- $120 million Fourth Refinancing Note provided by the OEFC
- $160 million Revolving Credit Facility provided by the OEFC

DBRS notes that the existence and any outstanding balances under the OFA and The Toronto-Dominion Bank facilities are not disclosed in the IESO's corporate financial statements. The OFA and Toronto-Dominion Bank facilities are for the use of the IESO-administered market.

The key terms of the four debt facilities provided by agents of the Province indicate that they are on normal commercial terms and could be provided by a commercial lender. DBRS has analysed the terms and has concluded that none of those debt facilities include any form of non-arm's-length financial support for the IESO.

The IESO has a Treasury Policy, approved by the Province's Minister of Finance, explicitly authorizing it to borrow from any Schedule I, II or III Canadian bank. The IESO's borrowing authority and general parameters are also embedded in a regulation, made under the Electricity Act, specifying it may only borrow for the purpose of funding corporate requirement and liquidity purposes. DBRS considers this a very broad and appropriate authorization.

The Electricity Act provides for authorization to be given to the Minister of Energy to purchase securities of or make loans to the IESO. Funds for this purpose may be paid out of the Consolidated Revenue Fund. Hence the Province has the power, but is not required, to directly provide funds (in a manner that has not been predetermined) to the IESO.

Rating History

	Current	2017	2016	2015	2014	2013
Issuer Rating	A (high)	A (high)	A (high)	A (high)	NR	NR

Previous Action

- Confirmed, March 8, 2017.

Previous Report

- Independent Electricity System Operator: Rating Report, March 15, 2017.

Notes:
All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrs.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.