



ENMAX Power Corporation

Northwest Calgary Transmission Line Relocation Project

January 25, 2023

Alberta Utilities Commission

Decision 27474-D01-2023

ENMAX Power Corporation

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Proceeding 27474

Application 27474-A001

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The Commission may, no later than 60 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

1 Decision summary

1. In this decision, the Alberta Utilities Commission approves an application from ENMAX Power Corporation to rebuild, relocate and realign Transmission Line 69-16.61L in northwest Calgary. For the reasons below, the Commission finds that approval of ENMAX's application, and specifically the preferred route, is in the public interest having regard to the social, economic, and other effects of the proposed facilities, including their effect on the environment.

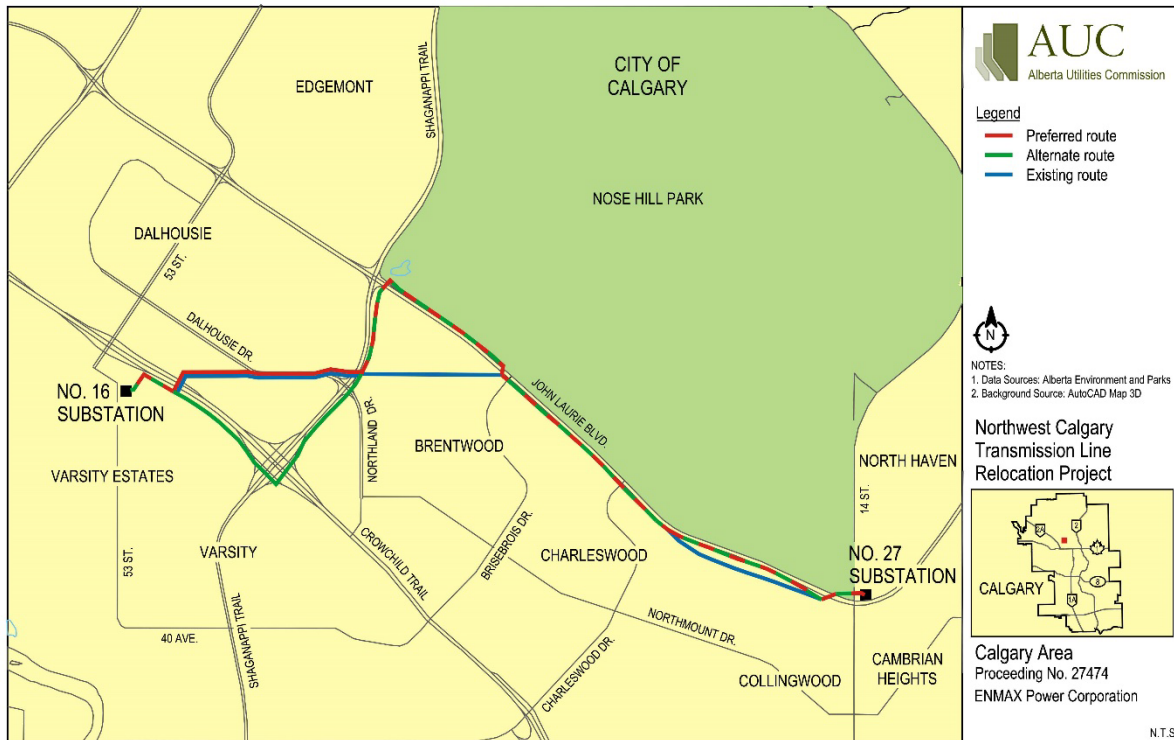
2. The Commission finds that the preferred route is in the public interest because the overall impacts for the preferred route are lower compared to the alternate route and it is the lowest cost route.

2 Introduction

3. On June 24, 2022, ENMAX applied to the AUC for approval to rebuild, relocate and realign the existing 69-kilovolt (kV) Transmission Line 69-16.61L,¹ from No. 16 Substation to No. 27 Substation in the northwest Calgary area. It stated that various components of the transmission line had deteriorated and the existing route had safety and maintenance access issues. ENMAX identified a preferred route and an alternate route to address these issues. The existing and proposed preferred and alternate transmission line routes are shown in Figure 1.

¹ Transmission Line Permit and Licence EN 98-59, Application 970516, January 5, 1998.

Figure 1. Existing and proposed preferred and alternate transmission line routes



4. The Commission issued a notice of application and mailed copies directly to residents, agencies and other interested parties in the vicinity of the project. The Commission received statements of intent to participate from Agnes Chow, Annie Wang, Gail Gay, Laura MacGregor, Jennifer Petersen, Paul Douglas, Tyler Greene, Wolfram Zwirner, and Yan Li. The Commission granted standing to all except for Y. Li and A. Wang. The Commission determined that Y. Li and A. Wang did not establish that they may be directly and adversely affected by the Commission's decision on the application and therefore denied standing to them. L. MacGregor formed and represented the Varsity Group and filed a petition with 45 signatures of homeowners and some tenants who are opposed to the alternate route.²

5. A public hearing to consider the application was held on December 15, 2022. L. MacGregor, on her own behalf and on behalf of the Varsity Group, and T. Greene, on his own behalf, participated in the hearing. The other parties with standing did not participate in the hearing.

6. This decision report first provides a description of ENMAX's application; then it considers the project's participant involvement program, residential impacts and other issues raised by stakeholders.

² Three other interveners that were granted standing (A. Chow, P. Douglas and W. Zwirner) and 17 additional residents became members of the Varsity Group.

3 Application

7. ENMAX filed its application to alter and construct the transmission line under sections 14 and 15 of *Hydro and Electric Energy Act*.

8. ENMAX's application included:

- A siting technical report,³ prepared by Maskwa Environmental Consulting Ltd., which detailed the route development methodology that was used to identify the proposed preferred and alternate routes.
- An environmental evaluation report,⁴ also prepared by Maskwa, which predicted that the preferred and alternate routes would have similar environmental effects, and concluded that with the implementation of Maskwa's recommended mitigation measures, the predicted residual effects on the environment would be limited and not significant.
- Information on its participant involvement program,⁵ supplemented by a stakeholder newsletter, two project information packages and a list of issues raised by stakeholders.⁶
- An assessment of the electric and magnetic field levels along the preferred and alternate routes.⁷

9. ENMAX stated that 75 per cent of the existing structures and components of the transmission line are deteriorated or damaged and have an increased risk of failure. In addition, maintenance access has become increasingly difficult with the developments within the Brentwood and Dalhousie communities. In Brentwood, some of the transmission line structures are located within fenced private properties. The transmission line also does not meet the required clearance from infrastructure owned by the City of Calgary at three locations. For these reasons, ENMAX applied for approval to rebuild the transmission line, with some relocation and realignment.

10. Both ENMAX's proposed preferred and alternate routes would replace the deteriorated or damaged transmission assets and relocate transmission structures currently located within residential fenced properties in Brentwood (the Brentwood alignment). The preferred and alternate routes would follow the same alignment in the eastern portion along John Laurie Boulevard and different alignments on the western portion of the transmission line. In addition to relocating the Brentwood alignment, the preferred route would rebuild the majority of the existing transmission line, whereas the alternate route would relocate the Dalhousie alignment to a new alignment along Crowchild Trail and Shaganappi Trail.

11. Table 1 summarizes certain aspects of the preferred and alternate routes as set out in ENMAX's application.

³ Exhibit 27474-X0006, Appendix C – Routing.

⁴ Exhibit 27474-X0008, Appendix E – Environment.

⁵ Exhibit 27474-X0009, F-1 Participant Involvement Program Report.

⁶ Exhibit 27474-X0015, F-5 Stakeholder Issue List.

⁷ Exhibit 27474-X0005, Appendix B – Electric and Magnetic Field Profiles.

Table 1. Comparison of lengths, structure types and costs of the preferred and alternate routes

	Preferred route	Alternate route
Length (kilometres)	6.3 ⁸	6.8 ⁹
Number of structures	66 ¹⁰	70 ¹¹
Structure types	Wood poles, laminate wood structures and steel monopoles ¹²	Laminate wood structures and steel monopoles ¹³
Cost	\$7.4 million ¹⁴	\$8.9 million ¹⁵

12. The alternate route has a longer line length and a higher estimated cost compared to the preferred route. ENMAX determined that it would be technically feasible to incorporate wood poles on the preferred route at certain locations, which would result in cost savings compared to using only steel monopole and laminate wood structures.¹⁶

13. To address maintenance access and safety considerations, ENMAX proposed to relocate a segment from the Brentwood community. In Brentwood, there are 11 transmission structures that have distribution line underbuilt on the same structures. ENMAX proposed to shorten seven of the 11 structures, relocate the associated transmission alignment and continue to use the shortened poles as distribution assets.¹⁷ The remaining four transmission structures would be removed due to deteriorated condition of these poles and ENMAX would replace them with new shorter wood distribution poles in the same locations. The siting technical report, prepared by Maskwa, stated that the relocation of the Brentwood alignment is required due to several factors, including: the development of residences and other features around the line over time; the requirement for ongoing operation and maintenance of the under-strung distribution services; the incremental disturbance associated with a rebuild along the existing alignment; and the longer-term maintenance access constraints.

14. To address clearance requirements, ENMAX proposed to replace 63 existing structures¹⁸ with new taller structures.

15. ENMAX designed both routes to a 138-kV standard for efficiencies and to improve response times for repairs, but will continue to operate the transmission line at 69 kV. This allows ENMAX to use standard maintenance materials such as spare hardware and insulators, which are kept in inventory. The 138-kV design standard does not materially affect the cost of the project.

⁸ Exhibit 27474-X0002, EPC-Facility Application, PDF page 18.

⁹ Exhibit 27474-X0002, EPC-Facility Application, PDF page 20.

¹⁰ Exhibit 27474-X0008, Appendix E – Environment, PDF page 12.

¹¹ Exhibit 27474-X0008, Appendix E – Environment, PDF page 12.

¹² Exhibit 27474-X0002, EPC-Facility Application, PDF page 31.

¹³ Exhibit 27474-X0002, EPC-Facility Application, PDF page 31.

¹⁴ Exhibit 27474-X0002, EPC-Facility Application, PDF page 54.

¹⁵ Exhibit 27474-X0002, EPC-Facility Application, PDF page 54.

¹⁶ ENMAX estimated that constructing the preferred route using only steel monopoles and laminate wood structures would increase the cost by \$1.2 million, for a total cost of approximately \$8.6 million.

¹⁷ ENMAX explained that wood transmission structures are accessed by bucket trucks and during a diverse weather, structure access becomes difficult because of an underbuilt distribution line. Since the distribution structure can be accessed from ground with any bucket truck, maintenance access is comparatively more difficult for the transmission structures than the distribution structures.

¹⁸ Exhibit 27474-X0002, EPC-Facility Application, PDF page 17.

16. ENMAX stated that since the project does not affect transmission capacity, it is exempt from the requirement for a needs identification document from the Alberta Electric System Operator.

17. The Commission has reviewed the application and has determined that it meets the information requirements specified in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations, Hydro Developments and Gas Utility Pipelines*.

4 Participant involvement program

18. ENMAX's participant involvement program was conducted over a three-month period and included distributing two project information packages, holding three public open houses, and developing a project website.¹⁹ ENMAX notified the landowners, occupants and stakeholders within the first row of houses facing the project.

19. The Varsity Group members raised concerns that ENMAX notified only a few first row residents along Varsity Drive. One of the Varsity Group members, W. Zwirner stated that the participant involvement program did not equally treat the Varsity area residences as compared to the Dalhousie area residences. He stated that some of the Dalhousie interveners are not residents in the first row of housing and "yet they seem to have been accommodated in the process (and have a voice)." Also, L. MacGregor and W. Zwirner stated that a number of Varsity residents missed the application notices issued by the AUC.

20. ENMAX confirmed that there was no difference in its approach to notify stakeholders in the Dalhousie and Varsity communities and that a project information package was mailed to all the residents, landowners, and occupants who are in the first row development adjacent to the project. ENMAX also confirmed that a project information package was mailed to each residence that is listed in the petition filed by L. MacGregor and located in the first row of development adjacent to the alternate route. These residences were also included in the mailing list provided to the AUC.

21. Rule 007 provides that for an overhead transmission line or line replacement within an urban area, personal notification is required within the first row of development surrounding the proposed project.²⁰ This is a minimum requirement and project proponents will often go beyond minimum requirements where there are circumstances that merit a change in approach. The Commission understands that where there is a condominium complex within the first row of development of a project, project proponents will often provide notification for all residents in the complex. The Commission considers that going beyond minimum consultation requirements in such circumstances is good practice.

22. With respect to W. Zwirner's statement about granting standing to Dalhousie residents, the Commission notes that T. Greene and J. Petersen are residents of a condominium complex that is adjacent to the preferred route. In its standing ruling, the Commission acknowledged that while it did not have information on whether T. Greene's or J. Petersen's specific units were directly adjacent to the project, since ENMAX provided notice to the residents within the

¹⁹ Transcript, Volume 1, page 25.

²⁰ Rule 007, Appendix A1 – Participant involvement program guidelines, page 128.

condominium complex, the Commission considers that the residents of that complex are directly adjacent to the preferred route.

23. The Commission finds that the participant involvement program undertaken by ENMAX meets the requirements of Rule 007. Regarding the Varsity Group members' comments on unequal treatment during ENMAX's participant involvement program and the AUC's notification, the Commission finds that the mailing list submitted by ENMAX shows that ENMAX and the Commission notified the first-row residents for both the Dalhousie and Varsity communities. Although some of the interveners are not content with how ENMAX conducted its public notification, ENMAX provided the necessary information to potentially affected parties about the nature, details and potential impacts of the project. The Commission is also satisfied that the participant involvement program gave potentially affected parties an opportunity to ask questions and to express their concerns.

5 Residential impacts

24. ENMAX stated that, unlike the existing route, neither the preferred or alternate routes would result in transmission structures located within the fence of a residential property,²¹ however, both routes will have an impact on residential areas. ENMAX provided a count of approximately 170 and 120 residences that have direct line of sight along the preferred and alternate routes,²² respectively. According to ENMAX, the preferred route would have lower potential residential impact because the preferred route would not cross any new residential parcels and the structure locations in the rebuilt portion may experience slight modification, but would remain within the existing right-of-way.

25. One of the interveners opposing the preferred route, T. Greene, stated that the preferred route would have more residential impact compared to the alternate route because more residences are located in close proximity to the preferred route. T. Greene asserted that removal of the existing transmission line from Dalhousie would eliminate the impact on more than 500 residential first-row dwellings,²³ as well as everyone who uses a greenspace that enables access to a pedestrian and cyclist path network. T. Greene stated that the alternate route would impact only 67 residences²⁴ which are at a greater distance from the alternate route than those on the preferred route and which would be separated by two rows of trees and a sound attenuation wall. T. Greene also indicated that the proposed structure height increase would impact more residents along the preferred route since they would have direct line of sight of the transmission line.

26. T. Greene questioned the accuracy of ENMAX's site count by stating that ENMAX failed to recognize an under-construction apartment building at 4739 Dalton Drive N.W. as first-row dwellings. T. Greene stated that in Decision 2014-219,²⁵ the Commission found that new residences must be factored into impact decisions even if they aren't yet occupied.²⁶

²¹ Transcript, Volume 1, pages 52-56.

²² Exhibit 27474-X0035, 2022-08-02 EPC Responses to AUC IRs (9), PDF page 2.

²³ Exhibit 27474-X0039, PDF page 2; Transcript, Volume 1, pages 89 and 90.

²⁴ Exhibit 27474-X0082, Residential Impact Factors for 27474, page 2.

²⁵ Decision 2014-219: AltaLink Management Ltd. – Red Deer Area Transmission Development, Proceeding 2669, Application 1609677, July 29, 2014.

²⁶ Transcript, Volume 1, pages 82-83.

27. T. Greene stated that the existing Dalhousie and Brentwood alignments have similar maintenance access and safety issues and therefore both should be retired. ENMAX stated that unlike in Brentwood, the existing and proposed structures in Dalhousie are not located within private residential yards but rather in parking lots or other open spaces. It follows that the potential impacts²⁷ of a rebuild through Brentwood are more significant than those associated with a rebuild in Dalhousie.

28. Maskwa stated that the building under-construction at 4739 Dalton Drive N.W. was not counted because the building was unoccupied; however, Maskwa agreed that counting the building's future residents would have been the conservative approach.²⁸ Before filing the application with the AUC, Maskwa spoke with the building developer, but could not get a final layout of the building.²⁹ Also, the developer did not express any concerns about ENMAX's proposed preferred route. ENMAX argued that the future residents of the building could be viewed as already impacted by the existing transmission line, therefore they should not be counted as being newly impacted by the preferred route. ENMAX stated that regardless of residential count numbers, the preferred route through Dalhousie represents a relatively small incremental change given that it follows the same alignment as the existing transmission line, incorporates the same type of structures as currently exist and places structures in approximately the same locations as they are currently. ENMAX also argued that Decision 2014-219 reflected a very different situation than this project.³⁰

29. With respect to T. Greene's concern about maintaining access for pedestrian and cyclist traffic next to a greenspace that is partly occupied by the transmission line right-of-way, ENMAX stated that it would maintain sufficient access through this area. ENMAX will follow the City's guidelines and requirements as part of a traffic accommodation plan. Also, ENMAX will notify stakeholders a minimum of one week prior to construction about the type of work planned, the anticipated time frame and any disruptions that may occur.

30. The Commission considers that the incremental impacts to residences associated with locating the transmission along the existing alignment (preferred route) must be compared to the new residential impacts that would occur with a new alignment (alternate route). Residents on the preferred route have likely purchased or rented their properties with the knowledge that the transmission line exists. Furthermore, the preferred route will maximize the use of existing right-of way and would use similar wood structures, located in similar locations, as currently exist, which would limit the extent of any additional new impact to residents. The Commission finds that the incremental changes from the replacement and modifications to the existing line on the preferred route will cause minimal additional impacts to existing residents on that route.

31. With regard to the new development at 4739 Dalton Drive N.W., the Commission notes that Maskwa contacted the building developer, who did not express any concerns. While such consultation was appropriate for a building under construction, in the Commission's view in its site counts for the preferred route ENMAX should have included an estimate of the residences in the new development. Notwithstanding, the Commission has considered the potential impact of the preferred route on the development at 4739 Dalton Drive N.W. in this decision, and finds that

²⁷ Including vegetation removal, removal of or damage to private property (e.g., fences, garages, sheds and landscaping) and distribution outages.

²⁸ Transcript, Volume 1, pages 77-78.

²⁹ Transcript, Volume 1, pages 56-57.

³⁰ Transcript, Volume 1, pages 124-125.

the replacement of the existing line will have a minimal impact on the future residents of that development.

32. While the alternate route would impact fewer residences, the fact that new transmission infrastructure would be introduced in an area where a transmission line does not currently exist would result in more significant impacts for those residents. The Commission finds that the overall incremental impacts on a larger number of residents associated with the preferred route would still be less than the overall new impacts to fewer residents on the alternate route.

6 Other issues

33. Several interveners submitted that the project would decrease their property values. L. MacGregor stated that she spoke to two real estate agents who stated that property values along Vienna Drive would generally decrease should the alternate route be constructed. A. Chow stated that her understanding was that studies and expert opinions concerning potential impacts of power lines on property values show mixed results. ENMAX referenced multiple AUC decisions where the Commission determined that potential impacts to property values are difficult to quantify and depend on a number of contextual factors.

34. The Commission has consistently stated that property valuation is a complex and technical matter that is influenced by a wide variety of contextual and circumstantial factors.³¹ For this reason, findings about property value impacts must be based on project-specific information that is provided by independent experts and tested or made available for testing in a hearing. In this case, no party filed such evidence of that nature and, based on the record of this proceeding, the Commission is not able to conclude that the project is likely to affect the market value of the properties along either of the proposed routes.

35. Intervenors on each of the proposed routes expressed concerns regarding the health effects of exposure to electric and magnetic fields (EMF) associated with the proposed project. To address the health concerns raised by the intervenors, ENMAX calculated the projected EMF levels of the transmission line operating at 69 kV and 138 kV³² at each intervener's residence for the route that would be closest to their property. In all scenarios, the projected EMF levels fall well below International Commission on Non-ionizing Radiation Protection guidelines.

36. The Commission has previously held that it cannot give weight to opinion evidence about the health effects of EMF from lay witnesses given the complexity of the topic. The Commission continues to place significant weight on the World Health Organization's conclusion that, based on available research data, exposure to EMF is unlikely to constitute a serious health hazard, and also on Health Canada's conclusion that exposure to EMF from transmission lines is not a demonstrated cause of any long-term adverse effect to human or animal health. Having regard to this, and the evidence of the very low EMF levels for this project, the Commission finds that there is no evidence to suggest that EMF from the transmission line will result in any adverse health effects.

³¹ Decision 23981-D01-2019: ENMAX Power Corporation – Home Road Transmission Lines 69-15.62L/21.61L Replacement Project, Proceeding 23981, Applications 23981-A001 and 23981-A002, October 16, 2019.

³² Even though 138-kV operations are not expected in the foreseeable future.

37. Interveners on each of the proposed routes expressed concerns regarding the visual impact associated with the proposed project. ENMAX explained that both the preferred and the alternate routes would be located in a densely populated urban setting where changes to the skyline view are common. For the preferred route, taller wood structures would replace existing wood structures in approximately the same locations as the existing structures. ENMAX asserted that this would result in only incremental and insignificant differences in the viewscape. To mitigate visual impacts, the alternate route was sited following existing linear developments such as Crowchild Trail and light rail transit.

38. The Commission acknowledges that both of the proposed routes would result in some visual impact. The Commission agrees with ENMAX that because both routes follow existing linear disturbances the visual impact would be mitigated to some degree. The Commission considers that the assessment of visual impacts is inherently subjective, but recognizes that locating new transmission structures on the alternate route would significantly alter the viewscape.

39. J. Petersen and T. Greene stated that ENMAX's application was an opportunity to move the existing transmission line out of Dalhousie to reduce the impact on the new and future residents that are close to the existing line. T. Greene also stated that removing the existing transmission line from the Dalhousie area would be in accordance with the City's Municipal Development Plan and the Land Use Bylaw. ENMAX argued that the City is best positioned to advise of any potential conflict between its development plans and the proposed project. ENMAX consulted with the City's planning department and did not receive any structure relocation requests or objections from the City in relation to the preferred route. The Commission considers that because the City did not raise any concerns, the preferred route is consistent with all area land use plans and bylaws.

40. With respect to the project's environmental impact, ENMAX did not identify an environmentally preferred route and stated that both routes have similar environmental effects. ENMAX consulted with Alberta Environment and Protected Areas (AEPA) and AEPA indicated no major concerns. The Commission agrees with the environmental evaluation report that the potential environmental impacts of the project are negligible because the proposed development is in a previously disturbed, urban environment.

41. The Commission considers that the project is needed because the new transmission line would resolve issues related to the deteriorated condition of the existing transmission line, maintenance access, and safety and clearance code requirements.

42. The Commission finds that the preferred route would have less overall impacts than the alternate route. The Commission considers that locating the transmission line along the existing transmission line's alignment would mitigate the potential impacts of the project more effectively than relocating the transmission line to a new alignment along the alternate route. In addition, the alternate route is estimated to cost \$1.5 million more than the preferred route.

43. For the reasons above, the Commission considers that approval of the application and the preferred route is in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

7 Decision

44. Under sections 14, 15, 19 and 21 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants ENMAX Power Corporation the approval set out in Appendix 1 – Transmission Line Permit and Licence 27474-D02-2023 to alter and operate Transmission Line 69-16.61L (Appendix 1 will be distributed separately).

Dated on January 25, 2023.

Alberta Utilities Commission

(original signed by)

Cairns Price
Commission Member