

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



The AESO has implemented the new [Cluster Assessment Process](#) effective April 3, 2023. Please note that this information Document (ID) does not reflect the changes required for Projects considered applicable for the Cluster Assessment Process, however, it continues to apply to all other Projects that are not applicable. The AESO anticipates undertaking an amendment to the ID to reflect the Cluster Assessment Process sometime in 2024.

Information documents are not authoritative. Information documents are for information purposes only and are intended to provide guidance. If there is a discrepancy between an information document and any authoritative documents¹ in effect, the authoritative documents govern.

1 Purpose

This information document relates to the following authoritative documents:

- Section 2 of the ISO tariff, *Provision of System Access Service* (“Section 2 of the ISO tariff”);
- Section 3 of the ISO tariff, *System Access Service Requests* (“Section 3 of the ISO tariff”);
- Section 4 of the ISO tariff, *Classification and Allocation of Connection Projects Costs* (“Section 4 of the ISO tariff”);
- Section 5 of the ISO tariff, *Changes to System Access Service* (“Section 5 of the ISO tariff”);
- Section 7 of the ISO tariff, *Generating Unit Owner’s Contribution* (“Section 7 of the ISO tariff”);
- Section 103.3 of the ISO rules, *Financial Security Requirements* (“Section 103.3”); and
- Section 502.15 of the ISO rules, *Reporting Facility Modelling Data* (“Section 502.15”).

The purpose of this information document is to outline the AESO Connection Process and practices in response to requests from market participants for system access service pursuant to the ISO tariff, the *Electric Utilities Act*, and the *Transmission Regulation*.

2 AESO Connection Process

The AESO responds to requests for system access service through the AESO Connection Process. This is an umbrella term that refers to the AESO’s process to provide system access service to market participants and covers the following 3 process types:

2.1 Connection Process

This applies to projects that require the construction of new or altered transmission facilities to expand or enhance the capability of the transmission system, which are built by the designated legal owner of a transmission facility upon receipt of regulatory approvals. Such projects may require a new or amended system access service agreement. These projects may also require the submission of data pursuant to Section 502.15.²

A project that satisfies the criteria outlined in Section 24.31 of the *Transmission Regulation* may follow the market participant choice process which is a variation of the connection process.

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 associated regulations, that contain binding legal requirements for either market participants or the AESO, or both. Authoritative documents include the ISO rules, the reliability standards, and the ISO tariff.

² Section 502.15 describes the submission of modelling data and records relating to new facilities or planned changes to equipment within existing facilities. The AESO uses this information to accurately represent the interconnected electric system in project studies. The modelling data and records to be submitted to the AESO are set out in the *List of Electrical and Physical Parameters for Transmission System Model* which can be found on the [AESO website](#).

2.2 Behind the Fence Process

The market participant may build a portion, or all, of the transmission facility in lieu of the designated legal owner of the transmission facility. Ownership of the transmission facility is subsequently transferred to the designated legal owner of the transmission facility.

This applies to projects that involve the alteration of a market participant’s existing facilities connected to the transmission system where the market participant is required to submit data to the AESO pursuant to Section 502.15. These projects may require a new or amended system access service agreement.

A market participant that is the legal owner of a distribution facility generally follows this process when connecting generation or energy storage to its distribution system, as this is considered an alteration to the market participant’s existing facilities connected to the transmission system.

The AESO may determine that a behind the fence project requires the addition or alteration of transmission facilities that expand or enhance the capability of the transmission system, in which case the project would follow the connection process. Alternatively, the AESO may determine that a behind the fence project does not require a data submission pursuant to Section 502.15, in which case, the project would follow the contract process.

2.3 Contract Process

This applies to projects that only amend or terminate an existing system access service agreement and do not involve the construction or alteration of transmission facilities, or of the market participant’s existing facilities connected to the transmission system.

Detailed descriptions of each project type can be found on the [AESO website](#).

3 Overview of the Connection and Behind The Fence Processes

The connection and behind the fence processes are divided into Stages 0 through 6, with a gated approach where, in order to advance to the next stage of the process, projects complete all required deliverables within the timelines described in subsection 3.1 below. Additional information related to the required deliverables within each stage can be found on the [AESO website](#).

3.1 Stage Duration Timelines

Tables 1 and 2 below provide a summary of the target and maximum stage duration timelines for the connection and behind the fence processes.³

Table 1: Stage 0 – 3 Duration Timelines for the Connection Process

Stage	Target Timeline (Weeks)	Maximum Timeline* (Weeks)
0	2	N/A**
1	8	18
2	14	40***

³ Contract projects may follow these timelines but generally have more flexibility and fewer regulatory requirements

3	32	70
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Table 2: Stage 0 – 4 Duration Timelines for the Behind The Fence Process

Stage	Target Timeline (Weeks)	Maximum Timeline* (Weeks)
0	2	N/A**
1	8	16
2	14	28***
¾	26	52

*Subject to AESO approved extensions

**Dependent on the time the market participant requires to complete the system access service request.

***A market participant is excluded from the maximum timeline while exercising the Stage 2 on hold option.

Timelines for Stages 4 to 6 of the connection process and Stages 5 and 6 of the behind the fence process are not included in Tables 1 and 2 above as these stages are dependent on a number of factors including the size of the project, financing, construction timelines, and the regulatory process. As a result, the durations of these stages are highly variable.

The AESO tracks timelines for stage durations, and statistics are updated semi-annually and available on the [AESO website](#).

The AESO issues notice letters at least 5 weeks in advance of the maximum timeline in an effort to provide notice to the market participant that the timeline is approaching the maximum stage duration. If a market participant is unable to provide the deliverables within the maximum timeline for a stage, the market participant is expected to contact their AESO project manager to request an extension.

The AESO considers the request, and approves or rejects extension requests on a project-by-project basis.

3.2 System Access Service Requests

A market participant may request a new or amended system access service by submitting a completed system access service request form to the AESO in accordance with Section 3 of the ISO tariff.⁴ The system access service request form is available on the [AESO website](#).

A market participant is expected to submit a system access service request to the AESO for any of the following:

- (a) load, generation, or energy storage projects that connect to the transmission system;
- (b) reliability projects which involve enhancements to the transmission system;
- (c) increases or decreases in contract capacity, or termination of an existing system access

⁴ New, amended, or terminated system access service agreements may result in an adjustment of the construction contribution for new or existing facilities. Refer to Section 5 for further information.

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



service agreement;

- (d) equipment changes within a market participant's facility currently receiving system access service;⁵ and
- (e) generation or energy storage projects that connect to an electric distribution system on a feeder,
 - (i) that have a maximum capability of greater than or equal to 5 MW;
 - (ii) that require a new or amended system access service agreement as determined by the legal owner of a distribution facility;⁶ or
 - (iii) that involve an equipment change.⁷

3.3 AESO Review of System Access Service Requests

The AESO expects a market participant submitting a system access service request to provide complete and accurate information. Upon receipt and initial review of a system access service request, the AESO may request additional information from the market participant, or may make a determination to accept or reject the request, as described below. A detailed description of the AESO's process for reviewing system access service requests can be found in the system access service request guide, available on the [AESO website](#).

(a) Request for additional information

The AESO reviews the system access service request and any supporting materials, and if it is incomplete or unsatisfactory, notifies the market participant of any deficiencies. The AESO expects the market participant to resubmit an updated system access service request once all deficiencies have been addressed.

(b) Acceptance of system access service request

If the system access service request is accepted, the AESO assigns a project number, project name, and process type. Stage duration timelines begin and a gate 0 completion acknowledgement letter is issued. It is at this point that the AESO starts to refer to the request as a "project" and the project will appear on the project list with a status of "Active".

(c) Rejection of system access service request

The system access service request may be rejected for a number of reasons outlined in the system access service request guide which is available on the [AESO website](#). If the AESO rejects a system access service request, the market participant may submit a new request.

3.4 Changes to System Access Service Requests

At any time during the AESO Connection Process, if any information provided in the system access service request has changed, the market participant is expected to inform the AESO of the change in a timely manner and submit a project change proposal form which is available on the AESO website. The AESO will review whether the change has impacted the technical assessment, the preferred connection alternative, or any other aspect of the project. Any such change may result in a delay to the project or cancellation of the system access service request, and the related project, as described in section 8 below.

⁵ A system access service request is only required for changes to existing points of connections that require data submissions under Section 502.15.

⁶ For example, the legal owner of a distribution facility may determine that a generating unit with a total maximum capability of 2 MW requires a system access service agreement.

⁷ Submitting a project change proposal form is the mechanism by which a system access service request is amended.

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



4 Preferred Connection Alternative

The AESO determines the preferred connection alternative at Stage 2 of the connection process. The AESO considers the factors outlined in subsection 3.2 of Section 3 of the ISO tariff, when selecting the preferred connection alternative.

5 System Access Service Agreements

For all projects that require a new or amended system access service agreement, the market participant is expected to enter into a system access service agreement with the AESO. Table 3 below outlines the execution date and effective date of the system access service agreement for each project type.

Table 3: System Access Service Agreements: Effective and Execution Dates

Project Type	Execution Date	Effective Date
Connection	<p>Upon receipt of the service proposal and the participant involvement program report from the legal owner of the transmission facility, and, if applicable, evidence from the legal owner of the generating facility that the legal owner of the generating facility has the ability to pay the generating unit owner's contribution, the AESO prepares and sends the system access service agreement to the market participant for execution.</p> <p>In accordance with subsection 3.6(1) of Section 3 of the ISO tariff, the market participant is expected to execute the system access service agreement prior to the AESO filing the needs identification document with the Alberta Utilities Commission, or where applicable, prior to the AESO's approval of a project under the abbreviated needs approval process.</p>	<p>The system access service agreement is generally effective upon permit and license as per subsection 3.7(1) of Section 3 of the ISO tariff.⁸ For a market participant choice project, the system access service agreement is effective when permits and licenses are issued for the facilities of both the market participant and the legal owner of the transmission facility.</p>
Behind the fence	<p>The market participant is expected to execute the system access service agreement prior to the completion of Stage 3/4 and no earlier than the issuance of the functional specification.</p>	<p>The system access service agreement is effective upon execution in accordance with subsection 3.7(4) of Section 3 of the ISO tariff.</p>

⁸ The effective date of a system access service agreement may differ if conditions precedent are included in the system access service agreement. For more information about conditions precedent, see subsections 3.6(4), 3.6(5), 3.6(6), 3.7(1)(b), 3.7(1)(c), and 3.7(5) of Section 3.

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



Project Type	Execution Date	Effective Date
Contract	The market participant is expected to execute the system access service agreement prior to the completion of Stage 3/4/5.	The system access service agreement is effective upon execution in accordance with subsection 3.7(4) of Section 3 of the ISO tariff.

5.1 Changes to System Access Service Agreements

If a market participant makes changes to critical information in the system access service request after the issuance of the notice under subsections 7.4(3) and 7.4(4) of Section 7 of the ISO tariff that result in a delayed energization date for a generation project, the market participant risks forfeiting a portion or all of the generating unit owner's contribution refund.⁹ In the event an executed system access service agreement is amended, the AESO will also amend the energization date in the notice, in accordance with subsection 7.4(5) of Section 7 of the ISO tariff.

If a market participant cancels a system access service request for a generation project after the issuance of the notice under subsections 7.4(3) and 7.4(4) of Section 7 of the ISO tariff and the payment of the generating unit owner's contribution, the market participant risks forfeiting all of the generating unit owner's contribution refund.

The AESO expects that the market participant will make payments under Rate DTS starting on the contract capacity start date once the system access service agreement for a load project becomes effective. If the market participant makes critical changes to the system access service request after the execution date of the system access service agreement that result in a decreased contract capacity or a later contract capacity start date, the market participant may elect to:

- (a) make payments under Rate DTS in accordance with the terms of the system access service agreement; or
- (b) amend the system access service agreement and make a payment in lieu of notice in accordance with subsection 5.3(3) of Section 5 of the ISO tariff.¹⁰

If a market participant cancels a system access service request for a load project after the execution date of the system access service agreement, the AESO expects the market participant to make a payment in lieu of notice.

6 Generating Unit Owner's Contribution Evidence and Payment

For connection, behind the fence, and contract projects, the legal owner of the generating facility is responsible for paying the generating unit owner's contribution in accordance with subsection 7.4 of Section 7 of the ISO tariff. Subsection 7.4(2) of Section 7 of the ISO tariff sets out the timelines for payment of the generating unit owner's contribution. For projects requiring a new or amended system access service agreement, this payment is due within 30 days of the system access service agreement becoming effective, in accordance with subsection 7.4(2)(a) of Section 7 of the ISO tariff.

For connection projects, subsection 7.4(1) of Section 7 of the ISO tariff sets out the requirements related to the provision of evidence that the legal owner of the generating facility has the ability to pay the generating unit owner's contribution. For the purposes of this requirement, the AESO will accept financial security provided by the legal owner of the generating facility that satisfies the requirements of Section

⁹ See Section 505.2 and subsection 7.5 of Section 7, for a description of the generating unit owner's contribution refund and how it is calculated.

¹⁰ See Section 5 for a detailed description of payment in lieu of notice.

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



103.3. The AESO will not file the needs identification document application with the Alberta Utilities Commission or, if applicable, approve a project under the abbreviated needs approval process, until it has received the required evidence. The AESO does not require behind the fence or contract projects to provide such evidence.

For connection projects, if a system access service request and the related project are cancelled prior to the effective date of the system access service agreement, the AESO returns the financial security.

For behind the fence projects that do not require an amended system access service agreement, the AESO will not advance a project past gate 3/4 until payment of the generating unit owner's contribution is received, in accordance with subsection 7.4(2)(b) of Section 7 of the ISO tariff.

7 Stage 2 On Hold Option

7.1 Eligibility

Projects are eligible to elect to go "on hold" in Stage 2 of the connection process or the behind the fence process following issuance of the AESO's proposal to proceed letter. The AESO permits a market participant to utilize the Stage 2 on hold option once per project. A project is no longer eligible to be put on hold once it has entered Stage 3.

7.2 Process

A market participant submits a project change proposal form to the AESO requesting that a project be put on hold. The project remains on the AESO project list while on hold and the project status is changed from "Active" to "On Hold".

The market participant is expected to submit an on hold check-in form, available on the [AESO website](#), at least every 6 months for the duration of the time that the project is on hold. The AESO reviews the on hold check-in form and assesses whether the project may remain on hold or whether the system access service request should be cancelled. The AESO may cancel the system access service request if the market participant fails to submit an on hold check-in form at least every 6 months or if the market participant fails to respond to inquiries from the AESO while the project is on hold.

To reactivate the project and proceed through the remaining stages of the AESO Connection Process, the market participant is expected to submit another project change proposal form making the request to reactivate. The AESO reviews the reactivation request and considers relevant factors in its decision to approve or deny the request which may include:

the validity of the original preferred alternative;

- (a) the re-work that may be required to complete Stage 2;
- (b) the availability of AESO resources that can be allocated to the project; and
- (c) the revised project schedule, developed in collaboration with the market participant and the legal owner of a transmission facility, including the date that activities are expected to resume and the revised Stage 2 deadline, taking into account any re-work that may be required and the remaining Stage 2 deliverables.

The AESO may reject a request to reactivate and the AESO may cancel the system access service request in cases where the original preferred alternative may no longer be valid. The original preferred alternative may no longer be valid if there are changes which include any one or more of the following:

- (a) the long term corporate forecast that may result in changes to the project impact to the transmission system;
- (b) contract capacity;

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



- (c) in-service date;
- (d) system topology;
- (e) cost estimates, if the cost estimates were used to select the preferred alternative; or
- (f) the environment and land use effects information, if such information was used to select the preferred alternative.

8 Cancelling a System Access Service Request

The AESO may exercise its discretion to cancel a system access service request and the related project in certain circumstances, including where:

- (a) the market participant has failed to complete key deliverables in accordance with the agreed upon project schedule, within the maximum stage timelines or within the approved extension timelines;
- (b) the market participant has proposed a change to any of the critical information described in subsection 3.2(2) or 3.2(4) of Section 3, or to any other project information the AESO determines to be significant;
- (c) the market participant has failed to notify the AESO in a timely manner of changes to the critical information or to any other project information the AESO determines to be significant;
- (d) the market participant and the AESO have failed to agree on an in-service date;
- (e) the original preferred connection alternative is no longer valid at the time that a project is reactivated from the Stage 2 on hold;
- (f) the market participant fails to submit an on hold check-in form at least every 6 months or respond to inquiries from the AESO while the market participant's project is on hold; or
- (g) the market participant requests cancellation of the system access service request.

If the AESO cancels a system access service request, the market participant may submit a new request.

9 Project List and Map

The AESO publishes a project list that includes all projects for which the AESO has accepted system access service requests. The project list is comprised of connection, behind the fence, and contract projects. The project list is updated monthly and contains project information including the project status, requested capacity for generation and load, planned in-service date, and the current stage of the project. A project is removed from the project list upon energization, or cancellation of the system access service request and the related project. The project list and corresponding guide may be found on the [AESO website](#). The project list is also geographically represented on an interactive map which is available on the [AESO website](#).

The AESO and the market participant may determine that the in-service date for the project is no longer achievable and needs to be re-evaluated. If such a determination is made, the AESO and the market participant will have 30 calendar days to evaluate and agree upon a new in-service date through the project change proposal process. If a new in-service date is not approved within 30 calendar days, the project's status on the next published project list will be amended from "Active" to "ISD under Review". The project's status on the project list will be returned to "Active" once the AESO and the market participant have agreed upon a new in-service date through the project change proposal process.

10 Project Inclusion Criteria

Subsection 2.2 of Section 2 of the ISO tariff details the provision of system access service by the AESO up to the contract capacity of a market participant with a current agreement for system access service. The AESO uses project inclusion criteria to ensure the AESO can provide system access service in accordance with subsection 2.2 of Section 2 of the ISO tariff and the system access service agreement. The project inclusion criteria is used to determine which projects in an area are included in a specific

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



technical study assessment for a project.

Each connection project in Stage 3 progresses with a unique connection alternative. However, the AESO will not include the connection alternative in the topology of other project's studies until the project satisfies the project inclusion criteria.

Given the numerous changes to project schedules and the need to understand the impact of other projects which have not met the project inclusion criteria, the AESO may also request additional projects be included in a project technical study assessment as a sensitivity. The inclusion of additional projects for sensitivity analysis is for information purposes only and does not imply that such projects have satisfied the project inclusion criteria.

Although the purpose of the AESO Connection Process is to respond to requests for system access service, the AESO notes that "[t]he Commission has determined that there are no explicit or implicit transmission "rights" but that the obligation imposed on the AESO is to provide market participants with a reasonable opportunity to access the AIES."¹¹

The project inclusion criteria are outlined in Table 4 below.

Table 4: Project Inclusion Criteria

Project Type	Inclusion Criteria
Connection	System access service agreement is effective; or
	if there is no system access service agreement, when permit and licence is issued by the Alberta Utilities Commission
Behind the fence	System access service agreement is effective; or
	if there is no system access service agreement, when the generating unit owner's contribution is paid; or
	if there is no system access service agreement and payment of the generating unit owner's contribution is not required, when gate 3/4 is passed
Contract	System access service agreement is effective

11 Mitigation Measures

The AESO may determine that mitigation measures are required if the technical study assessment for a project indicates that there are reliability criteria violations on the system. Mitigation measures include real-time operational practices, remedial action schemes, and other protection schemes. The AESO's initial determination of mitigation measures is based on the Stage 2 engineering study results.

As a project nears energization, the AESO conducts operational planning studies to determine the final mitigation measures required. This typically occurs in Stage 4 or 5 for connection projects and Stage 3/4 or 5 for behind the fence projects. These operational planning studies may result in new mitigation measures being identified or modifications to the initial mitigation measures. The AESO may consult with the legal owner of the transmission facility and the market participant before specifying new or modified

¹¹ See AUC Decision 2009-042 at paragraph 158; and Decision 2014-242 at paragraph 761.

Information Document

Provision of System Access Service and the AESO Connection Process

ID #2018-018T



mitigation measures.

If the AESO's technical study assessment indicates that a project is located in an area that the AESO has identified as being a constrained area, the project is expected to be able to allow for future mitigation measure development.

12 Cost Classification

The AESO classifies the costs of a connection project as either participant-related or system-related in accordance with Section 4 of the ISO tariff. The initial presumption for cost classification is that the costs of a connection project are to be classified as participant-related unless clearly demonstrated otherwise.¹²

13 Questions or Comments

Inquiries regarding the connection process and this information document may be emailed to customer.connections@aeso.ca. For questions related to active projects, please contact the AESO project manager assigned to your project.

Revision History

Posting Date	Description of Changes
2023-09-01	Revisions made throughout document to reflect changes to the ISO tariff with an effective date of September 1, 2023.
2023-04-03	Cluster Assessment Process banner added, effective April 3, 2023
2021-06-14	Updated to include information about the enhanced AESO Project List and interactive map.
2020-12-14	Revisions made throughout document to reflect changes to the AESO Connection Process and the ISO tariff with an effective date of January 1, 2021.
2018-12-18	Updated to incorporate performance reporting section and editorial changes
2018-03-06	Initial release.

¹² See AUC Decision 22367-D01-2017 at paragraph 83.