



Tidewater Midstream and Infrastructure Ltd.

Pipestone Power Plant Expansion

July 25, 2022

Alberta Utilities Commission

Decision 27418-D01-2022

Tidewater Midstream and Infrastructure Ltd.

Pipestone Power Plant Expansion

Proceeding 27418

Application 27418-A001

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Eau Claire Tower

1400, 600 Third Avenue S.W.

Calgary, Alberta T2P 0G5

Telephone: 310-4AUC (310-4282) in Alberta

1-833-511-4AUC (1-833-511-4282) outside Alberta

Email: info@auc.ab.ca

Website: www.auc.ab.ca

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1 Decision summary

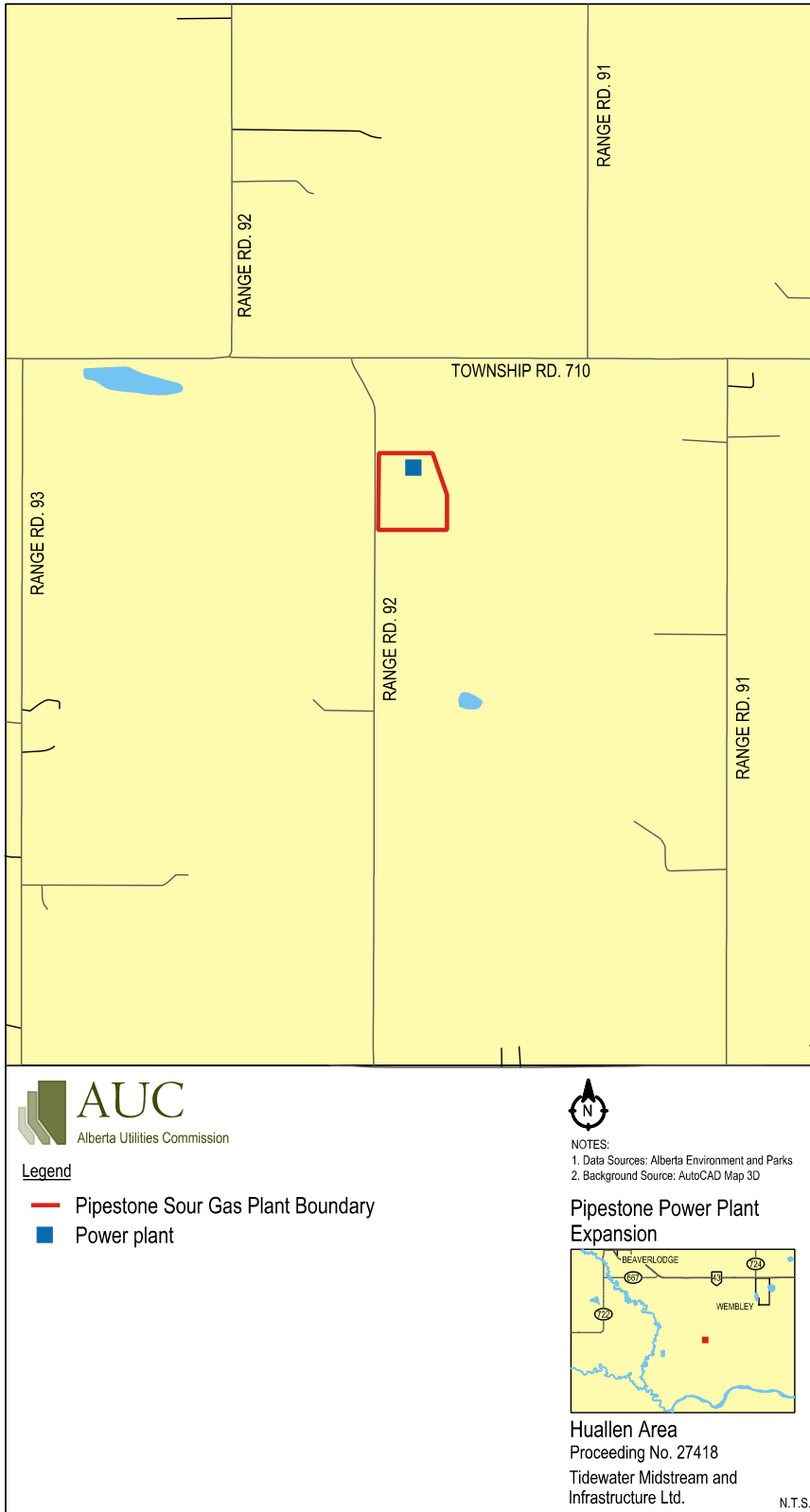
1. In this decision, the Alberta Utilities Commission approves an application from Tidewater Midstream and Infrastructure Ltd. (Tidewater) for the expansion of the Pipestone Power Plant (the project). Tidewater applied for the addition of two 17.7-megawatt (MW) Solar Titan 130 natural gas-fired generators.

2 Background

2. Tidewater, pursuant to Decision 23533-D01-2018,¹ is the owner of the Pipestone Power Plant, and has exemption from Section 11 of the *Hydro and Electric Energy Act* to operate the power plant. The power plant is located in the County of Grande Prairie No. 1, within the footprint of the Pipestone Sour Gas Plant (Pipestone Gas Plant). The power plant is not connected to the transmission or distribution system and provides power solely to the Pipestone Gas Plant. The power plant is located in Legal Subdivision 12 of Section 35, Township 70, Range 9, west of the Sixth Meridian, and as shown on the map in Figure 1.

¹ Decision 23533-D01-2018, Tidewater Midstream and Infrastructure Ltd., Pipestone Power Plant Exemption, Proceeding 23533, Application 23533-A001, August 17, 2018.

Figure 1. Pipestone Power Plant location



3 Application

3. On June 1, 2022, Tidewater filed an application with the Commission for approval of the expansion of the Pipestone Power Plant by adding two Solar Titan 130 natural gas-fired generators, each rated at 17.7 MW, with a combined capability increase of 35.4 MW.

Tidewater stated that the increased generation is required to supply the expansion of the Pipestone Gas Plant. After the proposed power plant expansion, the total capability of the Pipestone Power Plant would be 68 MW.

4. The power plant would continue to supply only the Pipestone Power Plant, be electrically isolated from the Alberta Interconnected Electric System, and would be located within the footprint of the existing Pipestone Gas Plant on land already cleared for industrial purposes.

5. Tidewater's application included:

- A participant involvement program summary, which detailed consultation with stakeholders within 800 metres of the project and notification to stakeholders within 2,000 metres of the project.²
- A noise impact assessment (NIA) from Patching Associates Acoustical Engineering Ltd., which predicted the project with mitigation will comply with Rule 012: *Noise Control*.³
- An environmental evaluation and environmental protection plan from North Shore Environmental Consultants, which concluded that there are no anticipated adverse environmental effects, after proposed mitigations are applied.⁴
- An air quality assessment from Horizon Compliance Group Inc., which concluded that predicted cumulative air quality effects to comply with ambient air quality and all ground-level concentrations are predicted to be within the *Alberta Ambient Air Quality Objectives*.⁵
- A *Historical Resources Act* approval with no conditions, dated February 14, 2022.⁶

6. Tidewater anticipated construction of the power plant expansion to begin in October 2022 with an in-service date of December 2023. It requested a construction completion date of March 31, 2024, to allow for contingencies.

7. The Commission issued a notice of application in accordance with Section 7 of Rule 001: *Rules of Practice*. No submissions were received in response to the notice.

² Exhibit 27418-X0009, TP28 - PIP Activity Summary.

³ Exhibit 27418-X0003, TP24 - Noise Impact Assessment.

⁴ Exhibits 27418-X0001, TP20 - Environmental Evaluation and 27418-X0002, TP22 - Environmental Protection Plan.

⁵ Exhibit 27418-X0006, TP19 - Air Quality Assessment.

⁶ Exhibit 27418-X0007, TP26 - *Historical Resources Act* Approval.

4 Findings

8. The Commission's authority to approve power plant applications arises under sections 11 and 19 of the *Hydro and Electric Energy Act*. Under Section 17 of the *Alberta Utilities Commission Act*, the Commission must assess whether the project is in the public interest, having regard to its social, economic and environmental effects. The public interest is met when applications comply with legislative and regulatory requirements and the project's benefits outweigh its negative effects. This includes requirements set out in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines* and Rule 012.

9. For the reasons outlined below, the Commission finds that approval of the power plant expansion is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

10. The Commission finds that the participant involvement program for the proposed power plant expansion meets the requirements of Rule 007. Tidewater notified stakeholders within the two-kilometre consultation radius and formally notified stakeholders within the consultation radius via in-person and phone conversations, email and physical mail notification. Tidewater submitted that nine parties initially expressed concerns with the proposed expansion of the power plant and sour gas plant. Concerns received by Tidewater included flooding and berm height, noise, odours, flaring, traffic, property value, and ground water contamination. Tidewater received confirmation of non-objection from the final concerned party on March 9, 2022, and submitted that there are no outstanding concerns with the expansion of the power plant and sour gas plant. Tidewater obtained a pre-consultation assessment from the Aboriginal Consultation Office which confirmed that no Aboriginal consultation is required. Based on the foregoing, the Commission is satisfied that the participant involvement program met the objectives of effective consultation.

11. The NIA submitted by Tidewater predicted that the project as proposed would not comply with Rule 012. The predicted cumulative sound levels at the most affected receptors R01 and R02 would exceed the nighttime permissible sound level (PSL) set out in Rule 012 by 0.3 and 1.3 A-weighted decibels (dBA) respectively. To reduce noise from the Pipestone site, the NIA recommended noise mitigation measures, including the installation of ventilation silencers, low noise fans, pipe lagging and skid skirting on the equipment at the project or the Pipestone Gas Plant. The NIA detailed the requisite mitigation acoustic specifications to achieve compliance with Rule 012. The NIA concluded that once the recommended mitigation measures are implemented, the cumulative sound levels are predicted to comply with daytime and nighttime PSL at all receptors.⁷

12. Tidewater committed to implement all the mitigation measures recommended in the NIA during construction and prior to operation, and plans to conduct a post-commissioning field study to assess the effectiveness of noise mitigation for the project. More specifically, Tidewater planned to conduct a field study to validate the noise model, the performance of the mitigation measures that would be implemented during construction, and to confirm whether any further noise mitigation is required.⁸

⁷ Exhibit 27418-X0003, TP24 - Noise Impact Assessment, PDF page 35.

⁸ Exhibit 27418-X0023, Tidewater Response to AUC IRs 2022JUN20-001 to 004, PDF page 5.

13. The Commission finds that the NIA and its noise model meet the requirements of Rule 012 with the implementation of mitigation measures recommended in the NIA and agreed to by Tidewater. Given that the project as proposed was predicted to be non-compliant with Rule 012 for nighttime levels, the Commission requires Tidewater to implement noise mitigation prior to project operation to ensure compliance with Rule 012. Therefore, the Commission imposes the following condition of approval:

- a. Before the project commences operations, Tidewater Midstream and Infrastructure Ltd. shall implement the noise mitigation measures recommended in the project's noise impact assessment or alternative mitigation measures that meet or exceed the acoustic specifications described in the noise impact assessment. On or before the date the project commences operations, Tidewater shall file a letter with the Commission detailing the mitigation measures it has implemented.

14. In addition, the Commission acknowledges Tidewater's plan to conduct a post-commissioning field study to verify the implemented mitigation measures and to confirm if additional mitigation is required. Accordingly, the Commission imposes the following condition of approval:

- b. After the project commences operations, Tidewater Midstream and Infrastructure Ltd. shall conduct near-field measurements to verify the effectiveness of the noise mitigation measures it has implemented and to determine if additional mitigation is required. Within three months after the project commences operations, Tidewater shall file a report with the Commission presenting results of the near-field measurements and confirming whether additional noise mitigation is required. If additional mitigation is required, in the report, Tidewater shall also describe the mitigation measures and provide a timeline for when Tidewater will implement these mitigation measures.

15. The Commission notes that after implementation of mitigation in the noise model, nighttime cumulative sound levels at receptors R01 and R02 are predicted to be 39.9 dBA and 39.8 dBA, which are close to the nighttime PSL of 40 dBA. In this case, the Commission orders a post-construction comprehensive sound level survey at these receptors to verify the project compliance with Rule 012. Accordingly, the Commission imposes the following condition of approval:

- c. Tidewater Midstream and Infrastructure Ltd. shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at receptors R01 and R02. The post-construction comprehensive sound level survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Tidewater shall file a report with the Commission summarizing results of the post-construction comprehensive sound level survey.

16. In response to an information request,⁹ Tidewater confirmed that the final project design is expected to be completed by November 2022. Tidewater stated that the NIA will be assessed once the final design is confirmed to determine if updates are required due to any changes to

⁹ Exhibit 27418-X0023, Tidewater Response to AUC IRs 2022JUN20-001 to 004, PDF page 6.

equipment selection or project layout. Accordingly, the Commission imposes the following condition of approval:

- d. Once Tidewater Midstream and Infrastructure Ltd. has finalized its project design, it must file a final project update with the Commission to confirm that the project has stayed within the final project update allowances for thermal power plants. The final project update must be filed at least 60 days prior to the start of construction.

17. The Commission finds that the power plant expansion will not result in a significant incremental effect on the environment and wildlife because the power plant expansion is located within the footprint of the existing Pipestone Gas Plant on land zoned for industrial purposes. An environmental evaluation and environmental protection plan was completed by North Shore Environmental Consultants, which concluded that no adverse effects to the environment are anticipated after proposed mitigations are applied. The primary environmental risks include groundwater contamination, surface water contamination, air emissions, and soil quality management for future reclamation. The Commission expects that Tidewater will manage these and other environmental risks by diligently adhering to applicable regulatory requirements; implementing the proposed mitigations; and through monitoring and mitigation requirements implemented as part of the *Environmental Protection and Enhancement Act* approval. Alberta Environment and Parks (AEP) was provided with an overview of the Pipestone Power Plant expansion and did not express concerns with the project.

18. The Commission finds that the Pipestone Power Plant expansion will be in compliance with the applicable Alberta air quality standards or guidelines, including the *Alberta Air Emission Standards for Electricity Generation*, the *Guidelines for the Reduction of Nitrogen Oxide Emissions from Natural Gas-Fuelled Stationary Combustion Turbines*,¹⁰ the *Multi-Sector Air Pollutants Regulations*, and *Alberta Ambient Air Quality Objectives*. Cumulative air quality effects were modelled and the power plant expansion is predicted to comply with ambient air quality objectives. An air monitoring and reporting program is already implemented at the site.

19. The Commission finds that Tidewater has appropriately addressed the emergency response needs for the project. The site-specific emergency response plan (ERP) includes specific considerations for the operation of the existing Pipestone Power Plant. The emergency response plan is updated and practiced annually, where all site changes and equipment additions are added into the ERP. The Pipestone Gas Plant conducts regularly scheduled emergency response plan exercises, which include an annual table-top review and a triennial full-scale mobilization exercise. Tidewater engages with potential area first responders to gauge estimated response times, abilities, and equipment. Tidewater also regularly reviews Incident Command System roles which includes participation from first responders and the Alberta Energy Regulator (AER).

20. The Commission finds that Tidewater has ensured sufficient funds are available at the project end-of-life to cover decommissioning and reclamation. The power plant is located within the Pipestone Gas Plant footprint, which is regulated by AER liability directives. Tidewater has an approved site-specific liability assessment filed with the AER covering the liability posed by the Pipestone Gas Plant. As of May 2022, Tidewater's liability management rating, as calculated

¹⁰ Environment and Climate Change Canada, <https://www.canada.ca/content/dam/eccc/documents/pdf/cepa/CEPA-Guidelines-CombustionTurbines-2-en.pdf>, November 2017.

by the AER, is 2.12 demonstrating that Tidewater's AER-calculated assets are 2.12 times more valuable than its AER-calculated liabilities. As outlined in the AER's Bulletin 2016-21,¹¹ a licensee with a liability management rating equal to or greater than 2.0 is considered to have the financial ability to address its obligations throughout the life cycle of development.

21. For the above reasons, the Commission considers the application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

5 Decision

22. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants Tidewater Midstream and Infrastructure Ltd. the approval set out in Appendix 1 – Power Plant Approval 27418-D02-2022 to alter and operate the Pipestone Power Plant (Appendix 1 will be distributed separately).

Dated on July 25, 2022.

Alberta Utilities Commission

(original signed by)

Matthew Oliver, CD
Commission Member

¹¹ AER Bulletin 2016-21: Revision and Clarification on Alberta Energy Regulator's Measures to Limit Environmental Impacts Pending Regulatory Changes to Address the Redwater Decision, July 8, 2016.

Appendix A – Summary of Commission conditions of approval

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the directions and conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following are conditions of Decision 27418-D01-2022 that require subsequent filings with the Commission and will be included as conditions of Power Plant Approval 27418-D02-2022:

- a. Before the project commences operations, Tidewater Midstream and Infrastructure Ltd. shall implement the noise mitigation measures recommended in the project's noise impact assessment or alternative mitigation measures that meet or exceed the acoustic specifications described in the noise impact assessment. On or before the date the project commences operations, Tidewater shall file a letter with the Commission detailing the mitigation measures it has implemented.
- b. After the project commences operations, Tidewater Midstream and Infrastructure Ltd. shall conduct near-field measurements to verify the effectiveness of the noise mitigation measures it has implemented and to determine if additional mitigation is required. Within three months after the project commences operations, Tidewater shall file a report with the Commission presenting results of the near-field measurements and confirming whether additional noise mitigation is required. If additional mitigation is required, in the report, Tidewater shall also describe the mitigation measures and provide a timeline for when Tidewater will implement these mitigation measures.
- c. Tidewater Midstream and Infrastructure Ltd. shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at receptors R01 and R02. The post-construction comprehensive sound level survey must be conducted under representative conditions and in accordance with Rule 012: *Noise Control*. Within one year after the project commences operations, Tidewater shall file a report with the Commission summarizing results of the post-construction comprehensive sound level survey.
- d. Once Tidewater Midstream and Infrastructure Ltd. has finalized its project design, it must file a final project update with the Commission to confirm that the project has stayed within the final project update allowances for thermal power plants. The final project update must be filed at least 60 days prior to the start of construction.