



EPCOR Distribution & Transmission Inc.

Victoria E511S Substation Expansion

February 17, 2015

Alberta Utilities Commission

Decision 3478-D01-2015

EPCOR Distribution & Transmission Inc.

Victoria E511S Substation Expansion

Proceeding 3478

Application 1610934-1

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Published by the:

Alberta Utilities Commission

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1 Introduction

1. EPCOR Distribution & Transmission Inc. (EDTI) filed an application with the Alberta Utilities Commission for approval to expand the Victoria E511S substation in the downtown Edmonton area, pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*. This application was registered on October 20, 2014, as Application 1610934-1. EDTI, pursuant to Permit and Licence [U2011-164](#),¹ is the operator of the Victoria E511S substation.
2. On December 9, 2014, the Commission issued information requests to EDTI with regard to the environmental site assessment. EDTI responded to the requests on December 19, 2014.
3. On December 15, 2014, the Commission issued a notice of application to potentially affected parties. The Commission issued the notice through direct delivery as well as a postal code drop to residents in the area. The notice was also published on the AUC website. The Commission conducted an information session for interested parties on January 5, 2015, at the Coast Edmonton Plaza Hotel. The Commission received one statement of intent to participate in the proceeding, which was later withdrawn.

2 Discussion

4. EDTI requested approval to expand the Victoria substation in the downtown Edmonton area and construct a new building that would be used to house a new 15-kilovolt (kV) switch gear (the project). The project was driven by the need to reduce the high fault levels on the 15-kV buses at Victoria substation and to reduce the risk of arc flash from the downtown network distribution feeders at Victoria substation.
5. The Victoria substation expansion project is part of a larger project, which is anticipated to be complete in 2017 and is not included in this project. The future work would include:
 - adding a new 15-kV switchgear in the new building;
 - transferring all seven network feeders from the existing switchgear to the new switchgear; and
 - replacing the existing non-arc resistant, outdoor fault filters with indoor arc resistant high-speed fault current limiting devices.
6. EDTI proposed to acquire portions of lots 195 to 197 southwest of the existing Victoria substation to expand the existing substation which is located on lots 232 to 238, Block 4, Plan B3, Subdivision Hudson Bay Reserve, in the northwest quarter of

¹ Substation Permit and Licence U2011-164, Application 1607156, Proceeding 1144, April 21, 2011.

Section 5, Township 53, Range 24, west of the Fourth Meridian, known municipally as 10520 - 104 Street N.W., in Edmonton.

7. EDTI did not apply for any new major equipment as stated above and the final major equipment at the Victoria substation is:

- one 450-megavolt ampere (MVA), 240/72-kV LTC transformer;
- one 240-kV circuit breaker;
- four 50/66.7-MVA, 72/14.4-kV transformers;
- nine 72-kV circuit breakers; and
- other substation equipment and an enclosure surrounding the substation perimeter as described in the application.

8. As part of the application, EDTI requested that the number of 15-kV circuit breakers be removed from the permit and licence as the quantity of 15-kV breakers is not material to the operation of the bulk transmission system and the 15-kV switchgear is considered to be a minor alteration in accordance with the *Electric Transmission Facilities Process Guidelines*.

9. EDTI evaluated the following alternative solutions for the project, which were rejected by EDTI due to technical and economic reasons:

- do nothing;
- upgrade part of the existing switchgear to meet the fault current levels;
- install feeder reactors; and
- replace the existing substation.

10. EDTI conducted a participant involvement program within 800 metres of the proposed substation expansion. The participant involvement program involved the delivery of project-specific information packages to local area occupants, residents and landowners within 800 metres of the proposed project; personal consultation, either face-to-face or telephone conversations with landowners directly adjacent; and an open house held in September 2014.

11. EDTI stated that the project would be located on previously disturbed lands within the city of Edmonton. It also stated that there would be no new impacts to terrain, vegetation, wetlands, wildlife habitats, surface water or air quality.

12. EDTI submitted that the Phase II environmental site assessment was completed in 2009 and 2010 at the project expansion site and polychlorinated biphenyl (PCB) testing occurred in locations known to have operated in the vicinity of electrical equipment, which may have contained PCBs. In all cases, PCBs were non-detectable within a detection limit of 0.2 parts per million.

13. Throughout the consultation, EDTI received concerns from local stakeholders with respect to aesthetics, security, project need, AUC application process, the project-specific information package and specific questions from the City of Edmonton's Office of Emergency Management. EDTI submitted that it addressed the concerns and comments and was not aware of any outstanding objections or concerns.

14. In response to the Commission's notice, a statement of intent to participate was received from the City of Edmonton. The city stated that the expansion of Victoria E511S substation was adjacent to the Metro Light Rail Transit (LRT) Line and the Victoria substation services some LRT substations. The city raised concerns with how the expansion would affect service to the LRT substation, whether there would be environmental impacts on the Metro LRT Line and whether there would be any electromagnetic interference that could impact the operation of the light rail vehicles. The city withdrew its statement of intent to participate on February 10, 2015, after discussions with EDTI who addressed its concerns.

3 Findings

15. The Commission considered the application pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*.

16. The Commission observes that EDTI's participant involvement program was conducted through notification and a personal consultation process and that there are no outstanding objections or concerns. The Commission finds that the participant involvement program meets the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines and Industrial Systems Designations and Hydro Developments*.

17. The Commission approves the new 15-kV switchgear equipment. As previously stated in [DA2014-272](#),² the Commission considers 15-kV circuit breakers to be transmission facilities and should be listed in a substation permit and licence.

18. Furthermore, the Commission is satisfied that no environmental impacts are expected from the proposed substation expansion because the construction is to be located on previously disturbed lands.

19. The Commission has reviewed the application and has determined that the technical, siting, and environmental aspects of the substation expansion project have been met.

20. Based on the foregoing, the Commission considers the project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

² DA2014-272: EPCOR Distribution & Transmission Inc., Medium Voltage Switchgear Replacement – Hardisty substation, Application 1611020, Proceeding 3536, December 5, 2014.

4 Decision

21. Pursuant to section 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants EDTI the approval set out in Appendix 1 – Substation Permit and Licence 3478-D02-2015 – February 17, 2015, to alter Victoria E511S substation (Appendix 1 will be distributed separately).

Dated on February 17, 2015.

Alberta Utilities Commission

(original signed by)

Neil Jamieson
Commission Member