

OCTOBER 2022

Interruptible Rate Pilot

Initial Design Elements

System and Sector Development
Innovation, Research, and Development

Purpose & Agenda

- **Purpose:** To share initial design considerations, including rate design options and selection process, with potential participants to solicit feedback
- **Agenda:** (1) IESO to present on overall pilot design; and
(2) Brattle to present on rate design options
- **IESO presentation outline:**
 - Minister's letter
 - Project milestones
 - Pilot rate structure
 - Draft eligibility criteria
 - Applications & selection
 - Interruptions conditions
 - Agreements & settlement
 - Exiting the pilot
 - Next steps

August 29, 2022 Minister's Letter

Some key points from the [Minister's letter](#) include:

- "... support a more efficient electricity grid that would reduce costs to consumers and reduce greenhouse gas emissions across the province..."
- "... work with the Ministry towards designing a three-year interruptible rate pilot..."
- "... the pilot would begin on July 1, 2023..."
- "... the pilot should be designed with the potential for a permanent program in mind."
- "... use of a competitive process to select participants that employ multiple criteria..."
- outlines three pricing design options that should be presented to stakeholders
- asks IESO to report back to the Minister "... on a detailed pilot design and proposed participant selection process by December 9, 2022."

Potential Benefits of the Pilot

- Minister's letter requires that the pilot design provides "... a system benefit (i.e., peak demand reduction) and a benefit to pilot participants, while minimizing potential cost transfers to other electricity customers..."
- Potential benefit to the system is expected to include:
 - Additional demand reductions given advance notice of interruption events
 - Less planning uncertainty and system cost given contract demand is firm
 - Less operational forecasting uncertainty given IESO identifies events
 - Opportunity to reduce cost transfers among electricity customers

Potential Benefits for Participants

- Opportunity to manage global adjustment (GA) costs
- Eliminate the need to predict and chase top five peaks hours (which is a feature of the Industrial Conservation Initiative (ICI))
- Added certainty and predictability by:
 - Establishing a maximum number of hours for load interruption
 - Providing day-ahead advance notice of when load interruption is required
 - Allowing participant loads to opt-in for shorter advance notice (e.g., <3 hours notice)
- Clearly defined and predictable consequences for failing to curtail when interrupted
- Charges may be less (or “savings” greater) under the Interruptible Rate Pilot than ICI participation where one or more of the top five peak hours in a base period is missed

Key Pilot Features

Pilot participants are charged at the pilot rate in exchange for agreeing to consume at a contract demand* level during system or local events as identified by IESO

- Size: 200 MW of total interruptible load in pilot
- Operational start: July 1st 2023
- Length: three years with potential to inform a permanent program
- Eligibility: transmission-connected load facilities and some hydrogen producers
- Selection: based on price bid, load reduction plans and diversity in location and sector
- Agreement: a “contract for differences” between status quo and pilot settlement
- Max reduction hours: up to a certain number of hours in each pilot year (e.g., 40 hours)
- Advance notice: day-ahead & optionally near real-time (e.g., <3 hours ahead)

Tentative Project Milestones

Milestone	Planned Completion Date
Focused consultation sessions	Oct 2022
Follow-up session – responses to feedback	Nov 2022
Report-back to ENERGY deadline	Dec 9, 2022
Draft pilot rules & agreement posted	Dec 2022/Jan 2023
Webinar re: draft documents	Dec 2022/Jan 2023
Final rules, application & agreement posted	Jan 2023
Application window	Jan – Feb 2023
Application review	Mar – Apr 2023
Agreement execution	May 2023
Successful applicants announced	May 2023
Pilot launch	Jul 1, 2023

Pilot Rate Structure

- As per Minister's letter, IESO seeking input on three rate design options:
 1. HOEP* + a demand charge;
 2. HOEP + a volumetric charge + a demand charge; and
 3. A volumetric all-in commodity charge
- Brattle's deck will also present and seek input on two additional rate design options:
 4. HOEP + fixed charge + demand charge; and
 5. HOEP + two-part demand charge
- Under each option, participants will commit to contract demand (i.e., a maximum level of demand during IESO identified events), and non-performance charges will apply if the commitments are not met
- Participants will compete to participate in the program based on a price bid, i.e., the amount of global adjustment they are willing to pay, among other selection criteria

Draft Eligibility Criteria

To be eligible for the pilot, a load facility must:

- be connected to the transmission system, except for hydrogen producers
- have a single connection point to the electricity system (e.g., no aggregations)
- be a market participant authorized in the IESO-administered markets
- have peak demand of at least [5]* MW, except for hydrogen producers
- have the capability to interrupt at least [20-50%] of its peak demand for four hours
- have a maximum of [20-50] MW of curtailable demand
- participate with full load facility (i.e. no “partial participation”)
- have been existing as of May 1, 2022, except for hydrogen producers
- not be the subject of an existing contract/obligation for energy/capacity/ancillary services during the pilot term, unless otherwise approved by the IESO (case-by-case)

Applications & Selection Process

- IESO will make an application form available, seeking information and materials, including inputs for competitive selection of participants
- Ranking expected to be based on four criteria: (1) price bid, (2) quality of load reduction plans, and consideration for diversity across (3) industrial sectors (NAICS) and (4) electrical zones
- Inclusion of an option for participants to commit to short-notice interruptions (e.g., <3 hours notice) is being considered with either (i) financial incentives as part of the rate design, or (ii) selection criteria for ranking pilot applications
- Price bid will depend on the pilot rate structure option selected
- Ranking would be in order of price bid, adjusted by factors that depend on the scores associated with the other three criteria

Interruption Conditions & Process

- Pilot will have pre-defined system stress conditions when the IESO has the option of triggering interruptions
- IESO is considering having participants be subject to a maximum of [40-100] interruption hours and [10-25] events per year
- If a proponent elects to be subject to short-notice interruptions, the interruption hours would be split between day-ahead and close-to-real time notice
- The day-ahead notices will align with the IESO's day-ahead processes and the close-to-real time notices will align with the IESO's pre-dispatch processes
- Interruption notices are expected to be communicated to participants via IESO's public website and emails to pilot participants' contact persons

Interruption Conditions Expanded

- IESO will have the *option* of interrupting participating facilities when any of certain pre-defined system stress conditions are realized, such as:
 - Demand: When day-ahead peak demand forecast exceeds (e.g., 21,000 MW) or exceeds zone-level demand thresholds
 - Emergencies: When under-generation advisory notice or NERC Energy Emergency Alert 1 (EEA-1) is issued
 - Market price: When forecasted HOEP or zone-level shadow prices exceed (e.g., \$100/MWh)
- IESO would be able to update the conditions from time-to-time throughout the pilot, which would be communicated to pilot participants
 - Maximum number of interruption hours would however not be subject to change

Agreements & Settlement Process

- Successful proponents will be offered a pilot agreement, which will outline the “contract for differences” settlement between a status quo settlement and pilot rates
- IESO considering whether all pilot participants should be required to opt out of Class A and become Class B
- Pilot participants commit to firm contract demand during pilot interruption hours
 - If actual demand is greater/lower than a [$\pm 5\%$] dead-band around the contract demand, then non-performance/incentive rates would apply
- Monthly settlement will be based on the contract demand and pilot rate structure on an ex-ante basis (before events) but non-performance will be ex-post (after events)
- Minister’s letter notes: “The commodity price paid by pilot participants should be set at a level that exceeds the anticipated commodity price paid by Class A consumers, on average”

Exiting the Pilot

- Minister's letter notes that, "For participants that return to ICI upon completion of the pilot, commodity charges should be as consistent as possible with charges prior to participation in the pilot."
- An annual opportunity to exit the pilot will be provided by April 30 of each year of the 3-year pilot (allowing exiting participants to enter an ICI base period from May 1)
- Given pilot interruption and settlement would commence on July 1, 2023, Class A loads entering the pilot would not be settled on demand levels and Peak Demand Factors (PDFs) set during the 2022-2023 base period – these will be "saved" instead in the pilot
- Pilot agreement would extend about a year after the pilot exit (i.e., 14 months – from May 1 to June 30 the next year), during which the load facility's settlement would be consistent with ICI and based on demand levels set in the base period prior to the pilot and "saved"

Next Steps

- Provide the IESO with feedback using the feedback form found on the Interruptible Rate Pilot engagement page by October 28, 2022
- IESO will hold a follow-up session in November to present a summary of the feedback received and the IESO's responses
- IESO to report back to the Minister with a detailed pilot design proposal and proposed participant selection process by December 9, 2022



Thank You

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