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.

Opportunities & Challenges

Topic	Feedback

What are the key opportunities and challenges the IESO should be aware of in developing a voluntary clean energy market?	• Corporate and industrial procurement (C&I procurement, or corporate procurement) of clean electricity has been a key driver renewable energy development in North America. To date there have been 47GW of renewable energy deals contracted in the U.S. since 2008,[1] and 1.7GW in Canada since 2019.[2]
	• There are 18 years of combined experience in Canada and the U.S. that Ontario can look at to evaluate buyer preferences for corporate procurement. Furthermore, the fundamental principles that enable corporate procurement are already established. Successfully designing a voluntary clean energy market in Ontario can be ensured by adopting the same fundamentals that have made corporate procurement a success in other jurisdictions and by aligning market design with evident corporate preferences. Some of the established fundamentals that must be considered in Ontario are:
	  ○ Achieving additionality
	  ○ Avoiding double counting
	  ○ Standardized certification
	  ○ Supportive regulatory environment
	• We anticipate that the main challenge to corporate procurement in Ontario will be the inability for corporate buyers to displace the global adjustment charge. The wholesale electricity price upon which financial PPAs are settled, called the Hourly Ontario Electricity Price (HOEP), only makes up a small portion of the total commodity cost of electricity in the province, and global adjustment charges make up the larger portion. In 2019 on average, HOEP made up only 15% of electricity costs with the global adjustment accounting for the remaining 85%.[3] Even in the presence of a perfectly designed CEC Registry that nominally enables a market for environmental attributes, if companies cannot contract clean electricity deals and compare those prices against a real value for the electrons being procured, they will continue to default to meeting their ESG needs in more competitive markets such as Alberta.

[1] Clean Energy Buyers Association, "CEBA Deal Tracker." https://cebuyers.org/deal-tracker/

[2] Business Renewables Centre Canada, "Corporate Renewable Energy Deals in Canada (Q4 2021)." https://businessrenewables.ca/deal-tracker

[3] Independent Electricity System Operator, "Global Adjustment (GA)." https://www.ieso.ca/en/Power-Data/Price-Overview/Global-Adjustment

Design considerations

Topic	Feedback

Which design considerations outlined in this presentation are most important to you and why?	• Achieving additionality
	  ○ Additionality is a criterion that companies use to make sure that their investments are impactful and bring new clean electricity onto the grid. Technology giants Google, Microsoft, and Apple cited additionality as one of the key criteria when selecting which clean power projects to invest in.[4, 5, 6]
	  ○ Furthermore, additionality is paramount to meeting the Ontario Government's main objective of attracting jobs and investments to the province. Investments and job creation come from the financing, design, construction, and operation of new projects, not from the continued operation of existing projects which are already financed and built. Lacking additionality, economic activity and job growth surrounding the CEC Registry will primarily come from market administration.
	  ○ By trying to market CECs from existing projects the currently suggested CEC registry design jeopardizes additionality and undermines the potential growth of a C&I market in Ontario.
	• Bundled vs unbundled sale options
	  ○ Corporate buyers find unbundled environmental attributes (EAs, such as RECs or CECs) less preferable to bundled products because bundled products incentivize electricity suppliers to increase the share of clean electricity generation. [4, 7] Furthermore, there are already established brokers in Ontario, such as Bullfrog Power,[8] that are meeting the need for unbundled EAs without the need to design a new market.
	  ○ In the current regulatory environment in Ontario, the only type of Power Purchase Agreement (PPA) that would allow

[4] Google, *Achieving Our 100% Renewable Energy Purchasing Goal and Going Beyond* (2016), 6. f
[5] Microsoft, *Microsoft Carbon Removal – Lessons from an early corporate purchase* (2021), 22.
[6] Apple, *Supplier Clean Energy – Program Update* (2017), 2.
[7] IBM, "Renewable Electricity Consumption." https://www.ibm.com/ibm/environment/climate/renewable_energy.shtml
[8] Bullfrog Power, "Green electricity." https://bullfrogpower.com/sustainability-solutions/green-energy/green-electricity/

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	competitive corporate procurement of this kind would be physical behind-the-meter PPAs. Financial PPAs are currently limited due to out-of-market costs recovered from electricity consumers through the global adjustment and the regulatory market environment that hinders direct bilateral deals. • Third-party certification o The IESO presentation states that voluntary CECs could be certified by independent third-party standards such as ECOLOGO and Green-e. It is important to note that any EAs certified by these certification programs need to adhere to the certification guidelines that dictate specific generation technologies. o UL's ECOLOGO is the preferred certification for Canadian businesses. Certification is achieved following specific guidelines, and for CECs to achieve ECOLOGO certification in Ontario's tracking system they need to meet the requirements set out in the standard: UL 2854 Standard for Sustainability for Renewable Low-Impact Electricity Products.[9] o Similarly, the Centre for Resource Solutions' Green-e program, the preferred voluntary certification program in the U.S., dictates specific eligible renewable energy products for certification in the Green-e Framework for Renewable Energy Certification.[10] o While purchasing certified products is not mandatory in a voluntary market, companies have shown a definitive preference for purchasing ECOLOGO or Green-e certified products because it ensures the efficacy of the EA. If CECs are to compete with certified RECs from other markets, then they must somehow demonstrate to the buyers the same degree of efficacy. o If CECs are to be certified by a market administrator, then IESO should consider who will be responsible for the cost of administration.

[9] UL, *Standard for Sustainability for Renewable Low-Impact Electricity Products* (2018).
[10] Centre for Resource Solutions, *Green-e Framework for Renewable Energy Certification* (2017).

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What other design considerations should IESO be aware of?	• Avoiding double counting
	  ○ When an entity uses 1MWh of clean electricity, they retire 1 CEC. Double counting occurs when two entities make claims to take credit for the same emissions reduction.
	  ○ This means that CECs cannot be counted towards voluntary corporate compliance while still being attributed to a share or percentage of decarbonization of the electricity grid.
	• Slide 18 in the presentation mentions that monetizing CECs and flowing the proceeds to ratepayers is a consideration for the CEC Registry. If the CECs are monetized then IESO loses the ability to claim credit for the decarbonization, effectively reducing the amount of clean electricity that could be attributed to Ontario's grid (currently at 96%). The right to claim the emissions reductions would flow to the new owner of the CEC.
	• Furthermore, if a Clean Electricity Standard[11] is instituted to achieve 100% clean electricity by 2035 (similar to Renewable Portfolio Standards in the U.S.), then credits from projects for voluntary claims cannot also count towards the clean electricity standard. As part of the Government of Alberta's target to produce 30% of electricity from renewable sources by 2030 they created the Renewable Electricity Program (REP) and successfully contracted 1.3GW of new renewable generation capacity through PPAs. This capacity was independent of other corporate procurement happening in the province to avoid double counting.

Engagement Process

Topic	Feedback
Which stakeholder groups and/or design topics are most important to include in the planned focus group discussions?	• The Ontario Energy Board on providing regulatory clarity to allow bilateral agreements. • Clean energy project developers on barriers of high electricity commodity cost on project competitiveness.

[11] Liberal Party, "Clean Electricity: A Net-Zero Grid By 2035." https://liberal.ca/climate/clean-electricity-a-net-zero-grid-by-2035/

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Are there any additional engagement opportunities the IESO should consider?	• IESO should engage Ontario businesses that have already pursued corporate procurement in Alberta, such as RBC,[12] Shopify, [13] Scotiabank,[14] and Spark Power,[15] to understand what conditions are needed for them to pursue deals in Ontario.

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Would you be willing to participate in a technical session? If so, on which topic(s)?	• Yes, I would be willing to participate in a technical session on behalf of the Pembina Institute. Topics we would like to participate in are: o The technical and economic needs of buyers o The technical and economic challenges faced by developers o Addressing Ontario-specific regulatory hurdles getting in the way of bilateral agreements or green pricing programs

General Comments/Feedback

Thank you for the opportunity to provide our feedback. We look forward to hearing your responses to the stakeholder comments submitted, and to continuing to engage on the design of the CEC Registry.

[12] RBC, "RBC becomes first Canadian bank to sign long-term renewable energy Power Purchase Agreement," July 28, 2020. http://www.rbc.com/newsroom/news/2020/20200728-renewal-evergy-ppa.html

[13] RBC, "RBC signs second long-term renewable energy Power Purchase Agreement," March 9, 2022. https://www.newswire.ca/news-releases/rbc-signs-second-long-term-renewable-energy-power-purchase-agreement-816823267.html

[14] Scotiabank, "Scotiabank and Evolugen announce 15-year renewable energy Power Purchase Agreement," February 9, 2022. https://www.newswire.ca/news-releases/scotiabank-and-evolugen-announce-15-year-renewable-energy-power-purchase-agreement-859932497.html

[15] Spark Power, "Spark Power awarded three new solar projects in Alberta with GP Joule; the 70MW projects to begin construction in fall 2021," June 29, 2021. https://sparkpowercorp.com/news/spark-power-awarded-three-new-solar-projects-in-alberta-with-gp-joule-the-70-mw-projects-to-begin-construction-in-fall-2021/