



## Lethbridge Biogas General Partner Inc.

Lethbridge Biogas Power Plant  
Application for Class A2 Adjustment

August 23, 2019

**Alberta Utilities Commission**

Decision 24680-D01-2019

Lethbridge Biogas General Partner Inc.

Lethbridge Biogas Power Plant

Application for Class A2 Adjustment

Proceeding 24680

Application 24680-A001

August 23, 2019

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## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission considers whether to approve an application from Lethbridge Biogas General Partner Inc. (Lethbridge Biogas) for an amendment to Approval 23569-D02-2018, and specifically, a Class A2 ambient adjustment (A2 adjustment) to the nighttime permissible sound level for the Lethbridge Biogas Power Plant (LBPP) at Receptor R1. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission approves the requested A2 adjustment during the nighttime periods for Receptor R1 and grants the requested amendment of Approval 23569-D02-2018. With the A2 adjustment applied to the nighttime permissible sound level, the LBPP is in compliance with the permissible sound level requirements of Rule 012: *Noise Control*.

## **2 Introduction and background**

2. Lethbridge Biogas, pursuant to Approval 23569-D02-2018,<sup>1</sup> is the operator of the LBPP, a 2.85-megawatt power plant located in Section 3, Township 9, Range 21, west of the Fourth Meridian, east of Lethbridge, Alberta.

3. The history of the power plant and of earlier approvals granted with respect to it was summarized by the Commission in Decision 23569-D01-2018. In that decision, among other things, the Commission found that the comprehensive sound level survey relied on by Lethbridge Biogas (the 2018 CSL survey) had failed to demonstrate that the facility complied with the nighttime permissible sound level. Accordingly, the Commission amended the then existing approval (Approval U2011-180), to reflect that its approval of the power plant was subject to the condition that Lethbridge Biogas demonstrate compliance with Rule 012 at the nearest or most impacted dwelling (Receptor R1) by no later than June 30, 2019.

4. Under Condition 3 of Approval 23569-D02-2018, compliance options provided by the Commission included: "...conducting a new, comprehensive noise survey; applying for an A2 adjustment; or implementing sound mitigation measures (such as construction of a berm)..." Lethbridge Biogas considered all three options but concluded that further mitigation or re-monitoring would not produce different results because its 2018 CSL survey concluded that ambient sound levels at Receptor R1 were dominated by traffic noise. Accordingly, Lethbridge Biogas filed an application with the Commission requesting a Class A2 adjustment of the nighttime permissible sound level in accordance with Section 11 of the *Hydro and Electric Energy Act*. In its application, Lethbridge Biogas requested the Commission to approve an adjusted nighttime permissible sound level of 49 dBA for Receptor R1 and to

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<sup>1</sup> Power Plant Approval 23569-D02-2018, Proceeding 23569, Application 23569-A001, December 7, 2018.

amend power plant approval 23569-D02-2018. The application was registered on June 26, 2019, as Application 24680-A001. In support of the application, Lethbridge Biogas filed an ambient sound level survey (ASL survey) conducted by dBA Noise Consultants Ltd. (dNCL) in June 2019.

5. Also on June 26, 2019, Lethbridge Biogas hand-delivered an information package to the residents of Receptor R1. The information package included:

- a letter explaining the Class A2 adjustment process
- AUC Approval U2011-180<sup>2</sup>
- AUC Decision 23569-D01-2018
- the 2018 CSL survey report
- the dNCL 2019 ASL survey report

6. By way of a letter dated July 3, 2019, the residents of Receptor R1 acknowledged receipt of the hand-delivered information package and confirmed that they had no concerns with the application for the A2 adjustment.<sup>3</sup>

### **3 Discussion**

7. dNCL conducted an ASL survey for the period of June 5 to 6, and June 6 to 7, 2019, to determine sound levels prior to the start-up of the LBPP. The ASL survey used the same sound level meters, weather station and associated equipment as the 2018 CSL survey to ensure consistency. dNCL obtained more than three hours of valid data at Receptor R1 during both nighttime measurement periods.

8. The ASL survey included the field calibration records of the sound level meters. The calibration dates for the sound level meters and calibrator were provided.

9. The data analysis phase included an assessment of whether recorded sound levels were representative, and the removal of data (isolation analysis) with abnormal noise events, such as noise that would unduly affect results (e.g., weather).

10. The results of the ASL survey were summarized as the average sound level  $L_{eq}$  for the nighttime period for the valid samples only. The results of the ASL survey for the LBPP and the proposed A2 adjustment were provided in detail in the ASL survey and the result for Receptor R1 has been summarized in Table 1 below.

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<sup>2</sup> Power Plant Approval U2011-180, Proceeding 1107, Application 1607075, April 28, 2011.

<sup>3</sup> Exhibit 24680-X0009, Letter DeJager to LB Jul-3-19.

Table 1. Nighttime measured ambient sound level compared to Rule 012 assumed ambient sound level and associated A2 adjustment

Receptor	Measured ambient sound level (MASL, dBA L <sub>eq</sub> )	Assumed ambient sound level (AASL, dBA L <sub>eq</sub> )	Difference between MASL and AASL	Rule 012 Nighttime permissible sound level (dBA L <sub>eq</sub> )	A2 adjusted permissible sound level (dBA L <sub>eq</sub> )*
R1	44	35	9	40	49

Note: \* as per calculation in Rule 012, this includes the associated A2 adjustment

11. In response to information requests, Lethbridge Biogas provided clarification regarding the isolation analysis conducted on the data during the ASL survey<sup>4</sup> as well as justification for the variance in height between the weather station and the sound level meter microphones.<sup>5</sup>

12. Lethbridge Biogas submitted that the ASL survey demonstrated that the assumed ambient sound levels included in Table 1 of Rule 012 are not representative of the current sound levels for Receptor R1. It further submitted that while only the unadjusted nighttime permissible sound level is being exceeded as a result of the ambient noise sources, an A2 adjustment for the nighttime hours is requested to ensure that it is able to demonstrate compliance with the permissible sound level if necessary to do so in the future. Specifically, at Receptor R1, the applied-for A2 adjustment based on the ASL survey is +9 dBA during the nighttime. The respective permissible sound level being applied for is 49 dBA L<sub>eq</sub> nighttime.

#### 4 Findings

13. Under Rule 012, an applicant for a Class A2 adjustment must, among other things, conduct an ASL survey, consult on the Class A2 adjustment and provide justification for the adjustment.

14. The Commission is satisfied that Lethbridge Biogas adequately consulted on the proposed A2 adjustment as required by Rule 012, as reflected by the confirmation from the residents of Receptor R1 that they had no concerns with the application for the A2 adjustment.

15. The Commission likewise finds that dNCL completed the ASL survey at Receptor R1 in accordance with Rule 012 and that the information provided in that survey meets the requirements of this rule. More particularly, the Commission finds that:

- (i) Based on dNCL’s description, monitoring site photographs and the placement of the microphones, the monitoring locations satisfy the requirements of Section 4.1(2) of Rule 012.
- (ii) The sound level meter and calibrator used in the noise study meet the requirements of Rule 012 and the sound level meter was field-calibrated both before and after the measurement period, in accordance with the rule.

<sup>4</sup> Exhibit 24680-X0013, Lethbridge Biogas IR Responses - Round 1, PDF page 3.

<sup>5</sup> Exhibit 24680-X0013, Lethbridge Biogas IR Responses - Round 1, PDF page 4.

16. Based on the results of the ASL survey, the Commission considers the application for an A2 adjustment to the nighttime permissible sound level at Receptor R1 to be reasonable. The ASL survey demonstrates that the noise contribution from the LBPP is marginal when compared to the measured ambient noise impact and that reducing the noise contribution from the power plant may not result in a noticeable change in noise levels. Further, the measured ambient sound levels (established by the ASL survey) demonstrate that the assumed ambient sound level for the nighttime period is not representative of the actual sound environment at Receptor R1. Rather, the ASL survey demonstrated that the overall sound level at Receptor R1 is dominated by ambient noise from traffic and trains. The Commission therefore finds that Lethbridge Biogas has provided sufficient information to warrant an A2 adjustment for Receptor R1 during the nighttime period.

17. The Commission also finds that Lethbridge Biogas' determination of the A2 adjustment for the nighttime period at Receptor R1 is consistent with the methodology described in Section 2.1(10)(d) of Rule 012.

18. Based on the above, the Commission approves the requested A2 adjustment to the nighttime permissible sound level at Receptor R1. In accordance with the methodology outlined in Rule 012, the nighttime A2 adjustment granted is +9 dBA and the resultant permissible sound level will be established at 49 dBA  $L_{eq}$  nighttime.

19. With the A2 adjustment applied to the nighttime permissible sound level, the Commission finds that LBPP has demonstrated compliance with the permissible sound level during the nighttime period at Receptor R1.

## **5 Decision**

20. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission approves an A2 adjustment during the nighttime periods for Receptor R1. With the A2 adjustment applied to the nighttime permissible sound level, the LBPP is in compliance with the permissible sound level requirements of Rule 012.

21. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants Lethbridge Biogas General Partnership an updated approval as set out in Appendix 1 – Power Plant Approval 24680-D02-2019 – August 23, 2019 (Appendix 1 will be distributed separately).

Dated on August 23, 2019.

### **Alberta Utilities Commission**

*(original signed by)*

Carolyn Hutniak  
Commission Member