



ATCO Gas and Pipelines Ltd. (South)

Pembina Expansion Project

June 7, 2016

Alberta Utilities Commission

Decision 21299-D01-2016

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Pembina Expansion Project

Proceeding 21299

Applications 21299-A001 to 21299-A004

June 7, 2016

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Fifth Avenue Place, Fourth Floor, 425 First Street S.W.

Calgary, Alberta

T2P 3L8

Telephone: 403-592-8845

Fax: 403-592-4406

Website: www.auc.ab.ca

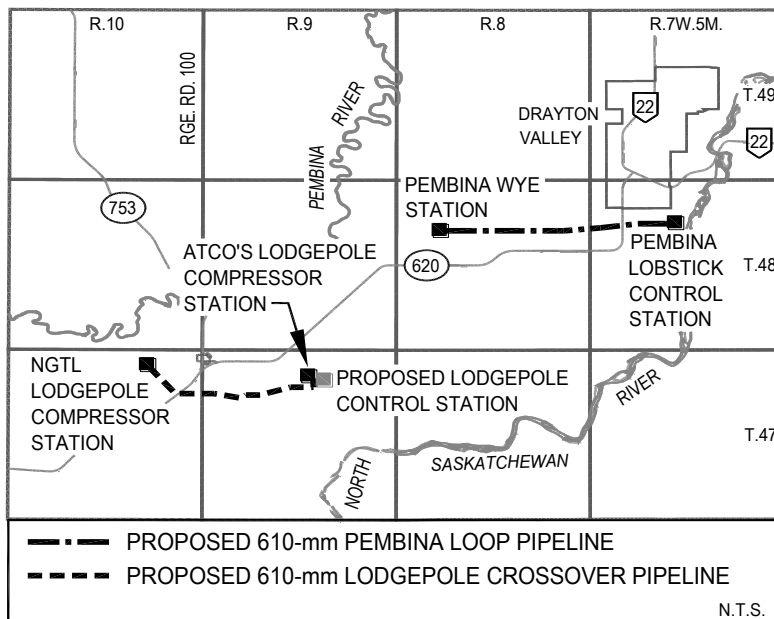
1 Decision summary

1. In this decision, the Alberta Utilities Commission must decide whether to approve applications by ATCO Gas and Pipelines Ltd. (South) (ATCO) to construct the Pembina Expansion Project, which includes the installation of the proposed Pembina Loop Pipeline and the proposed Lodgepole Crossover Pipeline to meet the future demand for natural gas in the greater Edmonton area. Having regard to the social and economic effects of the Pembina Expansion Project and its effects on the environment, and for the reasons outlined in this decision, the Commission approves the applications.

2 Introduction and background

2.1 Project description and need

2. On February 1, 2016, ATCO filed applications with the Commission to construct the Pembina Expansion Project pursuant to Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act*. The Pembina Expansion Project consists of the installation of the proposed Pembina Loop Pipeline, 10.8 kilometres of 610-millimetre outside diameter (OD) pipe, and the proposed Lodgepole Crossover Pipeline, 9.4 kilometres of 610-millimetre OD pipe, in Brazeau County, as shown in the map below.



3. The project includes pipeline splits, record amendments, removals, and installations on Licence 103, Licence 2876, Licence 3281 and Licence 5013 associated with the tie-in points of the proposed Pembina Loop Pipeline and the proposed Lodgepole Crossover Pipeline. ATCO applied to amend Licence 103, Licence 2876, Licence 3281 and Licence 5013 as described below:

Pertaining to Licence 103:

- splitting line 4 into lines 4 and 43
- splitting line 5 into lines 5 and 44
- splitting line 6 into lines 6 and 45
- removal of lines 6, 43 and 44
- length amendment of line 6 from 2.46 kilometres to the revised length of 4.13 kilometres
- 'From Location' LSD amendment of lines 4 and 5
- stress level amendment to lines 4 and 6
- addition of newly constructed pipeline (line 46 – 0.04 kilometres of 219.1-millimetre OD pipeline)
- addition of newly constructed pipeline (line 47 – 0.01 kilometres of 168.3-millimetre OD pipeline)
- addition of newly constructed pipeline (line 48 – 0.04 kilometres of 273.1-millimetre OD pipeline)
- addition of newly constructed pipeline (lines 49 through 63 – 10.83 kilometres of 610-millimetre OD pipeline)

Pertaining to Licence 2876:

- mapping amendment of lines 13 and 16

Pertaining to Licence 3281:

- length amendment of line 1 from 4.52 kilometres to the revised length of 4.38 kilometres
- length amendment of line 3 from 0.63 kilometres to the revised length of 0.77 kilometres
- 'To Location' LSD amendment of line 1
- 'From Location' LSD amendment of line 3
- stress level amendment of lines 1 and 3
- mapping amendment of lines 1 and 3

Pertaining to Licence 5013:

- splitting line 12 into lines 12 and 13
- removal of line 13
- mapping amendment of line 2
- 'To Location' LSD amendment of line 11
- 'From Location' LSD amendment of line 12
- addition of newly constructed pipeline (line 14 – 0.01 kilometres of 508-millimetre OD pipeline)
- addition of newly constructed pipeline (lines 15 through 36 – 9.47 kilometres of 610-millimetre OD pipeline)

4. The proposed Pembina Loop Pipeline would connect to the existing Pembina Transmission Pipeline through new above-ground valve assemblies located at the Pembina Wye valve site and Pembina Lobstick Control Station. It would parallel the existing Pembina Transmission Pipeline for approximately 9.67 kilometres. The Pembina Wye valve site is located in the southeast quarter of Section 29, Township 48, Range 8, west of the Fifth Meridian and the Pembina Lobstick Control Station is located in the northwest quarter of Section 28, Township 48, Range 7, west of the Fifth Meridian. Additional connections are located at the Pembina 4 Tie-In in the southeast quarter of Section 28, Township 48, Range 8, west of the Fifth Meridian and at the Violet Grove Control Station Tie-In in the northwest quarter of Section 26, Township 48, Range 8, west of the Fifth Meridian.

5. The proposed Lodgepole Crossover Pipeline would be installed from the discharge of NOVA Gas Transmission Ltd.'s (NGTL) Lodgepole Compressor Station and would connect to the Lodgepole Compressor Tie-In. The proposed Lodgepole Crossover Pipeline would parallel existing linear disturbances such as existing pipelines for approximately 8.5 kilometres. The NGTL compressor station is located in the northwest quarter of Section 35, Township 47, Range 10, west of the Fifth Meridian and the Lodgepole Compressor Tie-In is located in the southwest quarter of Section 34, Township 47, Range 9, west of the Fifth Meridian. To support the Lodgepole Crossover Pipeline, ATCO proposed to install the Lodgepole Control Station adjacent to the Lodgepole Compressor Station. NGTL proposed to install 40 to 60 metres of 610-millimetre pipeline from the compressor discharge piping to ATCO's proposed valve assembly and will also apply to the National Energy Board for approval to construct this segment of pipeline.

6. The purpose of the Pembina Expansion Project is to increase the capacity of ATCO's existing Pembina Pipeline System, which carries sweet natural gas into the greater Edmonton area. In consultation with ATCO, NGTL has forecast that the North Integrated System will experience a supply shortfall by the winter of 2016/2017, primarily due to a combination of temperature-sensitive demand growth, industrial demand growth and a decline in receipt supply. The Pembina Expansion Project has been selected by ATCO and NGTL as the optimal solution for provision of the required incremental capacity.¹ The expected in-service date is November of 2016 and the total cost is estimated to be \$66,200,000.²

7. ATCO and NGTL have completed supply and demand evaluations to ensure that the capacity of the ATCO pipeline system in the Edmonton area is adequate. The assessment was completed on the basis that the 18.3 kilometre 508-millimetre Inland Loop Pipeline approved by the Commission in Decision 21258-D01-2016 would be in service in 2016. The 2016-17 winter system capability after completion of the Inland Loop was determined to be 56,316 $10^3 \text{ m}^3/\text{day}$ which is less than the forecast demand of 56,815 $10^3 \text{ m}^3/\text{day}$. The forecast shortfall gave rise to the Pembina Expansion Project.

8. Forecast declines in receipt production from 2015/2016 to 2016/2017 are a contributing factor that would result in lower overall system capacity without further upgrading.

9. The individual contributions of the Pembina Loop and the Lodgepole Crossover pipelines would provide system capability of 56,665 $10^3 \text{ m}^3/\text{d}$ and 56,612 $10^3 \text{ m}^3/\text{d}$ respectively in 2016/2017. Because the 2016/2017 contract demand is 56,815 $10^3 \text{ m}^3/\text{d}$, neither of the individual

¹ Exhibit 21299-X0017, Pembina Expansion Project – Business Case, page 1 of 8.

² Exhibit 21299-X0017, Pembina Expansion Project – Business Case, page 1 of 8.

components of the Pembina Expansion Project would provide the system with sufficient capability. However, the combined capacity of both the Pembina Loop and the Lodgepole Crossover would provide the system with a capability of 56,960 10³m³/d in 2016/2017 and would therefore provide the system with sufficient capability to meet the 2016/2017 contract demand. Further system capability would be obtained when these facilities are coupled with NGTL's facility addition on the Western Alberta Mainline in 2017/2018, bringing the system capability to 59,481 10³m³/d, exceeding the 2017/2018 contract demand of 59,074 10³m³/d. The NGTL facility addition consists of a new compressor unit at NGTL's existing Lodgepole Compressor site. This is reflected in the 20-year supply/demand forecast filed in this proceeding.

2.2 Project alternatives

10. ATCO considered the implication of not proposing the Pembina Expansion Project. However if this approach is selected, service commitments for the 2016/2017 winter season will not be met. Consequently, ATCO considered the three capital alternatives summarized in Table 1.

11. The first alternative consists of using 508-millimetre pipe for the Pembina Expansion Project, while the second alternative utilizes 610-millimetre pipe for that project.

12. The third alternative involves extending the Inland Loop Pipeline³ for approximately nine kilometres, in conjunction with the 610-millimetre Pembina Expansion Project. The Inland Loop Pipeline is an 18.3-kilometre long pipeline approved by the Commission in Decision 21258-D01-2016.⁴

13. ATCO completed an economic comparison between the alternatives and applied for Alternative 2 because it has the lowest forecast cumulative present value cost of service.⁵

Table 1. Cost comparison of alternatives

Alternative	Description	First year with capital additions	First year capital (\$MM)	Long-term capital (\$MM)	CPVCOS (\$MM)
1	508-mm Pembina Expansion + 18 km Inland Looping	2016	57 (Pembina) 41.6 (Inland)	426.58	309.59
2*	610-mm Pembina Expansion + 18 km Inland Looping	2016	65.9 (Pembina) 41.6 (Inland)	388.20	306.41
3	610-mm Pembina Expansion + 27 km Inland Looping	2016	65.9 (Pembina) 60 (Inland)	406.60	324.54

Notes: Capital costs and cumulative present value cost of service (CPVCOS) values were updated by ATCO from the numbers initially provided by NGTL and included in the Pembina Expansion business case (Exhibit 21299-X0017).

*The selected option.

³ Need approved in Decision 3577-D01-2016

⁴ Decision 21258-D01-2016: Inland Loop Transmission Pipeline, Proceeding 21258, Application 21258-A001, April 6, 2016.

⁵ Exhibit 21299-X0078, Pembina Expansion Project – responses to round 1 information requests, ATCO-AUC-2016MAR04-002 (e), pages 7 to 8 of 23.

4 Commission process

14. A notice of application was issued by the Commission on February 17, 2016, indicating a deadline of March 10, 2016, for filing submissions to express objections to, concerns about, or support for the applications. The Commission extended the deadline for submissions until April 7, 2016 for parties who did not receive the original notice. No submissions were received by the deadlines set by the Commission.

15. The Commission issued a first round of information requests to ATCO on March 4, 2016. ATCO filed its responses on March 18, 2016.

16. The Commission issued a second round of information requests to ATCO on April 14, 2016. ATCO filed its responses on April 28, 2016.

5 Environmental assessment

17. The Pembina Loop Pipeline and related facilities are proposed to be located on private land, within the White Area of Alberta and therefore require a conservation and reclamation (C&R) approval from the Alberta Energy Regulator (AER). The White Area consists of lands in the central, southern, and Peace River areas of the province that are settled and generally suitable for agriculture. In the White Area, public land is part of the agricultural landscape and is under disposition or is otherwise committed. ATCO retained CH2M HILL Energy Canada, Ltd. to complete a C&R report⁶ in support of its application for C&R approval for the Pembina Loop Pipeline. The C&R report was filed on the record of this proceeding.

18. The C&R report provided detailed information on existing environmental and land-use conditions of the proposed site, and the anticipated environmental impacts and mitigation plans. It was submitted to the AER in August 2015 and ATCO received C&R approval for the Pembina Loop Pipeline from the AER on March 21, 2016.⁷

19. ATCO stated that it would comply with the recommendations and mitigation measures set out in the C&R report and with the terms and conditions of the C&R approval issued by the AER.

20. CH2M HILL Energy Canada Ltd. prepared a pre-construction site assessment and environmental protection plan⁸ for the proposed Lodgepole Crossover Pipeline. The proposed Lodgepole Crossover Pipeline and related facilities are located entirely within the Green Area of Alberta. The Green Area is provincially-owned public land that is administered under the *Forest Reserves Act* or the *Public Lands Act*, and comprises most of northern Alberta as well as the mountain and foothills areas along the province's western boundary.⁹ Because the proposed Lodgepole Crossover Pipeline is located entirely within the Green Area, C&R approval is not required.¹⁰ However, the environmental protection plan states that an environmental inspector

⁶ Exhibit 21299-X0032, Pembina Loop Pipeline - C&R Report.

⁷ Exhibit 21299-X0100, Pembina Expansion Project C&R Approval.

⁸ Exhibit 21299-X0068, Lodgepole Crossover Pipeline – Environmental Protection Plan.

⁹ <http://aep.alberta.ca/forms-maps-services/directives/documents/PublicLands-Sep-1997.pdf>

¹⁰ Conservation and Reclamation Letter, C&R/IL/02-3.

<https://extranet.gov.ab.ca/env/infocentre/info/posting.asp?assetid=6837&categoryid=4>.

will be accountable for ensuring environmental compliance during the construction of the Pembina Expansion Project.

21. ATCO indicated it would comply with the code of practice in accordance with the *Water Act* for all watercourse, wetland and drainage crossings.

22. Alberta Culture and Tourism granted *Historical Resources Act* clearance for the proposed Lodgepole Crossover Pipeline and the proposed Pembina Loop Pipeline on June 8, 2015, and June 12, 2015, respectively. A historical resources impact assessment was not required for the Pembina Expansion Project.

23. ATCO engaged Acoustical Consultants Inc. to complete a noise impact assessment for the proposed Lodgepole Control Station.¹¹ The assessment showed that noise mitigation would not be required at the site because the noise level was assessed to be in compliance with Rule 012: *Noise Control*.

24. Construction of the proposed Pembina Loop Pipeline and the proposed Lodgepole Crossover Pipeline and related above-ground valve assemblies is scheduled to start in July 2016, and be completed by the end of October 2016. Final cleanup and reclamation activities would be completed following a post-construction reclamation assessment in the late summer of 2017.

6 Consultation

25. In its application, ATCO submitted that consultation with landowners and occupants for the Pembina Expansion Project has been completed in accordance with Rule 020: *Rules Respecting Gas Utility Pipelines*. Consultation for the Pembina Expansion Project was initiated in March of 2015 and included acquisition of consent to survey, personal consultation, confirmation of non-objection with directly-affected landowners and delivery of project notification packages to all residents and landowners within 200 metres of the Pembina Expansion Project. The Pembina Expansion Project was advertised in the Drayton Valley Western Review newspaper on November 17, 2015.

26. ATCO entered into agreements with landowners regarding access, construction work spaces and to acquire the Pembina Expansion Project right-of-way in January of 2016. All disposition holders have been notified and, when required, their consent has been obtained. Applications for surface dispositions were submitted to the AER for the pipeline and associated surface facilities.¹²

27. Industry notifications were sent to all operators of licensed pipelines or wells within two kilometres of the proposed pipeline route on October 16, 2015. As required under the Integration Agreement with NGTL, this project was presented to the NGTL Tolls, Tariff, Facilities and Procedures Committee and no objections were received.

28. ATCO also consulted with Alberta Environment and Parks regarding the Pembina Expansion Project's environmental effects.

¹¹ Exhibit 21299-X0001, Noise Impact Assessment.

¹² Exhibit 21299-X0003, Crown Applications.

29. ATCO added that there are no outstanding objections or concerns related to the Pembina Expansion Project.

7 Findings

30. Approval for new gas utility pipelines in Alberta generally follows two separate application processes. One process sets rates to allow the gas utility to recover its prudently incurred costs. In the rate process, the gas utility seeks the Commission's approval for the forecast capital expenditures for new pipeline facilities within the context of a utility rate application pursuant to the *Gas Utilities Act*. In its general rate application, the gas utility includes a business case for the new pipeline project that describes the need or justification for the new project, the alternatives available to meet that need and the utility's choice of the best alternative.

31. The Commission's assessment of the business case is 'economic' in nature and includes a cost benefit analysis, supply-demand forecasts, safety and security of supply analyses and rate impact analyses. However, there is generally little consideration of site-specific impacts and, consequently, potentially-affected landowners have generally not been part of the general rate application process.

32. In the other application process, the gas utility seeks the Commission's approval to construct and operate a pipeline pursuant to the *Pipeline Act*. This application for a facility generally focuses on the site-specific impacts of the project. When deciding whether to approve a facility application, the Commission evaluates the justification for the project as configured and its site-specific impacts. The need for the project, including its economic benefits, is weighed or balanced against any adverse social, economic and environmental effects to determine the proposed project's acceptability.

33. While gas utilities in Alberta generally follow these two application processes for the approval of new gas utility pipeline projects in the order presented above, there is no statutory requirement that they proceed in this fashion.

34. The Commission's Rule 020 allows for an applicant to apply for both the need and the facility in a single proceeding. Pursuant to these provisions in Rule 020, a gas utility can seek approval to construct and operate a new gas utility pipeline under the *Pipeline Act* without prior approval of the associated forecast capital expenditures. In that case, the Commission would consider the need for the project, the alternatives, and the specific routing, all within the facility proceeding, without approving the forecast rate increases necessary to recover the project's costs.

35. In its application, ATCO requested approval of both the need for the Pembina Expansion Project as well as approval of the construction of the facilities specified to meet the need.

36. ATCO's evidence provided that the Pembina Expansion Project is required to meet the additional system capacity required in the five-year supply/demand forecast to avoid a natural gas supply capacity shortfall in the winter of 2016/2017 in the greater Edmonton area resulting from a combination of temperature sensitive demand growth, industrial demand growth and on-system receipt declines. Based on the above, the Commission finds that ATCO has demonstrated that there is a need for the Pembina Expansion Project.

37. The Commission finds that the 610-millimetre pipe option provides an effective technical solution to satisfy the need for system enhancement. With respect to the other alternatives presented, the Commission considers the fact that ATCO's recommended alternative has the lowest forecast cumulative present value cost of service to be an important factor.

38. When deciding whether approval of the Pembina Expansion Project is in the public interest, the Commission is required by Section 17 of the *Alberta Utilities Commission Act* to have regard to the Pembina Expansion Project's social and economic effects and its effects on the environment.

39. The Commission finds that the applications meet the requirements of Rule 020, including the public involvement and consultation requirements. In this regard, the Commission acknowledges ATCO's confirmation that there are no outstanding public or industry objections or concerns.

40. The Commission expects ATCO to comply with the terms and conditions of the C&R approval issued by the AER and all recommended mitigation measures contained in the environmental protection plan. Based on the above, the Commission finds that the applications contain the requisite environmental information and that the applications, if approved, are acceptable from an environmental perspective.

41. In reaching its decision on the applications, the Commission has taken into account that ATCO has committed to comply with the code of practice promulgated under the *Water Act* for all wetland and drainage crossings, and that Alberta Culture and Tourism provided *Historical Resources Act* clearance for the Pembina Expansion Project.

42. Based on the foregoing, the Commission considers the Pembina Expansion Project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

8 Decision

43. Pursuant to Section 11 of the *Pipeline Act* and Section 4.1 of the *Gas Utilities Act*, the Commission approves the amendments to Licence 103, Licence 2876, Licence 3281 and Licence 5013 and grants ATCO the following licences to construct Pembina Expansion Project:

- Appendix 1 – Gas Utility Pipeline Licence 103 – June 7, 2016.
- Appendix 2 – Gas Utility Pipeline Licence 2876 – June 7, 2016.
- Appendix 3 – Gas Utility Pipeline Licence 3281 – June 7, 2016.
- Appendix 4 – Gas Utility Pipeline Licence 5013 – June 7, 2016.

44. The appendices will be distributed separately.

Dated on June 7, 2016.

Alberta Utilities Commission

(original signed by)

Anne Michaud
Commission Member