

Feedback Form

Clean Energy Credits – February 24, 2022

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Following the February 24, 2022 engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the items discussed during the webinar. The webinar presentation and recording can be accessed from the [engagement web page](#).

Please submit feedback to engagement@ieso.ca by March 17, 2022. If you wish to provide confidential feedback, please submit as a separate document, marked "Confidential". Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

What are the key opportunities and challenges the IESO should be aware of in developing a voluntary clean energy market?

CanREA supports this direction from the Minister of Energy to the IESO to investigate options for the development of a CEC market. The province should seize this opportunity to work with prospective buyers of renewable electricity to invest in Ontario's clean technology economy at this pivotal moment for the province's electricity system.

There is rapidly growing global demand for the sourcing of renewable energy credits as part of corporate and institutional ESG mandates, and the voluntary sourcing of unbundled clean energy credits are one possible approach for these off-takers to meet these targets. In 2019, the RE100 global coalition of businesses committed to 100% renewable electricity reported that their more than 260 members collectively sourced over 120 TWh of renewable electricity either through unbundled purchases of environmental attributes (EAs) (42%), contracts with electricity suppliers (30%), bilateral Power Purchase Agreements (PPAs) (26%), or on-site generation (principally rooftop solar) (2.5%)¹. Going forward, there could and should be a role for each of these clean energy procurement mechanisms in the Ontario context. While we understand the focus a voluntary market at this time, it seems prudent to consider a future where a compliance market may need to exist, particularly in light of the Federal Government's launch of the Clean Electricity Standard consultation.²

For Ontario, this global demand for clean electricity represents a valuable opportunity to drive new private sector investment into the province's generation capacity to help maintain the our clean electricity advantage, which is in turn critical to attracting jobs and economic development, and ensuring that the province achieves our Paris Agreement target of reducing emissions by 30% below 2005 levels by 2030³. Absent substantial new investment in non-emitting generation capacity, the IESO 2021 Annual Planning Outlook envisions the province nearly doubling electricity sector GHG emissions to 11.9 million tonnes annually by 2030.⁴ This would present a severe threat to the province's economic competitiveness as a clean electricity jurisdiction.

Which design considerations outlined in this presentation are most important to you and why?

CanREA has a number of concerns with the design considerations outlined in this presentation. Our highest priority design consideration is the extent to which a future CEC market structure will incent new development of non-emitting generation assets in Ontario.

Topic

Feedback

What other design considerations should IESO be aware of?

See "General comments/feedback"

Engagement Process

Topic

Feedback

Which stakeholder groups and/or design topics are most important to include in the planned focus group discussions?

The perspective of renewable asset developers and owners with first-hand experience of CEC markets in other jurisdictions would be extremely important.

Topic

Feedback

Are there any additional engagement opportunities the IESO should consider?

CanREA would strongly recommend additional stakeholder meetings prior to the July report-back date.

Topic

Feedback

Would you be willing to participate in a technical session? If so, on which topic(s)?

Yes, and we would be able to bring forward the perspectives of CanREA members with significant first-hand experience from REC markets in other jurisdictions to participate in technical sessions. As the IESO is aware, a number of significant barriers currently exist in Ontario to support a growing corporate PPA market – notably the Global Adjustment and lack of clarity on how bilateral contracts could be struck competitively and how utilities could implement green pricing programs. An additional session to discuss barriers to corporate investment in the Ontario market would be valuable.

General Comments/Feedback

In terms of best practice for clean energy sourcing for corporate buyers, RE100 recommends that their members “source more directly, through on-site generation or long-term agreements when possible. The rise of PPAs indicates that members want more effective, impactful procurement methods to reach 100% renewable electricity, which are likely to bring new renewables onto the grid and reduce costs.” CanREA concurs with this view and would urge the IESO to prioritize a CEC approach that maximizes the potential contribution of new non-emitting generation capacity to the Ontario grid.

As was raised during the February 24 stakeholder meeting, in a very real sense Ontario consumers have already paid for and continue to pay for the province’s current 94% non-emitting grid through the Global Adjustment and, since the implementation of the Comprehensive Electricity Plan (2021), through their tax dollars. To the extent that monetization of the EAs from existing contracted generation helps to decarbonize the electricity consumption for the buyers of these attributes, it implicitly increases the emissions intensity of the grid for all other consumers and thus potentially reduces their own ability to meet corporate ESG objectives, despite the fact that they have paid and will continue to pay for the exact same generation mix.

While there may be a role for the monetization of unbundled EAs from contracted assets, it is important to bear in mind that without appropriate design, this approach risks undermining the economic prospects for new non-emitting generation by diminishing what could be an important market signal for the development of urgently needed new assets.

Different tiers of CECs

To this end, CanREA proposes that the IESO clearly define separate tiers of CECs according to specific characteristics of the generation assets. There are numerous examples from other jurisdictions of the use of hierarchies to differentiate between CECs of different value. The highest-value credits would be generated from new-build (“new-build” herein includes repowered and/or expanded projects) wind, solar and low-impact hydropower (i.e. “Tier 1”); the next-highest from existing wind, solar and low-impact hydro currently under long-term contact (“Tier 2”), and lastly nuclear and large-scale hydropower (“Tier 3”). Credit hierarchies differentiating between new-build renewables, “maintenance” of existing renewables, and other non-emitting generation including nuclear are already well established in Ontario’s neighbouring markets.^{5, 6}

According to RE100 criteria, additionality is a key quality criterion for GHG emissions reduction projects stipulating that the project would not have been implemented in a baseline or “business-as-

⁵ PJM Environmental Information Services: “Comparison of Renewable Portfolio Standards (RPS) Programs in PJM States” (2022), available from: <https://www.pjm-eis.com/~media/pjm-eis/documents/rps-comparison.ashx>

⁶ NYSERDA: “LSE Obligations” (2022) – available from: <https://www.nyserdan.ny.gov/All-Programs/Clean-Energy-Standard/LSE-Obligations>

usual” scenario.⁷ By this standard, any new-build wind, solar and low-impact hydropower asset developed in Ontario and financed at least partially based on the monetization of EAs would qualify as a generator of Tier 1 CECs.

The IESO envisions the monetization of future EAs as an important component of the revenue stack for new generation assets developed under the LT-RFP or future procurements. It is unlikely that any new-build generation assets will be developed in Ontario other than through these procurement processes for the foreseeable future. To ensure that this urgently required new generating capacity is built, it is important that the IESO take steps to safeguard the value of the future EAs from these assets. As the IESO appears to be only contemplating a voluntary CEC market mechanism at this time, there are limited options for protecting the value would be through clearly extremely clear differentiation between these different tiers of CECs according to highly specific criteria. Another option would be to incrementally retire Tier 2 CECs from existing, contracted generation assets as new Tier 1 generators are brought online through the procurement processes.

Consumer preference

In terms of which “clean” energy options consumers in Ontario would prefer and would be likely to use in order to meet their clean energy objectives, all available evidence from other markets indicates that credits generated from wind, solar and run-of-river hydro will be the most sought after, and credits associated with new-build generation will be preferable for consumers with corporate/institutional sustainability mandates requiring them.

CanREA is not aware of another market that has successfully implemented a voluntary CEC market encompassing credits for nuclear, although New York, New Jersey, Connecticut, and Pennsylvania have implemented or are in the process of implementing mandatory CECs for nuclear as part of a utility compliance approach.

Integration of energy storage

Leading global businesses with ambitious corporate ESG policies are seeking to acquire credits not just to offset the volume of their electricity consumption, but to match their consumption with 100% renewable electricity on a 24/7, hour-by-hour basis, including through the use of energy storage. For example, last year Google entered into a PPA with Engie to source round-the-clock energy to cover 80% of Google’s German operations, through a 140 MW portfolio of new and re-powered wind, solar and energy storage at 23 sites throughout Germany, and announced the procurement of 350 MW of solar PV and between 250 - 280 MW of battery storage at one or more hybrid projects in Nevada to power its data centres in the state. As Ontario looks to enable the development of hybrid generation-plus-storage assets in the province⁸, potential demand for real-time matching of renewable generation to a prospective off-taker’s load ought to be considered as a tool to help developers to finance these upgrades to existing sites, as well as the development of new assets.

⁷ RE100 Technical Advisory Group: “Making credible renewable electricity usage claims” (2016) – Available from: <https://www.there100.org/sites/re100/files/2020-09/RE100%20Making%20Credible%20Claims.pdf>

⁸ IESO Hybrid Integration Project: <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Hybrid-Integration-Project>

Enabling off-taker competition and price discovery

The IESO should enable bilateral contracting between renewable generators and off-takers for Tier 1 CECs, while at the same time providing a guarantee to developers of new renewable generation assets (pursuant to the LT-RFP or future procurements) that the IESO will purchase any EAs generated from these assets at a predetermined minimum price. This would provide both generators and off-takers with additional options and flexibility – For example, a corporate off-taker might be required to purchase EAs from specific types of generation within a given geographic boundary, and thus be willing to pay a premium over and above the IESO default CEC rate to generators who meet these criteria for the exclusive right to their CECs. To be clear, this would only be in the context of the selling of unbundled CECs, as opposed to a true corporate PPA for a bundled electricity + CEC product, which would of course raise questions of OEB oversight with respect to bilateral contracts overriding a regulated electricity price and the Global Adjustment. CanREA recommends that the latter option be considered as part of future consultations on this matter. A premium value for RECs will only be available to the extent that the IESO's program meets the minimum standards of other jurisdictions' programs, including the eventual Federal CES. The IESO must ensure that whatever program structure is established is interoperable with and meets prevailing minimum standards so that any RECs will retain their value over the long-term.