



Alberta Utilities Commission

In the Matter of the Need for the Riverview Substation

**And in the matter of the *Electric Utilities Act*, S.A. 2003, c. E-5.1,
the *Alberta Utilities Commission Act*, S.A. 2007, c. A-37.2, the
Hydro and Electric Energy Act, R.S.A. 2000, c. H-16, the
Regulations made thereunder, and
Alberta Utilities Commission Rule 007**

**Application of the Alberta Electric System Operator for
Approval of the
Riverview Substation
Needs Identification Document**

**Riverview Substation
Needs Identification Document**

PART A - APPLICATION

1 Introduction

1.1 Application – Pursuant to Section 34(1)(c) of the *Electric Utilities Act* (Act), and in accordance with further provisions set out in legislation,¹ the Alberta Electric System Operator (AESO) applies to the Alberta Utilities Commission (Commission) for approval of the *Riverview Substation Needs Identification Document* (Application).

1.2 Application Overview – EPCOR Distribution & Transmission Inc. (EDTI),² as the legal owner of an electric distribution system (DFO), has requested system access service to reliably serve growing demand for electricity in southwest (SW) Edmonton (AESO Planning Area 60, Edmonton). EDTI’s request includes a Rate DTS, *Demand Transmission Service*, contract capacity of 24 MW in SW Edmonton. EDTI’s request can be met by adding the Riverview substation in SW Edmonton, including two 240/25 kilovolt (kV) transformers, four 240 kV circuit breakers; and adding two 240 kV circuits to connect the proposed Riverview substation to the existing 240 kV transmission line 1139L³ using an in-and-out configuration (the “Proposed Transmission Development”, as further described in Section 2.2). The scheduled in-service date for the Proposed Transmission Development is October 1, 2019.

This Application describes the need to respond to the DFO’s request for system access service. Having followed the AESO Connection Process,⁴ the AESO has determined

¹ The *Alberta Utilities Commission Act*, S.A. 2007, c. A-37.2, the *Hydro and Electric Energy Act*, R.S.A.2000, c. H-16, the Regulations made thereunder, and Alberta Utilities Commission Rule 007 (AUC Rule 007).

² In this Application, EDTI acts as both the legal owner of the electric distribution system (DFO) and the legal owner of transmission facilities (TFO) as applicable to the specific business functions.

³ The 240 kV transmission line 1139L is currently named the 1043L. After the approved Harry Smith 367S substation is constructed and connected to the Alberta interconnected electric system, with a targeted in-service date of December 5, 2017, the transmission line will be renamed the 1139L. The Harry Smith 367S substation was approved through the *South and West Edmonton Transmission Development Needs Identification Document* (SW Edmonton NID) was originally approved by the Alberta Utilities Commission on May 5, 2014 in Approval No. U2014-183 and Decision 2014-126.

⁴ For information purposes, refer to note iv of Part C of this Application for more information on the AESO Connection Process.

Riverview Substation Needs Identification Document

that the Proposed Transmission Development provides a reasonable opportunity for the DFO to exchange electric energy and ancillary services. The Proposed Transmission Development is consistent with the AESO's long-term plans for the Edmonton Planning Region, which includes SW Edmonton. The AESO, in accordance with its responsibility to respond to requests for system access service, submits this Application to the Commission for approval.^{5,6}

1.3 AESO Directions to the TFOs – During the AESO Connection Process, the AESO issued various directions to AltaLink Management Ltd., in its capacity as general partner of AltaLink, L.P. (AltaLink), and EDTI, both of which are legal owners of transmission facilities (TFOs) in SW Edmonton.⁷

⁵ For information purposes, some of the legislative provisions relating to the AESO's planning duties and duty to provide system access service are referenced in notes i and ii of Part C of this Application.

⁶ Note v of Part C of this Application describes the Application scope in more detail.

⁷ The directions are described in more detail in the following sections of this Application and in Part C, note vi.

**Riverview Substation
Needs Identification Document**

2 Need Overview and Proposed Transmission Development

2.1 Duty to Provide Transmission System Access Service – The AESO, pursuant to its responsibilities under Section 29 of the Act, must provide system access service on the transmission system in a manner that gives all market participants (in this case the DFO), a reasonable opportunity to exchange electric energy and ancillary services.

The AESO, in collaboration with the DFO and the TFOs, has determined that the Proposed Transmission Development is the preferred option to meet the DFO’s request for system access service. The DFO, in executing its duties as defined under Section 105(1)(b) of the Act, has determined that the Proposed Transmission Development will meet its distribution planning criteria and will reliably serve growing demand for electricity in SW Edmonton. The DFO has made the appropriate applications to the AESO to obtain transmission system access service.⁸

Through the AESO Connection Process, the AESO, the DFO, and the TFOs have collaborated to determine the characteristics of the Proposed Transmission Development and to assess the impacts that the Proposed Transmission Development and the associated load would have on the transmission system. The AESO has issued directions to the TFOs to each prepare a transmission facility proposal⁹ (Facility Proposal) to meet the DFO’s request.

2.2 Proposed Transmission Development – The Proposed Transmission Development includes the following elements:

A. Proposed Riverview substation (EDTI development)

1. Add a new point of delivery (POD) substation, to be designated Riverview substation, including two 240/25 kV LTC transformers rated at approximately 75 MVA each, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers.

B. 240 kV circuit connections (joint development by EDTI and AltaLink)

⁸ For information purposes, some of the duties of the DFO are described in note vii of Part C of this Application.

⁹ Also referred to as facility application, or FA, under AUC Rule 007.

Riverview Substation Needs Identification Document

2. Connect the two 240 kV circuits to the existing 240 kV transmission line 1139L using an in-and-out configuration.

C. Associated facilities (EDTI and AltaLink developments)

3. Modify, alter, and or remove equipment, including switchgear, and any operational, protection, control and telecommunication devices required to undertake the work as planned and ensure proper integration with the transmission system.¹⁰

2.3 Proposed Transmission Development Cost Estimate – The AESO directed the TFOs to prepare cost estimates for the Proposed Transmission Development, described in Section 2.2. EDTI has estimated the in-service cost of its scope of work to be approximately \$35 million.¹¹ AltaLink has estimated the in-service cost of its scope of work to be approximately \$4 million.¹² In accordance with the ISO tariff, the AESO has determined that all costs associated with the Proposed Transmission Development will be classified as participant-related.

2.4 Transmission Development Alternatives – This section describes the AESO's process for determining the Proposed Transmission Development and takes into account the fact that the DFO has also informed the AESO that it intends to request system access service to address capacity and reliability concerns on its 25 kV distribution system in southeast (SE) Edmonton in the near future.

¹⁰ Details and configuration of equipment required for the Proposed Transmission Development, including substation single-line diagrams, are more specifically described in the AESO's Functional Specification included in the TFOs Facility Proposals. Also, further details will be determined as detailed engineering progresses and DFO operating requirements are finalized. Routing and/or siting of transmission facilities do not form part of this Application and are addressed in the TFOs' Facility Proposal. The two 240 kV circuits are currently estimated to have a length of approximately 70 metres. This is subject to change as routing and/or siting is finalized by the TFO. Line numbering and substation names provided here are for ease of reference and are subject to change as engineering and design progresses. Distribution facilities that may subsequently be connected to the Proposed Transmission Development are the responsibility of the DFO and are not included in the Application.

¹¹ The EDTI cost is in nominal dollars using a base year of 2016 with escalation considered, at an accuracy level of +20%/-10%. Further details of this cost estimate can be found in Appendix B.

¹² The AltaLink cost is in nominal dollars using a base year of 2017 with escalation considered, at an accuracy level of +20%/-10%. Further details of this cost estimate can be found in Appendix B.

Riverview Substation Needs Identification Document

For the purpose of ensuring transmission system planning efficiency, and given the proximity of the 25 kV distribution system in SW Edmonton to SE Edmonton, the AESO collaborated with EDTI to identify options to meet the DFO's request for system access service while taking into account the DFO's future plans to request system access service to address distribution system concerns in SE Edmonton.

Alternatives Examined for SW and SE Edmonton

In total, six transmission alternatives were examined that address distribution system concerns in SW and SE Edmonton.

1. Upgrade the existing Petrolia substation and add a SE Edmonton substation –
This entails: upgrading the existing Petrolia substation by adding two 240/25 kV transformers, two 240 kV circuit breakers, fourteen 25 kV circuit breakers; adding a POD substation in SE Edmonton (SE Edmonton substation), including two 240/25 kV transformers, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers; and connecting the SE Edmonton substation to the Alberta interconnected electric system (AIES) with approximately 400 metres of 240 kV circuit. This alternative would require the EDTI to expand the existing Petrolia substation, which EDTI has stated is not viable from an environmental and social impact perspective and; therefore, was not selected for further examination.

2. Upgrade the existing Jasper substation and add a SE Edmonton substation –
This entails: upgrading the existing Jasper substation by adding two 240/25 kV transformers, two 240 kV circuit breakers, and fourteen 25 kV circuit breakers; adding a SE Edmonton substation, including two 240/25 kV transformers, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers; and connecting the SE Edmonton substation to the AIES with approximately 400 metres of 240 kV circuit. EDTI has advised that there is not enough space within or surrounding the Jasper substation to allow for expansion; therefore, this alternative was deemed not viable from a TFO perspective and was not selected for further examination.

Riverview Substation Needs Identification Document

3. Upgrade the existing Summerside and Poundmaker substations and add a SE Edmonton substation – This entails: upgrading the existing Summerside substation by adding a third 240/25 kV transformer, one 240 kV circuit breaker, and seven 25 kV circuit breakers; upgrading the existing Poundmaker substation by adding a third 240/25 kV transformer, one 240 kV circuit breaker, and eight 25 kV circuit breakers; adding a SE Edmonton substation, including adding two 240/25 kV transformers, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers; and connecting the SE Edmonton substation to the AIES with approximately 400 metres of 240 kV circuit. This alternative was selected for further examination.

4. Add the proposed Riverview substation in SW Edmonton and upgrade the existing Summerside substation – This entails: adding a new POD substation in SW Edmonton, to be called the Riverview substation, including two 240/25 kV transformers, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers; connecting the proposed Riverview substation to the existing 240 kV transmission line 1139L using an in-and-out configuration with two 240 kV circuits, each approximately 70 metres in length; upgrading the existing Summerside substation, including adding one 240/25 kV transformer, one 240 kV circuit breaker, and six 25 kV circuit breakers. This alternative was selected for further examination.

5. Add the proposed Riverview substation and add a SE Edmonton substation – This entails: adding a new POD substation in SW Edmonton, to be called the Riverview substation, including two 240/25 kV transformers, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers; connecting the proposed Riverview substation to the existing 240 kV transmission line 1139L using an in-and-out configuration with two 240 kV circuits, each approximately 70 metres in length; adding a SE Edmonton substation, including two 240/25 kV transformers, four 240 kV circuit breakers, fourteen 25 kV circuit breakers; and connecting the

Riverview Substation Needs Identification Document

SE Edmonton substation to the AIES with approximately 400 metres of 240 kV circuit. This alternative was selected for further examination.

6. Upgrade the existing Summerside and Poundmaker substations – This entails: upgrading the existing Summerside substation, including replacing the two existing 240/25 kV transformers with two 240/25 kV transformers of higher capacity and adding a third 240/25 kV transformer, one 240 kV circuit breaker, twenty-eight 25 kV circuit breakers; and upgrading the existing Poundmaker substation, including adding one 240/25 kV transformer, one 240 kV circuit breaker, and eight 25 kV circuit breakers. This alternative was selected for further examination.

Transmission Alternatives Selected for Further Examination

Transmission Alternatives 3, 4, 5, and 6 were selected for further examination, which included the preparation of cost estimates described herein.¹³

2.5 Cost Estimates for the Examined Alternatives Selected – The AESO requested that the TFOs and the DFO prepare cost estimates for the transmission alternatives selected for further examination.¹⁴

For Transmission Alternative 3, described in Section 2.4, EDTI estimated the in-service cost of its transmission scope of work is approximately \$62 million and the in-service cost of its distribution scope of work is approximately \$115 million. Therefore, the total estimated in-service cost of Transmission Alternative 3 is approximately \$177 million.

For Transmission Alternative 4, described in Section 2.4, EDTI has estimated the in-service cost of its transmission scope of work is approximately \$47 million; AltaLink estimated that the in-service cost of its transmission scope of work is approximately \$4

¹³ The DFO also examined and ruled out load shifting and distribution system upgrades, as detailed in Sections 4 and 5 of the DFO's Distribution Deficiency Report, which is included as Appendix E.

¹⁴ All EDTI costs presented in Section 2.5 are expressed in nominal dollars using a base year of 2016 with escalation considered, at an accuracy level of +50%/-30%. All AltaLink costs presented in Section 2.5 are expressed in nominal dollars using a base year of 2017 with escalation considered, at an accuracy level of +20%/-10%. Further details of these cost estimates can be found in Appendix B.

Riverview Substation Needs Identification Document

million; and EDTI has estimated that the in-service cost of its distribution scope of work is approximately \$88 million. Therefore, the total estimated in-service cost of Transmission Alternative 4 is approximately \$138 million.

For Transmission Alternative 5, described in Section 2.4, EDTI has estimated that the in-service cost of its transmission scope of work is approximately \$69 million; AltaLink as estimated that the in-service cost of its transmission scope of work is approximately \$4 million; and EDTI has estimated that the in-service cost of its distribution scope of work is approximately \$71 million. Therefore, the total estimated in-service cost of Transmission Alternative 5 is approximately \$144 million.

For Transmission Alternative 6, described in Section 2.4, EDTI has estimated that the in-service cost of its transmission scope of work is approximately \$52 million; and its in-service cost of its distribution scope of work is approximately \$132 million. Therefore, the total estimated in-service cost of Transmission Alternative 6 is approximately \$184 million.

The total estimated in-service cost of Transmission Alternative 3 and Transmission Alternative 6 exceeds the total estimated in-service cost of Transmission Alternative 4 and Transmission Alternative 5; therefore, Transmission Alternatives 3 and 6 were not selected for further study.

Transmission Alternative 4 and Transmission Alternative 5 were selected for further study. For the purpose of responding to the DFO's request for system access service described in Section 1.2, that is to reliably serve growing demand for electricity in SW Edmonton, Transmission Alternative 4 and Transmission Alternative 5 are equal in scope. Transmission Alternative 4 and Transmission Alternative 5 both include adding the proposed Riverview substation in SW Edmonton and connecting it to the AIES. Transmission Alternative 4 and Transmission Alternative 5 differ in terms of the transmission development examined to address the distribution system concerns in SE Edmonton, which the DFO has indicated will be the subject of a forthcoming request for system access service. These transmission developments will be further examined by the AESO at that time.

Riverview Substation Needs Identification Document

For the purposes of this application, the Proposed Transmission Development described in Section 2.2 was selected for further study. The Proposed Transmission Development includes adding the proposed Riverview substation and connecting it to the existing 240 kV transmission line 1139L using an in-and-out configuration.

2.6 Connection Assessment – Power flow and voltage stability studies were conducted to assess the impact that the Proposed Transmission Development and the associated loads would have on the transmission system.¹⁵ Power flow analysis was conducted prior to and following connection of the Proposed Transmission Development, and voltage stability analysis was performed following connection of the Proposed Transmission Development. These analyses indicate that the Proposed Transmission Development and the associated load will not adversely impact the transmission system performance.

2.7 AESO Forecast and Transmission System Plans – The AESO’s corporate forecast for the Edmonton Planning Region is consistent with the load associated with the Proposed Transmission Development.¹⁶ The AESO’s corporate forecasts are used by the AESO to assess the adequacy of the regional transmission system and as a basis for identifying the need for transmission system expansion or enhancement. Therefore, the need associated with the Proposed Transmission Development is consistent with the AESO’s long-term plans for this region.

2.8 Transmission Dependencies – The Proposed Transmission Development does not require the completion of any other AESO plans to expand or enhance the transmission system prior to connection.

2.9 AESO Participant Involvement Program – The AESO directed the TFOs to assist the AESO in conducting a participant involvement program (PIP). Between November 2016 and October 2017, the TFO and the AESO used various methods to

¹⁵ The connection assessment is included as Appendix A.

¹⁶ The *AESO 2017 Long-term Outlook* discusses the Edmonton Planning Region, which includes the Proposed Transmission Development area.

**Riverview Substation
Needs Identification Document**

notify stakeholders about the need for development and the AESO's preferred option to respond to the system access service request. In November 2017, the AESO notified stakeholders of its intention to file this Application with the Commission. The AESO is not aware of any concerns or objections that have been raised regarding the need for the Proposed Transmission Development or the AESO's preferred option to respond to the system access service request.¹⁷

2.10 Information Regarding AUC Rule 007, Section 6.2.1, NID15(2) – The AESO has been advised that the TFOs' Facility Proposal addresses the requirements of AUC Rule 007, Section 6.2.1, NID15(2).¹⁸ In consideration of that fact, and as the filing of the Application is combined with the TFOs' Facility Proposals, the AESO has not undertaken a separate assessment of the sort contemplated in AUC Rule 007, Section 6.2.1, NID15(2).

2.11 Confirmation Date – In the event that the proposed facilities are not in service by April 1, 2020, which is six months following the scheduled in-service date of October 1, 2019, the AESO will inform the Commission in writing if the need to expand or enhance the transmission system described in this Application continues, and if the technical solution described in this Application approval continues to be the AESO's preferred technical solution.¹⁹

2.12 Approval is in the Public Interest – Having regard to the following:

- the transmission planning duties of the AESO as described in Sections 29, 33 and 34 of the Act;
- the request for system access service;
- the DFO's Distribution Deficiency Report and Supplement;
- the connection assessment;

¹⁷ Further information regarding the AESO's PIP for this Application is included in Appendix C.

¹⁸ Please refer to the letter included as Appendix D of this Application.

¹⁹ A detailed project schedule, which includes potential limitations or constraints as contemplated in AUC Rule 007, NID17(2), can be found in the TFOs' Facility Proposals.

**Riverview Substation
Needs Identification Document**

- the cost estimates for the Proposed Transmission Development and selected examined alternatives;
- information obtained from AESO PIP activities; and
- the AESO's long-term transmission system plans;

it is the conclusion of the AESO that the Proposed Transmission Development provides a reasonable opportunity for the market participant to exchange electric energy and ancillary services. In consideration of these factors, the AESO submits that approval of this Application is in the public interest.

**Riverview Substation
Needs Identification Document**

3 Request to Combine this Application with the Facility Proposal for Consideration in a Single Process

3.1 Pursuant to Subsection 35(1) of the Act, the AESO has directed each TFO to prepare a Facility Proposal to meet the need identified. The AESO understands that the TFOs' Facility Proposals will be filed shortly.²⁰ The AESO requests, and expects the TFOs will request, that this Application be combined with the Facility Proposals for consideration by the Commission in a single process. This request is consistent with Section 15.4 of the *Hydro and Electric Energy Act* and Section 6 of AUC Rule 007.

3.2 While it is believed that this Application and the Facility Proposals will be materially consistent, the AESO respectfully requests that in its consideration of both, the Commission be mindful of the fact that the documents have been prepared separately and for different purposes. The purpose of this Application is to obtain approval of the need to respond to the DFO's request for system access service and provide a preliminary description of the manner proposed to meet that need. In contrast, the Facility Proposals will contain more detailed engineering and designs for the Proposed Transmission Development and seek approval for the construction and operation of specific facilities.

²⁰ The AESO understands that AltaLink intends to file a Facility Proposal relating to this Application to be titled *EPCOR Riverview Substation Connection*. The AESO understands that EDTI intends to file a Facility Proposal relating to this Application to be titled *Riverview Substation New POD*.

**Riverview Substation
Needs Identification Document**

4 Relief Requested

4.1 The AESO submits that its assessment of the need to meet the market participant's request for transmission system access service is technically complete and that approval is in the public interest.

4.2 In the event that the proposed facilities are not in service by April 1, 2020, which is six months following the scheduled in-service date of October 1, 2019, the AESO will inform the Commission in writing if the need to expand or enhance the transmission system described in this Application continues, and if the technical solution described in this Application approval continues to be the AESO's preferred technical solution.

4.3 For the reasons set out herein, and pursuant to Section 34 of the Act, the AESO requests that the Commission approve this Application, including issuing an approval of the need to respond to the market participant's request for system access service, and for transmission developments, as follows:

- A. Add a 240/25 kV POD substation, designated as Riverview substation, including two 240/25 kV LTC transformers rated at approximately 75 MVA, four 240 kV circuit breakers, and fourteen 25 kV circuit breakers;
- B. Add two 240 kV circuits to connect the proposed Riverview substation and the existing 240 kV transmission line 1139L using an in-and-out configuration; and
- C. Modify, alter, add or remove equipment, including switchgear, and any operational, protection, control and telecommunication devices required to undertake the work as planned and ensure proper integration with the transmission system.

**Riverview Substation
Needs Identification Document**

All of which is respectfully submitted this 22nd day of November 2017.

Alberta Electric System Operator

“Electronically Submitted”

Kelly Yagelniski
Director, Transmission Program Support

**Riverview Substation
Needs Identification Document**

PART B – APPLICATION APPENDICES

The following appended documents support the Application (Part A).

APPENDIX A **Connection Assessment** – Appendix A contains the *Engineering Study Report EPCOR Riverview Substation New POD* that assesses the transmission system performance prior to and following the connection of the Proposed Transmission Development.

APPENDIX B **TFO Capital Cost Estimates** – Appendix B contains detailed cost estimates corresponding to the Proposed Transmission Development and selected alternatives examined. The Proposed Transmission Development estimates have been prepared by the applicable TFO at the direction of the AESO, to an accuracy level of +20%/-10%, which exceeds the accuracy required by AUC Rule 007, NID16. The selected alternatives examined have been prepared by the applicable TFO to an accuracy level of +50%/-30%.

APPENDIX C **AESO PIP** – Appendix C contains a summary of the PIP activities conducted, in accordance with requirement NID19 and Appendix A2 of AUC Rule 007, regarding the need to respond to the market participant's request for system access service. Copies of the relevant materials distributed during the PIP are attached for reference.

APPENDIX D **TFO Information Regarding AUC Rule 007, Section 6.2.1, NID15(2)** – Appendix D contains letters provided by the TFOs confirming that the requirements of AUC Rule 007, NID15(2) will be addressed within the TFOs' Facility Proposal.

APPENDIX E **DFO Distribution Deficiency Report and Supplement** – Appendix E contains the DFO's *Distribution Deficiency Report for Riverview Service Area* that provides information in support of the DFO's request for system access service, including describing the need for development; also included is a supplement that provides the latest available load forecast related to the development area.

**Riverview Substation
Needs Identification Document**

APPENDIX F **AESO Transmission Planning Criteria – Basis and Assumptions** – Appendix F contains the *Transmission Reliability Criteria, Version 1*, which includes the applicable thermal and voltage limits in support of the Transmission Planning (TPL) standards.²¹ Planning studies that are included in this Application meet the relevant performance requirements of the specified TPL standards (TPL-001-AB-0 and TPL-002-AB-0).

²¹ TPL Standards are included in the current Alberta Reliability Standards.

**Riverview Substation
Needs Identification Document**

PART C – REFERENCES

- i. **AESO Planning Duties and Responsibilities** – Certain aspects of AESO’s duties and responsibilities with respect to planning the transmission system are described in the Act. For example, Section 17, Subsections (g), (h), (i), and (j), describe the general planning duties of the AESO.²² Section 33 of the Act states that the AESO “must forecast the needs of Alberta and develop plans for the transmission system to provide efficient, reliable, and non-discriminatory system access service and the timely implementation of required transmission system expansions and enhancements.” Where, as in this case, the market participant (refer to note ii below) is requesting system access service to meet its distribution planning needs, and the request requires or may require the expansion or enhancement of the capability of the transmission system, the AESO must prepare and submit for Commission approval, as per Section 34(1)(c), a needs identification document that describes the need to respond to requests for system access service, including the assessments undertaken by the AESO regarding the manner proposed to address that need. Other aspects of the AESO’s transmission planning duties and responsibilities are set out in Sections 8, 10, 11, and 15 of the *Transmission Regulation*.
- ii. **Duty to Provide Transmission System Access** – Section 29 of the Act states that the AESO “must provide system access service on the transmission system in a manner that gives all market participants [the DFO in this case] wishing to exchange electric energy and ancillary services a reasonable opportunity to do so.”
- iii. **AESO Planning Criteria** – In accordance with the Act, the AESO is required to plan a transmission system that satisfies applicable reliability standards. Transmission Planning (TPL) standards are included in the Alberta Reliability Standards, and are generally described at: <https://www.aeso.ca/rules-standards-and-tariff/alberta-reliability-standards>²³

In addition, the AESO’s *Transmission Planning Criteria – Basis and Assumptions* is included in Appendix F.

²² The legislation and regulations refer to the Independent System Operator or ISO. "AESO" and "Alberta Electric System Operator" are the registered trade names of the Independent System Operator.

²³ This link is provided for ease of reference and does not form part of this Application.

Riverview Substation Needs Identification Document

- iv. **AESO Connection Process** – For information purposes, the AESO Connection Process, which changes from time to time, is generally described at: <https://www.aeso.ca/grid/connecting-to-the-grid/connection-process>²⁴
- v. **Application for Approval of the Need to Respond to a Request for System Access Service** – This Application is directed solely to the question of the need to respond to a request for system access service, as more fully described in the Act and the *Transmission Regulation*. This Application does not seek approval of those aspects of transmission development that are managed and executed separately from the needs identification document approval process. Other aspects of the AESO’s responsibilities regarding transmission development are managed under the appropriate processes, including the ISO rules, Alberta reliability standards and the ISO tariff, which are also subject to specific regulatory approvals. While the Application or its supporting appendices may refer to other processes or information from time to time, the inclusion of this information is for context and reference only.
- Any reference within the Application to market participants or other parties and/or the facilities they may own and operate or may wish to own and operate, does not constitute an application for approval of such facilities. The responsibility for seeking such regulatory or other approval remains the responsibility of the market participants or other parties.
- vi. **Directions to the TFOs** – Pursuant to Subsection 35(1) of the Act, the AESO has directed the applicable TFOs to prepare a Facility Proposals to meet the need identified. The Facility Proposals are also submitted to the Commission for approval. The TFOs have also been directed by the AESO under Section 39 of the Act to prepare service proposals to address the need for the Proposed Transmission Development. The AESO has also directed the TFOs, pursuant to Section 39 of the Act and Section 14 of the *Transmission Regulation*, to assist in the preparation of the AESO’s Application.
- vii. **Duties of DFOs** – The duties of DFOs to make decisions about building, upgrading and improving their electric distribution systems are described in Section 105(1)(b) of the Act. The DFO, being responsible for electric distribution system planning, determines its need for transmission system access service based on its own distribution planning guidelines and criteria. While the DFO’s plans are considered during the AESO Connection Process, the AESO, in executing its duties to plan the transmission system, does not oversee electric distribution planning or the development of specific DFO planning criteria. The AESO does, however, review

²⁴ This link is provided for ease of reference and does not form part of this Application.

Riverview Substation Needs Identification Document

the DFO forecasts that are submitted to the AESO, which may be considered in the preparation of the AESO's corporate forecasts.

- viii. **Capital Cost Estimates** – The provision of capital costs estimates in the Application is for the purposes of relative comparison and context only. The requirements applicable to cost estimates that are used for transmission system planning purposes are set out in Section 25 of the *Transmission Regulation*, AUC Rule 007, and Section 504.5 of the ISO rules, *Service Proposals and Cost Estimating*.