Feedback Form

Clean Energy Credits – February 24, 2022

Feedback Provided by:

Name: Bashir Bhana, P.Eng.

Title: Senior Manager, Origination – Energy Markets

Organization: Ontario Power Generation

Email: [redacted]

Date: March 17, 2022

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.

Opportunities & Challenges

Topic	Feedback
What are the key opportunities and challenges the IESO should be aware of in developing a voluntary clean energy market?	The development of an Ontario Clean Energy Credit (CEC) registry provides an opportunity to establish Ontario as a **leader in the clean energy market** in Canada and amongst North American markets. Designed correctly, an Ontario CEC registry could: • Increase awareness of Ontario's clean supply mix. • Retain and attract businesses with carbon emission reduction and other Environment, Social, and Governance (ESG) goals. • Create a market for investment in clean energy in Ontario, helping to further decarbonize the Ontario grid and reduce GHG emissions. • Support electricity sector innovation. • Provide greater transparency on the environmental attributes sold and improve the accuracy and integrity of electricity sector carbon accounting in Ontario. • Provide linkages with other CEC markets, as has been done by other North American tracking systems and in Europe through the European Energy Certificate System. For the Ontario CEC registry to be successful and provide value to ratepayers, the IESO should **build market capability, have linkages to other registries/markets, and be adaptive to future market changes**. Areas the IESO should address include: • Education on the role for CECs in Ontario, the market for these products, and what utility a registry function provides. • Although not in the initial scope of the review, OPG believes it would be beneficial to make the Ontario registry fungible with other registries to ensure that the Ontario CEC market/registry is not developed in isolation from other established markets/registries. It should also enable trade with other markets – no different from other electricity products (e.g. capacity and energy).

	• Recognizing the different types of CEC products in the market and the individual preferences of businesses in how they meet their ESG goals. • Decisions on which environmental attributes and associated technologies are in scope for the registry. • Need for flexibility to accommodate various types of CEC products in the market and to adapt to an evolving CEC market. • Transparency on what environmental attributes are being sold. • Consistent and transparent reporting of grid carbon intensity including the intensity of the residual grid mix.

Design considerations

Topic	Feedback

Which design considerations outlined in this presentation are most important to you and why?	There are a number of technical elements that will need to be addressed to result in a successful Ontario registry:
	• **Fuel Types/Environmental Attributes Product Offerings/Eligibility**
	  • Accommodate customer preference and not dictate which technologies should be eligible for registration provided they can be demonstrated to be sourced from clean energy and meet all registration requirements. Customers should have their choice of CEC products, so long as the products are measurable and verifiable. This flexibility will create a climate for innovation and support new technologies.
	  • Do not limit registration to grid-connected participants, including allowing for registration from embedded generation.
	  • Ensure the CECs can be registered unbundled from the underlying electricity production.
	  • Not restrict variety in product offerings such as carbon offsets, renewable natural gas, and clean hydrogen credits as well as registration of hourly CEC products.
	  • No restrictions on what product vintages and facility size are eligible to sell CEC's.

- Recognition and eligibility of Ontario CECs in neighbouring markets to increase the value of Ontario CECs. To do so, ensure that CECs are quantified using an accepted metric used in other registries – i.e., ensure that a CEC product (regardless of its attributes) is created in respect of one MWh or a determined equivalent of clean energy production.

- **Registry Functionality**
  - The IESO will need to distinguish between the registry function and commercial transactions.
    - The IESO's scope of work should focus on establishing the registry function to ensure only information needed to support that registry function is tabulated and provided.
    - A CEC registry is a voluntary tracking system, not a trading platform. The Ontario registry should not be involved in market making or in regulating commercial or financial matters such as price discovery and transaction terms. Commercial agreements for the sale of CECs exist outside the registry between counterparties involved in the transactions.
  - There are other well functioning, integrated CEC registries that exist today in other North American jurisdictions and Europe for environmental attribute instruments, creating potential opportunities to leverage or partner with an existing platform. The IESO should seek to learn from other registries and those participants that are actively involved in marketing/trading/purchasing environmental attributes on what works and what does not, to result in a registry that is the most effective, cost efficient, and timely deployed for Ontario.
  - The Ontario registry should ensure that CECs originating in Ontario meet the criteria to be transferable into other leading registries, in order for Ontario to maximize value from its CECs.
    - A coordinated approach with other registries can also help minimize double counting and fraud risk to ensure commonly accepted verification standards are in place. Do not develop the Ontario

environment attribute market or registry in isolation.
    - Ensure each registry account has sub-accounts for active, retired and reserved CECs such that account holders and their representatives can efficiently transfer and retire CECs.
    - Start simple but expand over time by working with stakeholders to prioritize which registry functions are necessary at launch vs those that can be added later and research other markets/registries to incorporate future proofing.

- **Reporting**
    - Serialize and track ownership of CEC products to avoid double counting and to ensure proper accounting and transparency.
        - Provide visibility on what CEC products are registered including information on the registrant and the CEC product source, location, volume, vintage, and other product attributes.
        - Provide visibility on whom CEC products are being transferred to (or being retired on behalf of).
    - Provide electricity consumers information on Ontario grid emissions intensity factors.
        - This would provide those electricity consumers not purchasing CECs accurate data to calculate their Scope 2 emissions.
        - This will support carbon accounting and other reporting needs while reducing risk of double counting ownership/impact of environmental attributes.
    - Track whether or not products meet any particular sustainability standard (e.g., Ecologo).
    - Provide an option for "attribute tags" to be displayed with serialized CEC products.
        - Allow products listed on the registry to display characteristic features, such as the source and fuel type of the generating facility, the attributes of the CEC product, and whether or not the products meet any particular sustainability standard (e.g., Ecologo) or have been certified as having any environmental or social co-benefits. Some registries already allow for credits to display certain characteristics given the

	market's desire to distinguish between credits with different features. There is growing market demand for these types of more nuanced and tailored products.

Topic	Feedback

What other design considerations should IESO be aware of?	In addition to the above design elements, other design elements the IESO will need to work through include:
	• **Time-Based Generation Attributes**
	  • The registry platform should track the specific hour that the underlying generation for the credit occurred. This will allow ultimate purchasers of CECs to make a firm link between production of the clean energy and their consumption. This will highlight the value of clean generation that occurs at peak times, as opposed to shoulder periods when there is often surplus clean energy present. Energy storage resources could potentially be used to time-shift CECs from low value to high value times.
	• **Registry Performance**
	  • The registry platform should be easy to use and be well supported.
	  ○ Have a user-friendly interface for registering and uploading data and make it easy to navigate to access data and reports.
	  ○ Ensure ease of data upload and verification.
	  ○ Ensure there is customer support available with response times of 1 to 2 days.
	  ○ Offer training to register users.
	  ○ Publish user guides or manuals to facilitate ease of use, as done by other leading registries.
	  • The platform itself should not become the barrier to developing the CEC market in Ontario.
	  ○ IESO should seek to learn from other registry platforms and from those actively involved in the CEC market.

    - Transfer of CECs from one registry to another and from one registry account to another – should be seamless and easily accomplished in the same business day to facilitate commercial transactions without undue delivery risk.
    - Ensure registry can withstand cybersecurity breaches as CECs have monetary value.

- **Verification/Auditing**
  - Have a smooth onboarding process for registrants.
    - Use published user guides or manuals to clarify obligations of registrants on what CECs are being generated, transferred, and accepted.
  - Implement a verification process to ensure the generation uploaded meets certain criteria such as sourced from clean energy sources and is accurate and truthful. Third party verification for CECs meter data should not be required if this is addressed through participant verification as it will add additional costs to customers.
    - IESO should validate what resources are being registered for CEC minting and transfer to give the registry legitimacy.
  - Provide a service guarantee for approving and verifying new generating units whose CECs will be registered (e.g., M-RETS typically completes this process within 5 days) so that this process does not become the barrier to fulfilling the commercial obligations associated with CEC sales.
    - Make this process even less onerous for market participants – the IESO could verify Ontario market participants using the market registration and metering information it already has.
    - For non-market participants, support verification through participant attestation.
  - Ensure there is a service guarantee for the creation of certificates for uploaded generation data.
  - Issue proof of CEC ownership (via transferable electronic certificates).

Engagement Process

Topic	Feedback
Which stakeholder groups and/or design topics are most important to include in the planned focus group discussions?	Key stakeholder groups: • Those active in the CEC market including generators, aggregators, and brokers. • Consumer, business, and industry groups/associations representing LDCs, Ontario loads, and other customers seeking CEC products. • Indigenous communities. • Climate accounting bodies. • Other CEC registry platform providers. Topics for discussion: • Registry design including discussion of each of the design elements discussed above (Fuel Types/Environmental Attribute Product Offerings/Eligibility, Registry Functionality, Time-Based Generation Attributes, Registry Performance, Reporting, and Verification/Auditing). • Design requirements of the registry for both consumers and generators of CECs. • Understand what customers currently report and how they utilize the CECs they purchase.

Topic	Feedback
Are there any additional engagement opportunities the IESO should consider?	The IESO would benefit from surveying the market and the context in which the trading of environmental instruments operates within. The IESO could benefit from reaching out to other ISOs/RTOs/utilities within Canada, the US, and Europe to better understand existing clean energy credit registries and design considerations that should be incorporated into an Ontario CEC registry platform.

	The IESO should also take the opportunity to engage environmental attribute accounting bodies to better understand the various carbon reporting standards (such as RE100 and the GHG Protocol) to ensure that the Ontario registry is designed with the appropriate accounting principles in mind.

Topic	Feedback
Would you be willing to participate in a technical session? If so, on which topic(s)?	As Ontario's largest producer of clean energy, OPG sees itself as a key contributor to technical sessions with the IESO. OPG would like to work with the IESO to design and develop an Ontario registry that provides value to Ontario ratepayers, attracts new businesses to Ontario, and maximizes the value provided for the Ontario clean energy market.

General Comments/Feedback

OPG is pleased to support the development of a clean energy credit market for Ontario. As increasing numbers of corporations establish ESG goals, OPG is seeing an increased interest in environmental attributes, including CECs, from Ontario's clean generation sources. An Ontario CEC registry would establish Ontario as a leader in clean energy, help retain and attract new businesses and investments, and further enhance the value from the clean energy investments Ontario has already made.

In designing a clean energy registry, the IESO should:

- Not restrict what types of generation/technologies may register. As long as there is a verification process to ensure the generation is from a low-emitting, clean source it should be allowed to register including embedded generation and hydrogen projects.
- Ensure customers of all types and load sizes can have access to the CEC registry including corporate customers, brokers, LDCs, large loads, small businesses and residential consumers.
- Establish centralized reporting of what CECs are transferred and allocated to loads and the corresponding impact on the carbon intensity of the unallocated grid mix. This will help avoid double counting the benefits from CECs.
- Focus on registry components only – i.e. the creation, ownership, transfer, and retirement of CECs. Leave price discovery (which can be done between parties or through brokers and

other exchanges) and commercial arrangements (between parties) outside of the registry function.
- To enable the effective, cost efficient, and timely deployment of an Ontario registry, rather than create a registry from scratch, leverage other registry platforms and customize those existing platforms to meet Ontario specific registry requirements.

As the IESO looks to create a CEC registry for Ontario, the IESO must make sure the CEC registry is established in a manner that facilitates CEC sales and does not try to unduly regulate those sales.

OPG would like to thank the IESO for the opportunity to provide feedback and looks forward to working with the IESO in the development of the Ontario CEC registry.

***