



ENMAX Power Corporation

ENMAX No. 7 Substation Upgrade

November 22, 2017

Alberta Utilities Commission

Decision 23038-D01-2017

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Proceeding 23038

Application 23038-A001

November 22, 2017

Published by the:

Alberta Utilities Commission

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1 Decision summary

1. In this decision, the Alberta Utilities Commission must decide whether to approve an application from ENMAX Power Corporation to alter and operate the ENMAX No. 7 Substation. The need for the proposed development was approved by the Alberta Electric System Operator pursuant to an abbreviated needs approval process established under ISO Rules Section 501.3. After consideration of the record of the proceeding, and for the reasons outlined in this decision, 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.

2 Introduction and background

2. ENMAX Power Corporation (ENMAX), pursuant to Permit and Licence U2008-372¹ is the operator of the ENMAX No. 7 Substation, located at 718 – 101 Street S.W., within the city of Calgary, in the northwest quarter of Section 21, Township 24, Range 2, west of the Fifth Meridian.

3. On October 10, 2017, pursuant to ISO Rules Section 501.3 Abbreviated Needs Approval Process, ENMAX received approval from the Alberta Electric System Operator (AESO) for the need to upgrade the ENMAX No. 7 Substation.

4. Pursuant to sections 14, 15, 18, and 19 of the *Hydro and Electric Energy Act*, ENMAX filed an application with the AUC on October 23, 2017, registered as Application 23038-A001, to alter and operate the ENMAX No. 7 Substation (the proposed project).

5. On November 6, 2017, the Commission issued information requests to ENMAX. ENMAX responded to the information requests on November 10, 2017.

6. Due to the nature of the application, a notice of application was not issued and, therefore, a hearing was not required because the Commission considered that its decision or order would not directly and adversely affect the rights of a person, pursuant to Section 9 of the *Alberta Utilities Commission Act*.

3 Discussion

7. Pursuant to the abbreviated needs approval process, the AESO issued the approval in response to a request from ENMAX for system access service to reliably serve growing demand

¹ Substation Permit and Licence U2008-372, Application 1597764-1, December 11, 2008.

for electricity in the city of Calgary. ENMAX identified existing system deficiencies that resulted from limited transformation capacity in west Calgary. Specifically, ENMAX's system analysis determined that during feeder contingencies, two of the four 25-kilovolt (kV) feeders connected to the ENMAX No. 7 Substation could have unsupplied load. The AESO, in collaboration with ENMAX, determined that the system access service could be addressed through the upgrading of the ENMAX No. 7 Substation.

8. ENMAX subsequently submitted a facility application proposing to upgrade the ENMAX No. 7 Substation by:

- replacing the existing two 138/25-kV, 30-megavolt-ampere (MVA) transformers with two 138/25-kV, 50 MVA transformers
- installing one new 138-kV bus-tie circuit breaker
- relocating one 138-kV three-phase potential transformer bank
- installing one 138-kV new three-phase potential transformer bank
- installing two new 138-kV manually operated disconnect switches
- installing all associated protection, control, and supervisory control and data acquisition (SCADA) equipment as a result of the proposed project

9. ENMAX indicated that upon completion of the proposed project, the ENMAX No. 7 Substation would contain the following major equipment:

- two 138/25-kV, 50 MVA on-load-tap-changing transformers
- three 138-kV circuit breakers
- two 138-kV motorized disconnect switches
- eight 138-kV manually operated disconnect switches
- twelve 25-kV circuit breakers, consisting of six feeder breakers, two bus tie breakers, and four transformer breakers

10. ENMAX stated that all proposed work would take place within the ENMAX No. 7 Substation fence line and that construction would occur on weekdays between 7:30 a.m. and 5:00 p.m. ENMAX submitted the replacement of the existing transformers at the ENMAX No. 7 Substation would present operational issues that would require installation of the two new transformers in separate steps. ENMAX stated that any required outages would be coordinated to ensure safe and reliable operation of the transmission system.

11. ENMAX conducted a participant involvement program in accordance with the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*. ENMAX developed the participant involvement program, in coordination with the AESO, by preparing and distributing project

specific information packages to seven landowners adjacent to the proposed project through mail and emailing eight stakeholders. ENMAX also conducted consultation with two stakeholders by telephone. ENMAX submitted there were no outstanding stakeholder concerns.

12. ENMAX stated it did not anticipate issues related to induction to adjacent facilities, any adverse interference to radio or communications systems, or issues related to electric and magnetic fields.

13. Due to the scope of the proposed project, ENMAX did not conduct any environmental studies and did not expect any environmental impacts from the proposed project. ENMAX indicated that if soil contamination was observed during proposed work, soil samples would be collected. If there is a shallow groundwater table at the site, groundwater samples will also be collected and analyzed for the presence and concentration of contaminants. ENMAX also confirmed any impacted soil exceeding the applicable Alberta Tier 1 Soil and Groundwater Remediation Guidelines would be removed until the guidelines were met.

14. ENMAX indicated a *Historical Resources Act* clearance was not required, as there would be no impact to any undisturbed lands surrounding the substation.

15. ENMAX completed a noise impact assessment, which confirmed that the predicted noise levels at the ENMAX No. 7 Substation would comply with Rule 012: *Noise Control*.

16. The proposed project cost is estimated to be \$6,857,445 (within +20 per cent/-10 per cent accuracy). All costs would be paid by the customer, ENMAX, and ENMAX indicated there were no system costs associated with the proposed project. ENMAX stated the proposed in-service date for the proposed project was December 15, 2018.

4 Findings

17. Pursuant to Section 1.4.1(b) of Rule 007, the Commission finds that a needs identification document was not required for the proposed project because the proposed project was a minor addition to an existing substation approved by the AESO pursuant to an abbreviated needs approval process established under ISO Rules Section 501.3.

18. The Commission finds that the application to upgrade ENMAX No. 7 Substation, filed by ENMAX pursuant to sections 14, 15, 18, and 19 of the *Hydro and Electric Energy Act*, complies with the information requirements prescribed in Rule 007. The application is also consistent with the need identified in the AESO's approval letter pursuant to its abbreviated needs approval process.

19. The Commission is satisfied that the participant involvement program undertaken by ENMAX meets the requirements of Rule 007.

20. The Commission finds that the technical and environmental aspects of the proposed project, as submitted by ENMAX, fulfill the requirements of Rule 007.

21. The Commission accepts ENMAX's statement that predicted noise levels at the ENMAX No. 7 Substation will comply with the requirements of Rule 012.

22. The Commission is satisfied that there are no outstanding concerns associated with the alteration and operation of the substation and finds the proposed project to be in the public interest pursuant to Section 17 of the *Alberta Utilities Commission Act*.

5 Decision

23. Pursuant to sections 14, 15, and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application to alter and operate the substation and grants ENMAX the approval set out in Appendix 1 – Substation Permit and Licence 23038-D02-2017 – November 22, 2017 (Appendix 1 will be distributed separately).

Dated on November 22, 2017.

Alberta Utilities Commission

(original signed by)

Neil Jamieson
Commission Member