Hello AUC,
I would like to stress as emphatically as possible. Alberta is an energy province, whether oil and gas or solar and wind. Choosing winners and losers does not serve Alberta and Albertans and Danielle Smith's delays and nonsense in the past have already cancelled a lot of projects that were set to be installed in this province; to the tune of billions. One number I heard from industry and reported on CBC's website this year, was $4 Billion in cancelled or significantly delayed projects. This does not help us and with our growing demands for electricity, both by Residents AND Commercial data centers. Some of these projects literally up and left for Sask and BC. Just yesterday an article was explaining that new generation was required to serve the needs of new data centers and that delays on data center builds would result! How does this help Alberta remain competitive?

My goal for this response is to ask that AUC take the small producers' view and the view of the planet on what should be required by wire providers. Currently, if a solar company is good at accurately measuring production, they are allowed to justify a higher percentage of microgen offset against the nameplate DC and AC standard calculation because the conditions on each house are different. **Why are we even doing this calculation?** ***Why not simply allow up to the maximum of the service size, regardless of true consumption.*** There are 3 and 4 solar module systems being designed and installed for literally no one's benefit. This is hardly good for the home owner, and hardly good for the installer!

Question 1. Should there be...
Answer 1. No. Standards are abused. Consumption, if limiting at all, up to 200 or 150% should be allowed up to the maximum of their bus capacity on the breaker panel or the service size of the meter. It should not have anything to do with consumption as the power is being used upstream. There are already limits in place for solar in a neighbourhood, the local transformer. Just require that service capacity calculations, as are currently used for consumption, to dictate how much solar should be allowed in each local transformer. Then as real records are shown on how 'loaded' these transformers are due to self-consumption of solar, a percentage of 'loading' can be calculated. Allow back-feeding installations up to that amount in a neighbourhood, first come, first served. For instance, if self-consumption = 20% of solar in a given neighbourhood and that neighbourhood is hooked up to a 50kva transformer, then it seems reasonable to allow 60kva of solar back-feed potential to be allowed to be hooked up by the members of that community served by that local transformer as the record would have shown that the true back-feed potential is less than the transformer rating. I'm not sure why this isn't already the case, it would drive adoption of solar and provide safety and stability to the grid.

Answer 1A: Don't touch that dial please. If you go back and evaluate existing microgen sites, you will be asking for overproduction by members who will game the system. You will have lawsuits, you will have issues with consumption dropping naturally and a normal honest producer, who hasn't gamed anything, just unplugged their sauna, would be in trouble. I would argue that at least a 200% of consumption with the limits being the existing service size, bus capacity of the service entrance breaker panel and the back-feed capacity of the local transformer plus a percentage of expected self consumption as explained in Answer 1 above.
Answer 1B: Accurate performance requires skill, historic data and site conditions, including azimuth and a great deal of other things that wire providers are not incentivize, skilled or careful enough to entrust to. Solar companies are doing the best for their clients, and honest solar companies, with long ties to the community, are being as accurate as possible. With vent placement, trees, historically evaluated data from existing installations they are accurately representing what is expected. IF THIS is done by a wire provider, they will simply choose an algorithm that does not take in to consideration the real world as they will not have the time or energy to do so. This has been shown by the calculation put forward by Fortis in PowerClerk. Averages over areas do not produce accurate values. It takes skills and care and attention. It's hard enough getting new designers to care about details, I do not believe that the wire providers have incentives to be accurate. They will allow less than they are supposed to and Albertans will be harmed.
Answer 1C: I believe this one is easy. Have a picture of it installed. Have registration for the vehicle. Have an invoice where pictures of the installation of the heat pump or air conditioner are required before energization but can be allowed to proceed with install (delays are annoying to time installations with many companies, just make it before generation is turned on).

Answer 1D: This is not something that can easily be explained because there are a great great deal of various roofs, features, shading sources, temperature effects, weather to consider. This is not a simple thing. This should not be averaged and it should not be up to wire providers. It should be justified by calculations that are shown. Share the shade report from the solar design software proving the calculation. Share your work with the wire provider. I do not agree that wire providers can use a rule of thumb for this. If any 'standard' rule is decided, it should be very loose to allow for less administrative load. For instance, it is likely that a south face without shade should be able to outproduce 1200kwh/kwhp per year. If this was set to a 'non-nonsense' 1000kwh/kwhp rule for direct south (180 degrees), then other than major sources of shade, this would be a rubber stamp. Both parties happy. If there is shade, attach the shade report. Then for east west, a similar value can be decided on that is, again, on the home owners side by at least 15%. Then for each azimuth degree, it can easily be extrapolated. Then if there is shade or a tilt reason to allow for something else, attach the proof from design software. This isn't super hard to regulate. A rule of thumb with the burden of proof on the solar company to provide their production proof for anything not covered by the rule of thumb would make it easier to apply than today and the result would be similar to today as well.

Question 2: There are currently no...
Answer 2: There SHOULD be no need or administrative load to monitor it. This is why setting it to production values is not smart. Simply use the back-feed capacity and other factors I listed above as the limitation. Then if someone uses less power, cool, good for them. This will drive people to use less power. And for safety, no problem either as the safety of the system is considered with the maximum of the local transformer. And for profitability for wire providers and the grid, the other 'non-backfeeding' power customers would not be able to back-feed, because that maximum has been reached. They would then be required to set zero-export on their inverters, and NOT have the bidirectional setting turning on their meter. They would then be billed for power going in and out of the meter instead because they are not allowed to back-feed. Problem solved. No management or administrative load required. If someone on a 'zero-export' microgen agreement changes the setting, their bill will tell them to cut it out if they are charged for it!
Answer 2a: This is a terrible idea that will be abused. You know it will be. People will find ways to game it. Just make the limitation something that can't easily be changed (service size, back-feed permissions due to local transformer and no back-feed microgen because of grid saturation in the area). Simple. Solves itself.

Question 3: Derating
Answer 3: Simple. Manufacturer stamped documentation, manufacturer limited access control when applying for microgen. Enforcement, requesting a picture of the system once a year? Count the modules? On thousands of houses? That sounds like a headache and problem. Perhaps do it with scare tactics instead, every microgen power bill should state that changing the generation facility is subject to penalties in excess of $50,000 plus any damaged upstream equipment.
Answer 3A: Derating is a good service to those who are required to stay below a required amperage due to local transformer or other site conditions. I think it should be allowed, as long as it is not a homeowner available setting. Make the manufacturer set it and stamp it.

Question 4: Medicine Hat
Answer 4: This is not a bad idea. Set a target that is allowed to be installed. I don't hate that one bit. Simple, easy. Also with shade conditions submissions, it's easy to look and approve too. I like it. There needs to be a simple way to check though, often the hard work is done for a month before submission. It would be best if a 3rd party authorization is NOT required to be collected for this information because this happens at very different times to the submission. Just have a lookup table, perhaps using the site ID search that already exists "Microgen Capacity: 4,124kwh". Then there is no need to ask or look anything up. Or even put it in the power bill for every single bill. Problem solved, almost for free. Just tell the home owner in their bill. Sharing the bill tells the solar installer, win win.

Question 5: The AUC has...
Answer 5: Yes please, I have heard and experienced equipment that is not allowed to be installed in Fortis territory but is infact, allowed to be installed in EPCOR territory. This means that lots and lots of

equipment is randomly not allowed to be installed and the installers holding product are stuck with product they cannot sell. This is wrong, and changing randomly does not instill confidence in any level of the application or approval process.
Answer 5A: Annually. This would allow it to happen outside of the normal installation schedule and to have the changes be put in place for the following season. For instance, if the meeting was in August or September, the changes ratified could be put in place for March of the following year, and then product would no longer be allowed to be installed up to the next meeting. Then everyone knows to rotate stock.
Answer 5B: I do believe AUC should take some leadership on this, with industry, wire provider, and microgenerators TRUE input. This means that topics are raised in a 'topic generation period' that is 2 months ahead of the meeting. Then topics that will be decided on would be made available to participants with 1 month notice of the meeting to research and prepare. Then a week prior to the meeting, some of this research and opinions could be shared so as to start the audience at a level of understanding PRIOR to the meeting. Then during the meeting, decisions are made. If another round must be done because of the size of the change, a follow up for just that topic can be scheduled later.

Question 6: Please identify...
Answer 6: Limiting microgeneration to an amount of production is 1. Hard to manage 2. Hard to enforce 3. Makes for 'poor neighbours', meaning everyone wants more generation, other than utilities.
The simple answer is, make the limit be code reasons and upstream conditions with meaningful understanding. The power currently is in the hands of the wire providers too much and it should be more balanced. Lets let Albertans participate in the growing industry and help Alberta continue to be the ENERGY GENERATION PROVINCE that we all are proud of.