



Leonard Kula  
Chief Operating Officer and Vice-President, Markets and Reliability  
Independent Electricity System Operator  
1600-120 Adelaide Street West  
Toronto, ON M5H 1T1

December 14, 2021

Dear Leonard,

This submission responds to the Independent Electricity System Operator's (IESO's) November 23, 2021 *Annual Acquisition Report* stakeholder engagement presentation.<sup>1</sup>

Power Advisory has coordinated this submission on behalf of a consortium of renewable generators, energy storage providers, and the Canadian Renewable Energy Association (the "Consortium"<sup>2</sup>).

This submission builds upon previous Consortium submissions dated October 14, 2021 and September 17, 2021 relating to the Annual Acquisition Report (AAR).

#### Comments on the November 23, 2021 Presentation

- Regarding the November 10, 2021 Ministerial Directive, re: Minister of Energy Outlines Further IESO Actions to Address Resource Adequacy,<sup>3</sup> the Consortium recommends that IESO report back to stakeholders on a monthly basis regarding the following resource adequacy related initiatives outlined within this Directive:
  - Design of the medium-term Request for Proposals (MT RFP);
  - Design of the long-term RFP (LT RFP);
  - Sole source negotiation to bilaterally contract for the gas-fired Brighton Beach generation station (GS);
  - Approach for re-contracting biomass generation facilities relating to Calstock GS and Chappleau GS;
  - Development of a program for re-contracting small hydroelectric generation facilities;

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<sup>1</sup> See <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Resource-Adequacy-Engagement>

<sup>2</sup>The members of the Consortium are: Canadian Renewable Energy Association; Axiom Infrastructure; BluEarth Renewables; Boralex; Capstone Infrastructure; Cordelio Power; EDF Renewables; EDP Renewables; Enbridge; ENGIE; Evolgen (by Brookfield Renewable); H2O Power; Kruger Energy; Liberty Power; Longyuan; NextEra Energy Canada; Pattern Energy; Suncor; and wpd Canada.

<sup>3</sup> See <https://www.ieso.ca/en/Corporate-IESO/Ministerial-Directives>

- Update to the 2016 study on energy storage in Ontario;
  - Review of the Marmora pumped storage (PS), Meaford PS, and Schreiber PS projects; and
  - Contract negotiations regarding the Oneida energy storage project and the Lake Erie Connector transmission project.
- Additional to the point above relating to IESO reporting back to stakeholders on a monthly basis regarding the status of the Minister directed resource adequacy related initiatives, the Consortium recommends that IESO also report back to stakeholders on a monthly basis regarding the status of the following direction from the October 7, 2021 Ministerial Directive, re: Minister Issues Letter to IESO Regarding the Future of Natural Gas Generation:<sup>4</sup>
    - IESO evaluation on a moratorium on the procurement of new gas-fired generation projects in Ontario; and
    - IESO development of an achievable pathway to phase-out gas-fired generation and achieve zero emissions in Ontario's electricity system.
  - The Consortium is still waiting for responses from IESO relating to the following requests and recommendations posed to IESO within our September 17 and October 14 submissions relating to AAR:
    - Considering resource eligibility for the first MT RFP, the Consortium requests that IESO publicly release a list of all IESO and Ontario Electricity Financial Corporation (OEFC) contracted resources that will be eligible to participate in the first MT RFP based on the date of the expiry of their contracts.
    - The Consortium recommends that IESO make sufficient data and information publicly available with needed granularity (i.e., hourly) within useable formats relating to key drivers that influence the formulation of existing wholesale prices (e.g., Hourly Ontario Energy Prices (HOEPs), five-minute Market Clearing Prices (MCPs), operating reserve (OR) prices, etc.) and will influence the formulation of future wholesale prices (e.g., Locational Marginal Prices (LMPs) for energy and OR) as being designed for within the Market Renewal Program (MRP), such as, but not limited to: transmission congestion and losses; zonal limits and power flows from zone to zone; zonal demand (actual and forecast); zonal supply (including by market participant resource); planned transmission upgrades and expansions; etc. Robust and sufficient data and information will help

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<sup>4</sup> See <https://www.ieso.ca/en/Corporate-IESO/Ministerial-Directives>

potential MT and LT RFP participants to model merchant exposure and risks within the IESO-Administered Markets (IAM).

- o The Consortium recommends that IESO learn from other jurisdictions, acknowledge Ontario's unique market structure and resource mix characteristics, and therefore design procurement mechanisms (e.g., RFPs and associated contracts) in a manner to best meet Ontario's power system needs and relevant policy goals and objectives. For example, there is growing evidence that conventional resource adequacy approaches and methodologies have shortcomings.<sup>5</sup> Therefore, utilities and system operators should consider adaptation of their resource adequacy approaches and methodologies - determining resource adequacy requirements for the power system, supply contribution from different resources and technologies, and procurement mechanisms. While most Consortium members regularly participate within the Capacity Markets administered by NYISO, ISO-NE, and PJM, and therefore have familiarity with unforced capacity (UCAP) procurement, these markets are presently being challenged in terms of how to effectively ensure resource adequacy.

### Questions Posed by IESO within November 23, 2021 Presentation and Consortium Responses

Listed below are responses to IESO's posed questions from the November 23 presentation.

How can the IESO evolve the Resource Adequacy Framework to enhance it?

*The Consortium recommends that more consultation is needed regarding decision rules within the Resource Adequacy Framework to provide clarity on how the procurement mechanisms (i.e., Capacity Auctions (CAs), MT RFPs, LT RFPs, sole sourced bilateral contract negotiations, etc.) will be administered in parallel – what are the linkages to meeting power system needs, linkages from procurement mechanism to mechanism, resource eligibility, how procured supply resulting from one procurement mechanism(s) (e.g., CAs, etc.) impacts supply targets within other procurement mechanism(s) (e.g., RFPs, etc.), etc. This will enable more informed investment decisions on behalf of resource owners/operators and their lenders. It is further required to provide clarity on potential CA revenues and contract revenues relative to any merchant opportunities and risks that will result within the planned reforms of the wholesale energy and ancillary services markets (e.g., OR) as being designed for under MRP (e.g., planned implementation of LMPs).*

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<sup>5</sup> See Redefining Resource Adequacy for Modern Power Systems (<https://www.esig.energy/resource-adequacy-for-modern-power-systems/>) by the Energy Systems Integration Group (ESIG), based in the U.S. This report provides an overview of key drivers changing the way resource adequacy needs to be evaluated, identifies shortcomings of conventional resource adequacy approaches and methodologies, and outlines the following principles for utilities and system operators to consider as they should look to adapt their approaches and methodologies.



What sections of the 2021 AAR were most helpful?

*All sections within AAR have been helpful.*

Are there specific topic areas the IESO should focus on in upcoming AARs?

*Regarding Ontario supply-side factors and uncertainties, the Consortium suggests that financing new projects and revenue adequacy are factors that should be addressed within future AARs. This is especially so considering potential for existing resources and new projects to face greater merchant exposure and risk within IAM mainly driven by the uncertainties relating to MRP. For example, to the extent that operating generators and storage facilities may not be able to recover their costs with an acceptable rate of return on investments from revenues within IAM (assuming these resources are not re-contracted, including for a sufficient period), this could result in retirement of these resources post expiry of contracts and will likely make it economically impractical to make investments in emerging resources, particularly in newer technologies such as energy storage, hybrid renewable generation and storage, and hydrogen. Ontario does not exist in a vacuum – many other jurisdictions around the world, including Europe, the U.S. (e.g., New York, New England, etc.), and adjacent Canadian markets like Quebec, are offering long-term contracts with favourable investment policies for generation supply. Ontario must compete against those jurisdictions for investment spending, especially from developers with needed experience and track record to meet Ontario's future supply needs alongside meeting policy goals and objectives.*

What additional data would be most helpful to be included as supplemental information in future AARs?

*See points listed in the above section, re: data/information recommendation*

The Consortium appreciates continuous dialogue with IESO and looks forward to our next discussion at a mutually convenient time.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Chee-Aloy", enclosed in a thin black rectangular border.

Jason Chee-Aloy  
Managing Director  
Power Advisory



cc:

Chuck Farmer (IESO)  
Candice Trickey (IESO)  
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Adam Rosso (Boralex)  
Greg Peterson (Capstone Infrastructure)  
Paul Rapp (Cordelio Power)  
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Ken Little (EDP Renewables)  
Lenin Vadlamudi (Enbridge)  
Michelle Dueitt (ENGIE)  
Julien Wu (Evolugen by Brookfield Renewable)  
Stephen Somerville (H2O Power)  
JJ Davis (Kruger Energy)  
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Cheryl Dietrich (NextEra Energy)  
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