Questionaire Responses

Question 1

Micro-generators with service sizes of 200 amps or less should be permitted to freely self-supply and export electricity to the grid—just as industrial users in Alberta are currently allowed. What matters to the utility is the *flow* of electricity, not the total annual volume. Utilities already account for local flow-based capacity constraints during their standard application reviews. Because of this, there's no need to introduce an additional oversight system at the micro scale to manage capacity concerns.

Given that existing grid connections inherently limit the capacity of micro-generation systems, allowing unrestricted self-supply and export—without requiring detailed output forecasts—would meaningfully reduce red tape for all involved, with little to no impact on grid performance. This streamlined approach would minimize the need for solar installers and utilities to evaluate the size of most residential and some small commercial micro-generation systems. It would also allow the AUC and utilities to focus their technical requirements on systems with more significant implications for the grid.

In addition, there should be a clear, standardized method—or at least a consistent set of minimum information requirements—for how utilities estimate a customer's annual energy use and projected generation. Such standardization would improve fairness, reduce delays, and make the process more efficient overall.

Currently, most solar installers work across multiple jurisdictions in Alberta, and it's challenging for them to navigate varying information demands and methodologies. These inconsistencies increase the cost of doing business, which ultimately raises the price of solar for Albertans. They also complicate communication with customers, since expectations often differ from one utility territory to another—even though Albertans may not understand why those differences exist.

For micro-generators connected to 200-amp services or smaller, we propose eliminating the requirement to assess historical electricity usage. Instead, these systems should be allowed to self-supply and export energy without restriction, as long as they remain within the technical limits of their existing grid connection—limits that are already reviewed and enforced during the micro-generation approval process.

For systems on services exceeding 200 amps, customers should have the option to base their export eligibility on either the previous year's consumption or an average drawn from the past 3 to 5 years. This approach allows for variability in weather patterns while remaining accessible for those who may not have extensive historical data.

Additionally, customers should be able to justify increased generation capacity at the time of installing new electricity loads—such as electric vehicle chargers or heat pumps—rather than waiting for future usage data to accumulate. In these cases, projected demand increases could be estimated using standard load values or manufacturer-provided specifications. Reliable, publicly available data on typical energy use for these technologies already exists and should be leveraged to support such projections.

For micro-generators with a 200-amp service or less, we recommend removing the requirement to project future energy usage and instead allowing unrestricted self-supply and export to the grid.

For those on services above 200 amps, future energy use projections should be based on historical consumption—whether from the past 1, 3, or 5 years—combined with any anticipated new loads expected to come online within a year of installation. In these cases, projected increases in demand can be supported using standardized consumption estimates or manufacturer data for new technologies such as electric vehicle chargers or heat pumps. Publicly available data on typical energy use for these technologies is widely accessible and should be accepted as valid justification.

For micro-generators connected to a 200-amp service or smaller, we recommend eliminating the requirement to demonstrate future energy use and instead allowing unrestricted self-supply and export to the grid.

For systems on services above 200 amps, customers should be permitted to submit reasonable evidence of upcoming energy demand, such as documentation consistent with proof of purchase. Acceptable forms could include a bill of sale, paid invoice, order confirmation, registration, permit issuance, or a contract deposit for major renovations. This should apply to additions like electric vehicles, EV chargers, heat pumps, air conditioning units, electric stoves, and other high-consumption equipment.

Currently, some utilities in certain jurisdictions are requiring more extensive documentation than is practical—for example, demanding both a bill of sale and vehicle registration or insurance for an EV. These excessive requirements create unnecessary barriers for customers and installers alike.

For micro-generators connected to a 200-amp service or less, we recommend removing the requirement to calculate or submit projected annual energy output. These systems should be allowed to self-supply and export without restriction, as their capacity is already limited by the constraints of their grid connection.

For micro-generators on services larger than 200 amps, we suggest aligning production estimate expectations with Section 5.6 of *Solar Alberta's Alberta Solar Business Code of Conduct*. This section outlines that system performance projections should, where applicable, take into account key *Material Factors*, including:

- Equipment and hardware specifications
- Tilt
- Azimuth
- System size
- Roof layout
- Geographic location
- Shading
- Any other reasonably evident or foreseeable factors that may influence production

If a performance calculation cannot incorporate these Material Factors, a production estimate should not be considered mandatory. This balanced approach ensures reasonable accuracy without creating unnecessary administrative burden, particularly in cases where complete data is unavailable.

Question 2

Introducing post-approval compliance protocols for micro-generators would impose unnecessary and burdensome requirements on both system owners and utilities. This approach directly contradicts the intent of Alberta's **Micro-Generation Regulation**, which, as reaffirmed by the Alberta Utilities Commission (AUC) in *Decision 23412-D01-2018* and again in 2023, is "in part, to promote self-supply by renewable energy resources and to simplify the regulatory process for micro-generators."

Adding compliance checks after approval would also weaken one of the key incentives for Albertans to reduce electricity consumption: the ability to generate and bank additional credits through improved energy efficiency. Such retroactive protocols would discourage this behavior and diminish the appeal of micro-generation.

Moreover, post-approval requirements would create unnecessary uncertainty in the residential and commercial property markets. Properties with solar installations could be perceived as carrying future administrative burdens or financial liabilities, potentially discouraging buyers. For

comparison, electrical systems are not subject to compliance monitoring after installation; any changes are simply managed through the existing electrical permitting system.

The risks associated with minor overproduction are minimal and are far outweighed by the broader benefits of encouraging distributed generation. Excess generation contributes to lower grid demand, displaces costlier centralized generation, and reduces electricity costs for other ratepayers. As highlighted in a recent *M.Cubed* analysis, California's rooftop solar customers delivered approximately **$1.5 billion** in net financial benefits to fellow ratepayers (link). A robust approvals process, especially for systems on services over 200 amps, is sufficient to mitigate any risks of significant overproduction.

Finally, it's important to clarify a key misunderstanding: the **Micro-Generation Regulation** does not contain the phrase "but not more than" in reference to matching generation with annual consumption. This appears to be a misinterpretation possibly stemming from concerns among some utility representatives about future localized oversupply. However, the Government of Alberta—through statements from Minister Neudorf—has made clear its intention to implement **demand-side management strategies**. These forthcoming measures should be sufficient to address oversupply concerns, eliminating the need for the AUC to introduce overlapping compliance mechanisms.

There is no optimal way to implement post-approval compliance monitoring for micro-generators—because such a system should not exist. Introducing post-approval compliance protocols would impose unnecessary administrative and financial burdens on both micro-generators and utilities, who would likely be responsible for managing the added oversight. It would also contradict the core intent of Alberta's Micro-Generation Regulation: to promote self-supply from renewable energy and to simplify the regulatory process.

These protocols would further erode one of the most effective current incentives for Albertans to improve energy efficiency: the ability to reduce their consumption and earn additional generation credit. Penalizing customers for consuming less electricity—particularly for personal or seasonal reasons, such as children moving out or time spent away from home—would be both counterproductive and unfair.

Rather than expending resources on monitoring homeowners' consumption patterns, utilities and regulators should focus on improvements to the *upfront* system sizing process. Strengthening guidelines at the application stage is a more effective and less intrusive way to address any concerns about overproduction, particularly for larger systems.

Distributed micro-generation reduces demand on the centralized grid and helps to defer or avoid costly investments in new utility-scale infrastructure. Encouraging it—rather than complicating it—should remain the priority.

Question 3

Inverter de-rating should be regarded as a protective design feature—not as a post-approval compliance enforcement tool. Utilities and regulators should continue to rely on service size limitations and the established interconnection approval process to manage grid impacts effectively. As previously noted, enhancing the **upfront system sizing process** and offering **clearer utility guidelines** would be a far more efficient and less intrusive way to address concerns around potential over-generation.

It's important to acknowledge that, even when a derating claim is supported by documentation from an installer or manufacturer, the technical reality remains: inverters can be reprogrammed after installation. While Solar Alberta is unaware of any such tampering having occurred, the potential for adjustment exists—highlighting the need for trust in the regulatory framework. This trust is best maintained through interconnection agreements and the expectation that any future request for additional generation capacity at the site would undergo a standard reapproval process.

In short, using inverter settings as a tool for ongoing compliance enforcement would create unnecessary complexity and administrative burden. Such post-approval protocols would not only strain both micro-generators and utilities—who would be responsible for ongoing monitoring—but also conflict with the core objectives of Alberta's Micro-Generation Regulation. These include promoting renewable self-supply and simplifying the regulatory pathway for Albertans. Moreover, it would undercut one of the Regulation's key incentives: encouraging households to become more energy-efficient and thereby generate additional export credits through lower consumption.

Yes, micro-generators should be permitted to de-rate their inverters. Allowing de-rating supports future-proofing, enabling system owners to expand generation capacity more easily in the future—such as when new loads like electric vehicles are added—without the expense of replacing the entire inverter.

In addition, the market availability of inverter products is often limited, and de-rating provides a practical solution for optimizing system performance within existing site-specific electrical constraints. In many cases, it is the only viable option for right-sizing a system while staying within regulatory or technical limits.

Question 4

Introducing an additional preliminary step to determine the maximum permissible size of a proposed micro-generation system is unnecessary—particularly if a standardized methodology is implemented across jurisdictions. Rather than improving efficiency, such a step would create further procedural complexity and administrative burden for applicants. The aim of the Micro-Generation Regulation and the AUC should not be, as the question suggests, to "reduce the number of applications received," but rather to facilitate a streamlined and accessible process for Albertans seeking to invest in renewable energy.

Micro-generators connected to 200-amp services or less should be allowed unrestricted self-supply and export up to the technical limits of their grid connection. This approach would put residential customers on equal footing with Alberta's industrial sector and reduce the current bottlenecks related to system sizing assessments—one of the key contributors to application backlogs identified by the AUC.

If the AUC is seeking ways to simplify the process while retaining appropriate size constraints, the City of Lethbridge offers a model worth emulating. Instead of requiring an extra approval step (as done in Medicine Hat), Lethbridge provides a public-facing map indicating the maximum allowable system size for each property. This approach allows contractors to design and quote systems with confidence that they will be approved. For cases where a proposed system exceeds the posted limit, a simplified process for justifying higher consumption and projected output could be used. A province-wide public database like this—accessible to both consumers and installers—would be a far more effective and transparent solution than requiring applicants to engage in additional review steps with utilities.

To further address the commissioning delays noted by the AUC, we recommend issuing a formal interpretation that includes a defined commissioning timeline. Several utilities have indicated to Solar Alberta that the absence of a clear timeline hinders their ability to allocate resources effectively and scale staffing in response to growing micro-generation demand. A clear standard would help utilities plan and deliver timely service, while also giving applicants reasonable expectations around project timelines.

If the AUC's concern is related to consumer protection and appropriate system sizing, a more targeted and effective approach would be to ensure that all solar installers in the province are members of **Solar Alberta**, thereby committing to the **Alberta Solar Business Code of Conduct**. Solar Alberta plays an active role in advocating for consumers and setting industry standards, making this a practical step toward accountability without adding regulatory red tape.

Question 5

Given that utilities often serve as the public-facing representatives of the AUC in their communities, it would be logical and beneficial for the AUC to take a more active role in fostering regular coordination among them. Consistent alignment across utilities is critical to reducing confusion, streamlining application processes, and ensuring that micro-generators receive clear and consistent guidance regardless of their location.

If the AUC does not wish to directly facilitate these discussions on an ongoing basis, it could consider subcontracting this coordination role to Solar Alberta. As a trusted, non-profit society with more than 34 years of experience, Solar Alberta has already demonstrated success in convening utility representatives for collaborative discussions. The main limitation to expanding this role has been a lack of dedicated resources—an issue that could be readily addressed through a formal partnership with the AUC.

Positioning Solar Alberta as a neutral facilitator would allow for more regular and structured dialogue between utilities, reduce regional inconsistencies, and improve overall outcomes for Albertans navigating the micro-generation process.

In regard to **inverter standards**, the establishment of a single, province-wide standard would provide much-needed clarity. This standard should be communicated consistently to utilities and local inspection authorities. **CEC (Canadian Electrical Code) approval should serve as the sole technical requirement** for inverter acceptance, eliminating the current patchwork of inconsistent or redundant requirements. A unified standard would simplify compliance, enhance confidence among system designers and installers, and reduce approval delays.

We recommend that the working group meet once or twice annually to maintain alignment across utilities and address emerging issues in a timely, coordinated manner.

One example of a technical topic that would benefit from this kind of discussion is system sizing for **heat pumps**. Currently, utilities across Alberta are applying different methodologies for sizing systems that accommodate heat pumps, leading to confusion and inconsistency. A working group forum would allow for the development of a shared approach to such challenges, improving fairness and efficiency in the application process.

If the AUC is unable or unwilling to convene these meetings regularly, this coordination role could be subcontracted to **Solar Alberta**. We have already demonstrated success in bringing together most of the province's utilities for discussions on key issues. The only barrier to doing this on a regular basis is a lack of dedicated resources—a challenge that could be easily addressed through a formal subcontracting arrangement with the AUC.

With adequate support, Solar Alberta could serve as a neutral, experienced convener to facilitate ongoing dialogue, support consistency across jurisdictions, and improve the overall experience for micro-generation applicants in Alberta.

Question 6

Allowing the aggregation of sites across different feeders or involving different retailers would offer significant benefits to Alberta's micro-generators. In tandem with enabling **unrestricted self-supply and export for Albertans with a 200-amp service or less**, we believe Alberta should preserve the foundational elements of its Micro-Generation Regulation—elements that have made Alberta the most supportive province for micro-generation in Canada.

These key pillars include:

- **The One-to-One Ratio**
  This ensures that micro-generators receive a credit for electricity exported to the grid at the same rate they pay when consuming electricity. It is a fair, straightforward

mechanism that supports long-term investment in distributed generation.

- **Solar-Specific Pricing**
  Alberta's current framework allows micro-generators—like all power producers in the province—to switch between electricity rates depending on what is most financially beneficial. Maintaining this flexibility supports consumer choice and market efficiency.

- **Year-End Credit Carryover or Payout**
  This provision allows micro-generators to carry forward or receive compensation for credits earned in a given calendar year, ensuring that excess generation is recognized and valued rather than forfeited.

Preserving these principles is essential to maintaining Alberta's leadership in renewable energy participation and ensuring that Albertans continue to have a clear, equitable pathway to contribute to—and benefit from—the province's energy future.