

Feedback Form - Public

Hydrogen Interruptible Rate Pilot – July, 2023

Feedback Provided by:

Name: Matthew Fairlie

Title: Vice Chair

Organization: Next Hydrogen Solutions

Email: [REDACTED]

Date: July 25, 2023

Following the focused consultation sessions with potential pilot participants, the IESO is seeking feedback on a number of questions related to initial design elements of the Hydrogen Interruptible Rate Pilot.

Please provide feedback by July 28, 2023 to engagement@ieso.ca. Please use subject header: *Hydrogen Interruptible Rate Pilot*.

To promote transparency, your responses in this public feedback form will be posted on the [Hydrogen Interruptible Rate Pilot webpage](#), unless otherwise requested by the sender. If you would like to submit feedback confidentially, please use the additional feedback form labeled as 'Confidential'.

The IESO will consider and work to incorporate comments, as appropriate, and provide responses at a follow-up session with potential pilot participants in August 2023. Thank you for your valuable contribution to the consultation process.

Public Feedback: Specific Questions

Please note: Responses in this section will be posted on the Hydrogen Interruptible Rate Pilot engagement webpage.

Topic	Feedback
How likely are you to participate in an H2 IRP and why?	It is highly likely that either Next Hydrogen or our customers (existing and future) will participate in the program as it will result in a lower cost of hydrogen for onsite production services. We strongly support this initiative as we believe this rate structure is most conducive to achieving an optimized market outcome for expanding clean hydrogen production as electricity grids decarbonize under CES regulations and other decarbonization measures.
Topic	Feedback
Which design features on slide 6 are most likely to impact your decision to participate? Do the options provided make sense for H2 producers?	Factors that impact cost. Because of storage and generally lower capacity factors, we are willing to trade frequency and duration of interruptions for reduced GA. The GA benefit in the IRP pilot should be greater than industrial IRP reflecting the increased frequency of interruption (15 to 60) and reduced warning periods (2.5 h vs day ahead)

Topic	Feedback
<p>With respect to the other support options on slide 7:</p> <p>a) Which of the other presented support options (e.g., CECs, RET), if any, would be valuable to include in/alongside an H2 IRP and why?</p> <p>b) Are there particular approaches to the deployment of these options that would make the pilot more beneficial for participants and other ratepayers?</p>	<p>a) Low carbon attributes add value to hydrogen fuel and are the premise for hydrogen production by electrolysis. To support a value proposition to replace hydrogen produced by natural gas (life cycle emissions are 10-12 kg/kg H2) we need power to be less than 200 gm/kWh (assuming that electrolytic hydrogen production takes 55 kWh/kg). Ideally, we are looking for clean power, less than 20 gm/kWh. By signaling the carbon intensity of the incremental kWh produced in addition to when the “system is constrained” the IESO can lower the carbon footprint of hydrogen services. This could also decarbonize services beyond hydrogen to customers, who can deploy storage to achieve a certain level of carbon intensity in their energy use. On this basis RET are more effective than CEC’s. CEC’s will also require expensive verification systems whereas RET can be done in real-time and will be more effective in matching market demand to market supply thereby increasing electrical system revenues with lower overall carbon emission outcomes. b) Providing a real time emission signal during the pilot phase would allow hydrogen system operators to develop appropriate controls to optimize their operations on the basis of RET.</p>

Topic	Feedback
<p>Are there any other design options the IESO should consider and why?</p>	<p>By integrating hydrogen production with electricity production through an expanded IRP, planning for new power generation can incorporate flexible hydrogen generation. This could be further enabled by bi-lateral power commitments between electricity generators and hydrogen producers either behind the fence of through an exchange facilitated by the IESO.</p>

Topic	Feedback
Please provide any comments you may have on the potential activities and timelines on slide 10. Are the timelines realistic and achievable?	From the perspective of our business plan the timelines look realistic and achievable.

Topic	Feedback
Do you have any further feedback for consideration in the development of an H2 IRP?	Take it one step at a time, starting with the IRP as described on slide 6 but putting in place tools (real time pricing/real time emission tracking) moving toward an integrated power and hydrogen generation system which optimizes market outcomes in terms of cost and decarbonization.

General Comments/Feedback

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