



**ENMAX Power Corporation**

**101 Street Transmission Line 138-7.82L Relocation Project**

**February 13, 2020**

**Alberta Utilities Commission**

Decision 24828-D01-2020

ENMAX Power Corporation

101 Street Transmission Line 138-7.82L Relocation Project

Proceeding 24828

Application 24828-A001

February 13, 2020

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## 1 Decision summary

1. In this decision, the Alberta Utilities Commission considers whether to approve an application from ENMAX Power Corporation to alter and operate Transmission Line 138-7.82L along 101 Street Southwest in the city of Calgary.

2. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds that ENMAX has satisfied the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*, and that approval of the proposed alteration is in the public interest, having regard to the social and economic effects of the project and its effect on the environment.

## 2 Introduction

### 2.1 Project description

3. ENMAX is the owner of the 138-kilovolt (kV) Transmission Line 138-7.82L from ENMAX No. 7 Substation to AltaLink Management Ltd.'s Sarcee 42S Substation in the city of Calgary, pursuant to Permit and Licence 22083-D02-2016.<sup>1</sup> Transmission Line 138-7.82L is located in the Calgary Transportation Utility Corridor (TUC) and is in conflict with the construction and planned infrastructure of the West Calgary Ring Road (WCRR). Alberta Transportation directed ENMAX to relocate certain portions of the line to accommodate the construction of the WCRR.

4. ENMAX applied to the AUC for approval under sections 14, 15 and 21 of the *Hydro and Electric Energy Act* to alter, remove and relocate a portion of Transmission Line 138-7.82L along 101 Street Southwest in the city of Calgary. The application was registered as Application 24828-A001 on August 23, 2019.

5. More specifically, ENMAX seeks approval to remove 17 existing wood poles (shown in blue as poles 30 to 46 in Figure 1 below), construct approximately two kilometres of overhead single-circuit 138-kV line, and install 20 new single-circuit self-supporting steel monopoles, also shown in Figure 1.<sup>2</sup> The proposed new structures range in height from 18 to 31 metres, while the existing wood poles range from 16 to 25 metres. As a result, there would be an increase in the height of the poles.

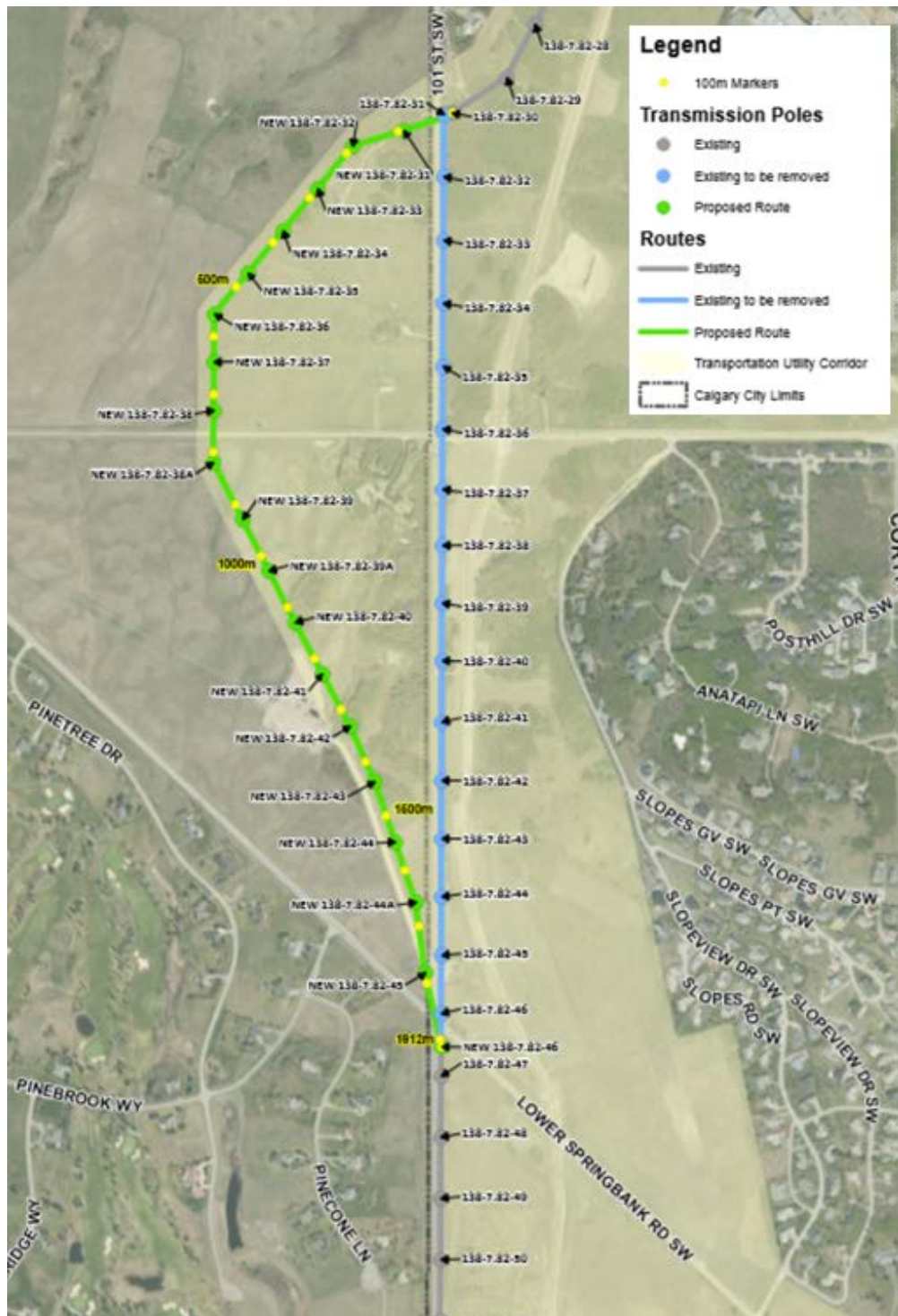
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<sup>1</sup> Transmission Line Permit and Licence 22083-D02-2016, Proceeding 22083, Application 22083-A001, October 27, 2016.

<sup>2</sup> Excerpted from Exhibit 24828-X0013.01, Appendix D – Maps, PDF page 1.

6. The estimated cost of the project is \$5.13 million.<sup>3</sup>

Figure 1: Proposed transmission line relocation<sup>4</sup>



<sup>3</sup> Exhibit 24828-X0002, ENMAX Application, PDF page 7, paragraph 5.

<sup>4</sup> Exhibit 24828-X00013.01, Appendix D – Maps, PDF page 1, modified by Commission staff by zooming in and moving legend location.

7. In a separate application, ENMAX applied for approval under sections 14, 15 and 21 of the *Hydro and Electric Energy Act* to alter, remove and relocate a portion of Transmission Line 138-7.82L along Highway 8 in the city of Calgary. The application was registered as Application 24831-A001 on August 23, 2018, and is being considered by the Commission in Proceeding 24831.

## 2.2 Hearing process

8. The Commission provided notice of ENMAX's application in accordance with Rule 001: *Rules of Practice*, and received statements of intent to participate from local residents. The Commission granted standing to Manoj Sharma, Leon Nellissen and Greg Josiak.<sup>5</sup>

9. The Commission held a written hearing with process for interveners' written evidence, the applicant's reply evidence, argument and reply argument. In response to a request from Mr. Sharma and Mr. Nellissen, the Commission established process for ENMAX to respond to information requests from Mr. Sharma and Mr. Nellissen.<sup>6</sup>

10. Mr. Sharma and Mr. Nellissen filed evidence, argument and reply argument.

## 2.3 The Commission's consideration of the application

11. Relevant to the Commission's consideration of this application are sections 14, 15, 19 and 21 of the *Hydro and Electric Energy Act*. In accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission must assess whether the alterations to the existing transmission line are in the public interest, having regard to the related social, economic, environmental and other effects.

12. In the circumstances of this application, which involves the alteration, removal, and relocation of an existing transmission line, the Commission's public interest assessment focuses on the incremental effects associated with the proposed amendments. More specifically, the Commission must consider any incremental effects resulting from the change in transmission route, structure type, placement and height within a TUC.

13. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts.<sup>7</sup> The Commission must also determine whether an applicant has met the requirements of Rule 007. An applicant must obtain all approvals required by other applicable provincial or federal legislation.

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<sup>5</sup> Exhibit 24828-X0033, AUC ruling on standing; Exhibit 24828-X0037, AUC ruling on standing. Names listed in order of receipt of statements of intent to participate.

<sup>6</sup> Exhibit 24828-X0042, Ruling on interrogatory process request.

<sup>7</sup> EUB Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation 490-MW Coal-Fired Power Plant, Application 2001173, December 21, 2001, page 4.

### 3 Visual impacts

14. ENMAX noted that the proposed transmission line relocation places the structures further away from most residences, including those of Mr. Sharma and Mr. Nellissen, and therefore reduces the likelihood of incremental visual impacts.<sup>8</sup>

15. ENMAX submitted that some of the concerns of the interveners were related to the removal of tree cover associated with the construction of the WCRR, which is unrelated to the project and out of its control.<sup>9</sup>

16. According to ENMAX, changes in viewscape resulting from the project must be considered in the context of where it is located:

In considering potential visual impacts, it is also important to place the changed viewscape in context – in this case the TUC. Within a TUC, changes to the skyline view are common and consistent with the very purpose of the TUC itself, being to accommodate ring roads, major powerlines, pipelines, regional water and sewer lines and telecommunication lines.<sup>10</sup>

17. Mr. Sharma and Mr. Nellissen stated that the proposed project would affect the residents' enjoyment of property, stating:

Arguably, the greatest attributes of most properties located in the Slopes community are the incredible mountain views to the west and southwest. As the name implies, the community is built on inclines up from the level of the roadway, allowing even properties further away from the road to have unobstructed, or largely unobstructed, mountain views. The sloped nature of the land also means potentially more than front row homes will be adversely affected by the visual impact of the transmission line.<sup>11</sup>

18. They filed photos to demonstrate the mountain views they enjoy and noted that the existing tree screen that currently obscures the line will be removed as a result of the construction of the WCRR, making the proposed line openly visible to the west-facing residences of the Slopes community.<sup>12</sup>

19. Mr. Sharma and Mr. Nellissen retained Trevor Cline to assess ENMAX's application. Mr. Cline prepared a report that suggested several alternatives to reduce the visual impacts of the project. His recommendations are addressed below.

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<sup>8</sup> Exhibit 24828-X0051, EPC Final Argument – December 18, 2019, paragraph 63.

<sup>9</sup> Exhibit 24828-X0055, EPC Reply Argument 2020-01-06, paragraph 42.

<sup>10</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 45.

<sup>11</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraph 27.

<sup>12</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraph 9.

### 3.1 Request to bury the all-dielectric self-supporting fibre optic cable

20. In his report, Mr. Cline concluded that the height of the structures/lines are dictated by the requirements for the all-dielectric self-supporting (ADSS) fibre optic cable.<sup>13</sup>

21. In Mr. Cline's opinion, ENMAX did not use heavy loading conditions to calculate the clearance requirements and the design is not to code. Mr. Cline estimated that in order to comply with ground clearance requirements, the structure heights may actually have to be at least three metres taller than those proposed by ENMAX. Mr. Sharma and Mr. Nellissen asserted that ENMAX failed to provide any material evidence that the pole heights will not have to be increased during the final design to meet code requirements and that ENMAX's reference to "approximate heights" leaves the door open for such an increase.<sup>14</sup>

22. Mr. Cline stated that if the ADSS cable were to be replaced with a buried fibre optic cable, the height of the poles could be reduced by an average of 5.15 metres relative to the required height that he estimated, which may in turn reduce the cost of the project and the impact to adjacent landowners.<sup>15</sup> He estimated that replacing the ADSS cable with a buried fibre optic cable would cost an additional \$130,000 and result in a saving of approximately \$330,000 because of the shorter poles.<sup>16</sup>

23. ENMAX confirmed that the structure heights estimated in the application are correct, that the design meets all code requirements applicable to the ADSS cable, and that the project was specifically designed for heavy loading conditions.<sup>17</sup>

24. ENMAX stated that the ground clearance of the ADSS cable does not solely govern the structure heights and that removing the ADSS cable would only result in a height reduction of approximately 1.3 metres, on average.<sup>18</sup> It added that if the ADSS cable were to be removed, an alternate link between the substations would have to be arranged.

25. ENMAX stated that it did not appear that Mr. Cline consulted with Shaw, the owner of the ADSS cable, about his proposal; therefore there is no evidence on the record of the proceeding to suggest that burying the line would be acceptable to Shaw.

26. ENMAX submitted that replacing the ADSS cable with a buried fibre optic cable would introduce additional risks, including susceptibility of the cable to damage if it is not buried deep enough, and impacts to reliability. ENMAX is not willing to accept these risks given the critical function of the fibre optic link.<sup>19</sup>

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<sup>13</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraph 11.

<sup>14</sup> Exhibit 24828-X0056, 24828 – Nellissen and Sharma Reply – January 6, 2020, paragraph 7.

<sup>15</sup> Exhibit 24828-X0053, 24828- Nellissen and Sharma Argument – December 19, 2019, PDF page 8.

<sup>16</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraphs 20 and 21.

<sup>17</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 23.

<sup>18</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 8.

<sup>18</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraphs 24 and 25.

<sup>19</sup> Exhibit 24828-X0051, EPC Final Argument – December 18, 2019, paragraph 49.

27. Shaw estimated costs of \$1.43 million to bury the ADSS cable which, in ENMAX's view, represent 30 per cent of the project costs.<sup>20</sup> Although ENMAX acknowledged that the reduction in height of the structures would save approximately five per cent of structure costs, it submitted that this amounted to only 1.5 to two per cent of the overall project costs and that burying the cable would therefore materially increase the cost of the project.

### **3.2 Request to modify the structure material**

28. Mr. Cline recommended that self-weathering structures be used instead of galvanized steel structures, to reduce visual impact. He stated in his report that self-weathering poles "have a low reflectivity compared to galvanized steel and are considered aesthetically pleasing because the brown, organic finish helps poles to blend into wooded areas."<sup>21</sup>

29. Mr. Sharma and Mr. Nellissen suggested that standards can change, that it is not reasonable nor accurate to suggest that transmission poles must always be made of galvanized steel, and requested that the colour of the structures be changed to the "non-reflective finish of self-weathering steel".

30. In response, ENMAX submitted that aesthetics are subjective and that the appearance of weathering structures may not be the preference of all area stakeholders.<sup>22</sup> ENMAX stated that while self-weathering structures are similar to galvanized steel structures from a cost perspective, it could not speak to the durability of self-weathering poles because they are not standard material for ENMAX or used on other transmission lines it owns. As self-weathering structures would be a custom solution, there could be longer outage times if repair or replacement were required.<sup>23</sup>

31. ENMAX added that steel monopoles may be galvanized with a formula to create a weathered look with low reflection.<sup>24</sup>

### **3.3 Request to use non-specular conductors**

32. Mr. Cline also recommended the use of non-specular conductors which are treated for lower reflectivity, to reduce visual impact. He indicated in his report that "the conductor surface has a smooth matte gray finish which blends naturally and unobtrusively with the environment." He further stated that in the United States, non-secular conductors are required for crossing undeveloped Federal Government park lands due to their reduced reflectivity.<sup>25</sup>

33. ENMAX responded that non-specular conductors are not standard for transmission lines in Alberta and that it is "not unlike" the standard conductor proposed in the project.<sup>26</sup> ENMAX

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<sup>20</sup> Based on \$715/metre.

<sup>21</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraph 22.

<sup>22</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 31.

<sup>23</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 34.

<sup>24</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 33.

<sup>25</sup> Exhibit 24828-X0044, 24828 Evidence – Trevor Cline on behalf of Nellissen and Sharma – December, paragraph 24.

<sup>26</sup> Exhibit 24828-X0045, 2019-12-11-EPC-101 Street Transmission Line 7.82L Relocation Project Reply, paragraph 36.



does not recommend the use of non-specular conductors because of noise and potential corona issues and increased risk of conductor deterioration and corrosion when compared to an ENMAX standard conductor (which, according to ENMAX, will lose its initial shininess over a relatively short period of time).<sup>27</sup>

### **3.4 Commission findings**

34. The interveners in this proceeding are not arguing against the approval of the project; Mr. Sharma and Mr. Nellissen are seeking changes to aspects of the project to mitigate its visual impact.

35. The Commission acknowledges that the project as proposed will have an impact on the viewscape. It finds, however, that while the proposed change in structure material and increase in structure height may be perceived as a negative visual impact, the movement of the structures away from the residences of Mr. Sharma and Mr. Nellissen is likely to negate some of that impact.

36. The project must be considered in light of the location of the project, i.e. within a Transportation and Utility Corridor, and the changes to the area as a result of the construction of the WCRR. In this regard, the Commission considers that the WCRR will have a much more extensive visual impact to the area than the proposed project.

37. The Commission finds that overall, the alternatives proposed in the Cline report will at best result in marginal reductions to visual impacts in the existing viewscape, and that the viewscape itself will be affected more extensively by the construction of the WCRR. These marginal reductions do not justify the additional costs or risks that the alternatives would impose.

38. Moreover, the proposal from Mr. Cline to replace the ADSS cable with a buried fibre optic cable to reduce the required height of the structures is not acceptable to the Commission because of the additional risks of damage to the cable, the loss of reliability, and the increased cost to construct that configuration. The Commission accepts ENMAX's history and expertise in constructing and designing transmission lines and that it has properly designed the project to meet all applicable codes.

39. Although the Commission agrees with Mr. Sharma and Mr. Nellissen that standards for structure material can change, visual impacts are subjective and they are only two of the many individuals ENMAX notified who will have a view of the project and who expressed a preference for a different structure material. In this regard, the information ENMAX shared with stakeholders stated that the new poles would be galvanized steel. It is therefore reasonable to assume that most of those stakeholders are expecting galvanized steel poles to appear if the project is constructed. The Commission is not satisfied that changing the poles' finish to self-weathering steel would be in the public interest, given the very limited evidence on this issue filed in this proceeding and the expectations established during ENMAX's public consultation and notification process.

40. The Commission recognizes that the use of non-specular conductors introduces new risks such as potential corona issues, and an increased risk of conductor deterioration and corrosion. It also accepts ENMAX's evidence that the conductor proposed for the project will lose its initial

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<sup>27</sup> Exhibit 24828-X0051, EPC Final Argument – December 18, 2019, paragraph 57.

shininess over a short period of time, which may mitigate visual impacts of the conductor. Accordingly, the Commission is not prepared to direct ENMAX to change its choice of conductor as proposed in the Cline report.

41. The Commission finds that the visual impacts of the project would be minor and that the modifications proposed in the Cline report would introduce additional costs and risks without providing any material mitigation to area landowners or benefit for the project itself. In the Commission's view, the moderate visual impacts associated with the project do not outweigh the benefits of the project, predominantly the need to relocate the line to make way for the WCRR.

#### **4 Participant involvement program**

42. ENMAX stated that it conducted a joint comprehensive participant involvement program for both this project and the Highway 8 project, in accordance with the requirements of Rule 007.

43. ENMAX's program included distribution of two sets of project-specific materials and a final letter advising of the final proposed routing. This material was provided to landowners adjacent to the project and additional stakeholders, including community associations and those who self-identified during the route development process. ENMAX also posted information about the project on its public website, and stated that it engaged occupants, residents and landowners located adjacent to the project by door-knocking activities, phone calls and face-to-face meetings. It held four open houses to further provide an opportunity for stakeholder engagement.<sup>28</sup>

44. ENMAX submitted that all stakeholders were given an opportunity to learn about the project and discuss any project-related concerns with ENMAX. It is not aware of any outstanding stakeholder concerns with the project and stated that engagement would continue throughout the regulatory process.<sup>29</sup>

##### **4.1 Commission findings**

45. Rule 007 requires that a participant involvement program be conducted before a facility application is filed with the Commission. It is a fundamental component of any facility application and applicants must fulfill the public notification and consultation requirements under Rule 007.

46. Having reviewed the details of ENMAX's participant involvement program, the Commission finds that it satisfies the requirements of Rule 007.

#### **5 Environmental considerations**

47. ENMAX retained Tetra Tech Canada Inc. to assess the existing land use conditions of the area surrounding the project, and to identify environmental components that could potentially be affected by construction associated with the project. Tetra Tech concluded that any residual

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<sup>28</sup> Exhibit 24828-X0002, ENMAX Application, PDF page 30, paragraphs 84-95.

<sup>29</sup> Exhibit 24828-X0002, ENMAX Application, PDF page 35, paragraphs 99-102.

effects would not be considered significant provided that effective mitigation measures are implemented.<sup>30</sup>

48. ENMAX stated that the mitigation measures recommended by Tetra Tech will be incorporated into the environmental management plan and will be implemented prior to and during construction. It also stated that it will conduct regular site inspections to ensure that the environmental management plan is effective and adhered to.<sup>31</sup>

### **5.1 Commission findings**

49. The Commission is satisfied that the environmental effects of the project will be minimal given ENMAX's commitment to implement mitigation measures and to monitor the effectiveness of the environmental management plan. It is also satisfied that the environmental aspects of the project, as submitted by ENMAX, fulfill the requirements of Rule 007. A noise impact assessment under Rule 012: *Noise Control* was not required as no noise producing equipment is proposed for the project.

## **6 Decision**

50. After considering the record of this proceeding and for the reasons stated above, the Commission finds that approval of the project is in the public interest, having regard to the social, economic, and other effects of the project, including its effect on the environment, in accordance with Section 17 of the *Alberta Utilities Commission Act*.

51. Pursuant to sections 14, 15, 19 and 21 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants ENMAX the approval set out in Appendix 1 – Transmission Line Permit and Licence 24828-D02-2020 – February 13, 2020 (Appendix 1 will be distributed separately).

Dated on February 13, 2020.

### **Alberta Utilities Commission**

*(original signed by)*

Anne Michaud  
Vice-Chair

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<sup>30</sup> Exhibit 24828-X0014, Appendix E: Environmental Assessments, PDF page 33.

<sup>31</sup> Exhibit 24828-X0002, ENMAX Application, PDF page 40, paragraph 120.