



**Alberta Electric System Operator  
Needs Identification Document Application**

**ENMAX Power Corporation  
Facility Application**

**Calgary Energy Centre Expansion Interconnection**

**March 22, 2017**

**Alberta Utilities Commission**

Decision 22352-D01-2017: Calgary Energy Centre Expansion Interconnection

Alberta Electric System Operator  
Needs Identification Document Application  
Application 22352-A001

ENMAX Power Corporation  
Facility Application  
Application 22352-A002 to 22352-A006

Proceeding 22352

March 22, 2017

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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](http://www.auc.ab.ca)

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**ENMAX Power Corporation**  
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**Expansion Interconnection**

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**1 Decision summary**

1. In this decision, the Alberta Utilities Commission must decide whether to approve a needs identification document application from the Alberta Electric System Operator (AESO) and facility applications from ENMAX Power Corporation (ENMAX) to interconnect the Calgary Energy Centre Peaking Plant. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds the AESO's assessment of the need to be correct and finds that approval of the facility applications 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. The AESO filed an application with the Alberta Utilities Commission, pursuant to Section 34 of the *Electric Utilities Act*, seeking approval of the need to interconnect the Calgary Energy Centre Peaking Plant to the Alberta Interconnected Electric System. The application was registered on January 23, 2017 as Application 22352-A001.

3. ENMAX filed facility applications with the Commission for approval to construct the facilities to meet the need identified by the AESO. ENMAX proposed to construct and operate a new substation, designated as ENMAX No. 70 Substation, a new single-circuit 138-kilovolt (kV) transmission line, designated as transmission line 138-70.80L, to alter the existing ENMAX No. 162 Substation and transmission line 138-162.81L and to connect the facilities to the Calgary Energy Centre Peaking Plant (the project). The applications, filed pursuant to sections 14, 15 and 18 of the *Hydro and Electric Energy Act*, were registered on January 25, 2017 as applications 22352-A002 to 22352-A006.

4. Pursuant to Section 15.4 of the *Hydro and Electric Energy Act*, the AESO and ENMAX requested that the Commission consider the needs identification document application and the facility applications jointly. The Commission advised the AESO and ENMAX that the applications had been combined and were being considered jointly as Proceeding 22352.

5. On February 13, 2017, the Commission issued a notice of applications for Proceeding 22352. Submissions to the Commission in response to the notice were to be made by March 8, 2017. The notice was sent directly to all landowners, occupants, and residents within the first row of development surrounding the proposed project. The notice was also published on

the AUC website and notification was automatically emailed to AUC eFiling System users who had chosen to be notified of notices of application issued by the Commission.

6. No submissions were received by the submission deadline of March 8, 2017.

### **3 Discussion**

#### **3.1 Needs identification document**

7. Calgary Energy Centre No. 2 Inc. requested system access service to connect the Calgary Energy Centre Peaking Plant at the existing Calgary Energy Centre in the Calgary area. The AESO proposed that the request could be met by:

- a. Adding a new switching substation, to be designated as ENMAX No. 70 Substation, including three 138-kV circuit breakers and connecting the proposed substation to the Calgary Energy Centre Peaking Plant.
- b. Adding a new 138-kV transmission circuit to connect the proposed ENMAX No. 70 Substation and the existing ENMAX No. 162 Substation using a radial configuration.
- c. Modifying the existing ENMAX No. 162 Substation, including the addition of one 138-kV circuit breaker.
- d. Modifying, altering, adding or removing equipment, including switchgear, and any operational, protection, control and telecommunication devices required to undertake the work as planned and ensuring proper integration with the transmission system.

8. The AESO conducted power flow, transient stability and short-circuit studies to assess the impact that the project and the associated generation would have on the Alberta Interconnected Electric System. The AESO identified that the existing system was subject to thermal criteria violations to transmission lines 39.82L, 11.83L and 688L under certain Category B conditions and that the AESO is using real-time operational practices and an existing remedial action scheme to mitigate these system performance issues. The AESO submitted that the same thermal criteria violations occurred under certain Category B conditions in its post-connection assessment. The post-connection violations were forecast to increase on transmission lines 39.82L and 11.83L while the violations on transmission line 688L were forecast to decrease. The AESO submitted that these system performance issues could continue to be mitigated by the use of real-time operational practices and the existing remedial action scheme.

9. The AESO directed ENMAX to file a facility application with the AUC for the facilities to meet the need identified and to assist the AESO in conducting a participant involvement program for its needs identification document application. The AESO submitted that it is not aware of any concerns or objections that have been raised regarding the need for the project.

### 3.2 Facility applications

10. ENMAX proposed to construct and operate a new substation, designated as ENMAX No. 70 Substation. The substation would be located at the site of the Calgary Energy Centre, in the northeast quarter of Section 35, Township 25, Range 29, west of the Fourth Meridian at 13939 68th Street N.E. in Calgary, Alberta. ENMAX indicated that the substation would include three 138-kV circuit breakers and other substation equipment surrounded by a fence, approximately 52 metres by 92 metres in size.
11. ENMAX also proposed to construct and operate approximately 600 metres of new single-circuit 138-kV transmission line, designated as transmission line 138-70.80L, that would connect the proposed ENMAX No. 70 Substation to the existing ENMAX No. 162 Substation.
12. ENMAX proposed to add one new 138-kV circuit breaker to ENMAX No. 162 Substation and to relocate a portion of the existing transmission line 138-162.81L within the ENMAX No. 162 Substation to accommodate transmission line 138-70.80L.
13. ENMAX is the owner and operator of ENMAX No. 162 Substation and transmission line 138-162.81L pursuant to permits and licences 21529-D03-2016<sup>1</sup> and U2003-022<sup>2</sup> respectively. ENMAX No. 162 Substation is also referred to as Beddington No. 162 Substation.
14. ENMAX also requested approval to connect the new ENMAX No. 70 Substation to the Calgary Energy Centre Peaking Plant.
15. ENMAX conducted a participant involvement program that included notifying landowners within the first row of development surrounding the project as well as other agencies and stakeholders. ENMAX stated that no questions or feedback were received during the participant involvement program.
16. ENMAX submitted that the project would be located entirely within the previously disturbed areas of the Calgary Energy Centre and ENMAX No. 162 Substation and that there would be no impacts to the surrounding environment. ENMAX also retained Tetra Tech Canada Inc. to prepare an overview of biophysical constraints for the project. Tetra Tech Canada Inc. concluded that adverse effects to the environment are not anticipated as long as the recommended mitigation measures are implemented.
17. ENMAX submitted that *Historical Resources Act* clearance had been obtained for the Calgary Energy Centre and ENMAX No. 162 Substation sites where the project would occur.
18. ENMAX did not conduct a noise impact assessment. It submitted that the project would not increase noise levels at the Calgary Energy Centre or ENMAX No. 162 Substation.
19. ENMAX stated that the estimated project cost (within +20 per cent/-10 per cent accuracy) would be \$12.72 million and would be allocated to the customer.

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<sup>1</sup> Permit and Licence 21529-D03-2016, Proceeding 21529, Application 21529-A002, June 29, 2016.

<sup>2</sup> Permit and Licence U2003-022, Application 1268575, January 28, 2003.

## 4 Findings

20. The Commission finds that the needs identification document application filed by the AESO contains all the information required by the *Electric Utilities Act*, the *Transmission Regulation* and Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*.
21. No interested party demonstrated that the AESO's assessment of the need to connect the Calgary Energy Centre Peaking Plant is technically deficient or that approval of the needs identification document application is not in the public interest. Therefore, the Commission considers the AESO's assessment of the need to be correct, in accordance with Subsection 38(e) of the *Transmission Regulation*, and approves the AESO's needs identification document application.
22. The Commission finds that ENMAX's facility applications comply with the information requirements prescribed in Rule 007. The facility applications are also consistent with the need identified in the needs identification document application.
23. The Commission finds that the joint participant involvement program undertaken by the AESO and ENMAX meets the requirements of Rule 007.
24. The Commission finds that there are no outstanding technical or environmental concerns associated with the project, nor are there any outstanding public or industry concerns.
25. Given the considerations discussed above, the Commission finds the proposed project to be in the public interest pursuant to Section 17 of the *Alberta Utilities Commission Act*.

## 5 Decision

26. Pursuant to Section 34 of the *Electric Utilities Act*, the Commission approves the need outlined in Needs Identification Document Application 22352-A001 and grants the AESO the approval set out in Appendix 1 – Needs Identification Document Approval 22352-D02-2017 – March 22, 2017.
27. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22352-A002 and grants ENMAX the approval set out in Appendix 2 – Permit and Licence 22352-D03-2017 – March 22, 2017, to construct and operate ENMAX No. 70 Substation.
28. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22352-A003 and grants ENMAX the approval set out in Appendix 3 – Permit and Licence 22352-D04-2017 – March 22, 2017, to construct and operate transmission line 138-70.80L.
29. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22352-A004 and grants ENMAX the approval set out in Appendix 4 – Permit and Licence 22352-D05-2017 – March 22, 2017, to alter and operate transmission line 138-162.81L.

30. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 22352-A005 and grants ENMAX the approval set out in Appendix 5 – Permit and Licence 22352-D06-2017 – March 22, 2017, to alter and operate ENMAX No. 162 Substation.

31. Pursuant to Section 18 of the *Hydro and Electric Energy Act*, the Commission approves Application 22352-A006 and grants ENMAX the approval set out in Appendix 6 – Connection Order 22352-D07-2017 – March 22, 2017, to connect ENMAX No. 70 Substation to the Calgary Energy Centre Peaking Plant.

32. The appendices will be distributed separately.

Dated on March 22, 2017.

**Alberta Utilities Commission**

*(original signed by)*

Neil Jamieson  
Commission Member