Information Document
Determination of Rate STS, Rate DTS and Metering Levels for a Distribution Facility Owner
No. 2018-019T

Information Documents are not authoritative. Information Documents are for information purposes only and are intended to provide guidance. In the event of any discrepancy between an Information Document and any Authoritative Document(s)[1] in effect, the Authoritative Document(s) governs.

1 Purpose

This Information Document relates to the following Authoritative Document:

- Rate DTS of the ISO tariff, *Demand Transmission Service* ("Rate DTS"); and
- Rate STS of the ISO tariff, *Supply Transmission Service* ("Rate STS").

The purpose of this Information Document is to provide information regarding the point of supply ("POS") and point of delivery ("POD") at which the AESO applies Rate STS and Rate DTS, respectively.

2 Background

The AESO has determined that additional clarity should be provided in regards to the appropriate contract capacity for Rate STS and Rate DTS for a distribution facility owner ("DFO") at a substation, in light of an increase in distribution-connected generation, and the increasing number of system access service requests ("SASRs") being received by the AESO from DFOs requesting system access service under Rate STS.

Rate STS currently applies to system access service at the point of supply, meaning that electricity flowing onto the transmission system is to be calculated and measured at the demarcation point between the transmission system and the applicable electric distribution system. The AESO considers the distribution feeders (energized at 25 kV or less) exiting the substation to be transmission facilities, as defined in the *Electric Utilities Act*. As such, the AESO considers the demarcation point between the transmission system and an electric distribution system to be the feeders exiting the substation.[2]

In the AESO's view, there have been inaccurate assessments of contract capacity and metering levels for system access service under Rate DTS and Rate STS at substations due to the totalizing of system access service under Rate DTS and Rate STS at the 138 kV bus level or the high side of the transformer, instead of at the feeder level.

Inaccurate contract capacity and metering levels for system access service under Rate DTS and Rate STS impact generating unit owner's contribution ("GUOC") payments, DTS billing determinants and substation fraction calculations. Substation fraction calculations are used in determining the allocation of connection costs as either demand or supply related, the appropriate DTS investment levels, and in calculating the monthly POD charge.

Therefore, the AESO is providing further clarity regarding how system access service for Rate STS and Rate DTS and metering levels should be calculated and measured, to ensure that: (i) the ISO tariff is applied correctly and consistently; and (ii) there is fair and consistent treatment between transmission and distribution-connected generation.

The AESO's practice, outlined in section 3 below, is intended to ensure the following:

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[1] "Authoritative Documents" is the general name given by the AESO to categories of documents made by the AESO under the authority of the *Electric Utilities Act* and regulations, and that contain binding legal requirements for either market participants or the AESO, or both. AESO Authoritative Documents include: the ISO rules, the Alberta reliability standards, and the ISO tariff.

[2] Relevant provisions from the ISO tariff and *Electric Utilities Act* can be found in Appendix 2.

- Consistent and fair treatment between transmission and distribution-connected generation. Generally, whether generation connects to the transmission system or the electric distribution system, the impact on and the benefits received from the transmission system are the same. Similarly, the AESO considers that there should be no economic advantage that can be achieved by a generator that connects to the transmission system versus the electric distribution system, or vice versa. For example, a distribution-connected generator should not receive distribution derived transmission credits (resulting from totalizing Rate DTS and Rate STS), lower GUOC payments, or avoid a transmission remedial action scheme ("RAS") by virtue of it being connected to the electric distribution system. Any inconsistent tariff treatment between transmission and distribution-connected generators may lead to "tariff shopping" by generators in some circumstances.
- POD transmission facilities and costs, which historically have generally been utilized or incurred for load connections, can be reviewed such that the substation fraction (i.e., substation split between generation and load) at each POD is properly calculated to determine the impact on AESO investment and monthly POD charges.
- Contract capacity under Rate STS and Rate DTS, as well as the GUOC (which is based on the contract capacity for system access service under Rate STS), are reflective of the flow of electric energy onto or out of the transmission system (i.e., these flows are not totalized).
- For large additions of distributed-connected generation, the AESO requires feeder-level information for forecasting and planning purposes.

The practice outlined in section 3 below will not be applied when a DFO submits a SASR for an industrial complex with on-site generation and load that is directly connected to the transmission system. In this circumstance, Rate STS and Rate DTS will continue to be totalized at the POD level.

3 Determination of Rate STS and Rate DTS and metering levels for a DFO

The following practice will be applied by the AESO on a go-forward basis:

- A DFO contract for system access service under Rate STS will be based on the sum of the feeder flows into the bus (i.e., the generation flows onto the transmission system).
- A DFO contract for system access service under Rate DTS will be based on the coincident sum of the feeder flows out of the bus (i.e., the demand flows out of the transmission system).
    - The demand (under Rate DTS) and supply (under Rate STS) will be corrected so that demand and supply flows are not totalized at the POD (or transformer) level. The contract for system access service under Rate DTS and Rate STS and metering will be based on the flows at the feeder level. This will allow for correct contract capacity and metering levels for the purposes of correctly calculating and collecting the GUOC , customer contributions decisions ("CCD's"), assessing POD charges, and assessing bulk/regional charges.
- The AESO will complete planning studies for a SASR submitted by a DFO requesting system access service under Rate STS where the inflow onto the transmission system is greater than 5 MW. For purposes of any RAS requirements, a distribution-connected generator will be treated the same as a transmission-connected generator.

4 Implementation

The practice outlined in section 3 above will be implemented as follows (and is further summarized in Appendix 1).

4.1 Metering/STS/DTS

System access service under Rate STS and Rate DTS will not be totalized at a POD level.

A single contract for system access service under Rate DTS may cover all flows on feeders out of the substation, and a single contract for system access service under Rate STS may cover all flows on feeders into the substation, unless the DFO requests individual or multiple contracts at the feeder level.

New distribution-connected generation projects will be studied at minimum feeder load levels to determine expected maximum generation feeder flows onto the transmission system such that an appropriate contract capacity for system access service under Rate STS is established.

Most DFOs have appropriate metering installed at the feeder level such that the above may be implemented. However, where this is not the case, the AESO will consider an appropriate solution on a case-by-case basis.

All new measurement point definition records ("MPDRs") are designed to reflect the above metering configurations (i.e., metering at the feeder level). Appendix 3 provides a general depiction of how the metering configuration will be applied.

4.2 GUOC

The AESO will continue to calculate GUOC for a DFO based on the contract capacity for system access service under Rate STS. However, if the contract capacity for system access service under Rate STS changes solely as a result of this new practice (i.e., no actual new incremental generation is being added), no additional GUOC amounts would be assessed. For example, an incremental generation addition from 10 MW to 12 MW (and corresponding contract capacity increase for system access service under Rate STS from 10 to 12 MW) would result in an incremental GUOC payment based on 2 MW. Whereas, in the case where the contract capacity for system access service under Rate STS increases from 10 MW to 12 MW due to the summing of only the feeders serving generation (i.e., no new generation is added on the distribution system), no additional GUOC amounts would be assessed.

4.3 Substation fraction

In general, the substation fraction will only be adjusted to reflect the incremental contract capacity changes for system access service under Rate STS or Rate DTS due to a new SASR. For example, a contract capacity change that is the result of this new practice (i.e., no new SASR), consistent with the above, will not result in a new substation fraction calculation being applied.

4.4 DTS Billing and Construction Contribution Decision (CCD) investment levels

The adjustment of the substation fraction for a POD and POS may result in the adjustment of investment levels and monthly DTS billing. Generally, the addition of system access service under Rate STS to an existing substation may result in a reduction in the AESO investment level and a corresponding reduction in monthly DTS billing charges. Sample calculations are provided in Appendix 4 below.

In cases where the contract capacity for system access service under Rate STS increases at a POD (as a result of a contract capacity change or new contract) and there has been investment at the POD in the last 20 years, the eligible investment is reduced accordingly and the DFO will be required to refund part of the previously calculated investment.

5 The 2018 comprehensive ISO tariff application

In its 2018 comprehensive ISO tariff application, the AESO has proposed revisions to the ISO tariff to explicitly incorporate and address the practice described above.[3] However, it is the AESO's view that the existing ISO tariff already supports the adoption of the practice.

Additionally, the AESO has proposed in its 2018 comprehensive ISO tariff application that:

[3] Alberta Utilities Commission Proceeding 22942, Exhibits X0002.01 and X0014.01.

- GUOC be paid by the legal owner of a distribution-connected generator (rather than the DFO) and based on the maximum capability of that generator (i.e., GUOC would no longer be based on the DFO contract capacity for system access service under Rate STS); and
- DFOs be required to provide additional, detailed information with regards to distribution-connected generator that is connected to each distribution feeder.

Revision History

Posting Date	Description
2018-05-24	Clarifying amendments to subsections 2 and 3 and Appendix 4; Addition of Appendix 5.
2018-05-03	Initial release

Appendix 1: Implementation Plan

	Timing	MPDR	Contract capacity DTS/STS	GUOC	Substation Fractions (SF)
Current Substation Configuration	Status Quo Today	Existing MPDRs were on substation or transformer basis.	• DTS/STS totalized at the POD (substation level) or transformer level; • one or multiple STS per substation, and • STS contract may not be reflective of energy flow on to the transmission system as it is totalized with DTS.	• GUOC based on STS contract capacity, and • GUOC paid by DFO.	• Based on contract capacity for STS and DTS.
Active SASR	**SASR received prior to 2018/05/15** As per AESO's project list: • If the project changes its ISD greater than 1 year from the ISD then the project will be considered a "New SASR" for DTS/STS contract and metering purposes. • If the project changes its size or location, then the project will be considered a "New SASR" for DTS/STS contract and metering purposes.	The AESO is continuing to evaluate this aspect of the practice.	• DTS/STS totalized on a transformer basis; • one or multiple STS per substation; and • STS contract may not be reflective of energy flow on to the transmission system as it is totalized with DTS.	• GUOC based on STS contract level; • GUOC paid by DFO; and • If there is an existing STS at the POD, GUOC will only be paid on the incremental generation added.	• DTS Monthly POD Charge and Customer Contribution (CCD) based on incremental contract capacity for DTS and STS.
New SASR **(new practice, outlined in section 3 above, is applicable)**	**SASR received on or after 2018/05/15**	All new or Revised MPDRs will be on feeder basis, adjustments may be required for sites with existing STS.	• One or multiple separate DTS/STS per substation • STS separately totalized on feeder basis; and • DTS separately totalized on feeder basis.	• GUOC based on STS contract level; • GUOC paid by DFO; and • If there is an existing STS at the POD, GUOC will only be paid on the incremental generation added.	• DTS Monthly Connection Charge and Customer Contribution (CCD) based on incremental contract capacity for DTS and STS.

Appendix 2: Relevant Excerpts from the ISO Tariff and the Electric Utilities Act

ISO Tariff

The relevant provision from Rate STS of the ISO Tariff includes:

Applicability

1(1) Rate STS applies to **system access service** provided at a **point of supply** to:

(d) the **legal owner** of an **electric distribution system** where a **generating unit** or an **aggregated generating facility** connected to the **electric distribution system** results in electricity flowing into the **transmission system**; or

Electric Utilities Act

The relevant definitions from the *Electric Utilities Act* include:

1(1)(m) "electric distribution system" means the plant, works, equipment, systems and services necessary to distribute electricity in a service area, but does not include a generating unit or a transmission facility.

1(1)(ccc) "transmission system" means all transmission facilities in Alberta that are part of the interconnected electric system.

1(1)(bbb) "transmission facility" means an arrangement of conductors and transformation equipment that transmits electricity from the high voltage terminal of the generation transformer to the low voltage terminal of the step down transformer operating phase to phase at a nominal high voltage level of more than 25 000 volts to a nominal low voltage level of 25 000 volts or less, and includes

(i) transmission lines energized in excess of 25000 volts,

(ii) insulating and supporting structures,

(iii) substations, transformers and switchgear,

(iv) operational, telecommunication and control devices,

(v) all property of any kind used for the purpose of, or in connection with, the operation of the transmission facility, including all equipment in a substation used to transmit electric energy from

(A) the low voltage terminal,

to

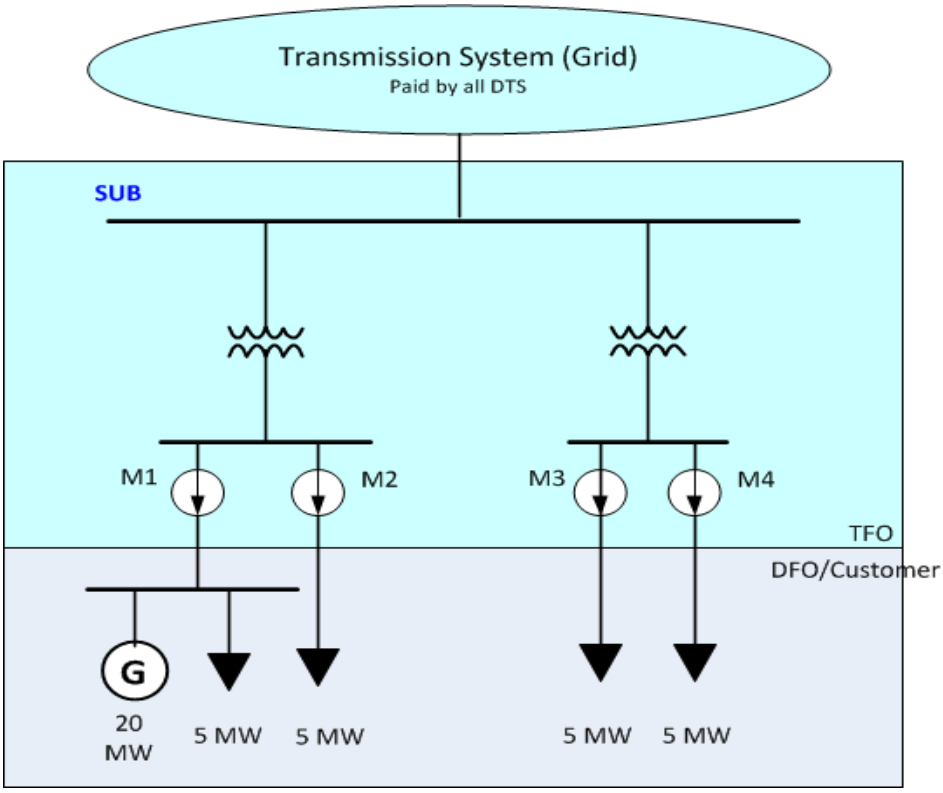
(B) electric distribution system lines that exit the substation and are energized at 25 000 volts or less,

and

(vi) connections with electric systems in jurisdictions bordering Alberta,

but does not include a generating unit or an electric distribution system.

Appendix 3: Metering Configuration



Rate STS:

The new formula for distribution generation flow will be as follows:

MPXSTS= {G1}(-M1) + {G2}(-M2) + {G3} (-M3) + {G4} (-M4)

- If M1 < 0, {G1} = 1; Otherwise, {G1} = 0
- If M2 < 0, {G2} = 1; Otherwise, {G2} = 0
- If M3 < 0, {G3} = 1; Otherwise, {G3} = 0
- If M4 < 0, {G4} = 1; Otherwise, {G4} = 0

Rate DTS:

The new formula for load will be as follows:

MPXDTS = {L1}(M1) + {L2} (M2) + {L3} (M3) + {L4} (M4)

- If M1 > 0, {L1} = 1; Otherwise, {L1} = 0
- If M2 > 0, {L2} = 1; Otherwise, {L2} = 0
- If M3 > 0, {L3} = 1; Otherwise, {L3} = 0
- If M4 > 0, {L4} = 1; Otherwise, {L4} = 0

Appendix 4: Sample calculation of investment level and monthly DTS billing

Examples:	No Rate STS	Addition of Rate STS	Notes	
Example 1 - Addition of 30 MW Rate STS				
Contribution/Investment				
Project cost	$ 7,390,016	$ 7,390,016		
Less for replaced transformer (RCN)	$ (1,400,000)	$ (1,400,000)		
Participant-related costs	**$ 5,990,016**	**$ 5,990,016**		
Original DTS (MW)	23.9	23.9		
Incremental Added DTS (MW)	15.4	15.4		
Total DTS (MW)	**39.3**	**39.3**		
STS (MW)	**0.0**	**30.0**		
Load Factor	93%	93%		
Investment	$ 2,340,800	$ 1,559,250		
Construction Contribution Required	**$ 3,649,216**	**$ 4,430,766**	**$ 781,550**	Additional contribution required when STS added (i.e investment level is reduced)
Monthly DTS Bill				
DTS Bill (per month)	$ 503,000	$ 483,754	**$ (230,952)**	Annual savings with STS added
			3	years simple pay back
Example 2 - Addition of 10 MW STS				
Contribution/Investment				
Project cost	$ 7,390,016	$ 7,390,016		
Less for replaced transformer (RCN)	$ (1,400,000)	$ (1,400,000)		
Participant-related costs	**$ 5,990,016**	**$ 5,990,016**		
Original DTS (MW)	23.9	23.9		
Incremental Added DTS (MW)	15.4	15.4		
Total DTS (MW)	**39.3**	**39.3**		
Investment	$ 2,340,800	$ 1,964,560		
Construction Contribution Required	**$ 3,649,216**	**$ 4,025,456**	**$ 376,240**	Additional contribution required when STS added (i.e investment level is reduced)
Monthly DTS Bill				
DTS Bill (per month)	$ 503,000	$ 495,538	**$ (89,546)**	Annual savings with STS added
			4	year simple pay back

Appendix 5: Snapshot of the Project List on May 15, 2018

AESO Connection Project List

Generates the Project List that is posted to the AESO website, and contains all Connection projects, BTF Projects and Contract changes that have passed Gate 0 and are not yet in service.

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
462	Enel Alberta Castle Rock Wind Farm	2	Connection	53-Fort Macleod	30.6	0	Wind	5	Jun 30, 2019	Jan 5, 2005
479	Naturener Wild Rose 1 Wind Farm	1	Connection	4-Medicine Hat	210	6	Wind	5	Jul 15, 2019	May 12, 2005
515	Heritage Wind Energy Centre	1	Connection	53-Fort Macleod	350	0	Wind	3	Oct 15, 2018	Sep 22, 2005
513	Pteragen Peace Butte 116 MW Wind Farm	1	Connection	4-Medicine Hat	116.4	0.1	Wind	5	Dec 1, 2019	Oct 14, 2005
524	Enel Alberta Riverview Wind Farm	1	Connection	53-Fort Macleod	115	1	Wind	4	Jun 30, 2019	Jan 25, 2006
580	Windy Point WAGF	1	Connection	53-Fort Macleod	63	0.6	Wind	4	Sep 17, 2019	May 12, 2006
635	Suncor Hand Hills Wind Energy Project	1	Connection	42-Hanna	80	0.1	Wind	5	Jan 28, 2020	Oct 6, 2006
678	BluEarth Hand Hills Wind Project	1	Connection	42-Hanna	78.2	0	Wind	5	Jan 21, 2020	Jan 15, 2007
693	Naturener Wild Rose 2 Wind Farm	1	Connection	4-Medicine Hat	189	6	Wind	5	Jul 15, 2019	Apr 3, 2007
851	TransCanada Keystone KXL Pumpstation #2-Eyre	1	Connection	37-Provost	0	0	Load	5	Nov 1, 2020	Aug 22, 2008
851	TransCanada Keystone KXL Pumpstation #2-Eyre	2	Connection	37-Provost	0	25	Load	5	Nov 1, 2020	Aug 22, 2008
863	TransCanada Keystone KXL Pumpstation #3-Current	1	Connection	42-Hanna	0	25	Load	5	Nov 1, 2020	Oct 8, 2008
864	TransCanada Keystone KXL Pumpstation #4-Armitage	1	Connection	42-Hanna	0	25	Load	5	Nov 1, 2020	Oct 8, 2008
865	TransCanada Keystone KXL Pumpstation #5-Cavendish	1	Connection	48-Empress	0	25	Load	5	Nov 1, 2020	Oct 8, 2008
937	Irma Wind Power	1	Connection	32-Wainwright	90	3	Wind	4	Jul 1, 2019	Jun 11, 2009
1080	Old Elm Wind Farm	1	Connection	55-Glenwood	60	0	Wind	3	Jun 8, 2020	Apr 29, 2010
1250	E.ON Grizzly Bear Wind	1	Connection	13-Lloydminster	120	1.5	Wind	5	Sep 1, 2019	Aug 2, 2011
1258	Fortis Alberta Grist Lake (Pike) Substation	1	Connection	25-Fort McMurray	0	23.2	Load	6	Jul 1, 2020	Aug 30, 2011

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
803	Mustus Energy Biomass Generator	1	Connection	18-High Level	41.5	0	Biomass	5	Sep 30, 2019	Nov 9, 2011
1289	Maxim Power Deerland Peaking Station	1	Connection	33-Fort Saskatchewan	185.8	0	Gas Turbine	5	Dec 1, 2020	Dec 2, 2011
1290	Whitetail Peaking Station	2	Connection	19-Peace River	200	0	Gas	5	Oct 25, 2019	Dec 7, 2011
1290	Whitetail Peaking Station	1	Connection	19-Peace River	0	1	Gas	5	Jul 30, 2019	Dec 7, 2011
1321	Three Creeks Power Plant	1	Connection	19-Peace River	600	10	Cogen	5	Jun 1, 2020	Mar 26, 2012
1326	Medicine Hat - Al Rothbauer 321S Interconnection	2	Unique	4-Medicine Hat	0	0	Other	6	Jun 1, 2018	Apr 17, 2012
1336	BowArk Energy Queenstown Power Plant	1	Connection	45-Strathmore/Blackie	80	0	Gas Turbine	5	Oct 1, 2020	May 16, 2012
1347	Fort Nelson Connection Remedial Action Scheme	2	BTF	17-Rainbow Lake	0	0	Other	5	Jun 4, 2018	Jun 19, 2012
1404	Cenovus Narrows Lake Substation (Boreal)	1	Connection	25-Fort McMurray	0	35	Load	5	Sep 30, 2020	Jan 17, 2013
1410	ATCO Heartland Pump Station Connection	2	Connection	56-Vegreville	0	20	Load	5	Dec 13, 2019	Feb 5, 2013
1412	Trans Mountain Pipeline Gainford Substation 16501S	1	Connection	40-Wabamun	0	11	Load	5	Feb 1, 2019	Feb 11, 2013
1421	ATCO Power Heartland Generating Station	1	Connection	33-Fort Saskatchewan	510	15	Combined Cycle	5	Nov 1, 2019	Mar 11, 2013
1440	CP Genesee Generating Units 4 & 5	1	Connection	60-Edmonton	0	50	Combined Cycle	5	Feb 1, 2020	Apr 30, 2013
1442	Fortis New Anthony Henday Substation	1	Connection	60-Edmonton	0	21	Load	5	Feb 1, 2019	May 2, 2013
1460	Fortis New Hornbeck Substation	1	Connection	29-Hinton/Edson	0	18	Load	5	Feb 1, 2019	Jul 22, 2013
1500	Renewable Energy Service WAGF	1	Connection	53-Fort Macleod	47	1	Wind	4	Dec 2, 2019	Nov 18, 2013
1505	ATCO City of Grande Prairie New POD	1	Connection	20-Grande Prairie	0	15.5	Load	5	Jul 9, 2020	Dec 10, 2013
1507	Cenovus SAGD Foster Creek DTS Increase	1	BTF	28-Cold Lake	0	21	Load	5	Dec 31, 2018	Jan 7, 2014
1516	Enbridge Sunken Lake 221S Transformer Change	1	Contract	37-Provost	0	14	DTS	3	Dec 3, 2018	Jan 23, 2014
1533	Joss MPC WAGF	2	Connection	48-Empress	60	0	Wind	5	Sep 2, 2019	Mar 1, 2014
1533	Joss MPC WAGF	1	Connection	48-Empress	60	0	Wind	5	Jun 30, 2019	Mar 1, 2014
1558	Enbridge New Hardisty Substation	2	Connection	32-Wainwright			Load	5	Dec 1, 2018	May 22, 2014
1566	Calgary Energy Centre Peaking Plant New Generator Capacity	1	Connection	6-Calgary	150	1	Gas	5	Dec 1, 2021	Jun 3, 2014

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1567	EDPR Sharp Hills Wind Farm New Facility Generator Capacity	1	Connection	42-Hanna	300	1	Wind	4	Aug 1, 2019	Jun 4, 2014
1601	ENMAX No 31 Substation 13KV Breakers Addition	1	Connection	6-Calgary	0	0	Load	5	Nov 12, 2018	Sep 23, 2014
1603	ATCO Jasper Interconnection Project Capacity Increase	1	Connection	29-Hinton/Edson	0	3.8	Load	4	Dec 30, 2019	Oct 10, 2014
1631	Fortis Chestermere New POD	1	Connection	45-Strathmore/Blackie	0	43.7	Load	5	Sep 1, 2018	Dec 15, 2014
1647	Inter Pipeline Strathcona Cogeneration	1	Connection	33-Fort Saskatchewan	60	61	Cogen	3	Mar 1, 2020	Feb 13, 2015
1647	Inter Pipeline Strathcona Cogeneration	2	Connection	33-Fort Saskatchewan			Cogen	3	Aug 28, 2020	Feb 13, 2015
1649	EPCOR Garneau Area Upgrade	1	Connection	60-Edmonton	0	0	Load	3	Jun 30, 2020	Feb 20, 2015
1649	EPCOR Garneau Area Upgrade	2	Connection	60-Edmonton	0	20.9	Load	3	Sep 30, 2022	Feb 20, 2015
1658	ATCO Ksituan River 754S Capacity Increase	1	Connection	20-Grande Prairie	0	11.7	Load	3	Feb 1, 2019	Mar 17, 2015
1659	EPCOR Strathcona Capacity Increase	1	Connection	60-Edmonton	0	14.2	Load	3	Oct 1, 2019	Mar 19, 2015
1660	Welsch Wind Farm	1	Connection	53-Fort Macleod	69	1	Wind	3	Dec 20, 2019	Mar 20, 2015
1695	EPCOR Riverview Substation New POD	1	Connection	60-Edmonton	0	24	Load	4	Oct 8, 2019	Aug 24, 2015
1696	BluEarth Burdett DG PV	1	BTF	52-Vauxhall	15	0	Solar	5	May 30, 2019	Aug 27, 2015
1698	Joss Jenner WAGF - Phase 2	1	BTF	48-Empress	180	0	Wind	5	May 1, 2019	Sep 8, 2015
1704	Paintearth Wind Power	1	Connection	42-Hanna	150	1	Wind	4	Jul 2, 2019	Oct 8, 2015
1710	Capital Power Halkirk 2 Wind	1	Connection	36-Alliance/Battle River	150	1.8	Wind	3	Dec 1, 2020	Oct 22, 2015
1718	Wheatland WAGF Project	1	Connection	43-Sheerness	120	0	Wind	3	Jul 1, 2019	Oct 30, 2015
1719	Stirling WAGF Project	1	Connection	54-Lethbridge	113	0	Wind	4	Jul 1, 2019	Oct 30, 2015
1728	RESL/ISE McLaughlin Phase 2 BTF Solar/WAGF	1	BTF	53-Fort Macleod	40	0	Solar	3	Sep 30, 2019	Jan 5, 2016
1729	Suncor Schuler WAGF	1	Connection	4-Medicine Hat	80	0.3	Wind	2	Oct 31, 2019	Jan 6, 2016
1731	Suncor Hand Hills Wind Project Phase 2 New POS	1	BTF	43-Sheerness	80	0.3	Wind	3	Oct 31, 2019	Jan 6, 2016
1732	Suncor Hand Hills Solar Project New POS	1	BTF	43-Sheerness	80	0.3	Solar	3	Oct 31, 2019	Jan 6, 2016
1733	Suncor Forty Mile Maleb Solar	1	BTF	4-Medicine Hat	80	0.3	Solar	3	Jun 1, 2019	Jan 6, 2016
1734	Suncor Forty Mile Maleb WAGF	1	Connection	4-Medicine Hat	200	0.3	Wind	3	Jun 1, 2019	Jan 6, 2016

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1737	Suncor Schuler Solar	1	Connection	4-Medicine Hat	80	0.3	Solar	2	Oct 31, 2019	Jan 6, 2016
1739	Suncor Firebag Generator Reactor Capacity Increase	1	BTF	25-Fort McMurray	0	0	Other	5	Nov 8, 2018	Jan 7, 2016
1740	Kineticor Peace River Power Generator	1	Connection	19-Peace River	93	2	Gas	2	Sep 30, 2021	Jan 7, 2016
1752	Suncor Braconnier Wind Project New POS	1	Connection	42-Hanna	80	0.3	Wind	2	Oct 31, 2019	Feb 23, 2016
1753	Suncor Huxley Wind Project New POS	1	Connection	42-Hanna	50	0.3	Wind	2	Oct 31, 2019	Feb 23, 2016
1756	TPG Canyon Creek PHES Storage Project	1	Connection	29-Hinton/Edson	125	50	Pumped Storage	3	Jan 31, 2020	Mar 2, 2016
1760	EDF EN Fort Saskatchewan WAGF	1	Connection	33-Fort Saskatchewan	300	0	Wind	2	Aug 1, 2020	Mar 7, 2016
1761	EDF EN Hand Hills WAGF	1	Connection	42-Hanna	200	0	Wind	2	Oct 1, 2019	Mar 7, 2016
1762	EDF EN Vulcan Solar PV	1	BTF	49-Stavely	100	0	Solar	5	Dec 1, 2018	Mar 7, 2016
1766	FortisAlberta Warner-Conrad Area Upgrade	1	Connection	55-Glenwood	0	3.5	Load	4	Jun 14, 2019	Mar 9, 2016
1767	RESC Forty Mile WAGF	1	Connection	4-Medicine Hat	400	0	Wind	3	Jun 28, 2019	Mar 9, 2016
1770	NextEra Red Deer Battery Energy Storage System	1	Connection	42-Hanna	40	46	Battery	2	Dec 1, 2020	Mar 18, 2016
1772	Ghost Pine Battery Energy Storage System	1	BTF	42-Hanna	0	34.7	Battery	2	Dec 1, 2020	Mar 18, 2016
1777	Invenergy Schuler Windfarm	1	Connection	4-Medicine Hat	100	2	Wind	3	Jul 1, 2019	Mar 29, 2016
1778	ATCO Aspen SAGD Project - DTS	1	Connection	25-Fort McMurray	0	40	Load	2	Jul 1, 2019	Apr 4, 2016
1779	Imperial Oil Aspen SAGD Project - STS	1	BTF	25-Fort McMurray	30	0	Cogen	2	Jul 1, 2019	Apr 4, 2016
1780	Sequoia Energy Oyen MPC Wind	1	Connection	42-Hanna	100	1	Wind	2	Dec 14, 2021	Apr 6, 2016
1782	Fortis Provost Reliability	1	Connection	37-Provost	0	0	Load	4	May 1, 2020	Apr 11, 2016
1786	Sequoia Schuler WAGF (MPC)	1	Connection	4-Medicine Hat	100	1	Wind	2	Jan 16, 2020	Apr 13, 2016
1787	ENMAX No.7 Substation 138/25KV Transformer Upgrade	1	Connection	6-Calgary	0	5	Load	5	Dec 1, 2018	Apr 18, 2016
1794	Fortis Genalta Bellshill DG	1	BTF	36-Alliance/Battle River	0	0	Gas	5	Jun 1, 2018	May 9, 2016
1797	RES Oyen Wind Power	1	Connection	42-Hanna	350	2	Wind	3	Aug 6, 2019	May 16, 2016
1800	Capital Power Whitla Wind Power Facility	2	Connection	4-Medicine Hat	97.2	1	Wind	3	Sep 1, 2020	May 25, 2016
1800	Capital Power Whitla Wind Power Facility	1	Connection	4-Medicine Hat	201.6	3.5	Wind	3	Sep 1, 2019	May 25, 2016

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1812	Suncor Forty Mile Granlea WAGF	1	Connection	4-Medicine Hat	200	0.3	Wind	3	Sep 1, 2019	Jul 4, 2016
1824	Lone Pine LP - Lone Pine WAGF	1	Connection	42-Hanna	172.8	1	Wind	2	Dec 1, 2019	Jul 28, 2016
1826	Fortis GP Joule Canada Cluny DG	1	BTF	45-Strathmore/Blackie	1.2	0	Solar	3	Oct 31, 2018	Jul 29, 2016
1828	HEP Capital Alderson Solar	1	Connection	4-Medicine Hat	100	1	Solar	2	Apr 2, 2020	Jul 29, 2016
1831	Fortis 255S Vulcan Faribault Farms DG PV	1	BTF	49-Stavely	14	0	Solar	3	Jul 1, 2018	Aug 5, 2016
1833	Fortis Tilley 498S DG Gas	1	BTF	47-Brooks	16	0	Gas	3	Jul 2, 2018	Aug 5, 2016
1837	Fortis 498S Tilley DG PV	1	BTF	52-Vauxhall	14	0	Solar	3	Jun 3, 2019	Aug 5, 2016
1838	Fortis 895S Suffield DG PV	1	BTF	4-Medicine Hat	22	0	Solar	3	Jun 3, 2019	Aug 5, 2016
1839	Fortis 421S Hays DG PV	1	BTF	52-Vauxhall	15	0	Solar	3	Jun 7, 2019	Aug 5, 2016
1840	Fortis 275S Jenner Solar DER	1	BTF	48-Empress	23	0	Solar	3	Jun 3, 2019	Aug 5, 2016
1841	Fortis 257S Hull DG PV	1	BTF	52-Vauxhall	8	0	Solar	3	Jun 7, 2019	Aug 5, 2016
1842	Fortis 158S Vauxhall DG PV	1	BTF	52-Vauxhall	11	0	Solar	3	Jun 3, 2019	Aug 5, 2016
1845	Fortis Bullshead 523S Solar DER	1	BTF	4-Medicine Hat, 53-Fort Macleod	14.7	0	Solar	3	Jul 1, 2019	Aug 22, 2016
1847	Fortis Coaldale 254S DG P/V	1	BTF	54-Lethbridge	17	0	Solar	3	Mar 31, 2019	Aug 23, 2016
1849	Fortis Burdett 368S DG P/V	1	BTF	52-Vauxhall	9.5	0	Solar	3	Oct 31, 2018	Aug 24, 2016
1850	Fortis Coaldale 254S DER Solar 3	1	BTF	54-Lethbridge	22	0	Solar	3	Jul 1, 2018	Aug 26, 2016
1851	Fortis Monarch 492S DER Solar	1	BTF	54-Lethbridge	20	0	Solar	3	Jul 1, 2018	Aug 26, 2016
1852	Fortis Stirling 67S DG P/V	1	BTF	55-Glenwood	17.4	0	Solar	3	Nov 15, 2018	Aug 30, 2016
1853	Fortis Buffalo Atlee Cluster 1 WAGF	1	BTF	48-Empress	18.3	0	Wind	3	Mar 1, 2019	Aug 30, 2016
1856	NaturEner Buffalo Trail WAGF	1	Connection	4-Medicine Hat	100	3	Wind	2	Sep 13, 2019	Sep 1, 2016
1857	NaturEner Ross Creek WAGF	1	Connection	4-Medicine Hat	100	3	Wind	2	Sep 13, 2019	Sep 1, 2016
1858	Enterprise Prosperity Wind	1	Connection	45-Strathmore/Blackie	175	2	Wind	2	Sep 30, 2019	Sep 7, 2016
1863	Northland Buffalo Trail WAGF	1	Connection	28-Cold Lake	100	1	Wind	2	Dec 31, 2019	Sep 16, 2016
1866	Peace River Power Upgrade	1	BTF	19-Peace River	125	2	Combine Cycle Gas Turbine	2	Sep 30, 2021	Sep 19, 2016

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1862	Fortis Spring Coulee 385S Solar DG	1	BTF	55-Glenwood	28.5	0	Solar	5	Nov 1, 2018	Sep 28, 2016
1864	BowArk Drywood Gas Generator	1	Connection	45-Strathmore/Blackie	38	1	Gas	3	May 30, 2019	Sep 30, 2016
1865	Fortis Warner 344S DER Solar	1	BTF	55-Glenwood	16.5	0	Solar	2	Dec 3, 2018	Oct 3, 2016
1869	Fortis Enchant 447S DER Solar	1	BTF	52-Vauxhall	68.2	0	Solar	3	Dec 15, 2018	Oct 3, 2016
1870	Fortis Stavely 349S DER Solar	1	BTF	49-Stavely	8.5	0	Solar	3	Jul 1, 2018	Oct 5, 2016
1872	Fortis Coaldale 254S DER Solar 2	1	BTF	54-Lethbridge	20	0	Solar	3	Mar 31, 2019	Oct 12, 2016
1875	EDF EN Red Rock WAGF	1	Connection	4-Medicine Hat	250	3.6	Wind	3	Jul 16, 2019	Oct 14, 2016
1877	Perimeter Sunset Solar	1	Connection	52-Vauxhall	60	0.3	Solar	3	Jun 30, 2020	Oct 20, 2016
1878	Fortis Krafte 257S Hull DER Solar	1	BTF	52-Vauxhall	24.5	0	Solar	3	Nov 15, 2018	Oct 24, 2016
1879	Perimeter Claresholm Solar	1	Connection	49-Stavely	130	0.6	Solar	3	Jun 30, 2020	Oct 25, 2016
1882	TransCanada Scoria 318S Cogen	1	BTF	33-Fort Saskatchewan	0	0	Cogen	5	Jan 31, 2019	Oct 26, 2016
1884	Maxim Power HR Milner Expansion Gas Generating Station	1	Connection	22-Grande Cache	90	0	Gas Turbine	3	Sep 1, 2019	Oct 26, 2016
1885	Joss Wind Northern Lights WAGF	1	Connection	26-Swan Hills	400	3	Wind	2	Nov 1, 2020	Nov 1, 2016
1887	ENGIE Duchess Solar	1	Connection	47-Brooks	90	0.1	Solar	3	Jun 30, 2020	Nov 3, 2016
1891	Archer Piikani Solar	1	Connection	53-Fort Macleod	40	0.1	Solar	2	Jan 31, 2019	Nov 7, 2016
1892	Fortis Buffalo Atlee Cluster 3 WAGF DER	1	BTF	48-Empress	17.3	0	Wind	3	Mar 18, 2019	Nov 15, 2016
1893	Red Deer River Solar	1	Connection	35-Red Deer	150	0.5	Solar	2	Dec 1, 2020	Nov 15, 2016
1896	EDF EN Cypress WAGF	1	Connection	4-Medicine Hat	250	3.6	Wind	2	Apr 29, 2019	Nov 22, 2016
1897	Fortis Hays 421S DER Solar	1	BTF	52-Vauxhall	0	0	Solar	3	Jan 29, 2019	Nov 25, 2016
1898	Pattern Lanfine North Wind	1	Connection	42-Hanna	145	0	Wind	3	May 1, 2020	Dec 2, 2016
1902	FortisAlberta Fincastle Area Capacity and Reliability Project	1	Connection	52-Vauxhall	0	11.1	Load	4	Jun 1, 2019	Dec 20, 2016
1903	FortisAlberta East Yellowhead Area Capacity and Reliability Project	1	Connection	29-Hinton/Edson	0	3.9	Load	5	Nov 1, 2018	Dec 20, 2016
1904	FortisAlberta Crossfield Area Capacity and Reliability Project	1	Connection	57-Airdrie	0	4.9	Load	4	Nov 1, 2019	Dec 20, 2016

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1905	FortisAlberta Fort Macleod Area Reliability	1	Connection	53-Fort Macleod	0	0	Load	5	Nov 1, 2018	Dec 20, 2016
1908	TransAlta Cowley Ridge 1 Wind	1	BTF	53-Fort Macleod	21	0.5	Wind	3	Sep 30, 2019	Dec 22, 2016
1909	TransAlta Garden Plain Wind	1	Connection	42-Hanna	50	4	Wind	3	Sep 1, 2019	Dec 22, 2016
1907	FortisAlberta Vulcan-Stavely Area Capacity and Reliability	1	Connection	49-Stavely	0	3.5	Load	4	Nov 1, 2019	Jan 18, 2017
1913	Glenridge Wind	1	Connection	43-Sheerness	150	1	Wind	2	Sep 1, 2019	Jan 19, 2017
1915	Acciona Energy Glenwood Area Wind	1	Connection	55-Glenwood	119.7	3.1	Wind	3	Sep 27, 2019	Feb 2, 2017
1916	Renewable Energy Systems, Rattlesnake Ridge Wind	1	Connection	4-Medicine Hat	100	1	Wind	2	Jul 25, 2019	Feb 2, 2017
1917	FortisAlberta West Brooks DER Solar	1	BTF	47-Brooks	19.2	0	Solar	5	Dec 15, 2018	Feb 6, 2017
1918	FortisAlberta Conrad DER Solar 1	1	BTF	52-Vauxhall	18.4	0	Solar	3	Dec 3, 2018	Feb 6, 2017
1922	FortisAlberta Vauxhall Solar DER	1	BTF	52-Vauxhall	22	0	Solar	5	Nov 30, 2018	Mar 14, 2017
1923	CNRL Kirby North Load	1	Connection	25-Fort McMurray	0	29	Load	3	Mar 1, 2019	Mar 21, 2017
1926	Solar Krafte Vauxhall	1	Connection	52-Vauxhall	150	0.4	Solar	2	Apr 1, 2020	Mar 23, 2017
1927	Solar Krafte Brooks	1	Connection	47-Brooks	400	1	Solar	3	Apr 1, 2020	Mar 23, 2017
1928	RealPart Calgary Area Solar	1	Connection	6-Calgary	150	0.3	Solar	2	Mar 10, 2020	Mar 24, 2017
1932	FortisAlberta Namaka DER Solar	1	BTF	45-Strathmore/Blackie	15.5	0	Solar	3	Nov 30, 2018	Apr 10, 2017
1934	FortisAlberta Empress DER Solar	1	BTF	48-Empress	20.5	0	Solar	2	May 1, 2019	Apr 12, 2017
1936	FortisAlberta Provost DER Solar	1	BTF	37-Provost	21.9	0	Solar	2	May 1, 2019	Apr 12, 2017
1937	FortisAlberta Metiskow DER Solar	1	BTF	37-Provost	18.5	0	Solar	2	May 1, 2019	Apr 12, 2017
1944	FortisAlberta Burdett DER Solar 1	1	BTF	52-Vauxhall	8.3	0	Solar	2	May 1, 2019	Apr 24, 2017
1945	FortisAlberta Burdett DER Solar 2	1	BTF	52-Vauxhall	16	0	Solar	2	May 1, 2019	Apr 24, 2017
1950	FortisAlberta Killarney DER Solar	1	BTF	37-Provost	22	0	Solar	2	May 1, 2019	Apr 27, 2017
1947	FortisAlberta Taber DER Solar 1	1	BTF	52-Vauxhall	12	0	Solar	2	May 1, 2019	Apr 28, 2017
1948	FortisAlberta Taber DER Solar 2	1	BTF	52-Vauxhall	22	0	Solar	2	May 1, 2019	Apr 28, 2017
1949	FortisAlberta Fincastle DER Solar	1	BTF	52-Vauxhall	12.5	0	Solar	2	May 1, 2019	Apr 28, 2017

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
1959	FortisAlberta Conrad DER Solar 2	1	BTF	52-Vauxhall	22.5	0	Solar	3	Jul 1, 2019	May 8, 2017
1960	FortisAlberta Bassano DER Solar	1	BTF	47-Brooks	0	0	Solar	2	Jan 1, 2019	May 10, 2017
1961	FortisAlberta Wainwright DER Solar	1	BTF	32-Wainwright	0	0	Solar	3	Jan 1, 2019	May 10, 2017
1962	FortisAlberta Provost DER Solar	1	BTF	37-Provost	0	0	Solar	3	Jan 1, 2019	May 10, 2017
1964	FortisAlberta Killarney Lake DER Solar	1	BTF	37-Provost	0	0	Solar	3	Jan 1, 2019	May 22, 2017
1967	FortisAlberta Jenner 275S DER	1	BTF	48-Empress	16.1	0	Gas Turbine	3	Jul 1, 2019	Jun 6, 2017
1968	FortisAlberta Carseland DER Solar	1	BTF	45-Strathmore/Blackie	12	0	Solar	3	Jul 1, 2019	Jun 6, 2017
1974	FortisAlberta Duchess DER Solar	1	BTF	47-Brooks	10.1	0	Solar	2	Mar 31, 2019	Jun 14, 2017
1976	FortisAlberta Brooks DER Solar	1	BTF	47-Brooks	13.7	0	Solar	2	Aug 5, 2019	Jun 20, 2017
1978	ATCO Michichi DER Solar	1	BTF	42-Hanna	61	0	Solar	2	May 1, 2019	Jun 20, 2017
1979	ATCO Monitor DER Solar	1	BTF	42-Hanna	4	0	Solar	3	May 1, 2019	Jun 20, 2017
1980	ENMAX North 69KV Reliability	1	Connection	6-Calgary	0	0	Other	3	Dec 17, 2018	Jul 6, 2017
1981	NextEra Buffalo Trail Solar	1	Connection	37-Provost	70	0.5	Solar	2	Dec 5, 2019	Jul 7, 2017
1982	EPCOR WSI DG Solar	1	BTF	60-Edmonton	12	0	Solar	3	Nov 30, 2019	Jul 7, 2017
1984	FortisAlberta Gleichen DG Solar	1	BTF	45-Strathmore/Blackie	17	0	Solar	3	Oct 1, 2018	Jul 17, 2017
1985	Aira Forty Mile Wind	1	Connection	4-Medicine Hat	125	1	Wind	2	May 29, 2020	Jul 21, 2017
1986	FortisAlberta 325S Leduc Contract Change	1	Contract	60-Edmonton	0	13.9	STS	3	Aug 1, 2018	Jul 28, 2017
1987	Solar Krafte Rainier	1	Connection	47-Brooks	450	1.1	Solar	2	Nov 15, 2020	Jul 28, 2017
1988	FortisAlberta 277S Hayter Contract Change	1	Contract	37-Provost	5.3	0	STS	3	Aug 1, 2018	Aug 8, 2017
1991	ENMAX Zephyr MPC Wind	1	Connection	52-Vauxhall	200	1	Wind	2	Dec 1, 2020	Aug 14, 2017
1995	ATCO Coronation 773S Solar DG	1	BTF	42-Hanna	12	0	Solar	2	Mar 15, 2019	Aug 30, 2017
1997	Air Liquide Scotford Equipment Change	1	BTF	33-Fort Saskatchewan	0	0	Equipment Change	5	Jun 1, 2018	Sep 6, 2017
1999	FortisAlberta Cheviot 101S Contract Change	1	Contract	29-Hinton/Edson	0	-16	DTS	2	Aug 1, 2020	Sep 14, 2017
2000	ENMAX Taber BTF Wind	1	BTF	52-Vauxhall	21	0	Wind	2	Nov 17, 2020	Sep 18, 2017
2002	Soventix Forestberg Area Solar	1	Connection	36-Alliance/Battle River	40	0.1	Solar	2	Jan 20, 2020	Sep 25, 2017

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
2003	Pattern Development Lanfine South Wind	1	Connection	42-Hanna	140.4	1.5	Wind	2	Sep 1, 2020	Sep 25, 2017
2007	Chiniki Solar	1	Connection	44-Seebe	40	0.3	Solar	2	Dec 31, 2018	Oct 2, 2017
2008	Greengate Lathom MPC Solar	1	Connection	47-Brooks	120	0.5	Solar	2	Dec 1, 2020	Oct 20, 2017
2009	Greengate Travers MPC Solar	1	Connection	49-Stavely	400	0.5	Solar	2	Dec 1, 2020	Oct 20, 2017
2010	FortisAlberta Coaldale 254S DER Cogen	1	Connection	54-Lethbridge	6	0	Cogen	1	Mar 16, 2020	Oct 23, 2017
2011	Suncor Forty Mile Granlea Solar	1	BTF	4-Medicine Hat	100	0.2	Solar	2	Dec 1, 2020	Oct 24, 2017
2012	Keyera West Pembina 359S Gas Turbine	1	BTF	56-Vegreville	4.9	0	Gas Turbine	3	May 15, 2019	Oct 25, 2017
2016	TransAlta Red Rock Wind	1	Connection	4-Medicine Hat	65	3	Wind	2	Nov 1, 2020	Nov 2, 2017
2015	Coalspur Vista Coal Mine Load	1	Connection	29-Hinton/Edson	0	23	Other	3	Dec 31, 2018	Nov 6, 2017
2024	EDTI East Industrial Load	1	Connection	60-Edmonton	0	11	Load	1	Jun 19, 2020	Nov 14, 2017
2020	FortisAlberta Onoway 352S Contract Change	1	Contract	40-Wabamun	0	0	DTS	2	Oct 23, 2018	Nov 17, 2017
2023	FortisAlberta Kananaskis Area Reliability	1	Connection	44-Seebe	0	4.7	Load	3	Nov 1, 2019	Nov 22, 2017
2026	FortisAlberta Whitecourt 364S Contract Change	1	Contract	26-Swan Hills	0	11.8	DTS	2	Oct 29, 2018	Nov 24, 2017
2021	Suncor TG1 & TG2 Testing and Commissioning	1	BTF	25-Fort McMurray	0	0	Equipment Change	5	May 30, 2018	Nov 27, 2017
2028	FortisAlberta Barrhead-Westlock Area Reliability	1	Connection	40-Wabamun, 28-Cold Lake	0	0	Load	2	Dec 1, 2020	Dec 5, 2017
2029	FortisAlberta Strathmore 151S DER Solar 1	1	BTF	45-Strathmore/Blackie	16.7	0	Solar	2	Nov 15, 2019	Dec 6, 2017
2030	FortisAlberta Strathmore 151S DER Solar 2	1	BTF	45-Strathmore/Blackie	19.5	0	Solar	2	Nov 15, 2019	Dec 7, 2017
2031	ATCO M.D. of Greenview Load	1	Connection	22-Grande Cache	0	20	Load	1	Mar 6, 2020	Jan 2, 2018
2032	Cascade Combined Cycle	1	Connection	29-Hinton/Edson	500	15	Combined Cycle	2	Jan 2, 2021	Jan 2, 2018
2032	Cascade Combined Cycle	2	Connection	29-Hinton/Edson	400	15	Combined Cycle	2	Jan 2, 2022	Jan 2, 2018
2033	BluEarth Hand Hills Wind Phase 2	1	BTF	42-Hanna	121.8	0.5	Wind	1	Dec 1, 2020	Jan 2, 2018
2034	Cold Lake Area Energy Centre	1	Connection	28-Cold Lake	100	30	Cogen	2	May 6, 2020	Jan 2, 2018
2035	FortisAlberta Willesdengreen DER Gas Turbine	1	BTF	30-Drayton Valley	5	0	Gas Turbine	2	Dec 21, 2018	Jan 2, 2018
2037	FortisAlberta Taber 83S DER Solar	1	BTF	52-Vauxhall	16	0	Solar	2	May 1, 2019	Jan 8, 2018

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
2038	FortisAlberta Empress 394S DER Solar	1	BTF	48-Empress	15.6	0	Solar	2	May 1, 2019	Jan 8, 2018
2039	Syncrude Mildred Lake Cogen Upgrade	1	BTF	25-Fort McMurray	0	0	Cogen	5	Oct 19, 2018	Jan 8, 2018
2041	TransAlta Windrise MPC Wind	1	Connection	53-Fort Macleod	220	3	Wind	2	Nov 2, 2020	Jan 12, 2018
2040	TransCanada Saddlebrook Solar	1	Connection	46-High River	100	1	Solar	1	Jun 2, 2020	Jan 17, 2018
2043	Suncor STG3 Upgrade	1	BTF	25-Fort McMurray	0	0	Other	5	Jun 1, 2018	Jan 19, 2018
2045	Algonquin Willow Ridge Wind	1	Connection	53-Fort Macleod	180	0.5	Wind	1	Oct 1, 2020	Jan 19, 2018
2046	ATCO Mowat 2033S DER	1	BTF	20-Grande Prairie	0	0	Gas	3	Aug 22, 2018	Jan 23, 2018
2047	TransAlta Ardenville Expansion Wind	1	BTF	53-Fort Macleod	40	0	Wind	2	Oct 19, 2020	Jan 29, 2018
2048	FortisAlberta Leduc 325S Contract Change	1	Contract	60-Edmonton	0	-13.2	DTS	1	Nov 1, 2018	Feb 2, 2018
2049	FortisAlberta North St. Albert 99S Contract Change	1	Contract	60-Edmonton	0	-20.9	DTS	3	Jun 1, 2018	Feb 2, 2018
2050	Enbridge Abee 993S Upgrade	1	Connection	27-Athabasca/Lac La Biche	0	13	Load	2	May 1, 2021	Feb 5, 2018
2051	ATCO Vilna 777S DER Solar	1	BTF	56-Vegreville	22.7	0	Solar	2	Mar 15, 2019	Feb 6, 2018
2055	FortisAlberta Bullshead 523S DER Solar 1	1	BTF	4-Medicine Hat	19	0	Solar	1	Apr 23, 2019	Feb 15, 2018
2056	FortisAlberta Bullshead 523S DER Solar 2	1	Connection	4-Medicine Hat	20	0	Solar	1	Nov 29, 2019	Feb 15, 2018
2057	Imperial Oil Edmonton 95S Cogen	1	BTF	60-Edmonton	0	0	Cogen	2	Apr 19, 2019	Feb 15, 2018
2058	FortisAlberta Namaka 428S DER Solar	1	BTF	45-Strathmore/Blackie	22	0	Solar	1	Sep 30, 2019	Feb 15, 2018
2059	ATCO Three Hills 770S DER Solar 1	1	BTF	42-Hanna	25	0	Solar	1	Sep 1, 2019	Feb 20, 2018
2060	ATCO Three Hills 770S DER Solar 2	1	BTF	42-Hanna	25	0	Solar	1	Sep 1, 2019	Feb 20, 2018
2061	ATCO Michichi Creek 802S DER Solar	1	BTF	42-Hanna	25	0	Solar	1	Sep 1, 2019	Feb 20, 2018
2062	FortisAlberta Thompson 140S Contract Change	1	Contract	27-Athabasca/Lac La Biche	0	0	DTS	1	Sep 3, 2018	Feb 21, 2018
2063	FortisAlberta Cheviot 101S Contract Change	1	Contract	29-Hinton/Edson	0	-8	DTS	2	Sep 1, 2018	Mar 5, 2018
2064	ATCO Weasel Creek 947S Contract Change	1	Contract	27-Athabasca/Lac La Biche	0	0	DTS	1	Sep 1, 2018	Mar 5, 2018
2065	E.ON Grizzly Bear Wind Phase 2	1	Connection	13-Lloydminster	30	0	Wind	1	Mar 15, 2021	Mar 9, 2018
2066	COMH Rothbauer 321S Contract Change	1	Contract	4-Medicine Hat	-59	-26	STS	1	Nov 21, 2018	Mar 15, 2018
2068	Four Rivers Wind	1	Connection	4-Medicine Hat	450	0.5	Wind	1	Mar 31, 2021	Mar 26, 2018

AESO Connection Project List (cont'd)

Proj No	Project Name	Phase	Queue Type	Planning Area	Gen MW	Load MW	MW Type	Stage	Planned ISD	Received
2069	Enterprise Bighorn MPC Wind	1	Connection	49-Stavely	325	2	Wind	1	Dec 1, 2020	Apr 3, 2018
2073	NextEra Rycroft MPC Wind	1	Connection	20-Grande Prairie	120	0.5	Wind	1	Dec 1, 2020	Apr 5, 2018
2074	FortisAlberta Spruce Grove Area Load	1	Connection	60-Edmonton	0	240	Load	1	Jul 6, 2020	Apr 6, 2018
2075	ATCO Garden Creek Contract Change	1	Contract	25-Fort McMurray	0	-0.3	DTS	1	Jul 31, 2018	Apr 6, 2018
2076	ATCO Thornton 2091S Contract Change	1	Contract	22-Grande Cache	0	-5.8	DTS	1	Nov 29, 2018	Apr 9, 2018
2078	FortisAlberta Taber 83S DER Solar	1	BTF	52-Vauxhall	14	0	Solar	1	May 15, 2019	Apr 11, 2018
2079	FortisAlberta Blackfalds 198S Gas	1	BTF	35-Red Deer	8.5	0	Gas	1	Jul 1, 2019	Apr 11, 2018
2081	Elemental Energy WD Wind Farm	1	Connection	53-Fort Macleod	150	0	Wind	1	May 19, 2020	Apr 19, 2018
2082	Suncor Base Plant Cogen	1	Connection	25-Fort McMurray	815	0	Cogen	1	Jul 1, 2021	Apr 24, 2018
2083	COMH MH-20L Change	1	BTF	4-Medicine Hat	0	0	Equipment Change	1	Jun 4, 2019	Apr 27, 2018
2080	TransAlta Tempest MPC Wind	1	Connection	54-Lethbridge	100	1	Wind	1	Jul 7, 2020	May 3, 2018
2084	COMH MHS9 & MH-15L Change	1	BTF	4-Medicine Hat	0	0	Equipment Change	1	Jun 7, 2019	May 3, 2018
2088	FortsiAlberta Albchem Load	1	BTF	33-Fort Saskatchewan	0	45	Load	1	Jun 13, 2019	May 7, 2018