Dear AUC,

Thank you for the opportunity to provide input on Alberta's evolving microgeneration framework. I'm writing as a committed stakeholder who cares deeply about Alberta's energy future. Our province has a proud legacy of energy leadership — from traditional oil and gas to the rapidly expanding renewables sector. Our regulatory decisions must continue to support this leadership through innovation, investment, and wide-scale participation, not by restricting it.

The recent regulatory uncertainty, including the pause on renewable energy approvals, has already had a chilling effect. Industry sources and media reports (such as coverage by CBC) suggest that up to **$4 billion worth of projects** have been delayed or cancelled. This has major implications for Alberta's competitiveness, particularly at a time when both residential demand and new commercial sectors (like data centers) are rapidly growing. Recent headlines highlight that data center growth is now being threatened by a lack of generation capacity, a direct result of delayed policy and constrained infrastructure.

Given these challenges, I urge the Commission to adopt reforms that reflect the capabilities of modern solar technology while enabling grid-conscious and equitable access.

Moreover, we must begin preparing for an electrified transportation future. As energy needs rise, empowering homeowners to contribute to the grid is a practical solution. To make this work, real financial incentives for battery storage and smart feed-in structures are crucial. Currently, homeowners see little benefit from installing storage, yet such systems would enhance grid stability by allowing for off-peak exports. Supporting the growth of distributed storage would significantly improve the quality, resilience, and responsiveness of Alberta's electrical system.

Question 1: Should system size be limited based on consumption?

Recommendation: No. Consumption-based sizing is outdated and unnecessarily restrictive.

Proposed Framework:

- Allow systems to be sized up to the full service capacity (i.e., the service panel or utility connection limit), rather than based on past energy use, which may fluctuate with lifestyle changes, new technologies, or EV adoption.

- Use real-world self-consumption data to calculate how much generation can safely be connected to each transformer. For example, if data show 20% of solar production is consumed on-site, a 50 kVA transformer could accommodate up to 60 kVA of solar capacity.
- Manage interconnection access on a **first-come, first-served** basis based on calculated transformer limits. Once capacity is reached, new applicants could enter into **zero-export agreements** and be billed for both consumption and generation.

Additional Considerations:

- Existing microgeneration systems should be protected from retroactive changes. Energy usage changes over time, and homeowners shouldn't be penalized for honest consumption shifts.
- Accurate production estimates rely on detailed factors like azimuth, tilt, shading, vent placement, and historical irradiance. These are best evaluated by qualified solar professionals, not wire providers.
- Wire providers lack the financial or technical incentive to produce accurate production models and often rely on oversimplified software. These estimates have already proven unreliable when scaled.
- A standardized, conservative default assumption (e.g., 1000 kWh/kWp for unshaded south-facing systems) could be adopted, with flexibility for installers to submit verified shading reports to justify higher performance claims.

Question 2: Should microgeneration be monitored to ensure production matches consumption?

Recommendation: No. Ongoing monitoring is inefficient and misaligned with grid realities.

Proposed Alternative:

- Set limits based on **technical grid capacity** (e.g., transformer back-feed ratings), not energy usage history.
- In areas where grid limits are met, enforce **zero-export inverter settings** to self-regulate system exports. Disallow excess energy sales in these cases to prevent system abuse.
- If a system exports power despite a zero-export agreement, discrepancies in utility billing data will automatically flag the issue — no additional monitoring required.

Question 3: Derating

Recommendation: Permit factory-configured derating with transparent documentation.

Details:

- Derating is a practical tool for aligning solar output with panel or transformer capacity limits.
- The derating must be **manufacturer-locked**, with documentation included in interconnection submissions. Final commissioning should require a stamped verification.
- Rather than active enforcement, utilities should notify customers on their bill that unauthorized changes to factory derating may result in financial penalties or liability for grid damage. A clear minimum charge for violations would discourage tampering.

Question 4: Target-based capacity limits (e.g., Medicine Hat model)

Recommendation: Adopt address-based lookup systems for generation capacity.

Details:

- A capacity lookup system by address or Site ID (e.g., embedded in utility bills or online portals) would help homeowners and installers design systems with confidence.
- This would avoid delays that arise when installations happen ahead of interconnection approvals.
- Simply including a printed “available generation capacity” on each bill would make this process seamless and transparent for everyone involved.

Question 5: Inconsistent equipment approval across wire providers

Recommendation: Establish a standardized, province-wide equipment approval list.

Details:

- Discrepancies between wire providers (e.g., an inverter approved by EPCOR but rejected by Fortis) create major financial and logistical issues.
- An annually updated list of approved equipment should be maintained and shared, with changes announced well in advance (e.g., implemented one season after ratification).
- A structured stakeholder consultation period should be included before list changes, with input from **homeowners, installers, wire providers**, and others.
- While wire providers currently hold disproportionate influence in regulatory processes, a more balanced approach is needed to ensure Albertans and small-scale producers are equally represented.

Question 6: Broader reflections on regulatory direction

Concern: Overreliance on consumption metrics and utility-controlled models limits Alberta's ability to lead in innovation.

Recommendation: Regulations should be built around:

- Physical grid safety and technical constraints,
- Transparent and predictable application processes,
- Fair and inclusive participation by small-scale producers, and
- Recognition of installer expertise and industry best practices.

Let's keep Alberta at the forefront of energy leadership — not only in traditional sectors, but also in the renewable energy transition.

Thank you, AUC, for opening the door to public input. I trust that this process will result in a thoughtful and forward-looking approach that balances safety, fairness, and innovation, and ensures everyday Albertans are empowered, not left behind.

Thanks,

Caleb