Rule 24 and Micro-Generation Application Processes Questionnaire
AUC Bulletin 2025-005 – Consultation on Rule 024 & MG Application Process
Due: June 26, 2025

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? Please provide an explanation.

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

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

    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.).

    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.

General Themes:

ATCO Electric (ATCO) provides the following responses in line with the current Micro-Generation (MG) Regulation. The intent of the MG Regulation when developed was to incent MG development such as rooftop solar on residential properties. The main incentive mechanism used is the application of the retail energy rate for generation payments, rather than the pool price, with the caveat that MG systems are limited in size to align with the properties expected usage.

Based on the questions outlined by the Commission, it has become increasingly challenging to administer and enforce limitations on sizing and monitoring while maintaining the spirit and intent of the regulation. This is further blurred by the recent modernization of the regulations to enable unlimited self-supply and export, introduced through Bill 22, and other incentives such as the declining costs of MG systems and government rebate programs.

While ATCO's proposals below adhere to the current MG Regulation and recognizing that changes to the MG Regulation are out of scope for this Bulletin, we assert that a potential review of the MG Regulation may be more effective in solving the issues presented. For example, limiting the retail energy rate incentive to match the customer's annual load may be an effective way to both address MG sizing concerns and monitoring. This approach appears to be common in other jurisdictions on some very preliminary research ATCO has conducted. Alternatives could also include treating MGs like unlimited self-supply and export, compensated by the Pool Price, while enabling the utility to develop a rate which compensates MGs to the extent, they offer reliability or elevate a utility system issue. Changes in regulation will ensure clarity and direction for both the customer and the utility as the administrator of MG Applications.

Given the limitation in changing the regulation via this Bulletin, please find ATCO's responses below based on the current enacted MG Regulation.

ATCO Response – Question 1:

(a) ATCO submits that flexibility is required to address different situations. Generally, except for unique situations, in testing section 1(1)(h)(ii), the use of 12-month historical data with an approximate 10 percent tolerance, in recognition of the fact that there may be fluctuations in energy consumption, meets the requirement for most Micro-Generation (MG) Applications.

For unique situations, flexibility is key to properly review and assess the MG Application. In some circumstances, to identify different trends in historical consumption and better understand the customer's usage, the utility may need to consider more than the general 12-month historical consumption data and can include up to 24-months or more of data.

For situations where the utility and customer cannot agree, setting up a dispute process outside the current dispute process which follows the normal proceeding process would be beneficial. The process undertaken for customer complaints can

be utilized as a starting point in developing a dispute process focused on cutting down the regulatory burden and the time to resolve the dispute.

While flexibility is key in assessing MG Applications, the unintended consequence of overgeneration approved and connected under the MG Regulation is that these customers receive a preferred rate for their energy (retail energy rate) that is ultimately subsidized through the power pool. ATCO believes that with the introduction of Bill 22, specifically unlimited self-supply and export, customers now have more options than ever to size their generation beyond their load as required under the MG Regulation. While the MG Regulation provides direction on testing section 1(1)(h)(ii), the spirit and intent of the regulation must be maintained when establishing guidance to be used to assess MG Applications.

(b) ATCO notes for new builds or extensively renovated properties a HOT2000 report (generated by the Natural Resources Canada's HOT2000 software[1]), commonly available, from a certified Energy Consultant, with strict parameters, software version, and the modes within the software for HOT2000 can be used.

(c) In maintaining the spirit of the current MG Regulation, ATCO believes that customers should be able to provide evidence that the load will change from recorded historical levels. This can come in the form of a purchase receipt of an Electric Vehicle (EV) charger or vehicle, air conditioner, or hot tub or other energy-consuming devices. ATCO believes that seeking verifiable proof of purchase and proof of installation assists in assessing the qualification under the MG Regulation is required to meet section 1(1)(h)(ii). Absent of some level of proof, a reactive and rigorous monitoring and review process would have to be implemented.

With the introduction of unlimited exports through the enactment of Bill 22, ATCO believes that customers have options in the event they choose to set up an MG with generation that exceeds past and future expected consumption. Requiring evidence of future load change will reduce unintended consequences and

1 Tools for industry professionals - Natural Resources Canada.

additional administrative efforts through a rigorous monitoring process. Under a scenario where a customer cannot provide proof of purchase and chooses to build an MG under the unlimited export enabled by Bill 22, the Customer can reapply to be an MG under the MG Regulation once the load has manifested, or proof can be provided.

(d) ATCO suggests that the estimation process should be kept simple from an administration standpoint. For unique scenarios, such as those with high shading, unconventional sizing or orientation, customers should be awarded the opportunity to provide a report signed off by a qualified expert to justify the oversizing in relation to the expected generation.

Today, ATCO uses the size of the nameplate of the inverter as an approximate to the level of generation. For most cases, this conventional estimation, based on nameplate capacities, can be simply applied. Any further detailed analysis should be the responsibility of the applicant to provide, with this responsibility extending to all technologies such as CHP, wind and combined solar and batteries units.

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 explanation.

    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.).

ATCO Response – Question 2:

ATCO would support a periodic consumption review for customers who fall under the MG Regulation. It is ATCO's belief that a periodic review would maintain the intent of the regulation specifically "to meet all or a portion of the customer's total annual energy

consumption at the customer's site or aggregated sites". The unintended consequence of overgeneration under the MG Regulation is that these customers receive a preferred rate for their energy (retail energy rate) that is ultimately subsidized through the power pool.

Both the utility and retailer should be awarded the opportunity, not the responsibility, to identify customers that are no longer compliant with the MG Regulation if the generation significantly exceeds load over a certain timeframe or criteria. Significant exceeds can be defined as the net export over a 24-month timeframe that is greater than 10 percent of the historical load.

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.

    a. Should micro-generators be permitted to de-rate their inverters, subject to the previously described limitations? Please provide an explanation.

ATCO Response – Question 3:

(a) ATCO does not see inverter derating as a good strategy to be applied as a standard. De-rating is applied to the generator power (kW) and it should only be adopted to solve power issues (e.g., grid limitations). Although de-rating might affect energy generation (kWh), this is not what it is meant for. If the customer has excessive energy generation, it should be controlled by energy limitation (e.g., unplugging panels from the inverter) or by regulation (moving customers from MG Regulation, as suggested above). De-rating for energy limitation is an ineffective strategy and should be considered a last resort.

In the event de-rating is contemplated, ATCO submits that a de-rate would require a change in nameplate by the manufacturer to ensure the system capacity will not be changed later. While the MG Regulation under Section 2.1(1) contemplates a change in nameplate capacity, this may not be effective due to scenarios such as ownership changes (sale of the property) and the added requirement to monitor future changes.

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.

ATCO Response – Question 4:

Currently, customers can work with their retailers to obtain all historical consumption data to better understand their usage history to help appropriately size their MG generating unit. Upon request and on a case-by-case basis, the DFO can provide utility data, such as transformer or breaker size, and advise whether an upgrade would be required. In order to manage the level of initial inquiries, consideration of a nominal administration fee for information beyond historical consumption data can be evaluated.

For new builds, ATCO submits that a short form (for example, based on a generic expected load) can be used. However, DFOs would still require verification of transformer size and check for multiple MGs connected to a shared transformer.

Other improvements to increase the efficiency of processing MG Applications include:

- More prescriptive standards in the guidelines for energy sizing (excluding utility technical standards).
- Require annual generation modeling document (with parameters) as part of the Application process, to allow for confirmation of the actual system generation.

ATCO notes that not every MG construction is the same, and there is the need for flexibility to understand and address unique circumstances. Flexibility is required to allow for this.

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.

    a. If yes, how often should the working group meet? (e.g. monthly, quarterly, bi-annually). Please provide examples of technical requirements, other than inverters, that should be included in the discussions.

    b. If no, please suggest a different way that the AUC can keep abreast of changing technical standards.

ATCO Response – Question 5:

Yes. ATCO suggests a biannual meeting between the Commission and relevant stakeholders to review the changes to technical standards for the MG systems (e.g., inverters) and their alignment to market practices and Commission guidance documents.

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.

ATCO Response – Question 6:

Please refer to the General Overview section above.