

Rule 012: Noise Control Revision Matrix

Section 1 Requirement changes	
Topic 1.1 Noise receptor	
Original text	Proposed change and Commission comment
N/A	<p>Add definitions for “noise receptor” and “the most affected noise receptor” to the Glossary (Appendix 1):</p> <p>A noise receptor is any dwelling located within 1.5 km of the facility property boundary. If there are no dwellings within 1.5 km of the facility property boundary, a noise receptor is any point at 1.5 km from the facility property boundary.</p> <p>For wind power projects, a noise receptor is any dwelling located within 1.5 km of the centre point of the tower of a wind turbine or within 1.5 km of the substation boundary. If there are no dwellings within 1.5 km of the wind turbine or substation, a noise receptor is any point at 1.5 km from the wind turbine or substation boundary.</p> <p>The Commission may consider other types of noise receptors (e.g., sites of ceremonial or cultural importance) on a case-by-case basis. In these circumstances, the party who requests consideration of a non-dwelling receptor must provide justification or explanation for why noise compliance at this location should be considered.</p> <p>The most affected noise receptor(s) are those noise receptors subject to the highest cumulative sound level relative to the permissible sound level.</p>

<p>PDF page 6 2.1(1), (2) and (3)</p> <p>(1) The permissible sound level is determined for the most affected dwelling(s) located within 1.5 km from the boundary of the facility property other than for wind turbines and a substation in a wind turbine project.</p> <p>(2) For wind turbines and a substation in a wind turbine project, the permissible sound level is determined for the most affected dwelling(s) located within 1.5 km from the centre point of the tower of the closest wind turbine, or from the boundary of that substation.</p> <p>(3) If there are no dwellings within the 1.5 km boundary applicable to a facility, the permissible sound level should be defined at the most affected point along the 1.5 km boundary, i.e., at a point 1.5 km from either the facility property, the centre point of the wind turbine, or the boundary of a substation in a wind turbine project.</p>	<p>These three items could be consolidated into one: 2.1(1) The permissible sound level shall be determined for noise receptor(s) as defined in the Glossary.</p>
<p>PDF page 19 3.2(1)</p> <p>(1) Permissible sound level: Determine the permissible sound level and the direction and distance to the most affected dwelling(s), or, in the absence of dwellings, the most affected point 1.5 km from the facility boundary...</p>	<p>Edits: 3.2(1) (1) Permissible sound level: Determine the permissible sound level for the noise receptor(s)...</p>
<p>PDF pages 19 and 20 3.2(3)(a)</p> <p>(3) Noise receptor identification</p> <p>(a) The noise impact assessment must predict noise compliance with the permissible sound levels at the most affected dwelling(s) located within 1.5 km of the proposed facility boundary.</p>	<p>Edits: 3.2(3)(a) (3) Noise receptor identification</p> <p>(a) The noise impact assessment must present direction and distance from the proposed facility to the most affected noise receptor(s), predict cumulative sound levels and assess noise compliance with the permissible sound levels at the most affected noise receptor(s).</p>

<p>PDF page 23 3.3(2) (2) The noise impact assessment must predict noise compliance with the permissible sound levels at dwelling(s) located within 1.5 km from the centre point of the wind turbine, or the boundary of a substation in a wind turbine project.</p>	<p>Deletion. <i>Commission comment:</i> The Commission proposes to delete this subsection, because it is repetitive of subsection 3.2(3)(a).</p>
<p>Appendix 3, Section 5 Predict the cumulative sound level at the most affected dwelling(s) or at a distance of 1.5 km where there are no dwellings...</p>	<p>Edits: Appendix 3, Section 5 Predict the cumulative sound level at the most affected noise receptor(s)...</p>
<p>Topic 1.2 Overview of noise impact assessment terminology</p>	
<p>Original text</p>	<p>Proposed change and Commission comment</p>
<p>N/A</p>	<p>New: A new graphic in Section 3, before 3.1 The Commission proposes to add a graphic to illustrate the applicability of different assessment methods in Section 3 “Noise impact assessments” (i.e., NIA flowchart, NIA summary form and NIA). The graphic can be found in Attachment A to this document or in the blackline version of Rule 012.</p>

Topic 1.3 New noise impact assessment flowchart	
Original text	Proposed change and Commission comment
N/A	<p>New:</p> <p>A new subsection (3.1(2)) under Section 3.1</p> <p>3.1 General requirements</p> <p>(2) Noise impact assessment flowchart</p> <p>(a) When a facility is exempt from the requirement to file a Rule 007 application or is eligible to file a checklist application under Rule 007, the facility must still comply with Rule 012 permissible sound levels. In these cases, a proponent may complete an Appendix X – Noise impact assessment flowchart to determine if a noise impact assessment is required.</p> <p>(b) Preparation of a noise impact assessment may be avoided in cases where the noise impact from a facility is expected to be minimal. For an exempt facility or a facility eligible to file a checklist application, the noise impact assessment flowchart provides objective criteria for determining if noise impacts are expected to be minimal.</p> <p>(i) If these criteria are satisfied, then further assessment is not required.</p> <p>(ii) If these criteria are not satisfied, then the proponent must complete a noise impact assessment.</p> <p>(c) A noise impact assessment flowchart is <u>only</u> applicable to a facility that is exempt from filing a Rule 007 application or that is eligible to file to a checklist application under Rule 007. For other types of facilities, a noise impact assessment must be filed.</p>
N/A	<p>New:</p> <p>Appendix X – Noise impact assessment flowchart</p> <p><i>Commission comment:</i></p> <p>See Attachment B to this document or the blackline version of Rule 012 for the new Appendix X – Noise impact assessment flowchart.</p>

Topic 1.4 Submission and retention of noise impact assessment records	
Original text	Proposed change and Commission comment
<p>PDF page 11 2.1(12) A licensee must keep noise measurement information to support the licensee's use of any of the adjustments to the basic sound level.</p> <p>PDF page 13 2.3(4) A licensee must keep documentation of its communication between the licensee and a person proposing to build a dwelling within 1.5 km of the boundary of the facility property or a wind turbine or substation in a wind project, including a copy of any information with respect to the permissible sound levels for the existing facility provided to that person.</p> <p>PDF page 14 2.4(4) A licensee must keep documentation of its communication with a person referred to in Subsection 2.4(1), including a copy of the noise impact assessment and any information on the permissible sound levels for the approved facility provided to that person.</p> <p>PDF page 15 2.5 (5) A licensee must keep documentation of its communications with a person referred to in Subsection 2.5 (1), including a copy of the noise impact assessment and any information on permissible sound levels for the approved facility provided to that person.</p>	<p>Edits:</p> <p>3.4 Submission and retention of noise impact assessment records</p> <p>(1) A noise impact assessment or summary form must be submitted to the Commission as part of the Rule 007 application for a facility except when the facility is eligible to file a checklist application.</p> <p>(2) A facility that is exempt from the requirement to file a Rule 007 application or is eligible to file a checklist application must still comply with Rule 012 permissible sound levels. The proponent must complete a noise impact assessment flowchart or a noise impact assessment before the facility commences operation.</p> <p>(a) If the noise impact assessment flowchart or noise impact assessment concludes that the facility will be compliant with this rule, then the proponent is not required to submit the flowchart or noise impact assessment to the Commission.</p> <p>(b) If a checklist application is filed for the facility, the applicant should clearly specify whether a noise impact assessment flowchart or a noise impact assessment was completed, and confirm compliance with Rule 012. The Commission may ask the proponent to provide a copy of the noise impact assessment flowchart or a noise impact assessment as part of the Commission's review of the checklist application.</p> <p>(3) If a noise impact assessment completed for a facility proposes mitigation measures or establishes a Class A or Class C adjustment, then the facility is not eligible for an exemption from the requirement to file a Rule 007 application and cannot file a checklist application.</p> <p>(4) In all cases, a proponent or licensee must keep all supporting information relating to the noise impact assessment flowchart or noise impact assessment prepared for a facility, including records of any communication between the proponent or licensee and nearby residents, until the facility is decommissioned and salvaged. A copy of the noise impact assessment flowchart or noise impact assessment prepared for a facility must be provided to the Commission, as part of a compliance or complaint investigation process.</p>

<p>PDF page 23</p> <p>3.4 Noise impact assessment records</p> <p>An applicant or licensee must keep all supporting information relating to a noise impact assessment in the event that the Commission requests the information.</p>	<p>Deletion:</p> <p>Subsections 2.1(12), 2.3(4), 2.4(4) and 2.5(5).</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to delete subsections 2.1(12), 2.3(4), 2.4(4) and 2.5(5), because they are repetitive of Section 3.4.</p>
<p>Topic 1.5 Noise impact assessment summary form</p>	
<p style="text-align: center;">Original text</p>	<p style="text-align: center;">Proposed change and Commission comment</p>
<p>PDF page 20</p> <p>3.1(5)</p> <p>(5) Where the facility application or exemption pursuant to AUC Rule 007 relates to an electric transmission line or substation of 240/260 kilovolt (kV) or less, to a small power plant with a capacity of less than one megawatt (MW), to a solar power plant, or to a meter station on a gas utility pipeline installation, an Appendix 3 - Noise impact assessment summary form may be submitted to satisfy the requirements of AUC Rule 007.</p>	<p>Edits:</p> <p>Now 3.1(3)</p> <p>(3) An Appendix 3 - Noise impact assessment summary form may be submitted in place of a noise impact assessment in the following circumstances:</p> <ul style="list-style-type: none"> (a) the predicted cumulative sound level at the most affected noise receptor(s) is less than the permissible sound level by at least three dBA; or (b) it is not practical or efficient to characterize baseline sound levels and the proposed facility qualifies to use the “no net increase” approach in Section 2.9. <p>For facilities that do not fall into either of these categories, a noise impact assessment is required.</p>
<p>PDF page 57</p> <p>Appendix 3</p> <p>Under the table in Item 5</p> <p>Is the predicted cumulative sound level less than the permissible sound level by a margin of three dBA?</p> <p>Yes _____ No _____</p> <p>If No, conduct a detailed NIA as per Section 3 of AUC Rule 012.</p>	<p>Deletion.</p>

<p>N/A</p>	<p>New:</p> <p>A new item in Appendix 3, below Item 5:</p> <p>Explain why the proposed facility qualifies to use a noise impact assessment summary form in place of a noise impact assessment.</p>
<p>PDF page 56</p> <p>Appendix 3, Section 1</p> <p>1. Permissible Sound Level (PSL) determination (Rule 012, Section 2)</p> <p>Complete the following for the most affected dwelling(s) or at a distance of 1.5 km where there are no dwellings:</p> <p>In the table under Section 1 of Appendix 3:</p> <p>Dwelling Distance from facility (m)</p> <p>Dwelling Direction from facility</p>	<p>Edits:</p> <p>Appendix 3, Section 1</p> <p>1. Permissible Sound Level (PSL) determination (Rule 012, Section 2)</p> <p>Complete the following for the most affected receptor(s):</p> <p>In the table under Section 1 of Appendix 3:</p> <p>Distance from facility to receptor (m)</p> <p>Direction from facility to receptor</p>
<p>N/A</p>	<p>New:</p> <p>A new subsection in Appendix 3 “Noise impact assessment summary form”:</p> <p>2.2 Identify baseline facilities in the project area, including existing, approved, and proposed (deemed complete) facilities, and describe their PWL or SPL. When the “no net increase” approach is used, the baseline case may be assumed to be compliant with the permissible sound level.</p> <p><i>Commission comment:</i></p> <p>A noise impact assessment summary form may be used to simplify reporting, but the baseline case must still be considered in the cumulative sound assessment.</p>

Topic 1.6 Ambient sound level	
Original text	Proposed change and Commission comment
<p>PDF page 15 2.6(2)</p> <p>(2) The average nighttime ambient sound level in rural Alberta is approximately 35 dBA. Rule 012 does not require the use of a specific ambient sound level in a noise impact assessment. Applicants must assess the ambient sound level as part of a noise impact assessment, particularly in areas where there is non-energy industrial activity that would impact the ambient sound levels or where pristine (as defined in Appendix 1) surroundings prevail.</p>	<p>Edits: 2.6(2)</p> <p>(2) The average nighttime ambient sound level in rural Alberta is approximately 35 dBA. In most circumstances, noise impact assessments should make use of this average value or assumed ambient sound levels calculated based on Table 1. However, an ambient sound level survey to establish representative ambient sound levels may be necessary where:</p> <ul style="list-style-type: none"> (a) the proposed facility is in an area with non-industrial noise sources or non-energy related facilities that would impact ambient sound levels, or (b) the proposed facility is in an area considered to be pristine (defined in Appendix 1 - Glossary). <p>In these two cases, the receptors in the area may be eligible for a Class A2 adjustment to the assumed ambient sound level.</p>
<p>PDF page 15 2.6(3)</p> <p>(3) The ambient sound level must be determined under representative conditions that portray typical conditions for the area, and not under extreme conditions (e.g. an unusually quiet day). If the ambient sound level is established by means of an ambient sound level survey, the maximum acceptable dwelling level wind speed is three m/sec to exclude contamination from sounds caused by higher wind speeds.</p>	<p>Edits: 2.6(3)</p> <p>(3) If the ambient sound level is established by means of an ambient sound level survey:</p> <ul style="list-style-type: none"> (a) The ambient sound level must be determined under representative conditions that portray typical conditions for the area, and not under extreme conditions (e.g., an unusually quiet day); and (b) The maximum acceptable dwelling level wind speed is three m/s, in order to exclude contamination from sounds caused by higher wind speeds.

<p>PDF page 16 2.6(5) and (6)</p> <p>(5) Applicants may use Table 1 to establish the ambient sound level. However, where Table 1 is used, an applicant must explain why values in Table 1 are representative of the project study area.</p> <p>(6) In circumstances where applicants find that ambient sound levels from Table 1 are not representative of the project area, measurements for Class A2 adjustments may be considered.</p>	<p>Deletion.</p> <p><i>Commission comment:</i> These two subsections repeat subsections 2.6(2) and 2.6(3).</p>
<p>PDF page 8 Table 2</p> <p>The “reason for adjustment” for A2:</p> <p>Ambient monitoring adjustment is applicable if the measured ambient sound level is not representative of the assumed ambient sound environment. The ambient sound levels may be measured in areas considered to be pristine as defined in Appendix 1 or areas that have non-energy industrial activity that would impact the ambient sound levels.</p> <p>In the case where there are existing energy-related facilities located within an area and the assumed ambient sound level without the existing energy-related facilities as determined from Table 1 is considered not representative of the actual sound levels, the area may be eligible for an ambient adjustment.</p> <p>An ambient adjustment for one dwelling may be applied to other dwellings within the same project study area that have a similar acoustic environment. To be deemed similar, justification must be provided demonstrating that the difference in daytime or nighttime ambient sound level at the dwelling(s) is no greater than plus or minus three dBA from the measured ambient sound level.</p> <p>Use Figure 1 to determine the applicable adjustment value.</p>	<p>Edits:</p> <p>Table 2</p> <p>The “reason for adjustment” for A2:</p> <p>Ambient monitoring adjustment (or Class A2 adjustment) is applicable only when ambient sound levels assumed according to Table 1 are not representative of the actual acoustic environment. Refer to Section 2.6, Ambient sound level, for further details.</p> <p>Delete the current second paragraph</p> <p>Maintain but move the current third paragraph out of the table.</p> <p>Delete the current fourth paragraph.</p> <p><i>Commission comment:</i></p> <p>The current second paragraph repeats the material in the updated first paragraph.</p> <p>The current third paragraph explains an A2 adjustment may be applied to other dwellings with similar acoustic environmental. It does not belong to the definition of A2 adjustment, so it should not be in Table 2. The Commission proposes to move this paragraph out of Table 2 and add it to the bulleted list below Table 2.</p> <p>The current fourth paragraph is repetitive of subsection 2.1(10)(g).</p>

<p>PDF page 8 2.1(10)(a) 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.</p>	<p>Deletion. <i>Commission comment:</i> This subsection repeats information in Table 2.</p>
<p>Topic 1.7 Comprehensive sound level survey</p>	
<p style="text-align: center;">Original text</p>	<p style="text-align: center;">Proposed change and Commission comment</p>
<p>PDF page 29 4.6.1(1) (1) When ordered to do so by the Commission as a condition in the approval; or in response to a noise complaint, a licensee must conduct post-construction noise monitoring.</p>	<p>Edits: 4.6.1(1) (1) When ordered to do so by the Commission as a condition in the approval; or in response to a noise complaint and when directed by the Commission, a licensee must conduct a post-construction comprehensive sound level survey. The survey shall be conducted at: (a) the noise receptor(s) specified in the condition, when the comprehensive sound level survey is conducted to satisfy an approval condition ordered by the Commission; or (b) the noise receptor(s) identified by the Commission, when the comprehensive sound level survey is conducted in response to a Commission order requiring the licensee demonstrate its facility’s compliance; or (c) the complainant noise receptor or the nearest complainant noise receptor to the facility (if there are multiple complainants), when the comprehensive sound level survey is conducted in response to a noise complaint.</p>
<p>PDF page 30 4.6.1(3)(a) The monitoring location must be at the dwelling(s) specified in the condition.</p>	<p>Deletion.</p>

Topic 1.8 Conditions for a time extension request	
Original text	Proposed change and Commission comment
<p>PDF page 6 1.5(1) 1.5 Conditions for a time extension request</p> <p>(1) A new noise impact assessment must be filed as part of a time extension request, if construction has not begun prior to the expiry date of the approval and one or more of the following conditions is satisfied:</p> <ul style="list-style-type: none"> (a) The licensee is proposing major amendments to the approved facility; (b) The most affected dwelling(s) have changed; or (c) There are new energy-related facilities that may influence sound levels at dwellings located within 1.5 kilometres (km) of the proposed facility boundary. 	<p>Edits: 1.5(1) 1.5 Conditions for a time extension request</p> <p>(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:</p> <ul style="list-style-type: none"> (a) The most affected noise receptor(s) have changed (e.g., construction of a new dwelling); or (b) There are new energy-related facilities that may influence compliance at noise receptor(s). <p>If a new noise impact assessment is not included in a time extension request, the applicant must confirm that the most affected noise receptor(s) have not changed and there are no new energy-related facilities that may influence sound levels at noise receptors.</p>
<p>PDF page 6 1.5(2) and 1.5(3)</p> <p>(2) A new noise impact assessment must include adjacent energy-related facilities that may influence cumulative sound levels at dwellings located within 1.5 km of the proposed facility boundary.</p> <p>(3) The new noise impact assessment must predict noise compliance with the permissible sound levels at the most affected dwelling(s) located within 1.5 km of the proposed facility boundary.</p>	<p>Deletion.</p> <p><i>Commission comment:</i> The current subsections 1.5 (2) and 1.5 (3) are redundant. They describe general requirements for all the noise impact assessments, which are not specific to time extension requests. The Commission proposes to delete these subsections.</p>

Topic 1.9 Noise complaint investigation	
Original text	Proposed change and Commission comment
PDF page 37 5.2(3) (3) If monitoring is conducted due to a noise complaint, completed noise complaint investigation forms (see Appendix 4) identifying the representative conditions for monitoring must be completed and submitted to the Commission.	Edits: 5.2(3) (3) Noise complaint investigation forms (see Appendix 4) must be completed and submitted to the Commission whenever there is a noise complaint, regardless of whether noise monitoring is ultimately required to address the complaint.
Topic 1.10 Statistical method	
Original text	Proposed change and Commission comment
PDF page 23 4.1(4)(b)(ii) (4) The number of samples is sufficient in a valid comprehensive sound survey if: ... (b) data from combined multiple nighttime periods or daytime periods are obtained under representative sound levels at a dwelling where measurement conditions, including weather conditions and nearby sound sources, are (i) consistent across the measurement periods being combined, and (ii) after an isolation analysis has been undertaken, the computed confidence interval for the arithmetic mean value over all the samples for each individual daytime and nighttime period is not more than plus or minus three dB with a confidence level of 90 per cent for the daytime or for the nighttime period (See statistical method in Appendix 9)	Edits: 4.1(4)(b)(ii) (4) The number of samples is sufficient in a valid comprehensive sound survey if: ... (b) data from combined multiple nighttime periods or daytime periods are obtained under representative sound levels at a dwelling where measurement conditions, including weather conditions and nearby sound sources, are (i) consistent across the measurement periods being combined, and (ii) after an isolation analysis has been undertaken, the difference in average sound levels from individual nighttime periods or daytime periods is no greater than plus or minus three dBA.

<p>PDF page 31</p> <p>Table 5. Noise measurement specifications for wind turbine project monitoring</p> <p>Item 8, Minimum monitoring duration</p> <ul style="list-style-type: none"> • Ambient wind sound level survey: sufficient valid samples in each wind bin so the 90% confidence interval on the calculated mean over the valid samples is ± 3 dB. • ... 	<p>Edits:</p> <p>Table 5. Noise measurement specifications for wind turbine project monitoring</p> <p>Item 8, Minimum monitoring duration</p> <ul style="list-style-type: none"> • Ambient wind sound level survey: sufficient valid samples in each wind bin so the difference in average sound levels from individual nighttime periods or daytime periods is no greater than plus or minus three dBA • ...
<p>PDF page 35</p> <p>4.6.3(3)</p> <p>(3) ... Each bin will contain sufficient samples to limit the calculated confidence interval for the mean value over the valid samples to plus or minus three dB with a confidence level of 90 per cent...</p>	<p>Edits:</p> <p>4.6.3(3)</p> <p>(3) ... Each bin will contain sufficient samples to limit the difference in average sound levels from individual nighttime periods or daytime periods to plus or minus three dBA...</p>
<p>PDF page 74</p> <p>Appendix 9</p>	<p>Deletion.</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to eliminate the statistical method in the interest of simplifying Rule 012. As long as the average noise levels from multiple measurement periods are consistent (i.e., within plus or minus three dBA), then combination of data from these periods should be allowed.</p>

Section 2 Edits	
Topic 2.1 Deletion	
Original text	Proposed change and Commission comment
<p>PDF page 12</p> <p>2.1(13)(d) ... A Class C1 adjustment to the permissible sound level of a wind turbine project may only be made with prior approval of the Commission.</p> <p>2.1(13)(f) An applicant for or a licensee of a wind turbine project must obtain approval of the Commission before adding a Class C2 adjustment to the permissible sound level.</p>	<p>Deletion: 2.1(13)(d)</p> <p>Edits: Now 2.1(9)(i) An applicant for or a licensee of a wind turbine project must obtain approval of the Commission before adding a Class C1 or Class C2 adjustment to the permissible sound level.</p> <p><i>Commission comment:</i> The Commission proposes to delete 2.1(13)(d) and making 2.1(13)(f) refer to both Class C1 and Class C2 adjustments.</p>
<p>PDF page 19</p> <p>3.1 General requirements</p> <p>(2) When planning a facility in an area where there is an existing facility or approved energy-related facility, the applicant must ensure that its facility will not cause the cumulative sound levels to exceed the permissible sound level.</p> <p>(3) The most affected dwelling(s) must be identified for each defined area of similar acoustic environment for inclusion in a noise impact assessment.</p> <p>(4) Where a noise impact assessment is not submitted, the applicant must demonstrate that noise levels are not affected by the proposed facility or modifications to a facility.</p>	<p>Deletion.</p> <p><i>Commission comment:</i> 3.1(2) is repetitive of Section 2.7. 3.1(3) is repetitive of subsection 3.2(3). 3.1(4) will be repetitive of the new subsection 3.1(1) regarding noise impact assessment requirements for Rule 007 exemptions and checklist applications.</p>

<p>PDF page 21 3.2(9)(c) Provide the predicted cumulative sound level with and without the Class A2 or Class C2 adjustment.</p>	<p>Deletion.</p> <p><i>Commission comment:</i> Because 3.2(9)(c) repeats material from 2.1(9)(c) and 2.1(13)(h), the Commission proposes to delete 3.2(9)(c).</p>
<p>PDF page 21 3.2(10) The noise modelling must include the cumulative effects of adjacent baseline facilities that may have a noise impact on a dwelling within the study area, which include:</p> <ul style="list-style-type: none"> (a) existing energy-related facilities (b) approved energy-related facilities (c) proposed facilities, where the application has that have been deemed complete by the Commission under Rule 007 	<p>Deletion.</p> <p><i>Commission comment:</i> This is already stated in the cumulative sound level section and could be deleted.</p>
<p>PDF page 29 4.6(1)(s) completed noise complaint investigation forms (in Appendix 4) identifying the representative conditions for monitoring, or provide explanation if the form is not available</p>	<p>Deletion.</p> <p><i>Commission comment:</i> Because 4.6(1)(s) repeats material from 5.2(3), the Commission proposes to delete 4.6(1)(s).</p>
<p>PDF page 30 4.6.1(3)(a) The monitoring location must be at the dwelling(s) specified in the condition.</p>	<p>Deletion.</p> <p><i>Commission comment:</i> New subsection 4.6.1(1) addresses appropriate locations for a comprehensive sound level survey.</p>

Topic 2.2 Rephrasing	
Original text	Proposed change and Commission comment
<p>PDF page 1</p> <p>The first paragraph</p> <p>The Alberta Utilities Commission has approved amendments to this rule on March 1, 2021, which are effective on March 5, 2021.</p>	<p>Edits:</p> <p>The first paragraph</p> <p>The Alberta Utilities Commission has approved amendments to this rule on <u>month day, year</u>, which are effective on <u>month day, year</u>. The revised rule applies to facility applications and noise complaints filed after the effective date, and does not apply retroactively.</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to include a clear statement that the revised rule applies to applications filed after a certain date to avoid confusion around which version of the rule applies.</p>
<p>PDF page 5</p> <p>1.1(5)</p> <p>(5) “licensee” means the holder of a licence or approval for a facility in accordance with the records of the Alberta Utilities Commission</p>	<p>Edits:</p> <p>1.1(5)</p> <p>(5) “licensee” means (i) the holder of a licence or approval issued by the AUC for a facility or (ii) the owner or operator of a facility that is exempt from the requirement to file an application under AUC Rule 007: <i>Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines</i> but is required to comply with one or more Rule 012 requirements.</p> <p><i>Commission comment:</i></p> <p>The rule uses “licensee” to refer to the party responsible for assessing and/or measuring noise from a facility. The Commission notes a facility that does not require a Rule 007 application (i.e., a facility that is exempt from Rule 007), does not hold a licence or an approval from the Commission.</p>

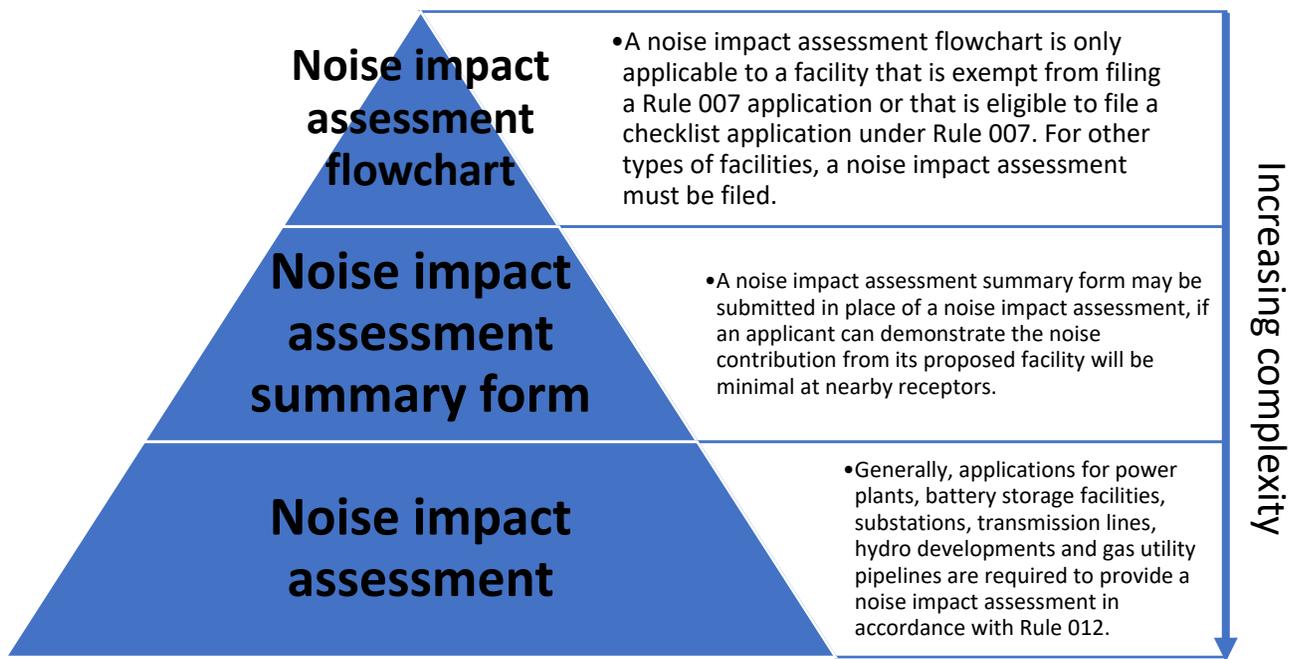
	<p>The current definition of “licensee” does not cover facilities that do not require an AUC application or approval. The Commission proposes to define “licensee” as the responsible duty holder, which is consistent with the definition of “licensee” in AER Directive 038.</p>
<p>PDF page 21 3.2(9) (9) Predicted sound level and compliance determination: (a) Identify what the predicted cumulative sound level will be at the most affected dwelling(s). If there are differences between daytime and nighttime operations, both levels must be calculated. Indicate whether the facility is in compliance with permissible sound level requirements.</p>	<p>Edits: 3.2(9) (9) Predicted sound level and compliance determination: (a) Calculate baseline sound levels and cumulative sound levels at the most affected noise receptor(s). If there are differences between daytime and nighttime operations, both levels must be calculated. (b) Compare baseline sound levels to permissible sound levels. Compare cumulative sound levels to permissible sound levels to demonstrate compliance for the proposed facility. New item under 3.2(9): (c) If a noise impact assessment is conducted as part of the amendment process for an approved project, describe the incremental changes in sound levels resulting from the project amendment. In particular, (i) Provide a comparison of the predicted noise contribution from the amended project and the predicted noise contribution from the approved project. (ii) Provide a comparison of predicted cumulative sound levels from the amended project and predicted cumulative sound levels from the approved project. <i>Commission comment:</i> The Commission proposes to update this subsection to require that both baseline sound levels and cumulative sound levels be presented and compared with permissible sound levels. In cases where a noise impact assessment is submitted as part of an application to amend an approved project, the Commission also proposes a new item under 3.2(9) so that that the NIA in an amendment application presents incremental changes in sound levels resulting from the proposed amendment.</p>

<p>PDF page 22</p> <p>3.2(15)</p> <p>(15) Acoustical practitioner's information:</p> <p>Provide the name(s) and describe the role (s), directly-related training and experience of the person(s) who prepared the noise impact assessment.</p>	<p>Edits:</p> <p>3.2(15)</p> <p>(15) Acoustical practitioner's information:</p> <p>Provide the name(s) and describe the qualifications of the individual(s) that performed the noise impact assessment or the noise surveys.</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to use consistent wording with requirements for environmental/glare/shadow flicker assessments in Rule 007.</p>
<p>PDF page 36</p> <p>5.1(4)</p> <p>(4) When the facility meets the requirements in this rule, the Commission investigation is complete.</p>	<p>Edits:</p> <p>5.1(4)</p> <p>(4) If the Commission determines that the facility is compliant with this rule at the complainant noise receptor(s), the Commission investigation related to the noise complaint is complete.</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to emphasize compliance when determining if a noise complaint investigation is complete.</p>
<p>PDF page 73</p> <p>Appendix 8 Sound definitions table</p> <p>Cumulative sound level predicted (includes baseline)</p> <p>...</p> <p>Baseline sound level predicted and/or measured (includes comprehensive)</p> <p>...</p>	<p>Edits:</p> <p>Cumulative sound level (includes baseline)</p> <p>...</p> <p>Baseline sound level (includes comprehensive)</p> <p>...</p> <p>Comprehensive sound level</p>

<p>Comprehensive sound level measured (includes ambient) ...</p> <p>Ambient Sound Level measured (Energy-related noise is isolated out of measured noise)</p>	<p>(includes ambient) ... Ambient sound level (Energy-related noise is excluded)</p> <p><i>Commission comment:</i> This table aims to clarify which sound sources/facilities should be included when determining ambient sound level, comprehensive sound level, baseline sound level and cumulative sound level. The Commission proposes the table does not specify “predicted” or “measured” for the sound levels listed above, because these sound levels may be assumed, measured and/or predicted depending on circumstances, which are detailed in the main body. To prevent inconsistency with the main body, the Commission proposes to not refer to specific approaches to determine these sound levels (e.g., predicted or measured).</p>
<p>Topic 2.3 Format</p>	
<p>Original text</p>	<p>Proposed change and Commission comment</p>
<p>PDF page 7 Table 1. Basic sound level and ambient sound level</p>	<p>The Commission proposes to reformat Table 1 for better readability, and adding the definition of “daytime adjustment” in the table. See Attachment C to this document or the blackline version of Rule 012 for the updated Table 1.</p> <p><i>Commission comment:</i> The daytime adjustment is required to establish daytime ambient sound level.</p>

<p>PDF page 11</p> <p>Table 4. Class C adjustments</p> <p>Row “C2”, “Reason for adjustment”</p>	<p>Maintain the first paragraph for C2.</p> <p>Move the other paragraphs out of the table.</p> <p><i>Commission comment:</i></p> <p>Only the first paragraph describes the “reason for adjustment.” The other paragraphs describe procedures for establishing the C2 adjustment value and should be moved out of the table. The Commission proposes to move this paragraph out of Table 4 and add it to the bulleted list underneath Table 4.</p>
<p>N/A</p>	<p>Link definitions between the Glossary and the main body.</p> <p><i>Commission comment:</i></p> <p>The Commission proposes to link terms used in the main body with definitions provided in the glossary (i.e., in the main body, add hyperlinks for terms defined in the glossary).</p>

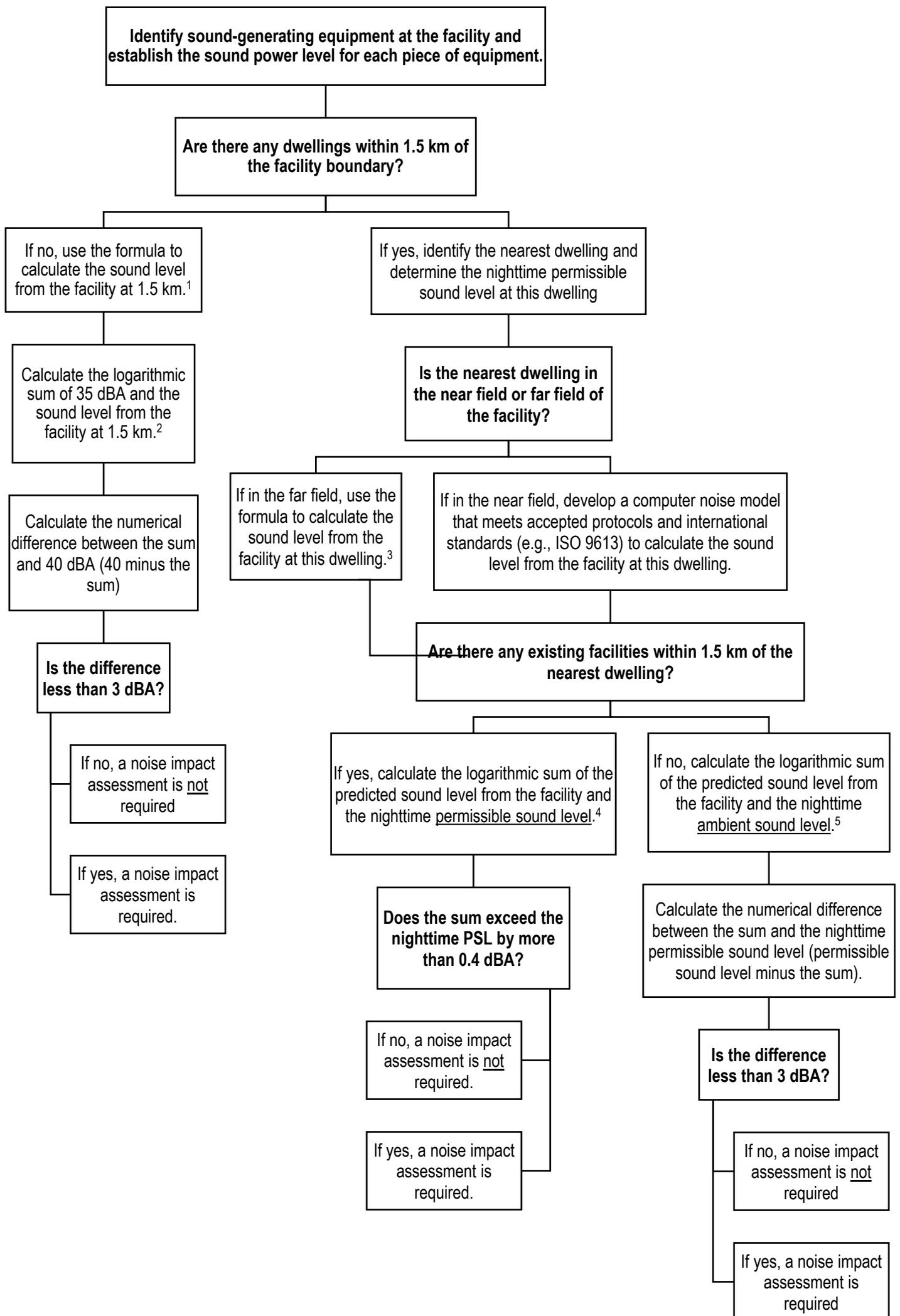
Attachment A – Graphic in Section 3 “Noise impact assessments”



Attachment B – New Appendix of Rule 012

Appendix X – Noise impact assessment flowchart

The noise impact assessment flowchart is a tool that provides objective criteria for determining if a noise impact assessment is required for a facility before it commences operations. A noise impact assessment flowchart is only applicable to a facility that is exempt from filing a Rule 007 application or that is eligible to file to a checklist application under Rule 007. For other types of facilities, a noise impact assessment must be filed.



Notes:

1, 3:

Formula to calculate sound pressure level (L_p) based on sound power level (L_w):

$$L_p = L_w - 20 \log_{10}(r) - 8$$

r: distance between sound source and receptor

2, 4, 5:

Formula to add two sound pressure levels (L_{p1}, L_{p2}):

$$L_{p,sum} = 10 \log_{10}\left(10^{\frac{L_{p1}}{10}} + 10^{\frac{L_{p2}}{10}}\right)$$

Attachment C – Updated Table 1

Table 1. Basic sound level and ambient sound level

Basic sound levels (dBA L_{eq})			
Proximity to transportation	Dwelling density per quarter section of land		
	1 to 8 dwellings	9 to 160 dwellings	>160 dwellings
Category 1	40	43	46
Category 2	45	48	51
Category 3	50	53	56
Daytime adjustment			
Daytime adjustment means an adjustment of 10 dBA above the nighttime basic sound level with daytime being the period between 7 a.m. and 10 p.m.			
Ambient sound level (dBA L_{eq})			
Nighttime (10 p.m. to 7 a.m.)		Daytime (7 a.m. to 10 p.m.)	
The assumed nighttime ambient sound level is five dBA less than the applicable basic sound level.		The assumed daytime ambient sound level is five dBA less than the applicable basic sound level plus the daytime adjustment	

Notes:

- (1) Category 1—dwelling(s) distance is more than or equal to 500 metres (m) from heavily travelled roads or rail lines and not subject to frequent aircraft flyovers.
- (2) Category 2—dwelling(s) distance is more than or equal to 30 m, but less than 500 m from heavily travelled roads or rail lines and not subject to frequent aircraft flyovers.
- (3) Category 3—dwelling(s) distance is less than 30 m from heavily travelled roads, or rail lines or subject to frequent aircraft flyovers.
- (4) Documentation regarding whether a road is heavily travelled must be compiled and submitted with the noise impact assessment to support the Table 1 category used.
- (5) Density per quarter section — refers to a quarter section with the affected dwelling at the centre (a 451 m radius). For quarter sections with various land uses or with mixed densities, the density chosen must be factored for the area under consideration on a prorated basis.