Rule 024 and Micro-Generation Application Process Questionnaire

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Preamble:

I'm a member of the Solar Club™, which is run by Utility Network & Partners Inc. ("UTILITYnet") through their team of energy marketers, including Park Power, my energy marketer of choice. As someone who uses solar power at home, I wanted to share my thoughts on the Alberta Utilities Commission's (AUC) review of Rule 024 and the micro-generation rules.

The Solar Club lets members like me switch between a high rate in the summer (when we're usually producing more energy than we use) and a lower rate in the winter (when we tend to use more than we produce). This seasonal rate setup helps make installing solar panels worthwhile. Most of us install the biggest system we're allowed to, based on current rules and the Solar Club's support. I have a 10kW system, which is equivalent to my household's historic electrical energy consumption. I consume more energy now, even though we have 2 less members in our household, as I have a hybrid heating system which incorporates a heat pump. I run the heat pump in the summer as an air conditioner (which I didn't have previously), and I run it in the winter up to -10 degrees Celsius. Below that temperature, it is more economical to run my gas furnace.

Our Solar Club community is pretty big — over 10,000 people, more than 100 megawatts of power, and around 200,000 solar panels already installed. Altogether, Albertans are spending over a million dollars every day on solar energy systems, and we've already put in $750 million as a group. That's a huge investment that was made under the current rules. My own upfront investment was $21,000, which I estimated would require 12 years to recoup. However, I received a $5,000 rebate from Canada Greener Homes, and a $4,000 rebate from the City of Edmonton. My net investment was reduced to $12,000, which I estimated would take 7 years to recoup.

Some of the changes the AUC is exploring could make it harder for people to keep going solar. New rules could slow down how quickly people can pay back their investment and could add a lot of unnecessary steps. A major point I want to make is that we should continue to allow people to produce and use as much of their own power as they want — and send extra back to the grid if they have it. This idea is key to making solar power worthwhile for regular homeowners like me. I am concerned by Minister Brian Jean recent announcement regarding his intention to allow macro-generators to utilize 100% of the electrical grid's capacity, which would leave no room for micro-generators to contribute to the grid from renewable sources. I believe Alberta could benefit from exploring how Texas is able to operate a thriving electrical system based upon a coordinated use of both renewable and non-renewable sources of energy.

Questions:

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, I think there should be a clear and consistent way to figure out how much electricity a household or site normally uses, especially for farm properties where usage can swing a lot depending on the weather. Right now, the rules say solar systems should be designed to supply all or part of what a household uses in a year, but that's vague. What counts as "***total annual energy use***"? That needs to be clearer.

That said, if we were simply allowed to produce as much solar power as we want and send any extra to the grid, we wouldn't need to worry about these estimates as much. People like me naturally want to save money, and most of us have already installed the biggest system we can afford or fit. Expanding later is more complicated and costly.

If full export isn't allowed, then I think it's fair to use either the average electricity used over the past five years or over the last year, whichever is number is higher.

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

R1(a): Again, if we're allowed to make and share as much solar power a we want, this question wouldn't really matter. But if no, then I think looking at the past five years or the last 12 months, and going with the higher number, is a good approach.

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

R1(b): For homes that don't have history to go on, I think the utilities should use some basic info to estimate — like the size of the home, what kinds of appliances are in it, and whether things like electric vehicles, EV chargers, or heat pumps are expected. Government-issued EnerGuide labels could also help.

Home energy assessments could be useful too, especially for people planning to make their homes more energy-efficient. As part of the Canada Greener Homes program and the City of Edmonton HERA program, I had a post-retrofit Energy Audit completed. In August of 2024 my home was assessed as consuming 72 GJ/year, compared to a typical new house which consumes 127GJ/ year. It was estimated as a household we consume 61 GJ of natural gas and 47 GJ of electricity, and were given credit for 36 GJ contribution of onsite renewal electricity.

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

R1(c): If people were allowed to send all their extra solar power to the grid, this wouldn't even be needed. But if they're not, then showing proof like a receipt or agreement for a big new appliance (especially energy-hungry ones like electric vehicles or heat pumps) should be enough. That's fair. Case in point: I added a heat pump after my solar panels were installed, so it adds to my overall household consumption of electricity.

Solar Alberta has pointed out that heat pumps can't currently be included in initial sizing if they're paired with a gas furnace, which adds another barrier for people trying to upgrade to cleaner systems. I'm not sure why this restriction is in place. By purchasing a heat pump, I am able to use a renewable energy source to heat my house in the shoulder seasons (fall and winter). The heat pump provides the added benefit of operating as an air conditioner, which has become important due to heat wave in the summer and wildfires, which restrict opening windows to cool down the house.

Q1(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.

R1(d): Installers already figure out things like the angle and direction of the panels, shading, location, and equipment specs when planning a system. All of that should be part of the paperwork customers get when their system is installed. My installer, SolTek, produced a shading report sing Aurora software, which estimated that the solar arrays on my roof would have a combined Total Solar Resource Fraction of 74%, i.e. my 10.01 kW system generates an average 7.4 kW of electricity at any given time, based on shading of my roof surface.

Again, if we're allowed to freely produce and share power, this calculation isn't really necessary, but customers should still be given the numbers so they understand what their system is expected to do.

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.

Response 2:

Adding more rules to check up on solar users after their system is approved feels like overkill. It could mean people like me would have to downgrade our systems or remove panels, which would be expensive and frustrating. It might also mess with the Solar Club's seasonal rate system, which depends on flexibility.

The rule actually says systems should be "intended" to meet part or all of our usage. That word matters; it's about intention, not strict limits.

If people can produce and send as much energy as they want, there's no need for extra inspections or monitoring after installation.

Q2(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.).

R2(a): I don't think we need post-approval checks at all. It just makes things harder — especially for customers who are already investing a lot of time and money to go solar. The whole process already includes permits, inspections, and financing — it's not simple. Adding more steps would turn people away.

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.

Response 3:

> We already have a system in place where you need approval before installing your solar setup, and that includes checking the size of the system. If someone wants to make their system bigger later, they'd have to go through that same process again. That seems like enough.
>
> Also, I can't even change the power output of my inverter on my own. Only the installer or manufacturer can do that. So there's already a control in place.
>
> Trying to add more restrictions or checks after the fact just wastes time and money. It targets a very small number of people and doesn't help the majority who follow the rules.

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

R3(a):

> Since we already have rules and approval steps that manage system sizing, there's no need to limit or restrict inverter settings. The setup we have now makes more sense and works fine.

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.

Response 4:

> We should be trying to make it easier, not harder, for people to go solar. Adding an extra sizing step at the beginning might sound helpful, but in practice, it just makes people give up before they even apply.
>
> Instead of putting the pressure on homeowners, I think installers should be held to a consistent standard for calculating system size. If they follow a shared code of conduct, that would go a long way in keeping things fair and accurate.

> The Alberta Government should consider an increase in the use of solar energy over other non-renewable sources as a means to demonstrates its commitment towards positive steps in preventing climate change. This would earn social capital that could then be used in support of development of non-renewables such as oil and gas

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.

Response 5:

Yes, a working group would be helpful. It would make sure that as equipment standards change — and they do, regularly — the rules keep up.

This would also cut down on confusion and make it less likely for people to mess up applications or have them rejected. Having utilities, installers, regulators, and others in the same room helps solve problems faster and more practically.

Q5(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.

R5(a):

Since changes to technical standards don't happen all the time, I think meeting every few months would be enough. That way the group can focus on the issues that matter without meeting too often.

Q5(b): If no, please suggest a different way that the AUC can keep abreast of changing technical standards.

R5(b):

If it's not possible to set up a working group, there are other ways to stay up to date — like subscribing to technical updates, joining professional groups, or following newsletters and alerts from the solar industry.

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.

Response 6:

Alberta's solar rules have been a big success. They've helped thousands of homeowners, businesses, and farmers add solar to their rooftops. This isn't just about energy, it's about jobs, community growth, and a cleaner grid.

We've spent hundreds of millions of dollars to install these systems, and Alberta's model is the best in the country. It works because:

1. We get paid the same rate for energy we send to the grid as we pay for using energy — that's fair.
2. We can switch between different rates to make the most of our solar energy — that helps the math work out.

In rural areas especially, long wait times for approvals are already a problem. If the AUC adds more steps or red tape, it will just slow things down more. That's the opposite of what we need.

Closing

Alberta's solar rules have made it easier for regular people like me to help power our homes and communities. Thanks to the flexibility and fairness of the current system, we've been able to invest in solar, reduce our electricity bills, and even help power the grid with clean energy and address climate change.

To keep this going, we need to make sure two key things stay in place:

1. Let people make and share as much solar power as they can without limits tied to how much they use.
2. Keep solar-friendly electricity plans that make it worthwhile to go solar.

Some of the ideas in this review, like more checks, restrictions, or size limits, could scare people off or make it harder to join the solar movement. Instead, let's focus on making the process smoother, keeping installers accountable, and supporting more people to make the switch.

Thanks for taking the time to hear from everyday Albertans like me. I hope we can keep working together to make Alberta the best place in Canada to go solar. It's time for the province to recognize the wealth we have in terms of solar and wind. Edmonton has over 2300 hour of sunlight in an average year (Source: Change for climate, City of Edmonton). Alberta was also a leader in wind energy in Canada, with total wind capacity of 3,618MW, representing 20% of total installed generation capacity in 2022 (Source: AESO). It is time to lift the moratorium on renewal energy and diversify and strengthen Alberta's energy sector.