

Cluster 2

System Access Service Request Guide

Cluster Assessment Process

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1. Purpose and Applicability

This document is meant to provide applicants with information on how to complete the system access service request (SASR) application form for projects applying to the [Cluster Assessment Process](#).

Market participants are required to follow the Cluster Assessment Process if their facility:

- Will inject a new or incremental 5 MW or more of energy flow into the Alberta interconnected electric system (AIES) at the facility connection to the AIES; and
- The injection is caused by the addition of a facility having 5 MW or more of maximum authorized real power (MARP) or increasing the MARP at an existing facility by 5 MW or more.

Additional guidance and information will be added to this document as required. Please contact customer.connections@aeso.ca for any questions on this guide or the SASR for Cluster Projects.

2. General Information

To request new or amended system access service (SAS) on the transmission system, including the alteration of existing SAS by the addition of downstream distributed energy resources (DER), a completed SASR must be submitted to the AESO. The AESO relies on the information provided in the SASR to assess the impacts to the AIES, and to select an appropriate preferred connection alternative.

Completed SASRs and all required attachments are submitted to the AESO by email at customer.connections@aeso.ca. All required sections in the SASR need to be completed per this guide, and all required attachments must be submitted with the SASR. Failure to do so may result in the rejection of the SASR by the AESO.

If after accepting a SASR the AESO determines that information provided in the SASR was incomplete, inaccurate, or misrepresented, the AESO may cancel the SASR and associated project in the Connection Process.

3. Guidance for completing the SASR

Refer to the following tables for information on how to complete each section of the SASR.

Section 1 – Contact Information

Title	Details
1-1 Applicant	
Applicant Contact Information	The Applicant will be the holder of any SAS agreements requested in the SASR, and must be the same legal owner as the holder of any SAS agreements being modified by the SASR (for DERs, this will be the legal owner of the electric distribution system, the “DFO”). The Applicant is the party that is accountable for compliance with the Rate DTS or Rate STS terms and conditions per the ISO tariff . The Applicant must be duly registered and authorized to carry on business in Alberta, and the Corporate Legal Name must match exactly the Legal Entity Name in the Government of Alberta Corporate Registration System.

Title	Details
	If the SASR will involve a change in ownership to an existing SAS agreement, please contact customer.connections@aeso.ca before submitting.
Contact for Fee Invoicing	Provide the contact information to whom cluster fee invoices should be addressed. This contact must be with the Applicant company. For SASRs involving DERs, this contact must be with the DFO.
Accounts Payable E-mail	Provide the email address where cluster fee invoices should be sent. This email must be with the Applicant company. For SASRs involving DERs, this email must be with the DFO.
1-2 Generating Unit / Energy Storage Resource / Aggregated Facility Owner (GFO)	
GFO Contact Information	The “GFO” is the legal owner of the generating unit, energy storage resource, or aggregated facility being connected or modified with the request, and will provide the details of those facilities to the Applicant for inclusion in the SASR. For transmission connected facilities, it is expected that the GFO is the same party as the Applicant. If this is not the case, please contact customer.connections@aeso.ca before submitting.

Section 2 – Request Information

Title	Details
2-1 Details	
Description	Provide a description of your request. Include any relevant details related to what is being connected or modified, timing, preferred connection locations, operational setup, ownership structure, desired reliability requirements, etc.
Market Participant Choice (MPC)	Indicate if the Applicant is seeking to build any part of the project under the Market Participant Choice option. Eligibility for this option will depend on the preferred connection alternative selected for the project and will be confirmed at the end of Stage 2. See the Market Participant Choice page on the AESO website for more information.
Related SASRs or Connection Projects	List any related SASRs that have been submitted concurrently with the SASR, and/or any related ongoing or cancelled connection projects. Provide an explanation of how they are related (SASR is a resubmission of a previously cancelled project, SASR is an expansion of an ongoing connection project, SASR will share facilities with another submitted SASR, etc.)
Future Development	List any future development planned or considered for the site that is not being requested in the SASR, such as expansions, changes in operational nature (including self-supply), changes in ownership structure (in whole or in part), addition of generation, energy storage, large loads, etc.

2-2 AUC Applications and Approvals

AUC Power Plant Application Status	Provide the current status of the power plant application or energy storage resource facility application for the facilities requested in the SASR, along with the related AUC proceeding or decision number as applicable. If the requested facilities required or require an amendment to an existing approval in an AUC decision, provide the AUC decision number being amended.
Self-Supply	If generation from the power plant will be used to self-supply load located within the same site, indicate the nature of the self-supply (generation will solely supply on-site load without export to the grid, generation will both supply on-site load and export to the grid, or generation and load will be part of an industrial system). Also indicate if energy for settlement and market offers will be metered on a gross or net-to-grid basis.

Section 3 – GFO Facility Information

Title	Details
3-1 Description	
New or Existing Facility	Indicate if this is a new facility connecting to the grid, or if it a modification of an existing facility already connected to the grid (e.g., expansion, unit increase, on-site energy storage).
Facility Name	Provide the name of the facility that is part of the request (e.g., the name of the wind farm, solar farm, industrial facility). This facility name should be used in communications with the AESO going forward. It can be the proposed facility name that is or will be included in the power plant application filed with the Alberta Utilities Commission.
Assigned Substation Name / Number	For existing transmission connected facilities, provide the name and number that was assigned to the GFO facility substation. Note that this is not the substation the Applicant wishes to connect to, or the upstream substation for a DER facility.
Facility Legal Land Description	Provide the legal land description for the GFO facility (legal subdivision or quarter section, section, township, range, and meridian). For aggregated facilities, the location must be for the collector substation. For DERs, the location must be for the DER facility and not the upstream substation.
90% Site Control	Projects following the cluster assessment process must confirm that ownership, a lease, or an option to lease in place for at least 90% of the site required for the generation or energy storage facility at the time of application.
Shared Facilities	Explain any infrastructure or services the GFO facility shares or will shared with any other existing or planned facilities approved under a separate AUC decision (control buildings, station service, bus, fence, access, etc.). The proximity and nature of the shared facilities may impact the connection alternatives that are considered, and failure to disclose may result in cancellation.

3-2 Grid Connection	
Transmission or Distribution	Indicate if the GFO facility is or will be connected to the AIES at the transmission or distribution level (i.e., the transmission system or distribution system).
Facility Connection Date	For new facilities, provide the date the facility is expected to have an energized connection to the AIES (transmission or distribution) and is capable of exchanging energy (regardless of if any energy is planned to flow on that date or not). Note that this is not the date the facility is expected to be commercially operational, but the date of first connection.
DER Connections	For a DER facility, provide the feeder(s) that the facility will connect to (new or existing), the upstream substation name and number, and the 25 kV PSS/E bus number(s) in the substation that the feeder(s) connect to.
3-3 Technical Files	
Conceptual Facility SLD	A conceptual single line diagram (SLD) for the GFO facility must be submitted with the SASR. The SLD must include the details of all switching devices within the facility. The SLD should not include the proposed/preferred connections to the transmission system.
Stage 0 PDUP	Projects following the cluster assessment process must submit a Stage 0 PDUP. See the Stage 0 PDUP Supplement on the Project Data Update Package Submissions page for more information.
Stage 0 PDUP Checklist	A Stage 0 PDUP Checklist must be completed and submitted with the SASR and Stage 0 PDUP.
PDUP Preparation	Provide the name and company of the engineers who prepared the Stage 0 PDUP and completed the Stage 0 PDUP Checklist.
3-4 Facility Loads	
Load Details	Provide details for the loads that will be added with the SASR, including any pre-existing loads at the facility, for station service, carbon capture, and any other on-site loads such as industrial or commercial loads. Do not include charging for any energy storage resources, as this will be captured in Section 4.

Section 4 – Source Asset Information

Section 4 is repeated for each new or modified source asset being requested with the SASR, with details specific to the source asset followed by information for the various source components that are behind the asset (the combination of generating units, energy storage resources, and / or aggregated facilities that contribute energy flow to the source asset). The SASR allows for up to three source assets, with up to three source components behind each. If more source assets or components are required please contact customer.connections@aeso.ca before submitting.

Title	Details
4-1 Energy Market	
New or Existing Source Asset	Indicate if this will be a new source asset in the energy market, or a change to an existing source asset. If it is a change to an existing source asset, provide the Asset ID assigned by the AESO.
Maximum Capability (MC)	<p>See the Consolidated Authoritative Document Glossary for the full definition of MC. Provide the MC being requested for the source asset, including the pre-existing MC if applicable, and the additional MC being requested with the SASR.</p> <p>MC should generally be equal to the sum of the maximum authorized real power (MARP) of the source asset components, unless using net-to-grid metered energy to self-supply loads, as indicated in Section 2. If the MC is lower due to a controller limitation on the asset output, select if the limitation is due to MSSC compliance, a capacity limitation on the DFO feeder or upstream TFO substation transformer for a DER, or an operating decision by the GFO (e.g., limiting the output of a wind / battery combination to the MARP of the wind component).</p>
4-2 Source Asset Components	
Source Type	Select the applicable source type for the component. Note that energy storage resources DC-coupled with generating units are considered a single component and source type, while AC-coupled energy storage resources and generating units are considered as separate components and source types.
First Sync to Grid	Provide the expected date that the component will be energized and is capable of supplying energy to the grid (regardless of if any energy is planned to flow on that date or not). This date will occur prior to commissioning of the component, as energy will be produced during the commissioning process.
COD	Provide the expected date of commercial operation (COD) when the component is fully commissioned and operating on the system in a normal manner. See the Consolidated Authoritative Document Glossary for the full definition of commercial operation.
Installed Capacity	Provide the nameplate or expected nameplate rating of the component. Include any pre-existing installed capacity if applicable, and the additional installed capacity being requested with the SASR. If the component is an inverter-based resource, this should reflect the nameplate rating of the inverter(s).
Maximum Authorized Real Power (MARP)	See the Consolidated Authoritative Document Glossary for the full definition of MARP. Include any pre-existing MARP if applicable, and the MARP being requested with the SASR. For an aggregated facility, this must reflect the reflect the real power delivered to the collector bus.

Title	Details
Annual Energy Production	Provide an estimate of the total energy produced by the component during a calendar-year period. Include the pre-existing production if applicable, and the additional production being requested with the SASR.
Rated Energy	Complete for components that include energy storage. Provide the amount of energy the energy storage resource is rated to store. Include the pre-existing rated energy if applicable, and the additional rated energy being requested with the SASR.
Maximum Authorized Charging Power (MACP)	<i>Complete for components that include energy storage.</i> See the Consolidated Authoritative Document Glossary for the full definition of MACP. Include any pre-existing MACP if applicable, and the MACP being requested with the SASR. For an aggregated facility, this must reflect the reflect the real power received at the collector bus.
Charging Method	<i>Complete for components that include energy storage.</i> Select if the energy storage will be charged from the grid, from on-site generation, or from a combination of both.

Section 5 – SAS Agreement Information

Section 5 has been split into sections for transmission connected facilities and distribution connected facilities, as the STS and DTS needs are specific to each. Each section also allows for up to four steps of capacity staging, if required by the energization plan of the project.

SAS agreements must be in place for any flows to or from the transmission system, as applicable, including during construction and commissioning. When considering the capacity staging needs of the project, consider the peak flows expected as the facility progresses through initial connection, construction, the connection of different source components, energy storage charging, and long term facility operation.

Title	Details
General Table Fields	
Event	Select the event that best describes why the capacity is required for this stage of the SAS agreement. The first event defaults to “Existing” for pre-existing SAS agreements but may be changed for new agreements.
Date	Select the date the capacity is required for this stage of the SAS agreement. This date should align with the dates of the event being selected for the stage, as provided in the Grid Connection and Source Asset Components sections of the SASR. Note that the executed SAS agreement will use a date of the first of the month for each stage. No date is required for existing capacity.
Capacity	Enter the capacity required for this stage of the SAS agreement. This should reflect the maximum flow expected

5-1 SAS Agreements Related To Transmission Connected Facilities	
STS Table	Each source asset for a transmission-connected facility must have its own STS agreement. If additional STS agreements are required, please contact customer.connections@aeso.ca before submitting.
DTS Table	A transmission-connected facility may have a single DTS agreement for the facility, and this table assumes that will be the case. If additional DTS agreements are required, please contact customer.connections@aeso.ca before submitting.
EUA Section 101 Requirements	A Section 101 Waiver is applicable to non-DFO Applicants who are submitting a SASR <u>with a load component</u> . According to Section 101 of the Electric Utilities Act , the Applicant must obtain prior approval from the DFO in their service area to enter into an arrangement directly with the AESO for the provision of system access service for electricity to use on their property. For cluster projects adding or increasing a DTS agreement, the SASR must be accompanied by: <ul style="list-style-type: none"> • A Section 101 Waiver from the DFO; or • Written confirmation from the DFO that they have no objections with the SASR being submitted and will determine the holder of the DTS prior to execution of the agreement
5-2 SAS Agreements Related To Distribution Connected Facilities	
STS and DTS Table	For a facility connecting to the distribution system (i.e., a DER), the SAS agreements are applied at the upstream substation and based on the DFO service needs at that substation. The table assumes the DFO will hold one STS and one DTS agreement per substation. If additional STS or DTS agreements are required, please contact customer.connections@aeso.ca before submitting.
5-3 SAS Agreements Related To Distribution Connected Facilities	
DOS Interest	New rates and terms and conditions for Demand Opportunity Service (DOS) will go into effect on February 1 st , 2025. More information can be found on the AESO website (for Rate DOS and related T&C Section 9), including information on the application process once available. <p>Indicate on the SASR if there is interest in applying for DOS for load at this facility, and if known, indicate the amount of load being considered. Note that the SASR is not the application for DOS, and any information provided here will not impact any future DOS application.</p>

Section 6 – SASR Submission

Section 6 (and the SASR itself) may be completed by either the Applicant or a designate of the Applicant who is authorized to certify that the information in the SASR is true and complete. The contact for the SASR will remain the party listed in Section 1 of the SASR.

The SASR must be locked prior to submitting to the AESO, to ensure that the information provided is not editable by the AESO. The Applicant should save an unlocked version of the SASR prior to locking, to ensure that changes can be made if required after submission.

4. Revision History

This section contains the revision history for both the SASR and the SASR guide. Numbering refers to the SASR sections and subsections, and related information in Section 3 of this guide.

SASR for Clusters v1.4 and SASR for Clusters Guide v1.1 – Posted 2024-09-16	
General	Added Subsection numbering to both SASR and Guide and added Revision History to Guide.
1-1	Clarified in Guide that Applicant must exactly match Legal Entity Name in the Government of Alberta Corporate Registration System.
2-1	Clarified in Guide that Future Development should include potential changes in operational nature including self-supply, changes in ownership structure, and addition of large loads.
2-2	Clarified in SASR and Guide the Self-Supply options to better align with new regulations.
4-1	Added in SASR and Guide that a Maximum Capability limitation for a DER could be caused by a capacity limitation on the upstream TFO substation transform in addition to a DFO feeder limitation.
5-3	Added new sub-section in SASR and Guide to provide information on possible interest in Demand Opportunity Service (DOS) ahead of new DOS process going in place February 2025.
6	Added language in SASR clarifying the use of information provided for the purpose of carrying out the Connection Process.