

**AUC007 & AUC012 Rules for Safe Set-back Sitings**

**AUC Renewable Reference Table**

**for Renewable Power Plant Sitings**

**Focus on absent rules for Battery Energy Storage Sites (BESS)**

**2024 Submission for AUC Rule Change AUC007 (& AUC012), dated  
September 3, 2024**

**Submitted by: Group of Adjacent Alberta Land Owners**

## **Adjacent Land Owner concerns where the AUC can be more efficient regarding Rule007:**

- 1) Follow and demand Applicants to actually be compliant to already existing AUC rules. Many companies cheat or hide or fake the compliance requirements of contacting all adjacent land owners, and further the AUC supports favorable Applicant Rulings that reflect the evidence of unanswered impact questions or noncompliant safety or set-back requirements under AUC007 or AUC012 under the AUC Rules. It is assuring to know again that there is Rule AUC016 that allows for the Review of Commission Decisions, as in the past the cost of Court of King's Bench legal fees was an impossibility for a land owner to defend against the rows of lawyers supporting big corporations. Why have the Rules in place, if the AUC does not assess compliance to AUC Rules, otherwise the cost to the Alberta public is higher with stakeholders and the AUC proceeding to time consuming and expensive Hearings?
- 2) Establish a PreApplication or PreConstruction application audit review. If the Applicant has not even complied to adjacent land owners and concerned stakeholders regarding unanswered questions and concerns for safety and noise, then why proceed with an application approval. According to the AUC webpage for AUC Rule007, "The AUC considers a concern to be resolved when the stakeholder in question expresses that they are satisfied with a proposed solution. The AUC does not consider that an applicant's acknowledgement of a stakeholder concern resolves the concern." AUC must ensure compliance on preapplication screening, as cheaters of Rule007 get their applications approved and simply then steamroll over the concerned stakeholders who were never answered. For example, if the first responder's the fire stations who are untrained in Hazmat with no knowledge of lithium-ion thermal runaway fires, have documented concerns for proximity of construction next to a community with no fire stations, the preconstruction application should not proceed.
- 3) Comply to new federal laws like Bill C-59 and do not allow greenwashing or attempted fraudulent means of speaking of the "renewable" projects with false claims or names. E.g. Projects with super environmental names like a "NO carbon-used" solar project, or a "water-charged" clean battery storage, or a "Produces energy without wind" windmill project would all be outlandish and not allowed under the Federal Competition Act with false advertising by being allowed to use the misleading names through application to the AUC. The provincial AUC legislation, should not be able to supersede the Federal laws of Canada.
- 4) Funding for Participants is out of date and unrealistic as the repayment costs are not guaranteed and only junior lawyer fees appear to be allowed. It is impossible to legally fund a challenge once the application is approved, thus the importance to ensure that there is assured AUC Rule compliance ordered by the AUC instead of unconditional permission granted, and to ensure that a PreApplication audit and rule compliance can thwart an applicant in advance to better the application and resolve stakeholder concerns. As once the application is through, the AUC appears solely to assist the applicants in the successful conclusion of approved Rulings.
- 5) Preventative efforts by the AUC to better assure AUC Rule compliance is a huge cost saver for the Commission in that if a faulty application that was not compliant to rules or mislead stakeholders with greenwashing or false information on the project, a Pre Application audit review process is able to mitigate the high costs and efforts of taking forward a faulty application as great time and costs of a Ruling and Stakeholder legal cost defenses for inappropriate attempts for Applicants.

The industry's biggest issue for Rule007, is reaching out to land owners that are within 400 to 800 m's. As a result, when people move into the area, they may not receive notice. But many industry players don't even really try, simply put out a little greenwash brochure and don't even talk to those directly impacted where an untested (beta testing) power plant known to blast into flame is brought into a community, within unsafe distances less than 0.5 kilometers. There should be safe set-back distances set for

preventative reasons by the AUC like no less than 2.5 kms or as seen internationally at least 4 kms when no on-site fire stations to protect communities and the public.

For this reason, there should be a Pre Application audit for the AUC, just like the AER has in place to be consistent.

Companies can easily lie and not actually contact adjacent land owners, yet without the AUC verifying compliance, then it becomes a costly process for the Alberta public to finance a public hearing that had not complied to the basic rules. All stakeholders with unanswered concerns should be able to seek a pre application deferral and review under audit, to ensure that companies do not act fraudulently or with little evidence of their greenwashing schemes. AUC should not allow the exploitation of false information in superseding the new Canadian Bill C-59 to protect adjacent land owners from greenwashing.

**AUC007 Efficiency Rule Conclusion:**

What is the point of AUC Rules, if the applicants do not need to comply and the AUC has no real compliance check to ascertain that the Applicant has actually met and responded to all safety and evacuation concerns of the adjacent land owners? It is a cost saving benefit for the public to ensure that applications are compliant in advance in the pre application stage, to avoid AUC hearing and witness costs if an off-site application. False, non compliant, greenwash or unsafe projects should be denied in advance of application until there is a better understanding and communication by the applicant in the Pre Application stage.

## **Adjacent Land Owner concerns over BESS:**

There should be a Table of recommended minimum siting set-backs bifurcating low risk sitings near a few acreages, compared to sitings near communities for Industrial-sized BESS. See example **AUC Renewable Reference Table for Renewable Power Plant Sitings** below.

Stakeholders agree that standards are needed for set-backs, as mentioned before as BESS or battery storage has no set AUC rules that consider community risk issues beyond noise. We agree that there is no one size fits all as others mentioned, but disagree when it comes to a community the “proximity in itself is in fact intrinsically bad” when you evaluate on a risk management basis. Corporations need to be corrected as the AUC decisions override our existing County set-backs as we were not allowed any public hearing at our County.

The risk and safety cycle involves stages in safety for humans, the first step is Prevention:

Prevention. The best way to address a disaster is by being proactive.

In fact, “two-thirds of Alberta wildfires are human-caused, the majority of these 'man-made' fires are in fact unintentional, caused by negligence...”. What is the risk of human error, like when a large utility scale energy storage facility is beside a community?

Set-backs are not a perfect guarantee, but like a school zone speed limit, it provides a reasonable safe limit, but not a guarantee of safe guarding an accident or death.

So if there is perhaps an acreage or two within 500 metres or 1.5 kms, it is a known smaller risk size to evacuate. But when near a community or busy provincial campground when there could be 100's impacted for evacuation, this risk of human error is exponential in rising the risk of human death. Communities are not just Province of Alberta towns and municipalities, but there are summer villages, Housing Ownership Associations (HOA's) and Condo Corporation communities, or even known busy recreational areas and campgrounds with large communities spanning larger than a few acreages. A safe set-back is more important with larger communities, as it is easier to evacuate a couple acreages than it is to safely remove a community, especially if constraints in highway access for evacuation, when there is more than a dozen, a hundred or a thousand or more Albertan citizens of any community. Even if not a voting community (a municipality), the Alberta government is charged with the protection of all Alberta residents and the residents have a right to a safe environment from their adjacent land owners.

Set-backs are safe hard limits that should not be ignored by the AUC applicant. Further, in the global comparison, large utility battery storage seems to be no less than 4 kms or industry “best practice” of up to 15 kms away if local fire stations are not provided on site. So, the current AUC limits for even noise appear to fall short for 1.5kms in studies, as that appears to be a minimum set-back currently according to the AUC Rules.

AER already has a long-standing set of distances established since the 70's and set-backs from busy communities that are difficult to evacuate. There should be better congruence within our Alberta agencies for the protection of the public.

With dozens of BESS storage battery fires globally, the AUC has the great benefit to learn from these cases and the industry and safety regulations in the US is more than 5 years ahead of us in the determination of safe power plant sitings as lithium-ion batteries are known to cause fires. Fire risks beside communities given the risk of wind, can be prevented as we do not want the next Lahaina fire with whipping winds through a community that might cause hundreds at risk or even death. AUC has a duty to protect the public, and a "burn baby burn" policy to allow for BESS batteries to burn for days beside communities is just wrong and unsafe. Strong and safe set-back rules are needed given the global precedence and known high incidence of failure rates, even recurring at the same facilities.

In the AUC we trust that the safety of the Alberta public needs to be considered with ample safe set-back of large-scale utility batteries adjacent to communities or busy campgrounds or parks. You don't have to go back to the drawing board and having NO reasonable set-backs currently of less than 500M's are allowed with no safe set-backs, when currently there are better known safe fire regulations and set-back standards set up already globally and even at our very own long established Alberta Regulator AEC. It would be foolhardy and putting the Alberta public at risk not to set up responsible safe set-backs like those summarized in draft Set-back reference table attached. Thank you for this written participation process as approved projects should always be at locations with a long-term benefit for Albertans that does not purposely put human risk of property, health or life without a safe set-back distances for BESS given their known high incidence rate of fire.

## **Preventative Set-Back required due to inherent explosive risks of BESS:**

Yes, we should follow the science. Now with global experiences 5 years ahead of us, we do not have to recreate the rules. In the US, in NY, AZ & CA the have fire chiefs recommended standards. In review of the California fire incidences for example, there were no homes within 4 kms. Even Capital Power here in Alberta near Edmonton offered up having on-site fire stations for a BESS application that did not preceed. That is the standard, if no acceptable set-back then “on-site” fire stations. It should not just be wildlife and salamanders protected as mentioned in AUC requirements, set-backs should be safe distances from human communities too. A set-back is not a perfect safety measure, as all BESS fires appear to be caused by human negligence. But it does provide a zone of safety and we trust the AUC to protect the public.

Recently, there has been additional test work on large BESS battery packs surrounding LEL limits virtually always being exceeded as most operators have tried to adopt a “Let er Burn” philosophy when dealing with BESS battery fires. What fire prevention agencies are starting to realize as more data becomes available is that serious deflagration events (low velocity explosions) have been the direct cause of a number of very serious first responder injuries. Surprise Arizona event being one example whereby a single 1MW battery pack injured four emergency responders with life threatening injuries. Previously, the focus was around heat radiation from fire and toxic chemicals from the smoke. Now we can add explosive behaviour to the mix.

It appears we are back to Beta testing new BESS systems with untested outcomes knowing a high incident rate. The international BESS industry itself is still learning and updating safety protocols as they move forward. We simply still do not know what we do not know, but we are learning. Some of the of the most recent work from StachD Training and BakerRisk BESS destructive testing combined, although only a small sampling can be seen on the video links below. These efforts combined with most recent UL explosive testing on these systems hi-lights significant additional risks inherent with BESS installations. One can bring into play additional standard safety setback recommendations for personal on an explosives test range. One recommendation here is for 1 to 10 lbs equivalent of TNT. The recommended safety set-back for experienced personal standing behind rated protection is 600 to 1000 meters. For 10 to 100 lbs equivalent TNT that number goes up to 2,000 meters. One has to ask themselves then.....what is a reasonable setback for a community of unsuspecting civilians going about their day-to-day activities without any protection?? We believe it is a fiduciary of the government to protect their respective citizens.....FULL STOP! We have listened to the argument of trying to find “Balance”. We believe the art of finding balance is simply a breach of that fiduciary. The government cannot make a civilian population an unwitting and unwilling participant to any industrial hazards.

Watch the explosive qualities of BESS:

<https://www.youtube.com/watch?v=JM4ifQnIm2Q&t=18s>

<https://www.youtube.com/watch?v=PXuo3-DSdPw&t=1s>

## Egregious Error in Definitions under the New Noise Rule AUC012

Noise Rule AUC012 – This rule just recently was changed by the AUC last month and contains an egregious error in the Noise Rule AUC012 within the Definitions.

### AUC 012

Conditions for a time extension request

(1) A new noise impact assessment must be filed as part of a time extension request, if one or both of the following conditions is satisfied:

(2)(a) The most affected noise receptor has changed (e.g., due to construction of a new dwelling).

(b) There are new energy-related facilities nearby that may influence compliance at a noise receptor.

If a new noise impact assessment is not included in a time extension application, the applicant must confirm that the most affected noise receptor has not changed and there are no new energy-related facilities that may influence sound levels at noise receptors.

It is most concerning in that a new BESS energy facility can hang onto the fact that another energy facility, say power lines or a hydro dam in place in area. In the new AUC012 definitions, both a hydro facility and a BESS storage facility are the same type of energy facility. That is grossly wrong, to the point of safety negligence and AUC012 should not proceed with such errant definitions

As seen for AUC 012 in the Table below, it is an impossibility to have an Industrial-sized BESS (>200 MWh) inside of the minimum safety set-back of 2.5 kms (if there are fire stations on site) or 15 kms when no fire stations instead of in the past where the AUC noise rule granted set-back (of 1.5kms).

Firstly, the BESS battery packs are louder when stacked and the new more dense phosphate lithium-ion batteries are much louder than other possible existing power plants, and therefore should not be coupled with power lines and hydro dams, when in fact they are dangerous new power plants.

**Recommendation:** Because large industrial BESS power plants are a safety issue and require international safe set-backs of 2.5 kms or more, it is impossible to group a new BESS power plant within the same noise definition as existing power lines or hydro dams.

Perhaps the AUC intended small battery packs of <5MW as they require little regulation. However it is a egregious safety error by the AUC to allow for dangerous BESS plants to be coupled with existing power lines or other utility assets, when an industrial sized new untested power plant BESS requires further safe set backs of 2.5 to 15kms as reflected in the Table below.

Please edit the Rule AUC012 as not to have a negligent safety incident by providing a useless definition exemption for noise. Bifurcate that definition to only include single unit small BESS battery packs below 5MW.

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<b>Set-Back Reference Table</b>	<b>S O L A R Energy</b>	<b>W I N D Energy</b>	<b>B. E. S. S. Storage *</b>	<b>Explanation</b>
<b>RULE AUC007 Set-Back</b>	0 – 1.5 Kms	2.5 - 15 Kms	<b>2.5 Kms **</b>	<b>ONLY if “on-site” fire station</b>
<i>w Industrial BESS storage*</i>	2.5 Kms	15 Kms	<b>15 Kms</b>	<b>If &gt; 15 minute fire access</b>
or Nearby Community	1.5 Kms	15 Kms	<b>15 kms</b>	<b>NO communities &lt;15 km</b>
<b>RULE AUC012 Noise</b>	1.5 Kms	2.5 Kms	<b>2.5 Kms</b>	<b>Large Scale BESS not Hydro</b>
<i>Large scale BESS storage*</i>	2.5 Kms	2.5 Kms	<b>2.5 Kms</b>	<b>ONLY if “on-site” fire station</b>
<b>Large Scale B.E.S.S.100MW+</b>	Below 5 MW is AUC exempt	Stand Alone or Bundled BESS	*Large Scale BESS>200 MWh	Proven inherently fire prone NOT “low” risk
<b>Stay consistent with newly developed and existing US and International Community Set-Backs and Fire Safety Standards</b>				
<b>Use known international facts and fire safety standards developed due to known high fire incident rates for Large Scale BESS</b>		All sitings of Large-Scale Industrial Bess should now follow international fire and safety procedures first, NOT Safety last for communities	** UK recommended: 2.5 km (The Friends of Walpoles case to persuade UK Gov't by James Whitaker)	See “BESS Failure Incident Database” (EPRI) as all >2.5 kms from a community. AUC not to approve <2.5km
		See July 24, 2024 New York State Recommendations for Industry Best Practice of Fire and Safety Rules that should be in place in advance of approval of Large-Scale Industrial BESS Power Plants >200MWh ***	International BESS failure rates are high with a 2.9% incident rate. DO not place high risk power plants adjacent to communities, as there is a high risk of innocent human contact, injury or death.	MOSS Landing, CA BESS failure incident is a typical remote operation. 3 catastrophic failures in 2 yrs, is a 4 km Set-Back from a community  <a href="#">BESS Failure Incident Database - EPRI Storage Wiki</a>
<b>Stay consistent with proven existing Alberta Regulator Set-Backs from Communities</b>				
<b>Use AER Set Backs that exist (Alberta Energy Regulator set-backs adopted in 1979)</b>	<b>AER: “Why are setback distances different for a (single) farmhouse, than for a (community) or large campground?</b> <i>“Setback distance can reflect site-specific considerations. Setback distances are greater for towns and major campgrounds to enable evacuation if necessary. It is easier to evacuate a single-family home than a large number of people or an entire community.”</i>			

\*\*\* <https://www.nyserda.ny.gov/About/Newsroom/2024-Announcements/2024-07-26-Governor-Hochul-Announces-Draft-Fire-Code-Language-That-Addresses-Recommendations>