



ENMAX Corporation
141 – 50 Avenue SE
Calgary, AB T2G 4S7
Tel (403) 514-3000
enmax.com

May 15, 2023

Alberta Utilities Commission

Eau Claire Tower
1400, 600 Third Avenue S.W.
Calgary, AB T2P 0G5

Attention: Joan Yu & Brian Shand

Re: ENMAX Corporation’s Response to Bulletin 2023-01 regarding Rule 012: *Noise Control* (“Rule 012”)

ENMAX Corporation (“EC”), on behalf of ENMAX Power Corporation and ENMAX Energy Corporation, provides the following information in response to *Bulletin 2023-12: Stage 2 of round 2 consultation for potential changes to AUC Rule 012: Noise Control* (“Bulletin 2023-01”).

The Alberta Utilities Commission (“AUC” or “Commission”) issued Bulletin 2023-01 as part of its most recent Rule 012 consultation, which included Bulletin 2022-08: *Initiation of stakeholder consultation process for AUC Rule 012: Noise Control* issued on June 3, 2022, and Bulletin 2022-12: *Further consultation for potential changes to AUC Rule 012: Noise Control* issued on December 16, 2022. EC made submissions on the matters raised in these previous bulletins on July 8, 2022, and February 14, 2023, respectively.

The AUC has requested additional stakeholder feedback on certain topics. The discussion questions posed by the AUC are outlined in the comment matrix (“Comment Matrix”) attached as Appendix A to Bulletin 2023-01 (“Discussion Questions”).

EC’s responses to the Discussion Questions are set out below. While EC has not taken a detailed technical approach to the Discussion Questions, it is of the view that its position as an urban operator provides a relevant perspective for the Commission.



Question 1: Dwelling Densities

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

As noted in its prior submissions, the facilities owned and operated by EC and its affiliates are generally located in or near densely populated urban areas where incremental exceedances of the permissible sound levels (“PSL”) can result from elevated ambient sound levels, not from the facilities themselves. EC suggested that as a starting point, “urban receptor” could be defined with reference to a municipal boundary and modified as needed based on a number of factors, including population density.

EC remains generally supportive of revisions to the definition of suburban and urban receptors that incorporate the concept of dwelling density (which keys off population density). EC also considers Health Canada’s *Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise* (“Health Canada Guidance”) to be a reasonable reference point, however recommends that the AUC’s proposed changes more closely reflect the approach of Health Canada, as discussed below.

Is it reasonable to add two columns to Table 1 of Rule 012 for suburban and urban receptors?

EC proposes the following changes to Table 1 of Rule 012 to more closely and consistently reflect the approach taken in the Health Canada Guidance:

Table 1: Basic Sound Levels (BSL) for nighttime

Proximity to transportation	Dwelling density per quarter section					
	1-14 (1-8*)	15-109 (9-160*)	110-280 (160*-280)	281-950	951-3000	>3000
HC qualification	Quiet rural	Quiet suburban residential	Normal suburban residential**	Urban residential*	Noisy urban residential**	Very noisy urban residential**
Category 1	40	43	48	53	58	63
Category 2	45	48	53	58	63	68
Category 3	50	53	58	63	68	73

* Denotes the number of dwellings currently identified by the AUC in Table 1 of Rule 012.

** Denotes proposed additional or changed BSL values compared to Table 1 of Rule 012.



Based on Table 6.1 of the Health Canada Guidance, population density was converted to dwelling density in the above table based on the Statistics Canada conversion proposed by the AUC in Bulletin 2023-01 (page 3). The converted dwelling density values were assumed to be centre values for each classification.¹

The proposed BSLs noted in the table above for Category 1 are taken from Table 6.1 of the Health Canada Guidance (i.e., the lower threshold values from Table 6.1) and converted from Ldn to the BSL in Rule 012. The BSLs noted in the table above for Category 2 and Category 3 are consistent with the approach in Rule 012 (i.e., 5 dB has been added for each additional category).

EC notes that the number of dwellings per quarter section used by Health Canada does not perfectly align with the number of dwellings used by the AUC for the first three dwelling density classifications. However, EC understands the benefits of continued alignment between the Alberta Energy Regulator (“AER”) and AUC in this regard and, therefore, does not necessarily recommend that the number of dwellings be changed for these first two classifications. EC does recommend that the number of dwellings be capped at 280 for the third classification and that additional dwelling ranges be added for the last three classifications, in line with the Health Canada Guidance.

EC submits that the above proposed additions and modifications will more closely align Table 1 of Rule 012 with the Health Canada Guidance.

Has the Commission selected appropriate dwelling densities for suburban and urban receptors?

EC has two comments about the dwelling densities selected by the Commission for suburban and urban receptors.

First, and as outlined above, EC is of the view that it would be appropriate to generally align the dwelling density classifications in the AUC’s Revised Table 1 with the dwelling density classifications in the Health Canada Guidance.

Second, EC notes that Table 1: *Population density for census metropolitan areas from Statistics Canada* and Table 2: *Population density for residential areas* as reproduced in the Comment Matrix reference population density by square kilometer, whereas the Revised Table 1 of Rule 012 references dwelling density by quarter section. EC understands that a further conversion from density per square kilometer to quarter section would be required. This conversion has been included in the EC recommendations for Table 1 above.

¹ For example: For the first classification (quiet rural), the calculated centre value was 7, resulting in a range for that category from 0-14 (plus and minus 7). For the second category (quiet suburban residential), the centre value was 61 and the difference between 61 and 14 was added to 61 to derive the upper range for that classification. Ranges for the subsequent classifications were derived in a similar fashion.



Question 2: Basic Sound Levels

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

In its prior submissions, EC proposed a number of different options for determining an urban PSL, which included the potential to reference population density, among other considerations. While EC did not identify Health Canada Guidance as a potential resource, it considers that this may be a reasonable reference point for the determination of BSLs in Revised Table 1 of Rule 012.

However, as noted above, EC considers there are two items that need to be addressed in the Revised Table 1 of Rule 012. First, EC is of the view that it would be appropriate for the Revised Table 1 of Rule 012 to more closely align with the approach used in the Health Canada Guidance. Second, EC understands that a further conversion from density per square kilometer to quarter section would be required. These two items are captured in the proposed table above.

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.

This question is not applicable to EC.

Question 3: Section 2.5(2) of Rule 12

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

As set out in its prior submissions, EC is of the view that Section 2.5 may benefit from additional clarity. EC's comments and positions on potential changes to Section 2.5 are outlined in its submission dated February 14, 2023.

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.

EC is of the view that a development milestone for establishing PSLs applicable to new dwellings could be helpful in the context of Section 2.5. EC considers that the commencement of any visible site work would be an appropriate milestone given the difficulty and cost implications of implementing mitigation measures after this point. EC notes that foundation work is not always required, particularly in the case of a modification to an existing facility, and that a milestone based on foundation work may not fully capture all scenarios caught by Section 2.5 (e.g., equipment replacement or addition within an existing substation).



EC notes that the referenced site work would be visible to owners/residents of a new dwelling and would therefore provide a reasonable indication that a new facility or piece of equipment (which may influence area noise) will be located nearby. In this regard a milestone based on visible site work would appropriately balance the interests of facility owners and area stakeholders.

Questions 4-7: Tonality

EC has not approached these questions from a technical perspective, however, has provided some information in its capacity as an operator.

Question 4

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

As an operator, EC does not take a view on the potential technical implications of this question. EC does, however, note the potential unintended consequences of a requirement for tonality evaluation for all audible frequencies in its response to Question 6, below.

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.

While EC takes no technical view on the question of whether Rule 012 should include tonality evaluation for all audible frequencies, it provides the following comments about when it would be appropriate to evaluate tonal noise.

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

Expanding the requirement for tonality evaluation to include all comprehensive sound level surveys ordered by the Commission could result in a situation where there is a Rule 012 tonality non-compliance but no stakeholder concern associated with tonality. Given its understanding that a key purpose of Rule 012 is to mitigate or resolve noise concerns of area stakeholders, EC is of the view that tonality is best evaluated in the context of a complaint (i.e., an operator should not be required to mitigate tonality if there is no stakeholder concern to be addressed).

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

EC is of the view that a tonality evaluation should only be required in comprehensive sound level surveys arising from complaints for the reasons outlined above.



Question 6

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

While EC does not take a technical view on whether Rule 012 should include tonality evaluation for all audible frequencies, it notes that one unintended consequence of incorporating such a requirement could be the finding of a Rule 012 non-compliance (and a corresponding requirement for mitigation) where no stakeholder concern has been raised.

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?

EC does not take any substantive view on this question which is technical in nature, however considers that any changes to the criteria should be based on studies or research.

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

EC does not take any substantive view on this question which is technical in nature, however considers that any changes to the criteria should be based on studies or research.

CONCLUSION

EC appreciates the opportunity to participate in this further consultation process. For any matter specifically related to substations and transmission lines, please contact Suzanne MacMillan, Regulatory Manager at (403) 470-8072 or by email at smacmillan@enmax.com. For all other matters please contact Tracy Coutts at (403) 514-2756 or by email at tcoutts@enmax.com.