

Memorandum

April, 2017

MEMORANDUM TO: The Board of Directors
of the Independent Electricity System Operator

FROM: Jeannette Briggs
Director, Settlements

RE: Briefing Note – Metering and Settlements

The purpose of this memo is to provide an overview of the metering and settlements activities that the IESO undertakes within the IESO-administered market, under government regulation, or on behalf of the Ministry of Northern Development and Mines (MNDM).

In settling transactions within the IESO-administered market, under government regulation, the IESO receives money from participants (e.g. local distribution companies, directly connected wholesale consumers, embedded wholesale consumers, retailers) or provincial revenues, and pays that money out to other participants (e.g. generators, importers, program participants).

Metering and Meter Data Management

There are 4,140 revenue meters within the IESO-administered market, each of which collects multiple pieces of information on a five minute basis. This information is collected on a nightly basis by the IESO either via telephone lines, or increasingly, over the internet. The IESO collects in excess of 8 million separate pieces of information every night.

If the IESO is unable to obtain information from a meter, or has reason to believe that the meter information that is obtained is inaccurate, the IESO works with the metering service provider to resolve the issue via a meter trouble report. In 2016 the IESO issued 5,821 meter trouble reports down from approximately 10,000 in 2013 which is testament to IESO process improvements and communication protocols.

The 4,140 meters are contained within approximately 2,000 metering installations comprised of both main and alternate meters. A metered market participant is responsible for the overall metering installation, the individual meters contained within the installation, and the provision of accurate metering data (local distribution companies are examples of a metered market participant). The metered market participant must either be registered as a metering service provider, or must contract with a metering service provider, to undertake certain activities, including maintaining the metering installation, registering the meter with the IESO, and responding to meter trouble reports. The IESO is responsible to establish metering standards, registering meters including reviewing all supporting information and documentation, auditing metering installations, and registering metering service providers.

Market Settlements

Statements

The IESO issues two settlement statements to every market participant for activities in the physical market **for each trading day**.

The first settlement statement, called the preliminary settlement statement is provided in order to allow market participants to review the data which the IESO will use to determine all of the participant's charges associated with their transactions for that day. The preliminary settlement statement is issued ten business days after the trading day to which it relates.

If the market participant disagrees with the IESO, the market participant must file a notice of disagreement within four business days of the issuance of the preliminary statement. The notice of disagreement will be investigated by the IESO.

The second settlement statement for a trading day, called the final settlement statement, is issued twenty business days after the trading day and may include changes due to the resolution of a notice of disagreement or any revised data.

A settlement statement may contain up to four generic types of transactions:

- Costs or revenues related to the operation of the IESO-administered market (e.g. energy and energy related charges);
- Costs or revenues that the IESO collects and disburses under an Ontario Energy Board ("OEB") order (e.g. transmission charges, Rural & Remote electricity Rebate Program);

- Costs or revenues that the IESO collects and disburses under government legislation or regulation (e.g. global adjustment); and
- Costs or revenues related to programs that the IESO settles on behalf of Ministries for regulatory programs (e.g. Ontario Electricity Support Program, Ontario Rebate for Electricity Consumers).

Settlement statements reflect energy consumption or energy generation based on either metering data, or inter-tie schedules for participants that transact on the inter-ties. The price is either the hourly Ontario energy price or the five-minute price for real-time energy. Uplift charges associated with the operation of the IESO-controlled grid, such as congestion management settlement credits are calculated on an hourly or monthly basis, depending upon the type of uplift, and appear on the appropriate preliminary settlement statement. Transactions settled as a result of an OEB order, government legislation or regulation, or on behalf of Ministry regulatory programs are calculated and appear on a preliminary statement consistent with the specific requirement. The settlement statement and associated data files provide transparency to IESO's settlement processes, in that all the input details used in calculating the charges are provided to market participants.

The IESO issues approximately 179,500 settlement statements annually. The volume of information contained within a daily settlement statement issued to a market participant varies greatly depending upon the nature and size of the market participant.

Invoices

Invoices are issued monthly to market participants for the approximately \$17.5 billion/year wholesale electricity market. Invoices are issued ten business days after the end of the calendar month. Each invoice reflects a combination of "final settlement statements" for the first half of the month and "preliminary settlement statements" for the second half of the month plus any adjustments and monthly charges. Participants who owe money to the IESO must make payment within two business days of the invoice being issued, while the IESO must make payment to participants' owed money within four business days of the invoice being issued.

Notice of Disagreement

As mentioned previously, a market participant may submit a notice of disagreement if they disagree with information contained on a preliminary settlement statement, which the IESO will then investigate. A market participant may not disagree with the calculation of prices or the equations used in calculating charges but may disagree with

meter readings, the application of the price, schedules, quantities utilized for physical bilateral contracts, and meter data allocation among other items.

There are three possible options with respect to the resolution by the IESO of a notice of disagreement:

- Agree with the participant and accept the proposed solution by adjusting the final settlement statement for the trading day in question;
- Agree with the basic issue but propose and implement a different solution from the one proposed by the participant and adjust the final settlement statement for the trading day in question; or
- Disagree with the participant and take no action to revise the preliminary settlement statement in which case there would be no adjustment to the final settlement statement for the trading day in question.

The IESO attempts to resolve as many notices of disagreement as possible prior to the issuance of the final settlement statement. For notices of disagreement that do not get resolved prior to the issuance of the final settlement statement, the IESO must complete its investigation within fifteen business days of the issuance of the final settlement statement for the trading day in question. At that time the IESO will follow one of the three courses previously described. In 2016 the IESO received 1,025 notices of disagreement of which approximately 31% resulted in a subsequent adjustment.

If a market participant disagrees with the IESO's resolution of the notice of disagreement the market participant may submit a notice of dispute, and take the issue to the dispute resolution process. Disputes related to settlement statements must be submitted within twenty business days from when the final settlement statement was issued for the trading day in question. There were six settlement disputes filed for 2016 trade dates, one was withdrawn, and the remaining continues to be under legal review.

Transmission Rights

Settlement statements and invoice processes for the auctions within transmission rights market are essentially the same as for the physical market, with the exception of the timing. Settlement statements and invoices are issued more quickly for the transmission rights auctions than for the physical market as no meter data is required. Preliminary statements are issued on the second business day after the trading day and final statements are issued on the sixth business day after the trading day. Similar to the physical market, market participants may also utilize the notice of disagreement and dispute resolution process to seek changes to issued settlement statements. For the

transmission rights auction, a market participant must file a notice of disagreement within two business days of when the preliminary statement is issued, while a notice of dispute must be filed within twenty business days of the final settlement statement being issued.

The timeline for invoices for the transmission rights market is different than for the real-time energy market as it uses a one-week billing period and invoices are issued six business days after the end of the billing period.

Other Settlement Activities

The IESO also performs settlement activities on behalf of Ministries:

- Northern Industrial Electricity Rate (NEIR) program under a service level agreement with Ministry of Northern Development Mines. The NEIR program provides a rebate of up to \$20 per MWh of energy consumption to qualifying businesses in northern Ontario that commit to increasing energy efficiency.
- Ontario Electricity Support Program (OESP) as of January 1, 2016, monthly electricity bills for eligible low-income families were reduced by \$20 to \$50 per month based on a 'sliding scale' which links household income, family size and, for some, energy use. As part of the Ontario Fair Hydro Plan, this program eligibility will be expanded to increase credits to cover more low income Ontarians. OESP is funded by provincial revenues.
- Ontario Rebate for Electricity Consumers (OREC) is an 8% reduction of the bills of Regulated Price Plan (RPP) eligible consumers plus a small additional group of consumers defined under regulation. OREC is funded by provincial revenues
- Rural or Remote electricity Rate Protection (RRRP) for Hydro One R2 residential customer receive a rate subsidy starting July 1, 2017 funded by provincial revenues.
- First Nations On-Reserve Delivery Credit eliminates the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. This credit begins July 1, 2017 funded by provincial revenues

The IESO undergoes a comprehensive external audit on the controls for its settlement processes and procedures (Canadian Standard for Assurance Engagements 3416) every two years. We have recently completed an unqualified audit for period January 1, 2017 to June 30, 2017. A final report was made available for Board review in August 2017.

I would be happy to answer any questions that you may have regarding Settlements.

Yours truly,

A handwritten signature in cursive script, reading "J. Briggs".

Jeannette Briggs
Director, Settlements