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February 17, 2023

**Alberta Utilities Commission**

Eau Claire Tower  
1400, 600 Third Avenue SW  
Calgary, AB T2P 0G5

**Attention:** Joan Yu & Brian Shand

**Re: ENMAX Corporation’s Response to Bulletin 2022-12 regarding Rule 012: *Noise Control* (“Rule 012”)**

ENMAX Corporation (“EC”), on behalf of ENMAX Power Corporation (“EPC”) and ENMAX Energy Corporation, provides the following in response to *Bulletin 2022-12: Further consultation for potential changes to AUC Rule 012: Noise Control* (“Bulletin 2022-12”).

The Alberta Utilities Commission (“AUC” or “Commission”) issued Bulletin 2022-12 as part of its most recent Rule 012 consultation which commenced with Bulletin 2022-08: *Initiation of stakeholder consultation process for AUC Rule 012: Noise Control* issued on June 3, 2022 (“Bulletin 2022-08”). This further consultation centres around potential revisions to Rule 012 to address permissible sound levels (“PSL”) in urban areas (“Urban PSL”) and as associated with new dwellings.

The discussion questions posed in Bulletin 2022-12 (“Discussion Questions”) were, in part, addressed in EC’s July 8, 2022 response to Bulletin 2022-08 (“EC Initial Response”), a copy of which is provided at Attachment A. EC relies on the EC Initial Response, as well as the additional information and detail provided below.

The potential Rule 012 revisions outlined in Bulletin 2022-12 also reflect EPC’s submissions in AUC Proceeding 27444,<sup>1</sup> as well as certain of the Commission’s recommendations in the resulting

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<sup>1</sup> ENMAX Power Corporation No. 28 Substation Application to Address Noise Complaint (“No. 28 Substation Noise Proceeding”).



Decision 27444-D01-2022.<sup>2</sup> EC has also reviewed AUC Decision 27276-D02-2022<sup>3</sup> and the Commission’s recommendation that an Urban PSL approach be explored further.<sup>4</sup>

## **EC RESPONSES TO POTENTIAL RULE 012 REVISIONS**

EC’s responses to the Discussion Questions are set out below and in the EC Initial Response. EC submits that the approaches it has outlined are consistent with the objectives of this consultation process (being to “[eliminate] requirements that may have become outdated or unnecessary” and to “streamline and improve regulation and adjudicative processes”<sup>5</sup>) and with the findings and recommendations of the Commission in the No. 28 Substation Decision and the Eastlink Decision.

The facilities owned and operated by EC and its affiliates vary in age (some are more than 60 years old) and are generally located near or within relatively densely populated urban centres. Ambient sound levels in EC’s operating area do not necessarily reflect the levels assumed by Rule 012 and can be complicated by continuing residential and other development (e.g., roadways and other infrastructure). EC, therefore, considers that it is well-positioned to provide an informed and relevant perspective on the Discussion Questions.

While EC can provide its view as an urban operator, it has not approached the Discussion Questions from a detailed technical perspective. EC has, however, reviewed a draft of the technical responses to the Discussion Questions prepared by Stantec Consulting Inc. (“Stantec”) and generally agrees with the approaches outlined therein.

EC’s responses to the Discussion Questions are below.

### **Urban PSL**

As set out below and in the EC Initial Response, EC recommends that the Commission revise Rule 012 to include an approach for determining a PSL in urban environments.

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<sup>2</sup> AUC Decision 27444-D01-2022, ENMAX Power Corporation, Application to Address Noise Complaint at ENMAX No. 28 Substation (November 24, 2022), para. 30 (“No. 28 Substation Decision”).

<sup>3</sup> AUC Decision 27276-D02-2022, City of Grande Prairie, Eastlink Centre Power Plant (November 7, 2022) (“Eastlink Decision”).

<sup>4</sup> Para. 51.

<sup>5</sup> Bulletin 2022-08.



### **Need for Urban PSL**

EC understands that the Rule 012-assumed PSL is based on a rural environment and is not, therefore, always representative of or suited to an urban setting. As compared to a rural setting, ambient sound levels in urban settings can be greater, more varied and/or subject to regular change.

EC's experience is that these differences can make it difficult to meet the Rule 012-assumed PSL in an urban environment without an A2 Adjustment. In such settings, an A2 Adjustment may only be required because the urban ambient sound level is already high, and not because the facility itself is exceedingly noisy or represents a meaningful component of the cumulative sound level at the surrounding receptors. The need for an A2 Adjustment in such cases adds complexity and regulatory burden for the Commission, impacted stakeholders and utilities operating in urban centres.

EC also notes that there could be situations where an A2 Adjustment is not sufficient to bring an otherwise relatively quiet facility located in an urban area into compliance with an adjusted PSL. This could result in the need for noise mitigation at the facility and associated costs to the utility and Alberta ratepayers.

Further, the availability of an A2 Adjustment in any environment (urban or otherwise) has the potential to create confusion for stakeholders who may expect a reduction in area noise, as opposed to a different PSL. While an A2 Adjustment may be appropriate in certain circumstances, it is EC's view that the potential for such stakeholder confusion is not warranted in the case of an already noisy urban environment where an A2 Adjustment may have limited utility.

On this basis, EC is of the view that it would be appropriate to revise Rule 012 to include an approach for determining a PSL in urban environments.

### **The Existing Framework**

It is EC's view that the existing regime (i.e., Rule 012 provisions for assessing ambient sound levels combined with an A2 Adjustment) does not provide an optimal or, in some cases, adequate method for the determination of the applicable PSL in urban environments.

Given the shortcomings outlined above, EC is of the view that there would be little, if any, benefit to the continued application of the existing Rule 012 provisions in an urban environment. Instead, EC recommends an approach that is tailored to different areas/aspects of an urban environment as discussed below.



### **Definition of “Urban Receptor”**

EC has not formulated a technical definition of “Urban Receptor”, however, recommends that such a definition be informed by the types of approaches outlined in the EC Initial Response<sup>6</sup> and discussed below. In this regard, the starting point for such a definition may be municipal boundaries which would then be modified based on, for example, the incorporation of site-specific factors such as higher population density, higher transportation activity, permissible land use and other urban activities.

EC has reviewed and agrees with Stantec’s recommended definition of “Urban Receptor” which is consistent with this approach.

### **Determination of PSL in Urban Environments**

As indicated above and in the EC Initial Response, EC is of the view that the determination of a PSL in urban environments (e.g., within a municipal boundary) could be addressed by: (1) the implementation of a non-cumulative facility-only Urban PSL (excluding noise from other nearby facilities); (2) site-specific factors such as population density, transportation activity (e.g., vehicle, rail, air), permissible land use and other urban activities; (3) a zone or classification-based approach; or (4) the use of a measured ambient sound level to determine the basic sound level.

EC is of the view that any of these approaches would appropriately tailor the Urban PSL applicable in any given case to the specific urban area/environment at issue (e.g., industrial vs. residential vs. commercial, high density residential vs. low density residential, high vehicle traffic vs. low vehicle traffic, etc.). In this regard, an Urban PSL could be higher or lower than the current PSL assumed by Rule 012.

EC recognizes that there would be additional technical work associated with certain of these recommendations for both the Commission and the facility operator (in the context of amendments to Rule 012 and on an ongoing facility-specific basis). EC also recognizes that there could be some subjectivity associated with the determination of site-specific factors (e.g., transportation activity). However, EC is of the view that such considerations could be addressed by a clearly drafted Urban PSL rule and that the advantages of such a rule would outweigh any potential negatives.

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<sup>6</sup> EC Initial Response, Attachment 1, PDF 7-10.



EC understands that Stantec has advocated similar approaches for the determination of a PSL in an urban environment and agrees with those recommendations.

### **Other Factors**

EC has not identified any other factors that would be relevant to the determination of an Urban PSL.

### **Revisions to the New Dwelling Regime<sup>7</sup>**

As set out below and in the EC Initial Response, EC recommends that the Commission revise Section 2.3 of Rule 012 to more clearly reflect its intended purpose. While not its primary focus, EC is of the view that Sections 2.4 and 2.5 may also benefit from additional clarity.

### **Need for Updates to the New Dwelling Regime**

EC's comments on potential updates to the new dwelling regime (including Sections 2.3, 2.4 and 2.5) are as follows.

While the Commission clarified the application of Section 2.3 in the No. 28 Substation Decision, EC submits that amendments to that section (which expressly reflect the comments of the Commission in that decision) would help to avoid future questions or uncertainty.

EC understands that Section 2.3 should be read as applying to all existing AUC-regulated facilities that pre-date nearby dwelling construction, particularly if the area noise level has not increased as a result of facility additions, upgrades or condition changes. In this regard, Section 2.3 does not impose any restrictions or exclusions based on the type or age of the facilities to which it applies and, on its face, applies to all existing AUC-regulated facilities that pre-date the construction of proximate dwellings. This is consistent with the Commission's findings in the No. 28 Substation Decision:

[...] Further, the Commission does not consider the fact that the facilities in question predate the New Dwelling Rule to preclude its application and finds that such an approach would unreasonably restrict the spirit and intent of the rule.

The Commission agrees with ENMAX's assessment that the rule contains no restrictions or exclusions with respect to the type or age of facilities, other than

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<sup>7</sup> For the purpose of this submission, "new dwelling regime" refers to all relevant aspects of Rule 012, including Sections 2.3, 2.4 and 2.5.



the high-level requirement that the rule is triggered where there is an existing and operational facility that pre-dates the construction of nearby dwellings.<sup>8</sup>

As confirmed in the No. 28 Substation Decision, Section 2.3 also does not require sound level measurements to be taken at the start of dwelling construction or in the initial post-construction period. The Commission held that such an approach would be “onerous, impractical and cost prohibitive to the utility and the customers in aggregate.”<sup>9</sup>

Despite confirming the scope and application of the current version of Section 2.3, the Commission held that “there is a specific opportunity for improved clarity respecting the New Dwelling Rule in Rule 012.”<sup>10</sup> EC agrees and is of the view that amendments to Section 2.3 would better define and clarify the purpose of that section for the benefit of the Commission, interested stakeholders and utilities.

While its primary focus is and has been Section 2.3, EC is of the view that Sections 2.4 and 2.5 may also benefit from clarification to ensure a consistent and appropriate application.

Section 2.4 applies where the facility operator is within the construction completion date and provides that the PSL at the new dwelling “will be the greater of the modelled cumulative sound levels at the start of the dwelling construction, or the permissible sound level as determined in Section 2.1.” EC notes that it is not required or standard practice to model cumulative sound levels at the time of new dwelling construction and that the Section 2.1 PSL is, therefore, likely to be the default PSL under Section 2.4. Section 2.5 applies where facility construction has not been completed by the construction completion date and provides that the PSL at the new dwelling will be determined in accordance with Section 2.1.

EC notes the potential for significant changes (e.g., the installation of a major roadway or third party facility) in ambient sound levels between the date of facility permitting and the date of dwelling permitting/construction. On this basis, EC submits that a more appropriate PSL approach in both Sections 2.4 and 2.5 would be to set a PSL based on a noise model that represents area sound levels at the start of new dwelling construction (including modelled noise associated with the permitted facility itself) as opposed to Section 2.1. Such a noise model could be the noise impact assessment (“NIA”) undertaken at the time of the facilities application or a later noise model if the NIA is no longer representative.

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<sup>8</sup> Paras. 18-19.

<sup>9</sup> No. 28 Substation Decision, para. 22

<sup>10</sup> No. 28 Substation Decision, para. 30.



EC also notes that Sections 2.4 and 2.5 appear to assume that a facility has not yet been constructed, meaning that noise models would have been submitted with the associated facility application in accordance with current regulatory requirements. However, it is also possible for these sections to be triggered on an historical basis when noise modelling was not required to be undertaken by the facility applicant. In such historical scenarios, Sections 2.4 and 2.5 as currently drafted may not be sufficiently broad and amendments similar to those proposed for Section 2.3 (i.e., related to a scenario where there is no NIA) would meet what EC understands to be the overall objective of the new dwelling regime – providing regulatory certainty to owners and operators of existing and operational electric facilities that newly constructed or permitted dwellings are subject to the existing acoustical environment as it relates to noise emitted from those facilities.<sup>11</sup> EPC, therefore, requests clarification of the timeframe within which Sections 2.4 and 2.5 are intended to apply.

With the amendments and clarifications discussed above, EC does not consider revisions to the definition of “new dwelling” to be required.

### **Rule 012 Amendments**

Given the opportunity for improved clarity noted by the Commission in the No. 28 Substation Decision, EC proposed the following amendments to Section 2.3 in the EC Initial Response:

#### **2.3 Permissible sound level at new dwellings in proximity to an existing facility**

(1) Where a person builds a new dwelling or receives a permit to build a **new dwelling** within 1.5 km from the boundary of an existing and operational facility, the permissible sound level at the **location of the** new dwelling will be the greater of the sound levels existing at the start of the new dwelling construction, or the permissible sound level as determined in Section 2.1 of this rule.

If there is a noise impact assessment for the facility, the phrase, “sound levels existing at the start of new dwelling construction,” refers to the modelled cumulative sound levels at the **location of the new dwelling at the time that noise impact assessment was undertaken, so long as it represents the sound levels at the facility at the start of dwelling construction.**

If there is no noise impact assessment for the facility **or no noise impact assessment that represents the sound levels at the facility at the start of new dwelling construction,** the phrase, “sound levels existing at the start of new dwelling construction,” refers to: **(a) ~~the~~ measured sound levels at the location of**

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<sup>11</sup> No. 28 Substation Decision, para. 28.



the new dwelling which represent the sound levels from the facility at the start of new dwelling construction; or (b) a noise model that represents the sound levels from the facility at the start of new dwelling construction.

(2) On the application of a person who builds a new dwelling or receives a permit to build a new dwelling within 1.5 km from the boundary of an existing and operational facility as referred to in Subsection 2.3(1), the Commission may, in exceptional circumstances, grant an exemption from the rule established by that subsection.

(3) In case of a noise complaint made to the Commission or if requested by a person who builds a new dwelling or receives a permit to build a new dwelling within 1.5 km from the boundary of an existing and operational facility, as referred to in Subsection 2.3(1), the licensee must communicate information on the permissible sound level to that person, as determined under the rule established by that subsection. If there is a noise impact assessment for the facility undertaken in accordance with Subsection 2.3(1), the licensee must provide a copy of the assessment and the modelled cumulative sound levels ~~at the new dwelling~~ to that person. If there is no noise impact assessment for the facility, the licensee can either conduct a noise impact assessment or a post-dwelling construction noise survey at the new dwelling in accordance with Subsection 2.3(1) ~~must conduct a post-construction noise survey at the new dwelling~~ and provide the noise survey results to that person.

As noted by the Commission in the No. 28 Substation Decision, Section 2.3 “is intended to provide regulatory certainty to owners and operators of existing and operational electric facilities that newly constructed or permitted dwellings are to be subject to the existing acoustical environment as it relates to noise emitted from those facilities.”<sup>12</sup> The above amendments specifically address the question of when a licensee must assess sound levels at the new dwelling (regardless of whether there is an NIA for the facility or the timing of any NIA that might have been undertaken) and, therefore, ensures that this purpose can be met. EC submits that the proposed amendments would achieve a fair result that balances the interests of a licensee whose facility pre-dates a dwelling with the interests of a resident of a dwelling constructed near a pre-existing facility.

EC further notes that proposed amendments to Section 2.3 would produce a PSL that is consistent with the PSL approved by the Commission in the No. 28 Substation Decision.<sup>13</sup>

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<sup>12</sup> Para. 18.

<sup>13</sup> No. 28 Substation Decision, para. 28 and Table 1.



EC has not proposed specific amendments to Sections 2.4 and 2.5, however, notes that clarification of these provisions may be useful for the reasons discussed above.

### **Establishing PSL for New Dwellings**

The above revisions to Section 2.3 would result in a conservative PSL, regardless of whether an NIA was undertaken at the time of dwelling construction. In this regard, the amended analysis would expressly key off facility noise that would have existed at the start of new dwelling construction, either as measured or modelled (recognizing that an exception pursuant to Section 2.3(2) might be warranted where historical information and records are not available).

EC recognizes that there is no reliable way to determine historic *ambient* sound levels at the time of new dwelling construction given potential changes over time. However, the proposed approach to Section 2.3 would allow for a determination of *facility* noise at the start of new dwelling construction and confirm whether *facility* noise has increased over time.

While EC has not proposed specific amendments, it is of the view that the high-level recommended changes to Sections 2.4 and 2.5 would also support a conservative and clear way of establishing a PSL at a new dwelling that is permitted/constructed after facility permitting, particularly where noise modelling was not undertaken at the time of the facilities application or where noise modelling at the time of the facilities application is not representative of area noise at the time of new dwelling permitting/construction.

EC notes that Stantec has highlighted the concept of an “acoustic audit” as applied in Ontario. EC conceptually agrees with this as a potential method for establishing PSLs for new dwelling.

### **Other Factors**

EC has not identified any other factors that would be relevant to the determination of PSLs for new dwellings.

### **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](mailto:smacmillan@enmax.com). For all other matters please contact Tracy Coutts at (403) 514-2756 or by email at [tcoutts@enmax.com](mailto:tcoutts@enmax.com).



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July 8, 2022

- via Electronic Filing -

**Alberta Utilities Commission**

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

**Attention: Joan Yu & Brian Shand**

Dear Joan Yu & Brian Shand

**RE: ENMAX Corporation's Response on Bulletin 2022-08 regarding Rule 012: Noise Control**

ENMAX Corporation ("EC"), on behalf of ENMAX Power Corporation and ENMAX Energy Corporation has enclosed its response to *Bulletin 2022-08 Initiation of stakeholder consultation process for AUC Rule 012: Noise Control*.

EC subsidiaries own and operate numerous noise-emitting facilities in and around the City of Calgary that are subject to the requirements of Rule 012, including 43 substations. Given the scope and scale of these operations, EC has had significant experience with the practical application of Rule 012 to facilities in a wide variety of circumstances (e.g., facility vintage, facilities located closer to or further from residences, etc.).

EC has reviewed the initial proposed changes in the document titled "2022-06-03-Rule012-Blackline.pdf" found on the AUC's Rule 012 consultation webpage and agrees with all proposed changes to the Rule.

EC also has identified two additional matters as per the attachments to this letter that it requests be considered as part of this consultation process:

1. clarification of the "New Dwelling Rule" in section 2.3 of Rule 012; and
2. mechanisms that would better tailor Rule 012 to an urban environment.

EC notes that Bulletin 2022-08 includes "initial proposed changes" for consultation. EC, therefore, understands that there could be scope for consideration of further changes to Rule

012 to the extent that they would meet the objectives of the Commission (i.e., “eliminating requirements that may have become outdated or unnecessary” and “streamline and improve regulation and adjudicative processes”). EC submits that the above matters meet these objectives. EC’s positions and suggestions on these matters are set out in Attachment 1.

EC appreciates the opportunity to participate in this consultation process. For any matter specifically related to substations and transmission lines, please contact Janene Taylor, Vice President Business Operations and Regulatory at (403) 514-2731 or by email at [jtaylor@enmax.com](mailto:jtaylor@enmax.com). For all other matters please contact Tracy Coutts at (403) 514-2756.

Sincerely,

*Tracy Coutts*

Tracy Coutts (Jul 7, 2022 11:38 MDT)

**Tracy Coutts**  
**Director, Compliance**

Cc: Janene Taylor  
Vice President, Business Operations & Regulatory – ENMAX Power Corporation

## Attachment 1

### New Dwelling Rule and Urban Facility Considerations

The following provides EC's positions and suggestions on the following Rule 012-related matters:

1. clarification of the "New Dwelling Rule" in section 2.3 of Rule 012; and
2. mechanisms that would better tailor Rule 012 to an urban environment.

EC submits that the changes detailed below are consistent with the objectives of the Bulletin 2022-08 consultation process, being to "eliminate requirements that may have become outdated or unnecessary" and "streamline and improve regulation and adjudicative processes."

#### New Dwelling Rule

Under section 2.3 of Rule 012, a resident of a new dwelling is assumed to accept area noise at the time of dwelling construction, including from an existing AUC-regulated facility, as the applicable PSL. EC understands that the purpose of this rule is to achieve a fair result that balances the interests of a licensee whose facility pre-dates a dwelling against the interests of a resident of a dwelling constructed near a pre-existing facility.

There are no restrictions or exclusions in the New Dwelling Rule with respect to the type or age of the facilities to which it applies. On its face, the New Dwelling Rule applies to all existing AUC-regulated facilities that pre-date the construction of proximate dwellings.

The key elements of section 2.3(1) can be broken out as follows:

- The applicable PSL for a new dwelling constructed within 1.5 km from the boundary of an existing facility will be the greater of (1) the sound level existing "at the start of new dwelling construction" or (2) the PSL as determined in Section 2.1 of Rule 012.
- The determination of "the sound level existing at the start of new dwelling construction" depends on whether the facility has a formal noise impact assessment (NIA). A sound survey will qualify as a formal NIA if it meets the conditions in section 3.2 of Rule 012 (comprehensive sound surveys and ambient noise surveys do not qualify as formal NIAs).
- If there is an NIA for the facility, the *modelled cumulative sound levels* at the new dwelling will apply. Rule 012 does not specify any *timeline* for the NIA or derivation of the modelled cumulative sound levels, although EC notes that an NIA is currently required at the time of facility application for a new substation or transformer addition within an existing substation.<sup>1</sup> An NIA reflects the modelled cumulative sound levels at the most

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<sup>1</sup> Rule 007: Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines, TS28, PDF page 77.

affected dwelling(s) *at that specific point in time* based on existing, approved and applied-for energy facilities, as well as the assumed ambient sound level (or measured ambient sound level in cases of a Class A2 adjustment (A2 Adjustment)).

- If there is no NIA for the facility (potentially because the facility pre-dates any associated application requirement), the *measured sound levels at the new dwelling* apply. Rule 012 does not specify any *timeline* within which such measurements must be undertaken relative to the construction of the new dwelling or otherwise.

Given the purpose outlined above, EC submits that the New Dwelling Rule should be available to all existing AUC-regulated facilities that pre-date nearby dwelling construction, particularly if the noise level has not increased as a result of facility additions, upgrades, or condition changes. EC submits that revisions to Section 2.3 (see below suggestions) would help capture the current elements of the rule and reinforce and clarify its application, regardless of the circumstances, vintage of the facility or timing of existing NIA (if any).

In this context, EC has rarely, if ever, had a request from a resident to undertake an NIA at the start of new dwelling construction near its existing facilities and EC is not aware of other operators receiving any such requests. EC's own experience suggests that it would be unlikely that an operator would have prepared an NIA or assessed cumulative sound levels from an NIA at the start of new dwelling construction. EC submits that it is unlikely that the New Dwelling Rule was only intended to apply in the limited (and likely rare) situation where there is an NIA for an existing facility undertaken at the start of new dwelling construction.

While not necessarily exhaustive, EC notes three potentially more likely scenarios where the current version of the New Dwelling Rule could benefit from further clarity:

1. Facilities constructed before the new dwelling without an NIA. This could be the case, for example, for facilities that did not require an NIA under the regulatory regime in place at the time of permitting.<sup>2</sup>
2. Pre-existing facilities with an NIA undertaken some period of time prior to dwelling construction, where sound levels at the location of the dwelling have changed in the interim period (due to construction of energy-related or non-energy-related facilities between the date of the NIA and the start of new dwelling construction).
3. Pre-existing facilities with an NIA undertaken some period of time after dwelling construction, where sound levels at the location of the dwelling have changed in the interim period (due to construction of energy-related or non-energy-related facilities between the start of new dwelling construction and the date of the NIA).

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<sup>2</sup> EC understands that the first iteration of noise regulation came into effect in or about 1973 (ERCB Directive 73-1).

In respect of scenarios 2 and 3, EC notes that NIAs represent a point-in-time assessment of sound levels and, therefore, may not accurately reflect sound levels at the start of new dwelling construction or any other time. Such a discrepancy is more likely in an urban setting where the noise environment can change on a regular basis.

Rule 012 does not currently require a licensee to undertake an NIA at any specific time, including at the time of new dwelling construction unless requested by a resident. EC submits that an ongoing obligation on licensees to monitor for new dwelling construction and undertake an NIA each time construction at a new dwelling commences would be unduly onerous, particularly in urban settings with potentially frequent residential construction. Even leaving this consideration aside, such an obligation would be problematic for utility operators in the absence of an associated regulatory requirement and mechanism and/or approved revenue requirement for such work.

In cases of a noise complaint or where otherwise requested by a person living within 1.5 km of a facility, the Commission could consider a requirement that a licensee develop a model that estimates the *facility noise* that would have existed at the start of new dwelling construction (recognizing that an exception pursuant to Section 2.3(2) might be warranted where historical information and records are not available). Such an approach would allow for a determination of facility noise at the start of new dwelling construction and confirm whether facility noise has increased over time. However, it is important to note that there is no reliable way to determine historic ambient sound levels at the time of new dwelling construction given potential changes over time.

To address the comments above and resolve any ambiguity or uncertainty that might be associated with the current version of Rule 012, EC suggests that section 2.3 be revised to specifically address the question of when a licensee must assess the sound levels at the new dwelling, regardless of whether there is an NIA for the facility or the timing of any NIA that might have been undertaken. While it is the Commission that must determine any revisions to Rule 012, EC proposes the following revisions for consideration:

### 2.3 Permissible sound level at new dwellings in proximity to an existing facility

(1) Where a person builds a new dwelling or receives a permit to build [a new dwelling](#) within 1.5 km from the boundary of an existing and operational facility, the permissible sound level at the [location of the](#) new dwelling will be the greater of the sound levels existing at the start of the new dwelling construction, or the permissible sound level as determined in Section 2.1 of this rule.

If there is a noise impact assessment for the facility, the phrase, “sound levels existing at the start of new dwelling construction,” refers to the modelled cumulative sound levels at the [location of the](#) new dwelling [at the time that noise](#)

impact assessment was undertaken, so long as it represents the sound levels at the facility at the start of dwelling construction.

If there is no noise impact assessment for the facility or no noise impact assessment that represents the sound levels at the facility at the start of new dwelling construction, the phrase, “sound levels existing at the start of new dwelling construction,” refers to: ~~(a) the~~ measured sound levels at the location of the new dwelling which represent the sound levels from the facility at the start of new dwelling construction; or (b) a noise model that represents the sound levels from the facility at the start of new dwelling construction.

(2) On the application of a person who builds a new dwelling or receives a permit to build a new dwelling within 1.5 km from the boundary of an existing and operational facility as referred to in Subsection 2.3(1), the Commission may, in exceptional circumstances, grant an exemption from the rule established by that subsection.

(3) In case of a noise complaint made to the Commission or if requested by a person who builds a new dwelling or receives a permit to build a new dwelling within 1.5 km from the boundary of an existing and operational facility, ~~as~~ referred to in Subsection 2.3(1), the licensee must communicate information on the permissible sound level to that person, as determined under the rule established by that subsection. If there is a noise impact assessment for the facility undertaken in accordance with Subsection 2.3(1), the licensee must provide a copy of the assessment and the modelled cumulative sound levels ~~at the new dwelling~~ to that person. If there is no noise impact assessment for the facility, the licensee can either conduct a noise impact assessment or a post-dwelling construction noise survey at the new dwelling in accordance with Subsection 2.3(1) ~~must conduct a post-construction noise survey at the new dwelling~~ and provide the noise survey results to that person.

EC submits that the above changes would fairly and appropriately balance the interests of licencees and residents and increase regulatory certainty and efficiency in the application of the New Dwelling Rule to existing facilities.

### Urban Facility Considerations

EC understands that the Rule 012-assumed PSL is based on a rural environment and, in this respect, is not always suited to application in an urban setting like the City of Calgary in which EC operates. In urban settings, ambient sound levels are generally greater and more varied than in rural settings and are subject to regular change based on ongoing development. As a result, the current Rule 012-assumed PSL is not necessarily representative of the ambient sound levels in the surrounding environment in these areas. EC, therefore, requests that the Commission

consider amendments to Rule 012 as part of this consultation to account for urban sound levels, including the potential addition of an assumed PSL for an urban environment (Urban PSL).

Many EC facilities are located near or within urban centres, which, in certain cases, has made it difficult to meet the Rule 012-assumed PSL without an A2 Adjustment. EC submits that an A2 Adjustment application that is only required because of an incremental exceedance of the assumed PSL where the urban ambient sound level is already high (and not because the facility itself is exceedingly noisy), adds a level of complexity and regulatory burden for the Commission, impacted stakeholders and EC. In this regard, a requirement for an A2 Adjustment could be triggered by the current PSLs assumed by Rule 012 (i.e., 61 dBA (daytime) and 51 dBA (nighttime)) even though facility noise contribution is a negligible component of the cumulative sound levels calculated at surrounding receptors.

While further work would be required to establish the details, EC submits that these issues would be addressed by any of the following:

- The implementation of a non-cumulative facility-only Urban PSL similar to other Canadian urban centers (e.g., the City of Vancouver and the City of Toronto). Please see the attached table summarizing the Urban PSLs in certain jurisdictions.
- Revisions to Table 1 of Rule 012 (basic sound levels (BSL) for nighttime), to incorporate higher population density, higher transportation activity (including traffic volume, traffic speed and road size), permissible land use in the relevant area (i.e., zoning) and other urban activities.
- The use of a measured ambient sound level to determine the BSL (given the many unregulated noise sources in urban areas).

Regardless of which (if any) of the above measures is implemented, EC also recommends that the Commission revise section 2.1(10)(a) of Rule 012 to provide a threshold for (or definition of) the required difference between the assumed PSL and the measured ambient sound level to help licensees understand when an A2 Adjustment may be implemented.<sup>3</sup>

The changes outlined above would avoid the regulatory burden for the Commission, impacted stakeholders and EC associated with an A2 Adjustment application that is required under Rule 012 where an incremental noise exceedance is largely driven by an already high urban ambient sound level (and not excessive facility noise).

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<sup>3</sup> Section 2.1(10)(a) currently states: "A Class A2 adjustment is an adjustment to the permissible sound level for locations where the measured ambient sound level is different from the assumed ambient sound levels set out in Table 1. See Example 1 in Appendix 6."

Overview of Select Urban Permissible Sound Levels in Canadian Jurisdictions

Jurisdiction	Location	Notes
Municipal	City of Vancouver	Noise Control By-Law No. 6555 Zone-based thresholds for the following: <ul style="list-style-type: none"> <li>• Activity or Event Zone: 70 dBA daytime and 65 dBA nighttime within the zone.</li> <li>• Intermediate Zone: 70 dBA daytime and 65 dBA nighttime within the zone.</li> <li>• Quiet Zone: 55 dBA daytime and 45 dBA nighttime within the zone. A Quiet Zone is any portion of the City not defined as an activity zone, intermediate zone or event zone.</li> </ul>
	City of Toronto	Toronto Municipal Code Chapter 491. Permissible noise is the <u>higher of the following</u> : <ul style="list-style-type: none"> <li>• 55 dBA daytime and 50 dBA nighttime, or</li> <li>• Ambient Sound Level.</li> </ul>
Provincial	BC	Similar to Alberta AER Directive 038 and Rule 012
	Ontario	MOECC NPC-300 <ul style="list-style-type: none"> <li>• Noise limit is the <u>higher of the applicable exclusion limit</u> (see Table B-1 below) for different classes or the background sound level for the point of reception.</li> <li>• Point of reception is the opened window pane of a noise-sensitive space.</li> </ul> Zoning – Class 1, Class 2, Class 3 (Rural), Class 4 <ul style="list-style-type: none"> <li>• "Class 1 area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people (usually road traffic) often referred to as "urban hum."</li> <li>• "Class 2 area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 areas: sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours); and low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours).</li> <li>• "Class 3 area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as: a small community; agricultural area; a rural recreational area such as a cottage or a resort area; or a wilderness area.</li> <li>• "Class 4 area" means an area or specific site that would otherwise be defined as Class 1 or 2 and which:</li> </ul>

Jurisdiction	Location	Notes															
		<ul style="list-style-type: none"> <li>○ is an area intended for development with new noise-sensitive land use(s) that are not yet built;</li> <li>○ is in proximity to existing, lawfully established stationary noise source(s); and</li> <li>○ has formal confirmation from the land use planning authority regarding application of the Class 4 area classification, which is determined during the land use planning process.</li> <li>○ Areas with existing noise-sensitive land use(s) cannot be classified as Class 4 areas.</li> </ul> <p style="text-align: center;"><b>Table B-1 Exclusion Limit Values of One-Hour Equivalent Sound Level (<math>L_{eq}</math>, dBA) Outdoor Points of Reception</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Time of Day</th> <th style="text-align: center;">Class 1 Area</th> <th style="text-align: center;">Class 2 Area</th> <th style="text-align: center;">Class 3 Area</th> <th style="text-align: center;">Class 4 Area</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">07:00 - 19:00</td> <td style="text-align: center;">50</td> <td style="text-align: center;">50</td> <td style="text-align: center;">45</td> <td style="text-align: center;">55</td> </tr> <tr> <td style="text-align: left;">19:00 - 23:00</td> <td style="text-align: center;">50</td> <td style="text-align: center;">45</td> <td style="text-align: center;">40</td> <td style="text-align: center;">55</td> </tr> </tbody> </table>	Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area	07:00 - 19:00	50	50	45	55	19:00 - 23:00	50	45	40	55
Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area													
07:00 - 19:00	50	50	45	55													
19:00 - 23:00	50	45	40	55													
Quebec		<p>Noise emissions of a facility may not exceed the maximum value of <u>either</u>:</p> <ul style="list-style-type: none"> <li>• the level of the Residual Sound (the Sound Level present in an area without the impact of the facility in question), or</li> <li>• the maximum sound level according to the zoning and time of day according to the following table:</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Zone</th> <th style="text-align: center;">Night (dBA)</th> <th style="text-align: center;">Day (dBA)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">I</td> <td style="text-align: center;">40</td> <td style="text-align: center;">45</td> </tr> <tr> <td style="text-align: center;">II</td> <td style="text-align: center;">45</td> <td style="text-align: center;">50</td> </tr> <tr> <td style="text-align: center;">III</td> <td style="text-align: center;">50</td> <td style="text-align: center;">55</td> </tr> <tr> <td style="text-align: center;">IV</td> <td style="text-align: center;">70</td> <td style="text-align: center;">70</td> </tr> </tbody> </table> <p>Zone categories:  <i>Sensitive Zones</i>  I: Areas with single family or double family occupancy, schools, hospitals or other institutions of learning, health care or health recovery, existing dwellings in an agricultural area.  II: Areas designated for multi-residential living units, mobile home parks, institutions or campgrounds.  III: Areas designated for commercial use or as leisure parks. In every case the nighttime value only applies at establishments that have a residential use. In all other cases the daytime noise limit also applies to the nighttime.  <i>Non-Sensitive Zones</i></p>	Zone	Night (dBA)	Day (dBA)	I	40	45	II	45	50	III	50	55	IV	70	70
Zone	Night (dBA)	Day (dBA)															
I	40	45															
II	45	50															
III	50	55															
IV	70	70															

Jurisdiction	Location	Notes
		<p>IV: Areas zoned for industrial or agricultural use. In the case of an existing dwelling in an industrial area that was erected in accordance with the municipal bylaws at the time of its construction, the noise limits are 50 dBA for the nighttime and 55 dBA for the daytime.</p> <ul style="list-style-type: none"> <li>• The zones are assigned based on the permitted uses by the municipal land zoning. In case an area or part of an area has not been considered in a municipal land zoning plan, the actual usage will determine the category of zoning for noise purposes.</li> <li>• Daytime is between 7 AM and 7 PM and nighttime is between 7 PM and 7 AM.</li> <li>• The criteria apply to all stationary noise sources within a facility fence line including moving sources on the facility terrain. Mobile noise sources outside the facility fence line are not included.</li> <li>• There are penalties for tonal, impulse and low frequency noise and recognizability of sound like music or speech. Ambient sound is not included.</li> <li>• Determining noise limits is the responsibility of municipalities. However, municipal noise limits must not exceed the noise limits in this provincial document.</li> </ul>