

## AUC Bulletin 2023-01 – GCR Responses for Stage 2 Round 2 Consultation

Please see the below response from Green Cat Renewables Canada Corporation regarding the AUC Bulletin 2023-01. Responses are with respect to the ‘Proposed Questions for Stage 2 of Round 2 Consultation’.

1. Please comment on the definition of suburban and urban receptors proposed for Table 1 of Rule 012.
  - Is it reasonable to add two columns to Table 1 of Rule 012 for suburban and urban receptors?  
No Comment.
  - Has the Commission selected appropriate dwelling densities for suburban and urban receptors?  
No Comment.
2. Please comment on the basic sound levels for suburban and urban receptors proposed for Table 1 of Rule 012.
  - 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.  
  
No Comment.
3. Please suggest changes to subsection 2.5(2) of Rule 012.
  - 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.

A typical requirement of an AUC approval for a generation project is for the submission of a Final Project Update. This update occurs once the final equipment has been selected, and the Project is ready to be constructed.

GCR suggests that the AUC adopt guidance indicating that once final equipment specifications are filed, all new residences in a Project study have a permissible sound level defined by the modelled cumulative sound level. Notwithstanding, should a developer amend the specifications of equipment that has been finalized, this guidance would not be applicable, and the assessment must then consider new dwellings based on Section 2.1 of Rule 012 (excluding expansions of Projects, so long as the original equipment remains as finalized).

**4. Please comment on whether Rule 012 should include tonality evaluation for all audible frequencies.**

GCR disagree that tonality evaluations for all audible frequencies be considered. In the event of a complaint from an operational facility where tonality concerns have been raised, GCR would support the AUC publishing a standard method for tonal assessment that allows for tones from higher frequencies on a case-by-case basis.

**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.**

- **Should tonality evaluation be required in all comprehensive sound level surveys ordered by the Commission?**

Including a tonality evaluation for all audible frequencies as a requirement within the comprehensive sound level survey will effectively add an additional layer of complexity to the assessment for negligible benefit in most scenarios. A tonality evaluation for all comprehensive sound level surveys should not be required. Requirements for a tonality evaluation should be limited to a specific complaint scenario. A protocol for tonality assessment at all audible frequencies could be added to Rule 012 to allow this to be investigated in the event of a complaint.

- **Should tonality evaluation only be required in comprehensive sound level surveys arising from complaints?**

Yes, but only where a reasonable case can be made that tonality is the main cause of the complaint.

**6. Please comment on potential unintended consequences if Rule 012 were to require tonality evaluation for all audible frequencies.**

The Rule 012 method used for low frequency noise is a simplified method that works well in that context but may not provide meaningful results for higher frequencies. If this method were to be applied to all frequencies, it would first need to be thoroughly tested.

If Rule 012 requires tonal assessment, then clear tonality thresholds would need to be set out with well-defined penalties to be applied, grounded in psychoacoustics (i.e., human response data). However, such an approach would require Rule 012 to set out the particular method for assessing tonality to ensure consistency.

There are several internationally recognized methods for the assessment of tonality. All are technically much more onerous than an assessment of compliance with PSL, giving more potential for variation in results from different noise consultants.

There is the potential for tonality to become the favoured reason to complain about energy generating facilities from residents who feel that the approved project was unjustly permitted. This could result in malicious complaints, wasting the AUC time and resource.

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?

- In particular, should the dBC minus dBA element of the low frequency noise evaluation be eliminated?

The dBC minus dBA element of the current low frequency assessment works well as a simple measure of project LFN, however, it should only apply for project levels where LFN noise is at an audible level (e.g.,  $\geq 20$  dBA). The LFN method, as a whole, works well, but it is not made clear what would replace it. GCR therefore suggests that the LFN method is retained.