Rule 024 and Micro-Generation Application Process Questionnaire

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Preamble:

As a participant in Alberta's micro-generation market, I have significant concerns about the direction suggested by this consultation. The existing micro-generation framework has enabled substantial private investment in renewable energy across our province. Any modifications to Rule 024 must carefully consider the impact on existing and future micro-generators who have made substantial financial commitments based on current regulations.

The micro-generation sector represents hundreds of millions in private investment by Alberta families and businesses. Changes that create uncertainty or additional barriers risk undermining this successful grassroots energy program that has positioned Alberta as a leader in distributed solar generation.

Question 1: Should there be a standardized methodology or minimum information requirements for utilities' calculation of the estimated annual consumption at a customer's site and the calculation of the micro-generation unit's output?

Response 1:

Yes, standardization would benefit all parties, particularly for Wire Service Providers who need consistent approaches. However, any methodology must account for the natural variability in both energy consumption and solar generation from year to year, especially for agricultural operations where weather significantly impacts usage patterns.

The current regulatory definition lacks precision regarding "total annual energy consumption," creating confusion in the application process. Rather than adding complexity, I believe the most effective approach would be to allow micro-generators the freedom to install systems sized to their available space, eliminating the need for precise consumption calculations altogether.

If consumption-based sizing remains required, customers should have flexibility to use either a five-year average or the most recent 12-month period - whichever provides a more accurate projection of their energy needs.

Q1(a): Please identify and justify the best historical timespan for accurately assessing a customer's historical energy usage (for existing sites).

R1(a): Flexibility should be the priority. Customers should be permitted to choose between a five-year average or the previous 12 months, selecting whichever better represents their expected usage. This accommodates both stable consumption patterns and recent changes in household energy needs.

Q1(b): Please identify and justify the best way for accurately projecting a customer's future energy usage (for new sites).

R1(b): For new construction without historical data, utilities should use standardized calculations that include typical residential loads plus major appliances and electrification equipment like heat pumps and EV chargers. EnerGuide ratings and similar standards could improve accuracy. Professional home energy assessments could also help customers understand their projected needs and potential for energy efficiency improvements.

Q1(c): Please specify and justify the minimum level of proof that utilities should accept if a customer explains that they intend to increase their electricity consumption shortly after installing a micro-generation system.

R1(c): Simple proof of purchase should suffice for major electrical equipment. The requirement should focus only on significant energy-consuming devices such as electric vehicles, heat pumps, and major appliances. Current restrictions that prevent including heat pumps in initial calculations when connected to gas heating create unnecessary barriers to both solar adoption and beneficial electrification.

Q1(d): Please explain how a new micro-generation unit's yearly energy output should be calculated.

R1(d): Solar installers already perform these calculations as part of their customer proposals, considering factors like panel orientation, tilt, shading, and equipment specifications. This information should be standardized and provided to both utilities and customers. The calculation process is well-established in the industry and doesn't require regulatory reinvention.

Question 2: How important is post-approval compliance monitoring to ensure micro-generators are remaining aligned with the Micro-Generation Regulation?

Response 2:

Post-approval monitoring creates unnecessary administrative burden and potential financial risk for customers who have already made substantial investments in good faith. The current regulation states systems should be "intended to meet all or a portion" of consumption - the word "intended" suggests the focus should be on initial planning, not ongoing enforcement.

Customers investing $20,000-$40,000 in solar systems deserve regulatory certainty. The prospect of post-installation penalties or required system modifications would create significant investment risk that could discourage participation in the program.

The existing interconnection approval process already ensures systems meet safety and capacity requirements. Adding ongoing compliance monitoring would introduce complexity without clear benefit.

Q2(a): Please identify and justify the best way to structure mechanisms for post-approval compliance monitoring.

R2(a): Any monitoring system would be counterproductive. The micro-generation program's success depends on encouraging participation, not creating additional hurdles. The existing approval process, combined with technical limitations that prevent unauthorized system modifications, provides adequate oversight. Resources would be better spent streamlining the initial application process rather than creating post-installation compliance mechanisms.

Question 3: What type of inverter de-rating would ensure that a micro-generation facility will not later increase its system capacity beyond the approved size?

Response 3:

The current system already provides adequate controls. Modern inverters require specialized access to modify power output settings, which typical homeowners cannot access. The initial interconnection approval process ensures appropriate system sizing, and any capacity increases would require new applications regardless of inverter settings.

Adding inverter de-rating requirements would create additional complexity and cost without meaningful benefit. The existing approval process combined with technical limitations on system modifications already prevents unauthorized capacity increases.

Q3(a): Should micro-generators be permitted to de-rate their inverters, subject to the previously described limitation?

R3(a): The current approval process adequately addresses capacity concerns. Alberta's net billing structure already provides natural disincentives against oversizing systems. Inverter de-rating adds unnecessary complexity to an already comprehensive approval process.

Question 4: Would it be useful for the micro-generation application process to include an initial sizing determination phase?

Response 4:

No. The stated goal should be encouraging micro-generation adoption, not creating additional barriers. Adding preliminary sizing steps would slow an already lengthy process and discourage potential participants. As noted in the question, such processes reduce application numbers - this works against Alberta's renewable energy objectives.

A better approach would be strengthening installer standards and accountability. Industry organizations like Solar Alberta could enforce professional standards and ensure consistent sizing methodologies without adding regulatory steps.

Question 5: Would it be helpful for the AUC to facilitate a working group to review technical standards?

Response 5:

Yes, a technical working group could help maintain alignment between regulatory guidance and evolving industry standards. This would reduce confusion and application delays caused by outdated technical requirements.

Such a group would benefit all stakeholders by providing a forum for proactive discussion of technical changes rather than reactive responses to problems.

Q5(a): If yes, how often should the working group meet?

R5(a): Quarterly meetings would likely be appropriate, with flexibility to adjust frequency based on the pace of technical developments. Beyond inverters, discussions should include mounting systems, electrical standards, and grid interconnection technologies.

Question 6: Please identify any other high priority micro-generation issues that should be addressed.

Response 6:

Alberta's micro-generation program has been remarkably successful, enabling hundreds of millions in private renewable energy investment. The province should focus on preserving the key elements that created this success:

1. **One-to-one billing ratios** that provide fair compensation for exported energy
2. **Flexible retail rate options** that allow customers to optimize their solar investments
3. **Streamlined approval processes** rather than additional regulatory layers

Long processing times, particularly in rural areas, currently discourage participation. Rather than adding compliance requirements, efforts should focus on improving processing efficiency and maintaining the regulatory certainty that has attracted significant private investment.

Alberta's micro-generation framework serves as a model for other provinces. Changes should enhance rather than complicate this successful program.

Closing

Alberta's micro-generation success stems from regulatory clarity and fair economic treatment of distributed generation. Any changes to Rule 024 should prioritize maintaining investment certainty and encouraging continued participation in this grassroots renewable energy program.

The focus should remain on streamlining processes and supporting continued growth in distributed solar, not on creating additional administrative requirements that could undermine the program's effectiveness.

Thank you for the opportunity to provide input on these important regulatory questions.