

From: [Ian Bonsma](#)
To: [Joan Yu](#)
Cc: [Sarim Baig](#); [Nathan Gara](#); [Rob Stevens](#)
Subject: RE: AUC Bulletin 2023-01 - Stage 2 of round 2 consultation for potential changes to AUC Rule 012: Noise Control
Date: Tuesday, May 16, 2023 7:26:46 AM

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Good morning Joan,

Thank you for the opportunity to provide feedback for potential changes to AUC Rule 012:Noise Control. Below are our comments with respect to the Questions in AUC Bulletin 2023-01, Appendix A. Sorry for the late response.

Question 1:

Please comment on the definition of suburban and urban receptors proposed for Table 1 of Rule 012.

o Is it reasonable to add two columns to Table 1 of Rule 012 for suburban and urban receptors? [The definitions based on dwelling density may be difficult to manage. To maintain a consistent approach, publicly available information regarding number of dwellings per quarter section should be available. What justification will the AUC require to demonstrate an urban location?](#)

o Has the Commission selected appropriate dwelling densities for suburban and urban receptors? [We are not aware of any studies comparing measured sound levels to dwelling densities in suburban and urban locations. These would likely be highly dependent on the receptor's proximity to heavily travelled roadways, rail lines, LRTs, etc. Determining the dwelling density for suburban and urban locations may not be straight forward.](#)

Question 2. Please comment on the basic sound levels for suburban and urban receptors proposed for Table 1 of Rule 012.

o In particular, the Commission requests that noise consultants and others who may represent members of the public comment on the basic sound levels for suburban and urban receptors from the perspective of suburban and urban residents. [The highest baseline level permitted under Ontario's NPC-300 is 55 dBA for nighttime and 60 dBA for daytime, for a Class 4 environment \(special considerations\) unless monitoring is conducted to show higher levels \(similar to an A2 adjustment in Alberta\). Table 1 of Rule 12 suggests a nighttime upper limit of 63 dBA for dwellings within 30m of a major roadway and with more than 1000 dwellings per quarter section \(and a **daytime limit of 73 dBA**, emphasis added\). Hourly nighttime sound levels exceeding 55 dBA are typically rare, even in urban centres. Additionally, a dwelling in an urban area \(> 1000 dwellings\), in a Category 1 \(more than 500m from a heavily travelled roadway\) is highly unlikely. HGC Engineering suggests the AUC consider one additional category for suburban and urban centres \(i.e., 401 and greater dwelling density\) and not include the currently proposed ">1,000 dwellings \(Urban\)" category. Where sound](#)

levels are observed to be higher than the basic sound levels in a suburban environment then an A2 adjustment can be utilized. A paper prepared by Les Blomberg for the 2018 Inter-Noise conference “Noise ordinance noise level limits, an update of the EPA’s 1975 findings” provides a comparison of noise ordinances from 500 of the largest cities in the United States. The residential noise limits for nighttime periods for most jurisdictions are less than 55 dBA.

Question 3. Please suggest changes to subsection 2.5(2) of Rule 012.

o In particular, please specify an appropriate development milestone for a facility that has been predicted or measured to be compliant with Rule 012. After this milestone, owners/residents of a new dwelling should be aware that a new facility will be located nearby and the permissible sound level at the new dwelling will be greater of the modelled cumulative sound level at the start of the dwelling construction, or the permissible sound level as determined in Section 2.1 of Rule 012. This particular concern is an issue in many jurisdictions. The renewable energy guidelines from the Ontario Ministry of Environment, Conservation, and Parks, include one method for “crystallizing” projects.

Question 4. Please comment on whether Rule 012 should include tonality evaluation for all audible frequencies. Yes. Utilizing the PAS-ISO 20065 standard may be an option (Annex J.2 of ISO 1996-2). Alternatively, Annex K includes a simpler, objective method for assessing tones, utilizing 1/3 octave band data (tones that are close to splitting third octaves can be missed using Annex K).

Question 5. If Rule 012 should include tonality evaluation for all audible frequencies, please comment on the circumstances where it would be appropriate to evaluate tonal noise.

o Should tonality evaluation be required in all comprehensive sound level surveys ordered by the Commission? Only where a tone is observed by the acoustical practitioner through either site measurements or high-quality audio recordings collected at the receptor location.

o Should tonality evaluation only be required in comprehensive sound level surveys arising from complaints? This puts the onus on the complainant. Similar to other jurisdictions, if a CSL is required, some assessment of tonality should be made for every CSL.

Question 6. Please comment on potential unintended consequences if Rule 012 were to require tonality evaluation for all audible frequencies. Insects and some amphibians can produce significant tones (depending on time of year). Some qualification will need to be made that the source of the tone is from the industry and not from natural sounds.

Question 7. If the Commission were to require tonality evaluation for all audible frequencies, should any changes be made to the current criteria for low frequency noise?

o In particular, should the dBC minus dBA element of the low frequency noise evaluation be eliminated? Potentially there is no need to include the dBC-dBA if tonality evaluations are included for all audible frequencies. It is however, a quick check to determine if there are low frequency concerns from the sound level data.

We would be happy to discuss any of the above in further detail.

Thanks!

Ian Bonsma, P.Eng.

HGC Engineering **NOISE | VIBRATION | ACOUSTICS**

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Any conclusions or recommendations provided by HGC Engineering in this e-mail or any attachments have [limitations](#).

From: Crystal Carstens <Crystal.Carstens@auc.ab.ca>

Sent: Tuesday, April 25, 2023 10:26 AM

Subject: AUC Bulletin 2023-01 - Stage 2 of round 2 consultation for potential changes to AUC Rule 012: Noise Control

Good morning,

The Alberta Utilities Commission has issued Bulletin 2023-01: *Stage 2 of round 2 consultation for potential changes to AUC Rule 012: Noise Control*. Please see the attached bulletin.

Any feedback should be sent to Joan Yu at joan.yu@auc.ab.ca **by May 15, 2023**.

Thank you,

Crystal Carstens

Administrative Assistant

www.auc.ab.ca



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