26 June 2025

Thank you for conducting a public consultation regarding AUC Rule 024 and potential updates or changes to the regulatory framework for microgeneration. I appreciate that you are doing this before proposing any changes.

My responses to the survey questions are premised on the following:

- Regulation of microgeneration should incentivize (or at least not *dis*incentivize) widespread local electricity generation. Alberta's electricity need is likely to continue to grow, and widespread microgeneration will help fuel this need while diminishing reliance on new large scale commercial generation projects.

- At the same time, microgenerators generally rely on and benefit from the existing commercial, large-scale power generation infrastructure. Fairness to commercial producers and other participants who literally "keep the lights on" should be ensured. (In other words, microgenerators should not get only the benefits of the regulatory structure, without consideration for the overall framework and operational sustainability of a system that always has power available for all users.)

- I assume that the underlying principle of having microgenerators produce not more than roughly what they consume is aimed at least in part at these goals of fairness and grid-effectiveness and sustainability. If this is not the aim, or if this is no longer accurate, or the model can easily and fairly be adjusted so that widespread net-positive microgeneration can be accommodated reasonably, then this issue should be tackled first. That is, before "fixing" power usage and generation estimate and measurement issues, it makes sense to make sure these are necessary. Will it hurt the overall power system in Alberta if microgenerators frequently produced much more power than they consume?

- A regulatory structure that maintains simplicity and less "red tape" for typical microgeneration is incredibly important. Thus, a simplified and relatively "automatic" structure for ensuring that the regulatory goals around microgeneration are met is ideal. (For example, instead of focusing heavily on complicated formulas for proving anticipated future power consumption, regulations providing clear guidelines but then making repeated or dramatic "over production" less attractive could be used.)

Survey Question Responses:

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

Yes, but simplicity, generous estimation, and some flexibility for unique circumstances must be built into such methodology. As others have commented, it is cost-prohibitive to build too small

based on conservative estimates, and later have to add-on microgeneration capacity if actual usage is higher than forecast.

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

Customers should be allowed to base such assessment on either the most recent one year usage or the annual average of a three year period.

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

This could be based on statistical data reflecting the size of the property, electrical installations, and so forth – perhaps coupled with one or three year historical usage data from the site owner (from a prior site). Again, simplicity is important, and a generous rather than "conservative" approach should be adopted. It is fair to assume that our usage will continue to grow as our dependence on electrical appliances, vehicles, etc. grows.

> *(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 (such as electric vehicle proof of purchase, etc.).*

There should be no "proof" required - but rather a hard cap (or formula) for how much "extra" capacity would be permitted for increased consumption expectations. If (and only if) microgenerators producing significantly more than they consume is unfair to commercial generators or risks undermining system integrity, then the simpler solution is to make it less profitable for microgenerators to produce much more than they consume.

A cap or formula for increased expectations may be different for new sites with no usage history, than for users/sites with existing history.

> *(d): Please explain how a new micro-generation unit's yearly energy output should be calculated, including accommodation for any partial shading or coverage of a rooftop solar photovoltaic system.*

I have no expertise on this issue and will defer to those who do. That said, simple approaches that provide reasonable and consistent results are better from an overall regulatory perspective than complex formulas that require (potential) microgenerators to retain experts or jump numerous regulatory hurdles.

*Question 2: There are currently no specified mechanisms for monitoring the compliance of micro-generation systems with the Micro-Generation Regulation (i.e., the micro-generation system generates all or a part of, but not more than, the customer's yearly electricity*

*consumption) after the system is approved. How important is post-approval compliance monitoring to ensure micro-generators are remaining aligned with the Micro-Generation Regulation? Please provide an example*.

The answer to this question depends on a broad range of factors – ultimately going to the question of whether the Micro-Generation Regulation is or remains appropriate. Will it harm our overall power structure if a large number of microgenerators regularly produce 115% or 120% of their consumption? If not, the regulation needs to be revisited.

Or, if in practice the approval process means that the vast majority of microgenerators are scaled appropriately at the outset and in fact produce no more, or little more, than they consume – then monitoring and compliance would add significant burdens with very little benefit.

Or, if it is becoming apparent that a significant number of microgenerators today are producing "too much" relative to their consumption *and* that this is presenting a material (un)fairness issue for commercial generators, then a simple disincentive formula for such overproduction could be considered.

> *(a): Please identify and justify the best way to structure mechanisms for post-approval compliance monitoring, particularly regarding which party (or parties) should assume primary responsibility (such as the AUC, the AESO, utilities, etc.)*.

Simplicity, automation, and the absence of "red tape" are key. So, for example, having utilities be required to provide annual statements to their microgenerator customers of any excess of generation over consumption would be a start. And then perhaps a threshold of "over-generation" could be established by regulation, which would automatically trigger a lower rate of credits for such "over-generating" microgenerators for a following period of time (year or portion of a year). The threshold and specific figures would depend on how big (or not) a "problem" over-production by microgenerators is. For example, it might be that only microgenerators who produce 125% or more of their consumption in the previous year will face potential "discounting" of the credits they receive. The credit discounting could also potentially be scaled, so as to dis-incentivize gross over-generation but allow practical flexibility for fluctuations in usage and production.

*Question 3: What type of inverter de-rating, and associated evidence of this de-rating, would ensure that a micro-generation facility will not later increase its system capacity beyond the micro-generation system size approved by the utility? Please provide an explanation*.

This question appears to presume that microgenerators will set out to ignore existing regulations and approval requirements in order to produce more power than authorized. The regulatory system should not be designed with a *presumption* of non-compliance. Appropriate sanctions should be set for increasing one's system capacity without appropriate authorization.

> *(a): Should micro-generators be permitted to de-rate their inverters, subject to the previously described limitation? Please provide an explanation*.

No comment.

*Question 4: The City of Medicine Hat's micro-generation application process includes an initial step to determine a potential micro-generation system's maximum permissible size, which has been found to reduce the number of full applications received. Would it be useful for the micro-generation application process to include an initial sizing determination phase, where a utility first determines a customer's maximum permissible micro-generation system size before the customer makes a decision to proceed to a full application? Please provide an explanation.*

Clarity, consistency and simplicity in the requirements would be more appropriate than having additional regulatory approval steps. Those considering microgeneration should be able to independently estimate their maximum generation figures, through AUC material or other information sources. Licenced solar installers should be able to help customers determine this.

*Question 5: The AUC has heard from stakeholders that inverter standards for micro-generation systems often change, creating temporary misalignment with some AUC guidance documents and contributing to some confusion among micro-generation applicants. Would it be helpful for the AUC to facilitate a working group of relevant parties that reviews technical standards (for inverters, etc.)? Please provide an explanation.*

No specific comment regarding a working group; however, kudos to Solar Alberta which has been outstanding as an educator and advocate for solar microgenerators in Alberta.

*Question 6: Please identify, and provide justification and details for, any other high priority micro-generation issues that should be addressed to ensure the effective and efficient functioning of the micro-generation landscape.*

No comment.

Thank you again for the opportunity to comment.

Sincere regards,

L. Berner