

# Feedback Form - Public

## Hydrogen Interruptible Rate Pilot – July, 2023

### Feedback Provided by:

Name: Luke Hoekstra

Title: Electrical Engineer

Organization: Carlsun Energy Solutions Inc.

Email: [REDACTED]

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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](mailto: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?	Carlsun may participate in the H2 IRP for a small pilot project since participation would provide access to lower-cost electricity than would otherwise be available outside of existing Class A or Class B consumer sites. The H2 IRP as drafted, will not make sense for large-scale hydrogen projects, however, as costs are designed to be higher than for conventional ICI participants due to the fixed price bid requirement and the newly-proposed CEC cost. This may be acceptable for small demonstration projects, but not for large-scale hydrogen production projects where the main factor for project viability is the input cost of electricity.

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?	In our opinion, the H2 IRP as currently drafted is best suited to small pilot projects. As such, the most important factor impacting our decision to participate would be the minimum size requirement. If the minimum size was reduced to 500kW, it would make it more attractive for pilots to proceed, due to lower capex costs and smaller electrical service upgrade requirements. The timeline of 10 years is also too short for any project of significant scale. Large investments will require durations of 15-20 years.

Topic	Feedback
<p>With respect to the other support options on slide 7:</p> <ul style="list-style-type: none"> <li>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?</li> <li>b) Are there particular approaches to the deployment of these options that would make the pilot more beneficial for participants and other ratepayers?</li> </ul>	<p>The bundling of CECs for hydrogen projects is an interesting idea. The potential downside of issuing CECs to hydrogen producers is that the carbon intensity of the rest of the grid system would increase potentially making Ontario as a whole less attractive for investment as many companies are working toward net-zero goals. To counter this, a commitment from IESO/MOE for the grid to be net-zero by 2035 would demonstrate to investors that Ontario's grid will be reducing its carbon intensity while also opening up the Clean Electricity Tax Credit announced in the federal 2023 budget further encouraging investment in Ontario's clean electricity sector. CECs would represent a cost adder for hydrogen producers, which would make Ontario a less attractive place to invest in a large hydrogen facility. Real-Time Emissions tracking, on the other hand, would be very useful in guiding hydrogen producers to only operate during periods of low-carbon intensity. IESO could certify the integrity of the RET, which in turn could form the basis of certification of low-carbon hydrogen. The availability of RET would make the H2 IRP more attractive for small pilot projects. These projects could operate according to the RET signal and demonstrate the current overall availability of low-carbon electricity available for hydrogen production.</p>

Topic	Feedback
Are there any other design options the IESO should consider and why?	<p>IESO should consider a hydrogen rate design that is not modeled on the ICI template. There is a mismatch between the goals of the ICI program (to reduce load during system peaks) and the economic/environmental operation of electrolysis plants wherein electrolysis loads are predominantly operating during off-peak, lower-cost timeframes. Large electrolysis loads will not be operating during peak timeframes, and so will not materially contribute to peak load reduction. On paper, a hydrogen facility may claim to be able to curtail 100MW if interrupted, however, in practice, the facility would not be operating during an interruption notice anyway. As such, a hydrogen rate modeled on the ICI program will likely not deliver peak load reduction in real terms. A better approach would be to offer a long-term, stable off-peak/low-carbon price to hydrogen consumers to ensure they are operating when the grid can support them cost-effectively and cleanly. Such a rate could be modeled after the Ultralow Overnight Rate for Electric Vehicle charging, which features very low off-peak rates combined with very high peak rates. This approach, along with an element of long-term price predictability, would be better aligned with electrolysis plant operations and would attract larger-scale investments to the province.</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?	<p>Several projects Carlsun has under development would benefit from earlier dates. Please move up the timeline to the maximum extent possible.</p>

Topic	Feedback
Do you have any further feedback for consideration in the development of an H2 IRP?	<p>Click or tap here to enter text.</p>

## General Comments/Feedback

Separately from the IRP or H2 IRP, the Ministry of Energy and the IESO should consider developing an Economic Development Rate for large-scale hydrogen projects. Such a rate would provide long-term stability around off-peak HOEP pricing for a 20-year-plus term. This would provide the conditions required for investment in large-scale projects. Providing off-peak price stability/predictability to hydrogen projects may be viewed as a form of subsidy for the sector. We believe that this support is warranted given the important role that hydrogen is expected to play in the province's decarbonization efforts as laid out in the IESO's Pathways to Decarbonization. Beyond the decarbonization attributes, hydrogen projects can provide significant grid benefits such as growing the off-peak customer base as highlighted in the government's Low-Carbon Hydrogen Strategy. Some observers will point out that private power purchase agreements or financial hedging instruments may be available to achieve price stability for new hydrogen projects, however, these options only increase the cost of electricity for hydrogen facilities and do not represent a strategy to grow the hydrogen sector in Ontario specifically. We believe it would be appropriate for the province to take on some of the risk of growing a new industry by providing price predictability support to hydrogen projects towards the ultimate public goods of decarbonization and grid benefits.