

Large Generator Interconnection

BPA Transmission Business Practice

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This business practice clarifies the processes and procedures that are necessary to comply with Attachment L of the Bonneville Power Administration’s (BPA) Open Access Transmission Tariff (OATT).

BPA Policy Reference

- [Open Access Transmission Tariff \(OATT\)](#): Attachment L

For more information, visit the [BPA Transmission Business Practices webpage](#) or submit questions to techforum@bpa.gov.

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A. Deposits and Non-Refundable Application Fee

1. All deposits and the non-refundable application fee required during the processing of an Interconnection Request, Surplus Interconnection Service Request, Repower Request, or Replacement Request must be remitted in accordance with the electronic funds transfer criteria described below:

Electronic Funds Transfer	<p>For instructions to pay the deposit by electronic transfer to BPA, either through FedWire or Automated Clearing House (ACH), contact your Transmission Account Executive.</p> <p>When using FedWire, after "OBI=" include the words "GI Request Deposit." Also include your proposed Project Name, if it is a new request. For Repower or Replacement Requests, include the Queue number of the Project your request is associated with.</p> <p>When using the ACH type of electronic transfer, include the same information in the "memo" field on the transfer.</p> <p>If a bank removes information from the "OBI" or "memo" field, BPA will not declare an Interconnection Request INVALID.</p> <p>For all follow-on payments, include the BPA Contract Number once known.</p>
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2. When paying the non-refundable application fee, Interconnection Customer must include the name of Interconnection Customer that made the request, the name listed on the Appendix 1, Item #12, and the words "App Fee".
3. In limited circumstances, paper checks will be acceptable if Interconnection Customer demonstrates they are unable to pay electronically. Contact your Transmission Account Executive for instructions.
4. Refunds:
 - a. A deposit refund will be calculated following completion of the studies under the Standard Large Generator Interconnection Procedures (LGIP) or Withdrawal of the request, whichever occurs earliest.
 - b. The entity, whose name is on the Interconnection Request, Surplus Interconnection Service Request, Repower Request, or Replacement Request, Appendix 1 if applicable, and W9e: Request for Taxpayer Identification Number and Certification form, shall receive the deposit refund.
 - c. Prior to the commencement of a study, reasonable costs incurred by BPA in processing, validating, and scoping the Interconnection Request shall be deducted from the deposit refund.
5. Failure to include the key details listed in this Section A.1, with any payment to BPA, will allow BPA's Accounts Receivable Department the right to reject a payment.

B. Interconnection Request Criteria

1. To initiate an Interconnection Request, Interconnection Customer must provide BPA all of the following:
 - a. A completed application in the form of Appendix 1 of the LGIP (including applicable technical information) signed by a person holding signatory contractual authority.
 - b. A non-refundable application fee of \$10,000 (per Interconnection Request) transmitted within one (1) Business Day of the submission of the Interconnection Request as specified in Section A.
 - c. Evidence of Site Control as specified in the Site Control Business Practice.
 - d. Generation Model and Performance Attestation.
 - e. W9e: Request for Taxpayer Identification Number and Certification form, of Interconnection Customer. This requirement may be waived at the discretion of BPA if Interconnection Customer has submitted previous Interconnection Requests to BPA. Interconnection Customer should consult with their Transmission Account Executive prior to submitting the Interconnection Request for clarification.
 - f. Certificate of Incorporation of Interconnection Customer if not previously submitted to BPA.
 - i. If Interconnection Customer is a subsidiary or partner of another entity, or if another entity controls Interconnection Customer, a letter from the parent or controlling entity's letterhead is required and must include the name(s) and position(s) of those holding contractual signatory authority on behalf of Interconnection Customer and the Certificate(s) of Incorporation for each entity.
 - ii. Interconnection Customer must provide BPA with written notification of a name change to the company within 15 Business Days from the effective date of the name change and include a cover letter with the company's official correspondence letterhead stating the new name of the company.

C. Surplus Interconnection Service Request Criteria

1. Surplus Interconnection Service enables an existing Interconnection Customer whose Generating Facility is already interconnected, or Interconnection Customer's affiliate or non-affiliate, to utilize the unused portion of an existing Interconnection Customer's Interconnection Service within specific parameters outlined in the LGIP and applicable business practices.
2. Surplus Interconnection Service requests must be emailed to interconnection@bpa.gov.
3. BPA provides an interconnection process that allows the use of Surplus Interconnection Service and the transfer of Surplus Interconnection Service to a non-affiliate if the existing Interconnection Customer or one of its affiliates does not intend to use the Surplus Interconnection Service.

4. BPA may perform reactive power, short circuit/fault duty, and stability analyses studies as well as steady-state (thermal/voltage) analyses as necessary to ensure evaluation of all required reliability conditions to provide Surplus Interconnection Service and ensure the reliable use of Surplus Interconnection Service. BPA may also perform an environmental analysis.
5. Surplus Interconnection Service cannot be granted if doing so would require Network Upgrades or would increase the Interconnection Service limit.
 - a. The original Interconnection Customer must indicate to BPA the amount of Surplus Interconnection Service that is available for use, when that service is available, and describe any other conditions under which Surplus Interconnection Service at the Point of Interconnection may be used. BPA will make the final determination regarding the Surplus Interconnection Service Request. The Surplus Interconnection Customer must provide BPA the following in any Surplus Interconnection Service Request for a Large Generating Facility:
 - i. A cover letter stating: (i) the identity of Surplus Interconnection Customer, (ii) the existing Point of Interconnection that Surplus Interconnection Customer proposes to use for Surplus Interconnection Service, (iii) the identity of the existing Interconnection Customer, (iv) if Surplus Interconnection Customer is any entity other than the existing Interconnection Customer, Surplus Interconnection Customer's affiliation, if any, to the existing Interconnection Customer, (v) the amount of Surplus Interconnection Service Surplus Interconnection Customer seeks to use, and (vi) the expected In-Service Date of the Surplus Interconnection generating facility and signed by a person holding signatory contractual authority.
 - ii. An Initial Deposit of \$10,000 transmitted within one (1) Business Day of the submission of the Surplus Interconnection Service Request as specified in Section A.
 - iii. Evidence of Site Control as specified in the Site Control Business Practice.
 - iv. Modeling data and project one line diagram for the Surplus Interconnection Service Request. Modeling data must be submitted in PowerWorld format (.aux) or GE PSLF format (.epc and .dyd).
 - v. A letter of intent, signed by the existing Interconnection Customer, indicating: (i) the existing Interconnection Customer's intent to allow a specified portion of its Interconnection Service to be used by Surplus Interconnection Customer, (ii) the specified amount of Surplus Interconnection Service that the existing Interconnection Customer is making available, (iii) the date when the Surplus Interconnection Service will be available, (iv) the conditions under which such Surplus Interconnection Service may be used, and (v) the letter must also include a statement that the existing Interconnection Customer is waiving its priority right, on behalf of itself and any affiliate to utilize the Surplus Interconnection Service, only if Surplus Interconnection Customer is any

entity other than the existing Interconnection Customer or an affiliate of the existing Interconnection Customer.

- vi. If a new Customer with BPA, must submit the W9e:Request for Taxpayer Identification Number and Certification form, of the Surplus Interconnection Customer. This requirement may be waived at the discretion of BPA if the Surplus Interconnection Customer has submitted previous Interconnection Requests or Surplus Interconnection Service Requests to BPA. The Surplus Interconnection Customer should consult with its Transmission Account Executive prior to submitting its Surplus Interconnection Service Request for clarification.
- vii. If a new Customer with BPA, must submit the Certificate of Incorporation of the Surplus Interconnection Customer if not previously submitted to BPA.
 1. If Surplus Interconnection Customer is a subsidiary or partner of another entity, or if another entity controls Surplus Interconnection Customer, a letter from the parent or controlling entity's letterhead is required and must include the name(s) and position(s) of those holding contractual signatory authority on behalf of Surplus Interconnection Customer and the Certificate(s) of Incorporation for each entity.
 2. Surplus Interconnection Customer must provide BPA with written notification of a name change to the company within 15 Business Days from the effective date of the name change and include a cover letter with the company's official correspondence letterhead stating the new name of the company.

D. Submission Procedures

1. Consistent with Section 4.2.1 of the LGIP, BPA will only accept Large Generator Interconnection Requests during an open Cluster Request Window. BPA will accept Surplus Interconnection Service, Repower, or Replacement requests at any time.
2. To request an interconnection of a Large Generating Facility or Surplus Generating Facility, or to request a repower or replacement of an existing Generating Facility, Interconnection Customer should submit the request by email.
 - a. Submit Surplus Interconnection Service Requests, Repower Requests and Generator Replacement Requests via email to Interconnection@bpa.gov.
 - b. Submit Large Generator Interconnection Requests via email to GI_ClusterStudies@bpa.gov.
3. Interconnection Requests and Surplus Interconnection Service Requests sent to other email addresses will not be entered into the Interconnection Queue or the Surplus Interconnection Queue.
4. The completed application and any additional documents must be attached to the email as Portable Document Format (PDF) files; if the files exceed 30 MB the customer service engineer must be contacted for directions on how to submit the files.

- a. PDF files should be referenced and specified by their exact names in the email.
- b. Modeling data must be submitted in GE PSLF format (.epc and .dyd). Please submit only the generator model and not a complete base case.

E. Interconnection Queue Position

1. Consistent with Section 4.1 of the LGIP, Queue Position of an Interconnection Request or Surplus Interconnection Service Request is the date and time BPA receives a valid Interconnection Request or Surplus Interconnection Service Request via email as specified in Section D, Submission Procedures.

F. Queue Status

1. Subject to the requirements of the LGIP, BPA shall post the relevant information contained in the Interconnection Request or Surplus Interconnection Service Request on the [Interconnection webpage](#) under Related Links, "Interconnection Request Queue."
2. Upon BPA's receipt of the Interconnection Request or Surplus Interconnection Service Request, the queue status shall be shown as RECEIVED.
3. Upon receipt by BPA of an executed study agreement and deposit the queue status will be changed to STUDY.
 - a. As each study is executed and commenced, BPA shall insert the stage being studied into the Comments section of the Interconnection Request posting.
 - b. During the study process if any of the posted Interconnection Request or Surplus Interconnection Service Request information changes, the posting will be revised and the date of the amendment recorded in the Comments section of the queue posting.
 - c. When each study report is final and has been provided to Interconnection Customer or Surplus Interconnection Customer, a redacted summary of the report will be posted to BPA OASIS.
4. Upon completion by BPA of the Interconnection Facilities Study, the queue status shall be changed to STUDY COMPLETED.
 - a. After the Interconnection Facilities Study, Interconnection Customer may still be performing environmental studies, or going through permitting processes. BPA does not post statuses for environmental studies or permitting.
 - b. After environmental studies and permitting are complete, BPA will tender a LGIA to Interconnection Customer. Interconnection Customer will execute or withdraw. If Interconnection Customer executes the LGIA, Interconnection Customer may go to design or construction or suspension. BPA does not post statuses for the LGIA.
5. Upon execution of the Large Generator Interconnection Agreement (LGIA) or Surplus LGIA, the queue status shall be changed to IA EXECUTED and the identity of Interconnection Customer or Surplus Interconnection Customer will be posted.
6. Upon energization of the Generating Facility, the queue status shall be changed to ENERGIZED.

7. BPA will change the queue status to WITHDRAWN and include the reason for withdrawing the Interconnection Request in the Comment section if Interconnection Customer or Surplus Interconnection Customer does any of the following:
 - a. Withdraws the Interconnection Request or Surplus Interconnection Service Request.
 - b. Fails to execute a required interconnection studies agreement.
 - c. Fails to submit the required deposit.
 - d. Fails to meet required timeline milestones.
8. If, at any time, the public process under the National Environmental Policy Act (NEPA) requires that the identity of Interconnection Customer or Surplus Interconnection Customer become public, BPA may post the identity of Interconnection Customer or Surplus Interconnection Customer.

G. Sale or Transfer of Generating Facility

1. Sale or Transfer of a Generating Facility Identified in the Interconnection Request:
 - a. In the event that Interconnection Customer anticipates the sale or transfer of its interest in the Interconnection Request (see Section 4.3 of the LGIP, Transferability of Queue Position) BPA requires written notice at least 30 Calendar Days in advance of the transaction.
 - b. Interconnection Customer should contact their Transmission Account Executive to seek guidance in advance of the 30 day written notice requirement, which contact shall be non-binding and will be held in confidence, in order to establish and identify clearly what (if any) agreements, rights and obligations are to be the subject of such a sale or transfer.
2. Sale or Transfer of a Generating Facility Identified in the Executed LGIA:
 - a. For the sale or, transfer of a Large Generating Facility for which Interconnection Customer has an executed LGIA, the purchaser or transferee must execute a new LGIA. The new LGIA must specify the purchaser's or transferee's interest in the Large Generating Facility.

H. Environmental Studies

1. Tendering the Environmental Study Agreement (ESA):
 - a. In accordance with Section 3.4.5 of the LGIP for Interconnection Requests and 3.3.8 of the LGIP for Surplus Interconnection Service Requests, BPA will tender to Interconnection Customer or Surplus Interconnection Customer an ESA as soon as practicable.
2. Executing the ESA:
 - a. Within 30 Calendar Days of receiving the ESA, Interconnection Customer or Surplus Interconnection Customer must execute the agreement per the terms of Section 3.4.5 and 3.3.8 of the LGIP respectively; if Interconnection Customer or Surplus Interconnection Customer fails to execute the ESA within 30 Calendar

Days of receipt, then BPA shall deem the Interconnection Request or Surplus Interconnection Service Request withdrawn pursuant to Section 3.7 of the LGIP.

3. Calculating the Deposits:
 - a. The appropriate deposit amount for the ESA for the Interconnection Request or Surplus Interconnection Service Request will be determined by BPA based on the extent of the required environmental studies. The deposit for the ESA may be either:
 - i. The estimated cost of all environmental evaluation and studies; or
 - ii. A partial payment of the estimated costs of all environmental evaluation and studies, including engineering and design requirements, that is sufficient to cover the BPA's preliminary review of the necessary environmental evaluation and studies.
4. Information Required for Conducting the Environmental Evaluation and Studies:
 - a. BPA requires information from Interconnection Customer or Surplus Interconnection Customer to conduct the National Environmental Policy Act (NEPA) analysis including but not limited to: preliminary designs, permits, status reports, and funds. The ESA details information that is required from Interconnection Customer to complete this analysis.
5. Timeline for NEPA Analysis:
 - a. BPA will proceed in good faith to ensure the timely completion of the environmental review for the Interconnection Request or Surplus Interconnection Service Request. BPA reserves the right to revise the estimated date of completion of the environmental review as necessary, and is not obligated to issue the NEPA document for its own actions within any specific timeframe.
6. Tendering the LGIA:
 - a. Completion of the record of decision or other NEPA document is a necessary condition for the tendering of an LGIA or Surplus LGIA.

I. Material Modifications

1. A request to modify the operating characteristics of an Interconnection Request must be submitted via email to GI_ClusterStudies@bpa.gov for Large Generator Requests or Interconnection@bpa.gov for Surplus, Repower, or Replacement requests. This request must provide the following:
 - a. A completed Appendix 1 to the LGIP, including a detailed description of the proposed modification in Section 2 of Appendix 1 to the LGIP, and all information necessary to support BPA's analysis of how the proposed modification:
 - i. Results in equal to or better electrical performance;
 - ii. Does not increase Interconnection Customer's requested Interconnection Service even if Generating Facility Capacity increases;
 - iii. Does not cause any reliability concerns (i.e., material impacts to the transmission system, including impacts to short circuit capability limits,

- steady-state thermal and voltage limits, or dynamic system stability and response); and
- iv. For a Co-located Resource, a description of the primary and secondary controls that limit the combined output of the Co-located Resources to the requested Interconnection Service amount.
 - b. A new plant level model of the Generating Facility with a detailed description of the proposed modification, if the new model is different from that submitted to BPA under the original Interconnection Request.
 - i. Plant level models must be submitted in one of the following formats: General Electric Positive Sequence Load Flow (PSLF) Power Flow (EPC), General Electric PSLF Dynamics Data File (DYD), PowerWorld Auxiliary File (AUX).
2. Within 30 Calendar Days of receipt of the request for a modification, other than addition of a Co-Located Resource, BPA will assess the modification request and notify Interconnection Customer of whether the proposed modification is either:
 - a. A permissible change that is determined not to be a Material Modification; or
 - b. A Material Modification.
 3. Within 60 Calendar Days of receipt of a request for the addition of a Co-Located Resource, BPA will assess the modification request and notify Interconnection Customer of whether the proposed addition of a Co-Located Resource:
 - a. Requires additional studies at Interconnection Customer's cost; or
 - b. Does not require additional studies.
 4. If a request for the addition of a Co-Located Resource requires additional studies, BPA will provide a good faith estimate of time and cost to complete such studies. BPA may use Interconnection Customer's study deposits to perform the additional studies or may tender a reimbursable expense agreement to collect such funds as are needed to cover the good faith estimated study cost.
 5. Within 30 Calendar Days after BPA's determination is sent, Interconnection Customer shall provide BPA notice via email to GI_ClusterStudies@bpa.gov for Large Generator Requests or to Interconnection@bpa.gov for Surplus, Repower, or Replacement requests, of its desire to either withdraw or proceed with the requested modification. If such notice is not received within 30 Calendar Days after BPA's determination is sent, the proposed modification will be deemed withdrawn.

J. Identification of Contingent Facilities; Requesting Cost Estimates and Schedules

1. BPA will identify Contingent Facilities in the Phase Two Cluster Study and Facility Study reports. To identify Contingent Facilities, BPA will use a technical screening process for identifying Contingent Facilities as outlined in the LGIP.
2. If requested by Interconnection Customer, and if readily available and not commercially sensitive, BPA will provide an estimate of the interconnection facility and/or network upgrade costs and the in-service date for each Contingent Facility identified in Interconnection Customer's Interconnection study report, which may be subject to later

updates if a Contingent Facility's estimated costs and in-service dates change. Interconnection Customer can submit such a request to Interconnection@bpa.gov. Clearly label the email with the subject line "Contingent Facility Cost and Schedule Request" and in the body of the email, call out each Contingent Facility exactly as they were defined in the study report.

K. Phased Interconnection and Provisional Interconnection Service

1. Phased Interconnection Service:
 - a. If Interconnection Customer plans to complete and achieve Commercial Operation of its Generating Facility in two or more successive phases under a single LGIA, then each phase, including all milestone dates, and cost payment tables must be documented in the Appendices of the LGIA.
2. Provisional Interconnection Service:
 - a. If Interconnection Customer plans to execute an LGIA for Provisional Interconnection Service, then Interconnection Customer shall follow the processes for Phased Interconnection Service as described above.

L. Repower and Replacement Requests

1. A Generating Facility Repower Request is a request to change aged components of an existing generating facility. The MW nameplate of the generating facility may increase, but not the Interconnection Service limit. If a generator wishes to utilize the increased MW (i.e., increase the Interconnection Service limit), a new Interconnection Request is required.
 - a. A Repower Request must be made at least one (1) year in advance of the change. The Generating Facility must have a valid LGIA that has been with the same owner for at least one (1) year prior to the request.
 - i. The Repower Request can be submitted via email to Interconnection@bpa.gov.
 1. The request should identify the existing LGIA, and provide any technical or modelling data available.
 - ii. The required \$10,000 deposit can be submitted per the terms of Section A.
 - b. Within 10 Business Days, BPA will schedule a scoping meeting. At the scoping meeting, BPA will determine whether or not the request is a potential Material Modification. If the Repower Request is determined to be a potential Material Modification, Interconnection Customer may withdraw the Repower Request, or proceed with a normal Interconnection Request. BPA will assign and post a queue number if the customer chooses to proceed with a standard Interconnection Request.
 - c. If the Repower Request is determined not to be a potential Material Modification, BPA will tender an ESA and a technical study agreement, if needed. Even

though a Repower Request may not be a potential Material Modification, there may still need to be some technical studies conducted if key electrical characteristics (like voltage control) of the generating facility are changing or if any new or modified facilities (like updated relays) are needed. The technical studies will provide plan of service, schedule, and estimates for any BPA actions.

- d. After technical and environmental studies are complete, BPA and generating facility owner will update the existing LGIA to capture any construction items and the new description of the Generating Facility.
2. A Generating Facility Replacement is a request to replace one or more aged generating units at an existing generating facility (e.g., one or more turbines at the generating facility). The MW nameplate of the generating facility may increase, but not the Interconnection Service limit. If a generator wishes to utilize the increased MW (i.e., increase the Interconnection Service limit), a new Interconnection Request is required. The request must be at the same POI and voltage level as the original generating facility.
- a. A Replacement Request must be made at least one (1) year in advance of the change. The Generating Facility must have a valid LGIA that has been with the same owner for at least one (1) year prior to the request. Interconnection Customer with Energy Resource Interconnection Service (ERIS) in the existing LGIA may only request ERIS on the Replacement Request. Interconnection Customer with Network Resource Interconnection Service (NRIS) in the existing LGIA may request NRIS or ERIS.
 - i. The Replacement Request can be submitted via email to Interconnection@bpa.gov.
 1. The Replacement Request should identify the existing LGIA, and provide any technical or modelling data available. Modeling data must be in a .dyd or .epc file format.
 - ii. The required \$10,000 deposit can be submitted per the terms of Section A.
 - b. Within 10 Business Days, BPA will schedule a scoping meeting.
 - c. After the scoping meeting, BPA will tender Interconnection Customer an ESA and a technical study agreement, if needed. The Replacement Impact Study will examine any changes in electrical performance of the new generator; the Reliability Assessment will examine any reliability issues if there is a gap between the old generator going offline and the new generator coming online; and the Replacement Facility Study will provide scope, schedule, and cost estimates for any required BPA actions.
 - d. Interconnection Customer may request a modification or withdraw the replacement request any time before the evaluation is complete. Modification requests or withdrawals should be emailed to Interconnection@bpa.gov with the request clearly explained in the email. Modifications to the cessation date of the existing generator or COD of the new generator may require a new Replacement Request and such modifications are subject to the one (1) year notice clause.
 - e. After technical and environmental studies are complete, BPA and the generating facility owner will update the existing LGIA to capture any construction items and the new description of the Generating Facility.

M. Request for Technological Advancement

1. Requests for Technological Advancement must be made prior to the return of the Interconnection Facility Study Agreement or Surplus Interconnection Facility Study Agreement.
2. Send requests for Technological Advancement of a project via email to Interconnection@bpa.gov. The email must clearly explain the proposed Technological Advancement and attach any proposed model updates, customer studies, or other pertinent information that demonstrates the proposed Technological Advancement is of equal or better performance than the original request. Permissible Technological Advancements cannot change the electrical characteristics of a project, cannot change the requested nameplate or Interconnection Service amount, cannot change or add a fuel type, and cannot require extensive studies to determine if the proposed Technological Advancement is a Material Modification. For requests that do not meet these requirements, Interconnection Customer should request a Material Modification Analysis instead.
3. A \$10,000 deposit should be submitted with the request for Technological Advancement per the terms of Section A.
4. BPA will determine if studies are needed to process the Technological Advancement request. If no studies are needed, BPA will refund the \$10,000 deposit. If studies are needed, BPA will use reasonable efforts to conclude the studies in 30 Calendar Days. The results of the studies will either determine that the request for Technological Advancement is permissible and can be incorporated into the Interconnection or Surplus Interconnection Service Request, or that the request for Technological Advancement is not permissible. If the proposed Technological Advancement is not permissible, Interconnection Customer may abandon it or they may submit a new Interconnection or Surplus Interconnection Service Request and start over with a new Queue Position.

N. Transmission Credits - Generator Large

1. Refer to the [GI Transmission Credits Business Practice](#) for further discussion on eligibility for transmission credits under the LGIA.

O. Energy Imbalance Market

1. If a generator wishes to participate in the Energy Imbalance Market, see the [Energy Imbalance Market \(EIM\) Business Practice](#) for requirements.