



Chuck Farmer
Vice President, Planning, Conservation and Resource Adequacy
Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, ON M5H 1T1

October 14, 2021

Dear Chuck,

This submission responds to the Independent Electricity System Operator's (IESO's) September 23, 2021 *Medium Term RFP Engagement* presentation¹ within the Resource Adequacy stakeholder engagement.

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"²).

This submission builds upon the Consortium's September 17, 2021 submission.³ The Consortium understands that more details are still to come regarding the medium-term (MT) Request for Proposals (RFP) through planned release of the draft MT RFP and associated draft contract within the coming weeks. However, based on information from IESO to date, renewable generators and storage facilities will be disadvantaged compared to other resource technologies towards their potential participation within the MT RFP. This is despite wind generation having the lowest levelized cost of energy in Ontario.

The sections below address specific comments regarding the September 23 presentation and recommendations and requests the Consortium posed to IESO within our September 17 submission regarding IESO's August 26, 2021 presentation.

COMMENTS ON SEPTEMBER 23 PRESENTATION

Cadenced RFPs and Linkages

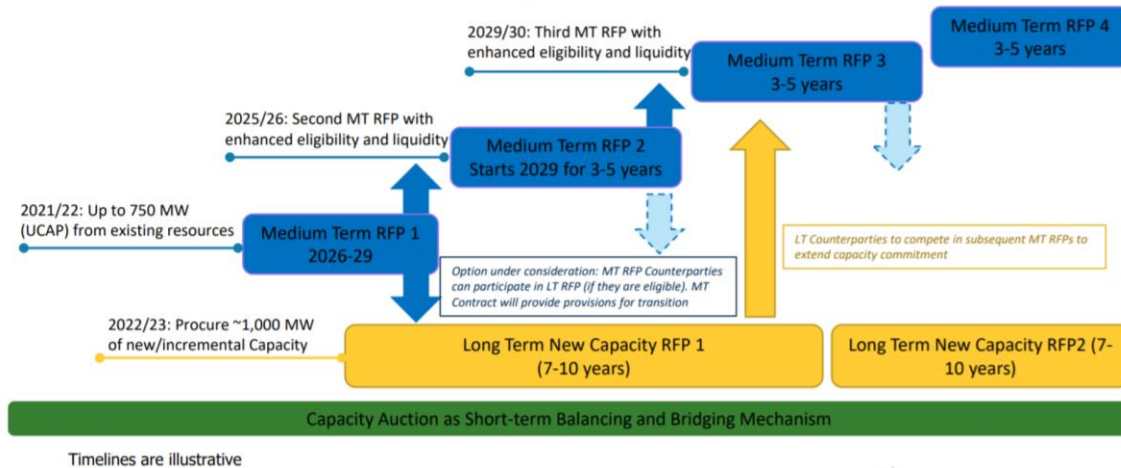
As depicted from slide 7, shown below, the Consortium has comments regarding IESO's plans to administer multiple MT RFPs and Long-Term (LT) RFPs. The Consortium also notes that IESO administration of MT RFPs and LT RFPs will run in parallel to administering annual Capacity Auctions (CAs) and implementation of the Market Renewal Program (MRP).

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

² 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.

³ See <https://www.ieso.ca/Sector-Participants/Engagement-Initiatives/Engagements/Resource-Adequacy-Engagement>

Cadenced RFPs and Linkages



Timelines are illustrative

- The Consortium had previously expressed concerns regarding the design and requirements of the first MT RFP (i.e., MT RFP 1) (e.g., procuring unforced capacity (UCAP) only, limited resource eligibility, etc.). However, based on the graphic above, the Consortium notes that IESO has not identified UCAP to be procured within subsequent MT RFPs (i.e., no electricity product description under MT RFP 2, MT RFP 3, MT RFP 4) or within LT RFPs. The Consortium takes this as IESO to be open-minded to working with stakeholders to determine what electricity products should be procured within MT RFPs and LT RFPs subsequent to MT RFP 1. If true, the Consortium supports this position and looks forward to working with IESO and other market participants (MPs) and stakeholders to define the design of future RFPs and associated contracts.
- To ensure “enhanced eligibility and liquidity” within MT RFPs subsequent to MT RFP 1, the Consortium recommends IESO maximize proponent participation through inclusion of on-site upgrades and expansions relating to operating resources (e.g., generators) in addition to new projects to be developed.
- Clarity is needed regarding how “MT Counterparties can participate in LT RFP” and how “LT Counterparties ... compete in subsequent MT RFPs” – see point #1 in section below for further commentary regarding process and decision rules within the Resource Adequacy Framework.
- The Consortium understands that the purpose of MT RFP 1 is to meet capacity needs for the 2026 to 2029 timeframe. Considering the above point, more clarity is required why IESO is planning to take a cadenced approach by planning to administer multiple MT RFPs – and administering multiple MT RFPs alongside administering CAs and LT RFPs in parallel. The Consortium conceptually understands planned administration of CAs and RFPs as defined

within the Resource Adequacy Framework but is requesting more clarity why multiple RFPs are required to meet supply needs that are forecast to arise within the medium-term and long-term.

Proposed Performance Obligations

On slide 20, IESO states that for resources that are non-dispatchable they “must maintain a monthly minimum capacity factor (MCF) during 5x16 hours that is at least equal to [0.95x] of the capacity factor reflected in the ratio of their Seasonal Qualified Capacity/Nameplate capacity (the “QC Ratio”)”. The Consortium is concerned about this potential requirement due to energy production characteristics from non-dispatchable generators (e.g., some hydroelectric generators). Therefore, the Consortium requests IESO to reconsider this position and work directly with non-dispatchable resources towards more workable performance obligations and any associated performance charges.

Overall, the September 23 presentation did not specifically address resources that are not registered MPs within the IESO-Administered Markets (IAM). Therefore, IESO should provide clarity regarding performance obligations and any associated performance charges for non-MP resources. Through similar rationale regarding non-dispatchable resources, the Consortium also believes non-MP resources (e.g., distribution-connected hydroelectric and solar generators, etc.) should not be subject to the performance obligations as stated on slide 20 nor the performance charges as stated on slide 22.

RECOMMENDATIONS AND REQUESTS TO IESO FROM PREVIOUS SUBMISSION

The following recommendations and requests were made by the Consortium within our September 17 submission to IESO and respectfully is awaiting IESO responses.

1. 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., 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., operating reserve (OR)) as being designed for under MRP (e.g., planned implementation of Locational Marginal Prices (LMPs)).
2. 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 Price (HOEP), five-minute Market Clearing Price (MCP), OR price, etc.) and will influence the formulation of future wholesale

prices (e.g., LMPs for energy and OR) as being designed for within 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 MP resource); planned transmission upgrades and expansions; etc. Robust and sufficient data and information will help potential RFP participants to model merchant exposure and risks.

3. The Consortium recommends that IESO frequently meet with renewable generators and energy storage providers in 2021 and 2022 towards workable RFP and contract design solutions for future MT RFPs and LT RFPs and associated contracts. As stated in previous submissions to IESO, the Consortium is concerned with IESO's present plans to solely procure UCAP through a capacity style contract.
4. 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 (OEFCE) contracted resources with contracts due to expire by April 30, 2027, along with the UCAP ratings for each of these resources.
5. 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.⁴ 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 UCAP procurement, these markets are presently being challenged in terms of how to effectively ensure resource adequacy.

⁴ 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.



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:

Leonard Kula (IESO)
Candice Trickey (IESO)
Shawn Cronkwright (IESO)
Barbara Ellard (IESO)
Jordan Penic (IESO)
Brandy Giannetta (Canadian Renewable Energy Association)
Elio Gatto (Axiom Infrastructure)
Roslyn McMann (BluEarth Renewables)
Adam Rosso (Boralex)
Greg Peterson (Capstone Infrastructure)
Paul Rapp (Cordelio Power)
David Thornton (EDF Renewables)
Ken Little (EDP Renewables)
Lenin Vadlamudi (Enbridge)
Michelle Dueitt (ENGIE)
Julien Wu (Evolugen by Brookfield Renewable)
Stephen Somerville (H2O Power)
JJ Davis (Kruger Energy)
Deborah Langelaan (Liberty Power)
Jeff Hammond (Longyuan)
Cheryl Dietrich (NextEra Energy)
Rob Campbell (Pattern Energy)
Chris Scott (Suncor)
Ian MacRae (wpc Canada)