

**FEBRUARY 7 2023**

# Interruptible Rate Pilot (IRP)

## Overview of Draft Rules & Contract

**Shutha Pulendran**, Senior Advisor, System & Sector Development

**Ali Golriz**, Lead, System & Sector Development

# Disclaimer

These slides provide an overview of the currently proposed drafts of the Rules and Contract for the Interruptible Rate Pilot (the “Pilot”), both of which are based on the proposed Pilot design as of the date of posting and remain subject to on-going revision. Capitalized terms used but not defined in these slides have the meaning ascribed in the draft of Appendix 1 – Standard Definitions.

The posting of these slides is made exclusively for the convenience of stakeholders, prospective participants, and other interested parties. The information contained in this document and related documents shall not be relied upon by any stakeholder, prospective participant, or other interested party as a basis for any commitment, expectation, interpretation or design decision. To the extent of any inconsistency between these slides and the provisions of the draft Pilot Rules or draft Pilot Contract, the provisions of the draft Pilot Rules or Pilot Contract shall prevail.

# Purpose of Today's Webinar

Provide an overview of the draft Pilot Rules and Contract, including:

- Term
- Eligibility
- Application process
- Performance obligations
- Interruption events
- Settlement
- Illustrative examples

Next steps will be discussed and feedback will be sought on the details of the draft Pilot Rules and Contract



# Context and Recap

# Minister's Letters

- The August 29 2022 letter regarding the Ministry of Energy's (ENERGY) proposal to launch an interruptible rate pilot outlined certain principles and parameters, asked the IESO to engage with stakeholders, and to report back with a detailed pilot design proposal by December 9, 2022
- Following the IESO's submission of the proposal, in a February 2, 2023 letter, the Minister expressed support for the IESO to share with stakeholders the draft Pilot Rules and Contract based on the detailed pilot design proposal
- The Minister also supports continued engagement with the hydrogen community to adapt the Pilot to develop a future pilot or program that is tailored for hydrogen producers

# Potential Benefits to Pilot Participants

- A major difference between the Pilot and Industrial Conservation Initiative (ICI) is that Facilities do not need to predict and “chase” top five peak hours in the Pilot
- The Pilot provides certainty and predictability to Participants by:
  - establishing a maximum number of hours and events for interruptions
  - providing advance notices for interruptions, and
  - ensuring interruption events have a maximum duration
- The Pilot represents an opportunity to lower Global Adjustment (GA) costs for Facilities that miss identifying or are unable to react quickly enough to respond to top five peak hours in the ICI

# November 2022 Stakeholder Feedback Summary

## Feedback

## IESO Response

How will different permutations of how the demand at the Facility changes during the Pilot Period be treated?

The Participant may, prior to the start of a Pilot Year, request an amendment to the Contract Demand and Peak Demand for such Pilot Year, subject to IESO approval. See additional details in Section 2.2(c) of the draft Pilot Contract.

The economics of this pilot are likely to be worse than the ICI for flexible loads due to the addition of the minimum Fixed Price Bid and inability to participate in the IESO's capacity auction.

In contrast to the ICI, the Pilot eliminates the need for the Participant to predict and chase top five peaks.

In addition, the Pilot provides certainty and predictability by: (i) establishing a maximum number of interruption events per year, (ii) providing advance notices for interruptions, and (iii) ensuring interruption events have a maximum duration.

Facilities participating in the Pilot must not be subject of a Capacity Obligation during the Pilot Period. Any Facilities that were successful in the 2022 Capacity Auction have the option to (i) start in the Pilot on either July 1, 2024 or July 1, 2025, or (ii) buy out of the Capacity Obligation pursuant to Section 7 of [Market Manual 12](#).

How will non-performance and over-performance be treated?

Exhibit F of the draft Pilot Contract outlines the details of the Non-Performance Adjustment and the Over-Performance Adjustment.

# Key Feedback from Hydrogen Producers

## Feedback

Rather than being a sub-stream of the Interruptible Rate focused primarily on avoiding system peaks, a dedicated hydrogen rate should be designed to fully develop the potential of the hydrogen sector.

The level of interruption is relatively low. Electrolyzer operation can handle much more than 60 interruption hours and 15 events.

Hydrogen producers are significantly different from other prospective users of the IRP. They will need more price certainty to make capital investments for building new electrolyzer facilities in Ontario. When built, these facilities can offer substantial value, including more interruption time with less advanced notice.

Encourage building of new hydrogen production projects in Ontario by providing off-peak electricity price predictability, preferably for a term of 20 years or more.

Pricing should be offered below rates being paid currently by conventional transmission-connected loads recognizing the flexible load and decarbonization attributes of hydrogen production.

## IESO Response

Thanks for the feedback. The IESO will continue engaging with hydrogen production stakeholders with the aim of developing a program, pilot, or a stream that is tailored for the hydrogen electrolyzer facilities.

# Pilot Timelines

Milestone	Expected Timing
Focused consultation sessions	Oct 11-27, 2022
Follow-up session – response to feedback	Nov 23, 2022
Report-back to ENERGY	Dec 9, 2022
Draft Pilot Rules and Contract posted	by Feb 7, 2023
Webinar – summary of Pilot rules and contract	Feb 7, 2023
Stakeholder feedback due	Feb 20, 2023
Final Pilot Rules and Contract posted	Mar 13, 2023
Application Period opens	Mar 13, 2023
Application End Time	Mar 31, 2023 at 11:59:59 pm EPT
Application review	Apr - May 2023
Contract offer and execution	May - Jun 2023
Pilot Participants announced	Jun 2023
Pilot launch	Jul 1, 2023

# Key Pilot Features (1/2)

Participants satisfy the Interruption Obligation by reducing the Facility's Demand in the Interruption Hour(s) specified by the IESO in an Interruption Notice to no greater than the Contract Demand

Feature	Details
Procurement Target	Up to 200 MW of Interruptible Demand
Term	Jul 1, 2023 – Jun 30, 2026 with entry/exit optionality and potential 1 year Residual Term
Eligibility – existing	Facility must be a Load Facility and have been existing and connected as of May 1, 2022
Eligibility – market participation	Market Participants with a Registered Facility under the IESO Market Rules during the Term
Eligibility – minimum size	Peak Demand that meets or exceeds 1 MW
Prioritization criteria	Fixed Price Bid, Load Reduction Plan, IESO Electrical Zone, industrial sector, and Short-Notice Facility

## Key Pilot Features (2/2)

Feature	Details
Contracting approach	“Contract for differences” between status quo GA and Pilot charges
Interruption Hours/Events	Up to 15 Interruption Events and 60 Interruption Hours in each Pilot Year
Short-Notice Hours/Events	If Facility opts in, up to 5 Short-Notice Events and 20 Short-Notice Hours in each Pilot Year, which will count towards the total Interruption Events and Hours.
Maximum event duration	Duration of each Interruption Event will be up to 4 consecutive hours
Advance notice	6 PM day-ahead for Long-Notice Events; at least 2 hours in advance for Short-Notice Events
Settlement – demand charge	Demand Charge aligned with the GA value under the ICI
Settlement – base rate	Product of Contract Demand and Demand Charge plus the Fixed Price Bid
Settlement – adjustments	Non-Performance Adjustment, Over-Performance Adjustment, and ICI Return Adjustment



# Overview of Pilot Rules

## Pilot Term (2023 – 2026)

- Applicants select their preferred Start Date, must be one of July 1, 2023, July 1, 2024, or July 1, 2025
- Facility End Date is June 30, 2026
- Participants will have an option to exit the Pilot by providing written notice to IESO by January 31st in any Pilot Year and the Facility will no longer be:
  - subject to Interruption Events after April 30th of that Pilot Year
  - participating in the Pilot after June 30th of that Pilot Year

# Residual Term

The Pilot Contract will remain in full force and effect for 1 year after the end of the Term if the Participant is subject to any of the following adjustments in the final Pilot Year:

- a Non-Performance Adjustment
- an Over-Performance Adjustment and/or
- an ICI Return Adjustment

The IESO may waive the Residual Term if:

- the ICI Return Adjustment will not be applied, and
- the Participant and the IESO agree in writing to settle any Non-Performance Adjustments or Over-Performance Adjustments that would otherwise be applicable during the Residual Term as a single lump sum payment

# Eligibility

- To be eligible to participate in the Pilot the Facility must be a Registered Facility under the IESO Market Rules
- Only the person that owns and operates the Facility may be eligible to participate in the Pilot, and that person must be:
  - a Market Participant
  - the Metered Market Participant in respect of the Facility
  - compliant with the Prudential Support requirements under the IESO Market Rules

# Facility Eligibility

To be eligible to participate in the Pilot, a Facility must:

- Be a Load Facility (Electricity Storage Facilities are ineligible)
- Have a Peak Demand that meets or exceeds 1 MW during a specified period in 2022 (Jan–Dec or May–Dec)
- Have an Interruptible Demand equal to at least 25% of its Peak Demand for at least 4 consecutive hours
- Have a maximum Interruptible Demand of 50 MW
- Be capable of participating in the Pilot with the entirety of its Peak Demand (i.e. no “partial participation” is permitted)
- Have been existing as of May 1, 2022
- Be located in Ontario
- Be connected by a single Connection Point to the Transmission System or Distribution System
- Have a single Delivery Point

# Applicant Eligibility

The Applicant must:

- Be a corporation, registered co-operative, partnership or limited partnership (unless otherwise consented in writing by the IESO)
- Be registered or otherwise authorized to carry on business in Ontario
- Not be insolvent, bankrupt, etc.
- Have sufficient financial and technical capacity to perform its obligations under the Pilot Contract to Good Engineering and Operating Practices

## Eligibility – Existing Contracts

- Existing Contract: “any physical or financial purchase contract for energy, capacity, or ancillary services, or any other contractual arrangement with the IESO, a Transmitter or a Distributor in respect of the Facility’s Peak Demand”
- The Facility must not be the subject of an Existing Contract unless it expires or is terminated prior to the start of the Term of the Pilot Contract (i.e. before the Facility starts participating in the Pilot) or as otherwise consented to by the IESO in writing in its discretion

# Eligibility – Capacity Obligations

The Facility must not be:

- the subject of a Capacity Obligation or
- a Demand Response Contributor

in the Capacity Auction when actively participating in the Pilot (i.e., during the Obligation Period under the Pilot Contract)

Options:

- Buy-out of Capacity Obligations as per process under Market Manual 12
- Optionality on the Start Date

# Considerations with No Impacts on Eligibility

- An Applicant may be a Class A Market Participant or a Class B Market Participant and also a Participant in the Pilot
- A Participant will be permitted to participate in the IESO's Real-Time Market and provide:
  - Energy Bids in any hour that is not an Interruption Hour, or
  - Operating Reserve Offers
    - in any hour that is not an Interruption Hour, for Short-Notice Events
    - in any hour that is not an Interruption Day, for Long-Notice Events

# Application Materials and Requirements

- Application Form
- Load Reduction Plan
- Fixed Price Bid in Prescribed Form
- Termination Agreement in Prescribed Form in respect of an Existing Contract, if applicable

No application fee or security deposit required to participate in the Pilot

# Application Evaluation – Three Stage Process



# Application Ranking

- Fixed Price Bid (\$/month) is normalized by dividing by a Facility's Peak Demand (MW) to generate a "Normalized Price Bid" (\$/MW per month)
- The Normalized Price Bid must be greater than or equal to the Minimum Normalized Price Bid of \$500/MW per month

PRIORITIZATION CRITERIA (PC)	MAXIMUM MULTIPLIER SCORE
Quality of Load Reduction Plan (PC1)	1.2
Industrial Sector (NAICS) (PC2)	1.1
IESO Electrical Zone (PC3)	1.1
Short-Notice Facility (PC4)	1.2

- Adjusted Price Bid = Normalized Price Bid x PC1 x PC2 x PC3 x PC4
- Applications with higher Adjusted Price Bids will receive a higher ranking than Applications with lower Adjusted Price Bids

# Selection Process

- Following the process in the previous slide, Ranked Applications are selected until the earlier of:
  - the aggregate Interruptible Demand from selected Applications reaches the Procurement Target (200 MW) or
  - the number of Facilities selected reaches the maximum limit of 15
- If the Marginal Application causes the aggregate Interruptible Demand to exceed the Procurement Target by:
  - $\leq 10\%$ , then the Marginal Application will also be selected
  - $> 10\%$ , then the Marginal Application will be rejected, and process will end

# Pilot Contract Offer & Acceptance

- Selected Applicants will receive an Offer Notice to enter into a Pilot Contract with the IESO
- The Offer Notice will specify Contract Demand, Fixed Price Bid, and Start Date that will be incorporated into the Pilot Contract
- Selected Applicants will have 15 Business Days from the issuance of the Offer Notice to accept the offered Pilot Contract by submitting a copy of the executed signature page of the Contract via e-mail



# Overview of Pilot Contract

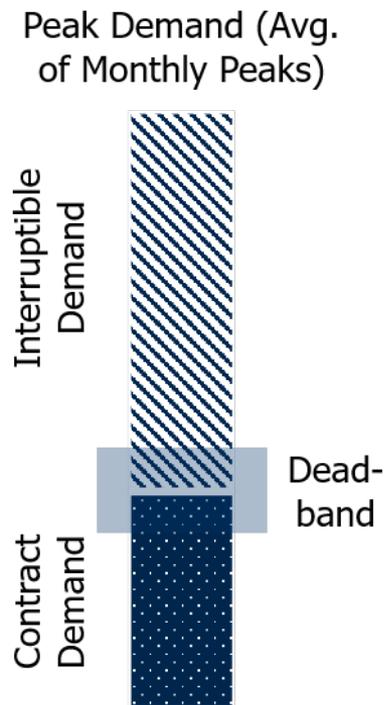
# Performance Obligations (1/2)

Commencing on the Start Date and continuing until the Obligation End Date the Participant will be obligated to:

- Monitor for and receive Interruption Notices, which will be issued via the Pilot's Website, and emailed to the Participant's Primary and Secondary Contacts
  - Use of SMS text message is being explored as well
- Satisfy its Interruption Obligation by reducing the Facility's Demand in the Interruption Hour(s) specified in an Interruption Notice to no greater than the Contract Demand
- Remove any Operating Reserve offers and energy bids for Interruption Hours or hours during Interruption Days, as applicable

## Performance Obligations (2/2)

- Non- or Over-Performance Adjustments will apply if the Facility's Actual Demand is outside a  $\pm 5\%$  dead-band range around Contract Demand for any Interruption Hour
- Non-Performance Adjustment is calculated as the product of (a) the Demand above the dead-band, (b) the Demand Charge, and (c) a Non-Performance Factor of 1.1
- Over-Performance Adjustment is structured similarly, but with directions flipped and an Over-Performance Factor of 0.9
- Over- or Non-Performance Adjustments will be settled in the subsequent Pilot Year or, if applicable, in the Residual Term



# Interruption Conditions

- The IESO will determine whether any Interruption Conditions are present in the Ontario transmission system or any of the IESO Electrical Zones
- Interruption Conditions will be published on the Pilot Website during the Term
- An Interruption Condition may be a Long-Notice Condition or a Short-Notice Condition
- The IESO may, at its discretion, from time-to-time, amend, update, delete or supplement any Interruption Conditions, and create new Interruption Conditions
- The IESO will promptly notify the Participant following any such amendment or creation of new Interruption Conditions

## Interruption Events (1/2)

- The IESO may (but will not be required to) declare an Interruption Event of up to 4 consecutive hours if any Interruption Conditions are present
- Interruption Event may be declared for the Ontario transmission system or in one or more IESO Electrical Zones, or in respect of any one or more Load Facilities that are participating in the Pilot
- Each Facility may be subject to up to 15 Interruption Events and 60 Interruption Hours in each Pilot Year
- Each Short-Notice Facility may be subject to up to 5 Short-Notice Events and 20 Short-Notice Hours in each Pilot Year
  - The Short-Notice Events and Hours will count towards the total 15 Interruption Events and 60 Interruption Hours

## Interruption Events (2/2)

- An Interruption Event may be a Long-Notice Event or Short-Notice Event
- All Facilities will be subject to Long-Notice Events
- A Long-Notice Event may be declared at or before 18:00 EST on the day ahead of an Interruption Day only if Long-Notice Conditions are present
- Only Short-Notice Facilities will be subject to Short-Notice Events
- Short-Notice Events may be declared at least 2 hours prior to the first Interruption Hour on an Interruption Day only if Short-Notice Conditions are present

# Settlement – Overview

- Structured as a “contract for differences” between status the quo Global Adjustment charged to the Facility and the Pilot’s monthly rate
- During the Term, Participants will continue to be responsible for all Electricity-related charges payable to the IESO (and LDC as applicable), including GA
- Participants will be subject to the Pilot’s Monthly Settlement adjustments, which may have the effect of rebating a portion of GA (see Exhibit F of the draft Contract for details)
  - For clarity, the Monthly Settlement may be a charge or a credit
- The IESO expects that the Pilot’s Monthly Settlement will lag a Participant’s obligation to pay all Electricity-related charges by one or more months

## Settlement – in a Pilot Year

In Settlement Months during a Pilot Year, the Monthly Settlement adjustments will be based on the following calculations:

- The Participant's status quo GA charges (related to the Facility) are credited
- An amount equal to the product of the Contract Demand and the Demand Charge, plus the Fixed Price Bid is charged instead
- The Demand Charge aligns with the value of GA under the ICI
- Over-Performance Adjustments and Non-Performance Adjustments assessed in the previous Pilot Year will be credited and charged, respectively, in the Monthly Settlement amount

## Settlement – in the Residual Term

If applicable, Monthly Settlements during the Residual Term will be based on the following calculations:

- Over-Performance Adjustments assessed in the final Pilot Year will be credited in the Monthly Settlement
- Non-Performance Adjustments assessed in the final Pilot Year will be charged in the Monthly Settlement
- ICI Return Adjustments will be credited in the Monthly Settlement

# Settlement – ICI Return Adjustment

The ICI Return Adjustment will be applied during the Residual Term if:

- The Participant was a Class A Market Participant as of the Start Date,
- The Participant is a Class A Market Participant as of the Facility End Date, and
- The Facility's Peak Demand Factor established in the Base Period ending immediately prior to the Start Date was lower than the Peak Demand Factor established in the final Pilot Year



# Illustrative Examples of Pilot Charges for GA

# Comparison with ICI Charges

For Facility with a Peak Demand of 20 MW and a Contract Demand of 10 MW, the table below compares Pilot's payments (when meeting all Performance Obligations) with the following ICI scenarios:

- **Scenario 1:** "Perfect" ICI participation, i.e., the Facility reduced demand during all 5 peak hours to 10 MW
- **Scenario 2:** "Imperfect" ICI participation, where the Facility was only able to reduce demand to 10 MW during 3 peak hours, while the demand during the other 2 peak hours was 20 MW

The Pilot provides cost savings compared to "imperfect" ICI participation (Scenario 2)

Description of Charges	Pilot Rate	Scenario 1 – "Perfect" ICI Participation	Scenario 2 – "Imperfect" ICI Participation
[A] Demand Charge or ICI GA cost allocation (\$/MW per month)	\$31,667	\$31,667	\$31,667
[B] Fixed Price Bid (\$/month)	\$10,000	N/A	N/A
<b>Monthly settlement</b>	$(A \times 10 \text{ MW} + B) =$ <b>\$326,670</b>	$(A \times 10 \text{ MW}) =$ <b>\$316,670</b>	$(A \times (3/5 \times 10 \text{ MW} + 2/5 \times 20 \text{ MW})) =$ <b>\$443,338</b>

# Example Pilot Charges

For a Facility with a Peak Demand of 20 MW, the table below compares Pilot payments for 3 cases, where the Facility's Actual Demand during all Interruption Hours during the previous Pilot Year was: (i) within dead-band region, (ii) below the dead-band region, and (iii) above the dead-band region.

The following parameters for the Pilot participation are assumed for the Facility:

[A] Fixed Price Bid: \$10,000 per month    [C] Demand Charge [\$/MW per month]: \$31,667    [E] Over-Performance Factor: 0.9  
 [B] Contract Demand: 10 MW    [D] Dead-Band: 9.5-10.5 MW (i.e., 5%)    [F] Non-Performance Factor: 1.1

Description of the Charges	Case 1: Meeting Performance	Case 2: Over Performance	Case 3: Non-Performance
Actual Demand during all Interruption Hours	9.8 MW	7.5 MW	12.5 MW
[DE] Deviation of Actual Demand from Dead-Band region during all Interruption Hours	0 MW (within the dead-band region)	2 MW (below the lower limit of the dead-band)	2 MW (above the upper limit of the dead-band)
[BR] Base rate (B x C)	\$316,670	\$316,670	\$316,670
[OP] Over-Performance Adjustment (C x DE x E)	\$0	\$57,000	\$0
[NP] Non-Performance Adjustment (C x DE x F)	\$0	\$0	\$69,667
<b>Monthly settlement (BR + A – OP + NP)</b>	<b>\$326,670</b>	<b>\$259,670</b>	<b>\$386,337</b>



# Next Steps and Feedback

## Next Steps

- IESO expects to receive ministerial direction in order to proceed with Pilot implementation
- The final Pilot Rules and Pilot Contract expected to be posted by March 13, 2023
- Application window is expected to open on March 13, 2023 and close on March 31, 2023, with contracts offered and executed in May/June 2023
- The Pilot is expected to launch on July 1, 2023

# Feedback Questions

- Feedback is not being sought at this time on the major Pilot parameters that were shared as part of the pilot design proposal and that the IESO has already received and considered stakeholder feedback on
- Feedback is being sought on how the design proposal has been captured and detailed in the draft Pilot documents prior to finalizing:
  - Pilot Rules, e.g., re: eligibility, application process, contract offer process, etc.
  - Pilot Contract, e.g., re: interruption process, performance obligations, payment obligations, settlement exhibit (i.e., Exhibit F), etc.
  - Standard Definitions, which apply to both the Pilot Rules and Pilot Contract
  - Application Form, Fixed Price Bid prescribed form, and Load Reduction Plan prescribed form

# Feedback Submission

Please use the feedback form found under the February 7 entry on the Pilot's webpage to provide feedback and send to [engagement@ieso.ca](mailto:engagement@ieso.ca) by February 20<sup>th</sup>, 2023

---

# Thank You

ieso.ca

1.888.448.7777

customer.relations@ieso.ca

engagement@ieso.ca



@IESO\_Tweets



linkedin.com/company/IESO