MARCH 2025

Resource Adequacy Request for Information – Results Summary

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Resource Adequacy Request for Information

- In September 2024, the IESO launched the Resource Adequacy Request for Information (the RFI) to hear from facility owners and developers on the future of current facilities and the development of new projects.
- The RFI received responses representing more than **1,500 facilities and developers**, demonstrating significant stakeholder engagement. A number of these responses were related to facilities whose contracts will expire on or after January 1, 2035, and were excluded from the analysis.
- While majority of the analyzed responses represented existing facilities of < 1 MW capacity, feedback from larger facilities and proponents of new development also offered valuable insights. The RFI also received **~ 300 qualitative comments**, which offered additional insight into respondents' sentiments.
- The IESO would like to thank everyone who participated in the RFI. Your feedback is vital in shaping procurement design and supporting energy planning for a reliable and efficient electricity system.

Key Insights

Most facilities have required minor repairs to maintain operations. Facilities < 1 MW have also needed major repairs, and their maintenance costs have increased sharply over the past five years.

Most facilities intend to continue operations post-contract, and are open to investing in refurbishments and upgrades, but require revenue certainty.

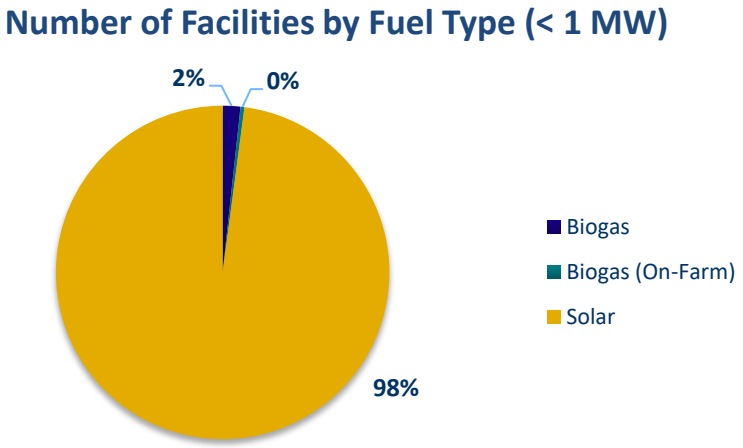
Smaller facilities believe IESO procurements are too complicated, whereas larger facilities are more concerned about network availability.

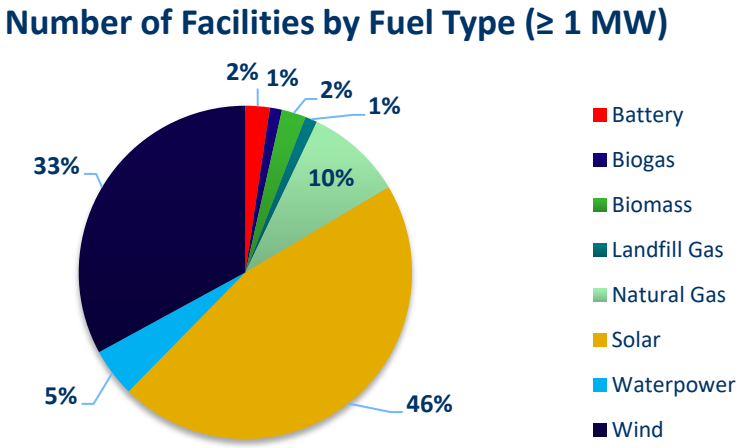
Energy storage is gaining traction, though financial incentives remain a key barrier.

RFI Response – Breakdown by Fuel Type

Most facilities < 1 MW that responded to the RFI were solar, while solar and wind made up majority of the responses from facilities ≥ 1 MW.

Natural gas facilities contributed to a smaller portion of the overall responses.





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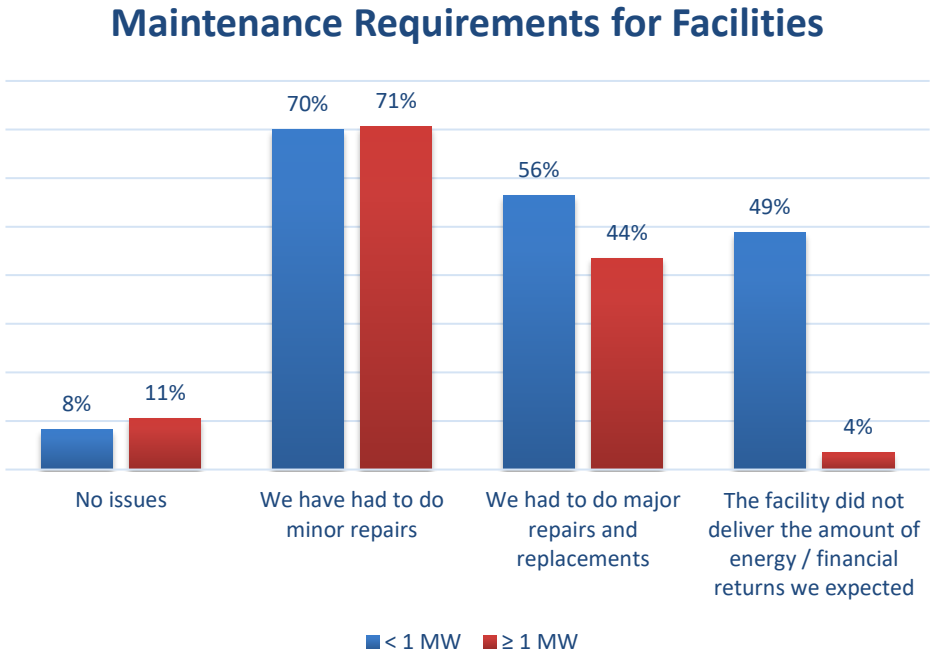
Maintenance Requirements of Facilities

- 70% of facilities (both < 1 MW and ≥ 1 MW) indicated that they have had to do minor repairs.
- In terms of major repairs, these were required by 56% of < 1 MW facilities, compared to 43% of ≥ 1 MW facilities.
- 49% of < 1 MW facilities indicated that they did not generate the electricity and financial returns that they have expected from their facility.
    - Comments received from some respondents attributed this to equipment failures from the onset and lack of support from service providers in solving these issues.



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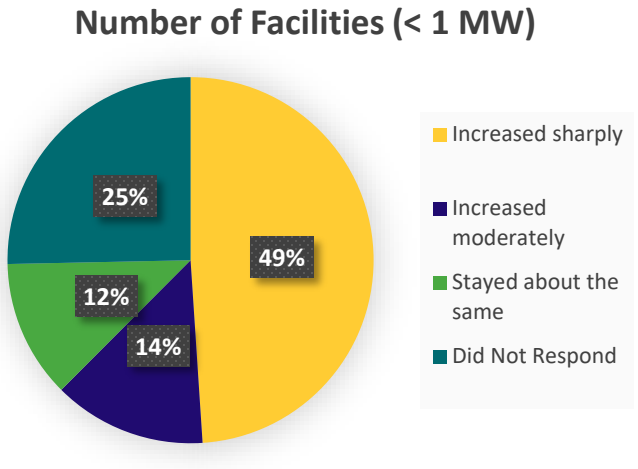
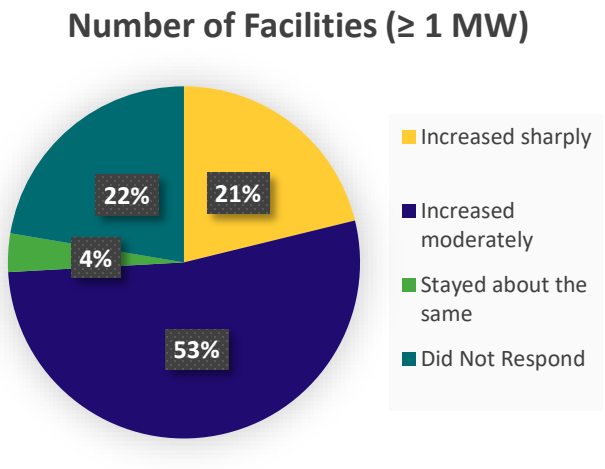
Maintenance Costs in Last Five Years

- Almost 50% of < 1 MW facilities felt that their maintenance costs had increased sharply in the last five years. Conversely, majority of ≥ 1 MW facilities believed that their maintenance costs had increased moderately.
- Comments submitted through the RFI noted that facilities < 1 MW attributed the increase in maintenance costs to rising insurance costs and costs of replacing equipment such as inverters, once the projects reached mid-life.





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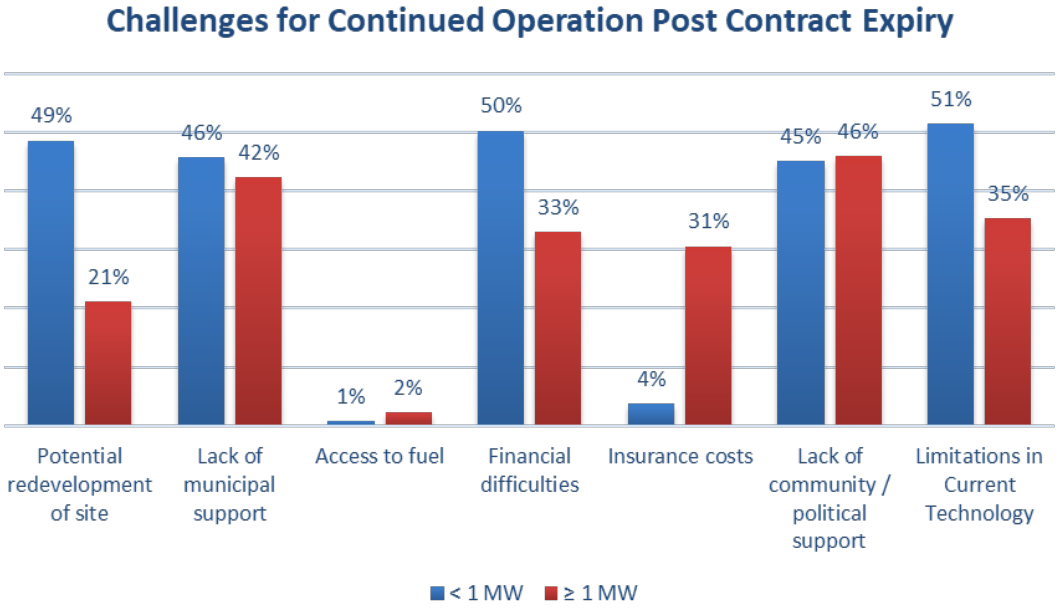
Challenges in Continued Operations of Facilities

- Uncertainty regarding support from the municipal council, the local community and policy uncertainty were flagged as key challenges by < 1 MW and ≥ 1 MW facilities.
- Half of < 1 MW facilities also highlighted financial difficulties and limitations in current technology as challenges in continuing operations beyond their contract term.
- Comments from some <1 MW facilities indicated that continued operations is also dependent on the renewal of their leases.



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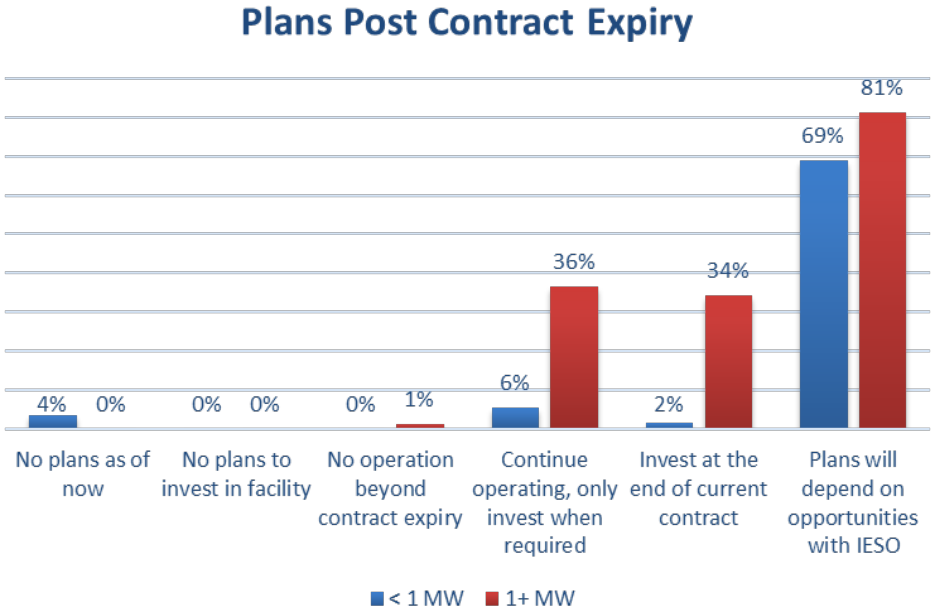
Interest in Exploring Future Opportunities

- Nearly **all respondents** indicated an interest in re-contracting and exploring new opportunities with the IESO.
- 35% of ≥ 1 MW facilities indicated that they plan to continue operating their facilities without any major investment for as long as feasible.
- At the same time, 70% of < 1 MW facilities and 80% of ≥ 1 MW facilities also indicated that their investment decisions would depend on contracting opportunities provided by IESO, highlighting that respondents are flexible in their decisions regarding future investments.



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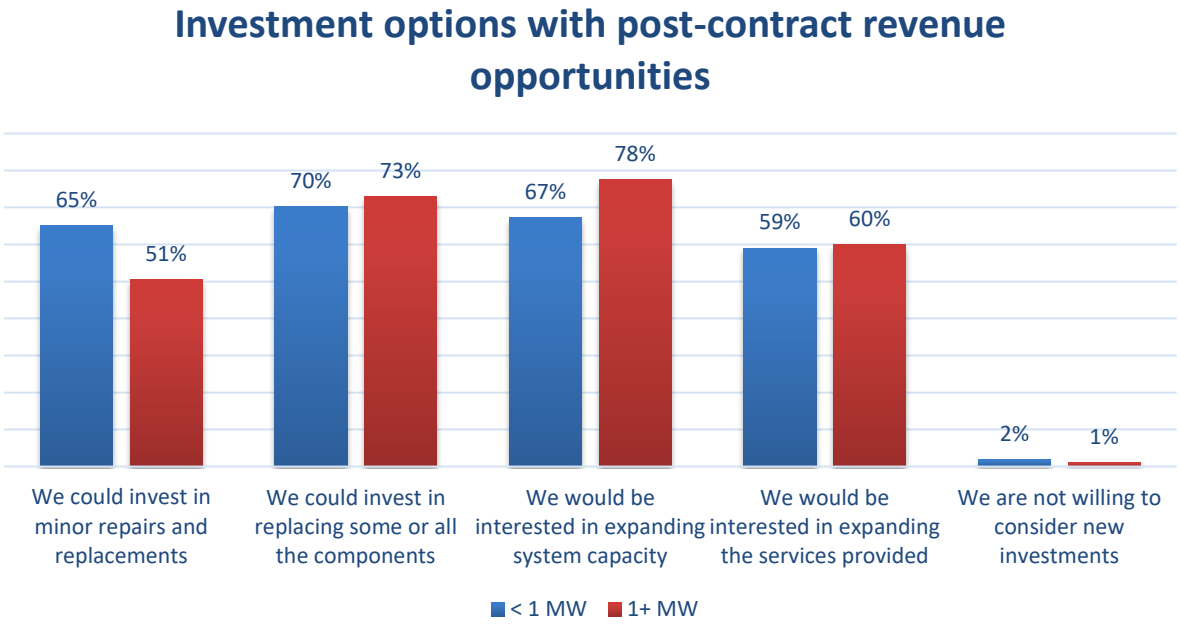
Potential Investment Options

- Most respondents indicated that they are willing to make all forms of investments, i.e. minor repairs, replacement of components, and upgrades to capacity and capability; **if revenue opportunities** were to be made **available**.
- There is a particularly high level of interest in ≥ 1 MW facilities to expand their system capacity.



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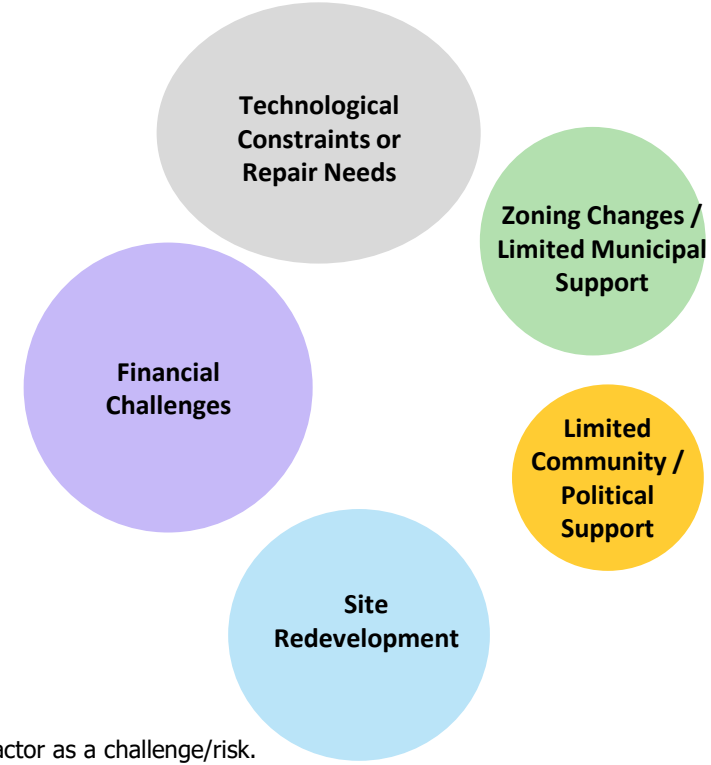
Challenges for Continued Operation of Facilities

- The RFI provided valuable insights into the risks and challenges faced by existing contract holders in continuing the operation of their facilities.
- The **circles* highlight common challenges and risks** shared by more than 40% of < 1 MW facilities.
- Facilities ≥ 1 MW had mostly similar concerns except that they were not as concerned about site re-development of financial concerns.
- However, they highlighted **"Insurance Risks and Costs"** as a key challenge impacting their operations



Note: The size of the circle is indicative of the percentage of respondents that highlighted that factor as a challenge/risk.

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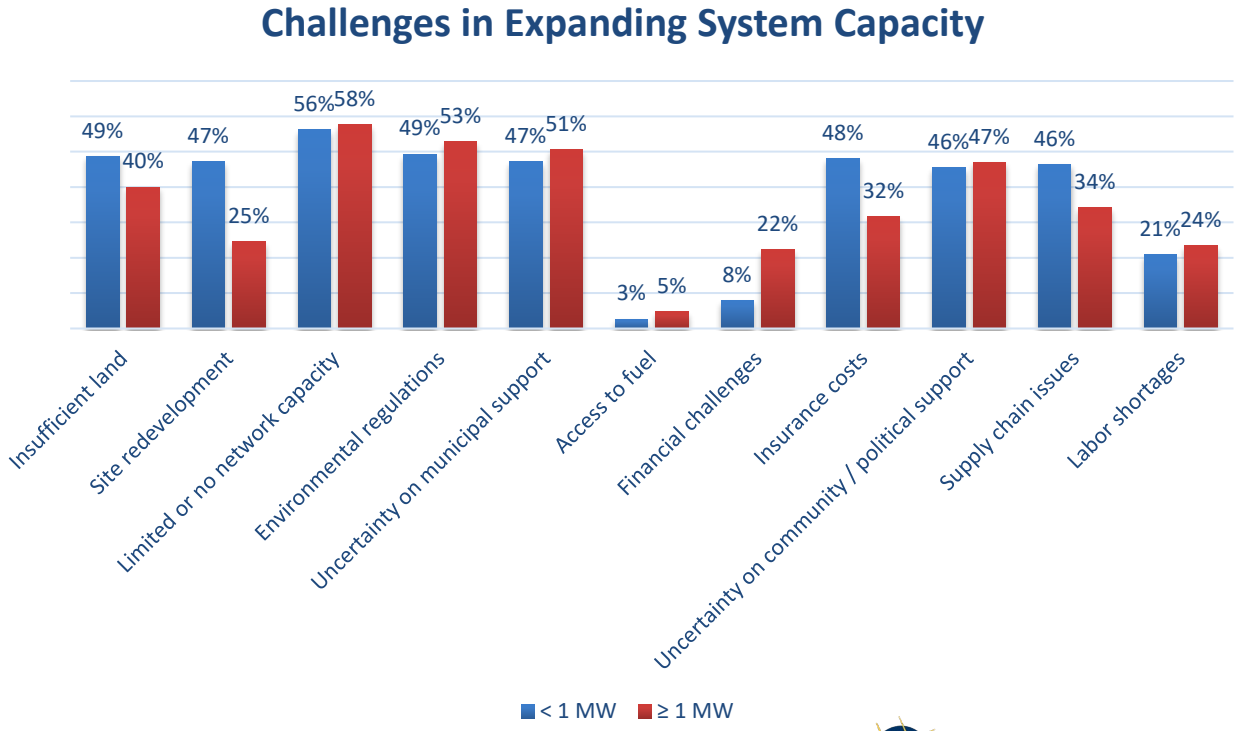
Challenges in Expanding System Capacity

- Most respondents indicated an interest in expanding the capacity of their facility.
- At the same time, respondents flagged the following top three challenges for facility expansions:
    - Limited or no capacity on the transmission/ distribution network
    - Uncertainty regarding support from the municipal council, the local community and policy uncertainty
    - Potential obligations under environmental regulations



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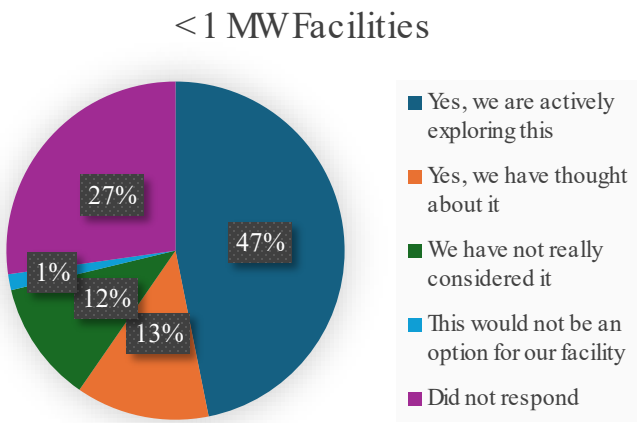
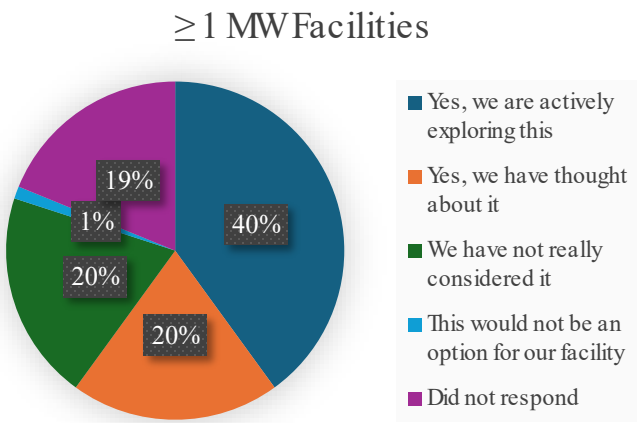
Interest in Expansions and Energy Storage

- The RFI also revealed that nearly 60% of respondents are actively pursuing or have considered adding energy storage to their facility. Their decision is dependent on several factors including costs, technological capabilities, ease of integration, and return on investment.
- 20% of ≥ 1 MW facilities have not yet considered adding energy storage, as they currently do not see a financial incentive to do so.





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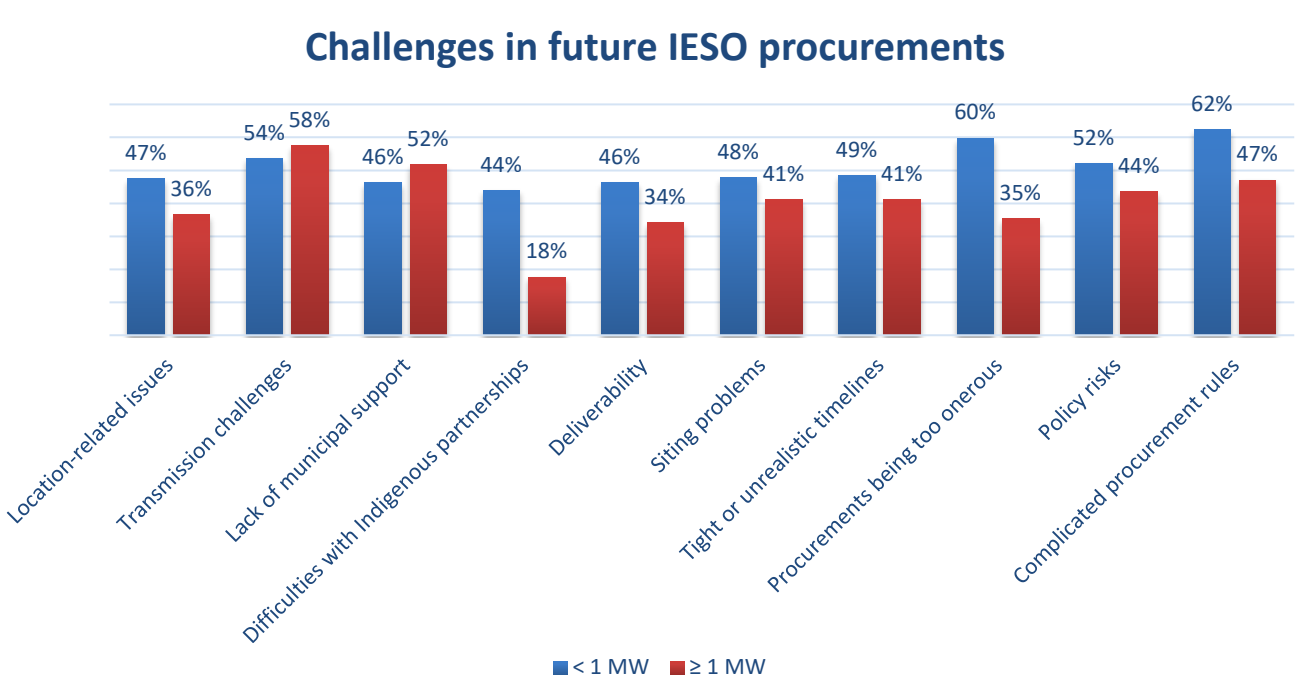
Challenges in participating in IESO procurements

- < 1 MW facilities and ≥ 1 MW facilities flagged different sets of challenges for future IESO procurements.
- 60% of < 1 MW facilities are concerned about IESO procurements being too onerous and complicated.
- On the other hand, more than 50% of ≥ 1 MW facilities are concerned about limited capacity and utilization of network infrastructure, and lack of municipal support for their projects



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Insights from Developers of New Facilities

- 55% of respondents indicated that they are proposing to develop ground mounted solar PV, whereas 40% respondents indicated that they would like to develop 4-hr energy storage.
- **50%** respondents answered that their number one criteria for selecting the site for their proposed project is the **proximity to the transmission system**.
- **30%** of respondents indicated that the number one challenge expected in developing their projects is the **lack of network capacity**.
- **20%** respondents answered that they were **unaware of IESO's recent electricity procurements**, whereas 75% indicated that they have received information on recent procurements or have participated in IESO's recent stakeholder engagements.

" Developers in Ontario face risks that are unique in Ontario in that determining where there is and isn't capacity to connect is unknown. The inability to determine network upgrade costs is also a big risk."

-Comment from Developer

RFI Feedback Impact on Programs and Procurements

WHAT WE HEARD

- Small facilities (<1 MW) struggle to participate in competitive procurements targeting Market Participants
- Many are unwilling or unable to become Market Participants
- A need for revenue-backed opportunities to continue operations and invest in refurbishment and/or upgrades

WHAT WE'RE DOING

- Local Generation Program (LGP) currently under design for non-Market Participants with 100 kW – 10 MW distribution-connected facilities
- Designing participation pathways for refurbishment and re-powering in future RFPs and in the LGP
- Ongoing engagement to ensure new programs meet the needs identified in the RFI

RFI Feedback Role in Upcoming IESO Initiatives

The IESO will continue to utilize the insights received from the RFI in:

- Informing the assumptions utilized by Planning for determining Ontario's adequacy needs, as well as the contributions of planned resource procurements towards meeting those needs.
- Supporting the development of other IESO programs and initiatives, such as the Enabling Resources Program.
- Identifying key areas where further intelligence from RFI participants and other stakeholders could better inform the design of future RFPs and Programs.

Stay Connected for Future RFIs

The Resource Adequacy RFI will be conducted regularly. Stay informed and involved to ensure that your voice continues to be heard in shaping future energy initiatives.

How to Stay Informed:

- The Request for Information - Resource Adequacy webpage will be the primary source for updates on current and future Resource Adequacy RFIs.
- Subscribe to the IESO Weekly Bulletin to receive announcements about other RFIs and new updates or postings on the Resource Adequacy RFI webpage.

Thank You

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