Generation Integration Services~~, Version 4~~

~~Effective: 4/20/2018~~

Version 5

This business practice provides the procedures and requirements for generators operating in the ~~Bonneville Power Administration's (~~BPA~~)~~ Balancing Authority Area (BAA) to provision Generation Integration Services from BPA.

~~Version 4 clarifies that BPA's generation integration requirements apply to certain small generators; refers to a new procedure under development; and addresses formatting issues.~~

BPA Policy Reference

- Transmission Rate Schedules/Provisions: Ancillary and Control Area Service Rates

For more information, visit the BPA Transmission Business Practice webpage or submit questions to techforum@bpa.gov.

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A. Scope of Integration Services

1. There are two arrangements for a generator operating in the BPA BAA that use Generation Integration Services:
   a. A generator not directly connected to the BPA Transmission System that either impacts BPA Transmission System Operations, or serves load within the service territory of a BPA customer utility; this includes Distributed Energy Resources and energy storage devices connected to a BPA customer utility's distribution system; and
   b. A generator Interconnected to the BPA Transmission System.
2. The Generator Owner, or its assignee, of a generator operating in the BPA BAA is responsible for complying with all applicable BPA and other regulatory requirements for generation, facility installation, generation estimate submittal, scheduling energy from the facility, responding to dispatch orders, and either purchasing from the BPA BAA or self-supplying the required Control Area Services.
3. The Generator Owner, or its assignee, is further responsible for meeting all pertinent FERC, NERC,

and WECC standard reliability requirements.

B. Integration Service Request Requirements

1. Requests for Generation Integration Service:

~~1.~~a. BPA is developing a separate process for requests for Ggeneration ~~i~~Integration Service~~requests~~. Until this new process becomes effective, a Generator Owner, or its assignee, must submit an Interconnection Request as outlined in this business practice to the BPA BAA to initiate the process for procuring Generation Integration Services (Generator Integration Request). ~~See BPA's Large Generator Interconnection Procedures and Small Generator Interconnection Procedures on the BPA Transmission Services Interconnection Portal for further guidance on how an Interconnection Request should be submitted.~~

i. A request for Generation Integration Service for a small generator is made by submitting an Interconnection Request as outlined in Section 1.3 of BPA's Standard Small Generator Interconnection Procedures and BPA's Small Generator Interconnection Business Practice.

ii. A request for Generation Integration Service for a large generator is made by submitting an Interconnection Request as outlined in Section 3.1 of BPA's Standard Large Generator Interconnection Procedures (LGIP) and BPA's Large Generator Interconnection Business Practice. Generator Integration Requests will be validated and studied under the procedures that the request was submitted under.

2. Large Generator Requests for Generation Integration Service that Bypasses Study:

a. A request for Generation Integration Service by a Generation Owner, or its assignee (Generator Integration Customer) that meets the requirements outlined in this Section B.2 may proceed to the Interconnection Facilities Study under the LGIP, bypassing the Phase One Cluster Study and the Phase Two Cluster Study outlined in the LGIP (Bypass Generator Integration Request).

b. Criteria: If all of the following criteria are met, a large generator seeking Generator Integration Service may qualify as a Bypass Generator Integration Request:

i. The Generator Integration Request has no impact on any utility other than BPA or the host utility.

ii. Generator Integration Customer has received an Interconnection System Impact Study Report or the equivalent of a System Impact Study Report from the host utility and there are no pending re-studies or revisions to study reports needed for the Generator Integration Request. The plan of service must be fully identified with no outstanding issues.

iii. Generator Integration Customer has provided BPA with a completed System Impact Study Report (or equivalent from the host utility), which identifies the plan of service for BPA's evaluation.

iv. Based on BPA's review of the System Impact Study Report (or equivalent), no Network Upgrades on BPA's Transmission System are required. Meters, telemetry, relay upgrades, or other direct assigned equipment will not disqualify the Generator Integration Request from proceeding to the Interconnection Facilities Study.

v. The Generator Integration Request has no impact on any Interconnection Request or Generator Integration Request in the queue unless the impact is limited to other Generator Integration Requests connecting to the same host utility and such impacts

do not result in Network Upgrades on BPA's Transmission System, Remedial Action Schemes, or operating conditions needing significant study or management by BPA.

vi. The Generator Integration Request does not require BPA's contingent facilities, and does not share upgrades with any other Interconnection Request or Generator Integration Request.

c. Bypass Generator Integration Request Submittal Process:

i. A Generator Integration Customer may submit a Bypass Generator Integration Request at any time by sending a written request and any supporting documents required under this business practice via email to Interconnection@bpa.gov.

1. A Bypass Generator Integration Request may be submitted when the Cluster Request Window is closed under Section 4.2.1 of the LGIP.

ii. The Bypass Generator Integration Request must meet the criteria specified in Section B.2.b above.

iii. A Generator Integration Customer must submit the Bypass Generator Integration Request consistent with Section B of BPA's Large Generator Interconnection Business Practice and also include the following information:

1. A study report, consistent with the requirements specified in Section B.2.b above.

iv. BPA will acknowledge receipt of and validate the Bypass Generator Integration Request as outlined in the LGIP.

v. BPA will notify Generator Integration Customer upon validating the request qualifies as a Bypass Generator Integration Request. BPA will tender and process the Interconnection Facilities Study Agreement for the Bypass Generator Integration Request as outlined in the LGIP.

vi. BPA will notify Generator integration Customer upon determining that Generator Integration Customer's request does not qualify as a Bypass Generator Interconnection Request.

1. If the Cluster Request Window was open when the Generator Integration Customer submitted the ineligible Bypass Generator Integration Request but the request otherwise meets the requirements of the LGIP, BPA will treat the request as a Generator Interconnection Request and study the request under the LGIP Cluster Study process.

2. If the Cluster Request Window was not open when the Generator Integration Customer submitted the ineligible Bypass Generator Interconnection Request, then BPA will withdraw the request from the queue. Generator Integration Customer must re-submit a Generator Integration Request when the Cluster Request Window is open, consistent with Section 4.2.1 of the LGIP.

~~2~~3. To procure Generation Integration Services the Generator Owner, or its assignee, must execute a Large Generator Interconnection Agreement (LGIA), Small Generator Interconnection Agreement (SGIA), or Balancing Authority Area Services Agreement (BAASA).

~~3~~4. To utilize Generation Integration Services in the BPA BAA the Generator Owner must register, as appropriate, with other entities. Examples of other entities include, but are not limited to, FERC, NERC, WECC, and NAESB.

~~4~~5. Metering, telemetering and SCADA data requirements for generation in the BPA BAA are found in Table 7 of the "Technical Requirements for Interconnection to the BPA Transmission Grid" document posted on OASIS under Generation Interconnection and on the ~~Transmission Services~~ Interconnection ~~Portal~~ webpage.

~~5~~6. In certain cases where a utility is connecting a generating or energy storage resource of 3 MW or less nameplate capacity to its distribution system, and the resource will operate in the BPA BAA, and the resource will be used to serve the utility's load, the metering required by BPA should be installed by the utility. Details can be found in the "Responsibilities and Technical Requirements Guide for Customer Owned Meters" posted on the Metering Services webpage~~site~~.

~~6~~7. Automatic Generation Control (AGC) requirements for generators operating in the BPA BAA can be found in the "Technical Requirements for Interconnection to the BPA Transmission Grid" document posted on OASIS under Generation Interconnection and on the ~~Transmission Services~~ Interconnection webpage~~Portal~~.

~~7~~8. Generators operating in the BPA BAA are subject to Dispatch Orders as outlined in the Redispatch and Curtailment Procedures and the Failure to Comply Penalty Charge B~~b~~usiness ~~p~~Practices.

~~8~~9. Table 1, below, identifies the ~~S~~scheduling, Generation Estimate ~~S~~submittal, and Ancillary and Control Area Services requirements to integrate ~~for Integration Services~~ in the BPA BAA for the ~~FY2018-19~~ current Rate Schedules~~, or their successors~~.

~~9~~10. The Generator Owner, or its assignee, must comply with other applicable BPA business practices such as those related to, but not limited to, operational controls, scheduling, and Control Area Services.

Table 1 -Requirements for Scheduling, Generation Estimates, and Ancillary and Control Area Services

Requirement or Quantity	G ≤200 kW	200 kW < G ≤ 1 MW	1 MW < G <3 MW	G ≥ 3 MW
Generation Estimate[1]	No	Conditional[2]	Yes	Yes
Schedules	No	Conditional[3]	Conditional[3]	Conditional[3]
Generation Imbalance Service	No[5]	Conditional[4]	Conditional[4]	Conditional[4]
Operating Reserve- Spinning Reserve Service	No[5]	Yes	Yes	Yes
Operating Reserve- Supplemental Reserve Service	No[5]	Yes	Yes	Yes

[1] The Generator Owner, or its assignee, is responsible for ensuring a ~~g~~Generation ~~e~~Estimate is submitted through the Customer Data Entry (CDE) system for the estimated energy output of the resource. The hourly estimate of generation must equal the sum of the transmission schedules. See the Scheduling Transmission Services ~~b~~Business ~~p~~Practice for the operational requirements for generation estimates.

[2] An hourly estimate is not required for generation serving local load only. An hourly estimate is required when the energy produced by the resource is for delivery outside the Load Service Entity's (LSE)~~'s~~ system. See the Scheduling Transmission Services ~~b~~Business ~~p~~Practice for the operational requirements for generation estimates.

[3] A ~~T~~transmission ~~S~~schedule is not required generation serving local load. Transmission Schedules are required when the energy produced by the resource is for delivery outside the LSE's system. See the Scheduling Transmission Services ~~b~~Business ~~p~~Practice for the operational requirements for submitting scheduled to BPA. Specific requirements for Dynamic Schedules are found in the Dynamic Transfer Operating and scheduling Requirements ~~b~~Business ~~p~~Practice.

[4] Generation Imbalance Service is not required for generation serving local load. Generation Imbalance Service is required when the energy produced by the resource is for delivery outside the LSE's system. See the Generation Imbalance Services ~~b~~Business ~~p~~Practice for the operational requirements.

Variable Energy Resource Balancing Service (Wind & Solar Only)	No[5]	Yes	Yes	Yes
Dispatchable Energy Resource Balancing Service (Thermal Only)	No[5]	No	No	Yes

[5] For generation with a nameplate rating greater than 200 kW and located within BPA BAA, BPA revenue metering is required. Refer to ~~BPA~~ Metering Application ~~Guide r~~Requirements for Generation ~~Interconnection~~ Metering. For generation over 200 kW and under 3 MW, please contact the host utility's Customer Service Engineer to discuss metering requirements.

C. ~~Use of the~~ Balancing Authority Area Services Agreement (BAASA)

1. A BAASA is required for a generator with a nameplate capacity greater than 200 kW that is not directly interconnected to the BPA Transmission System and does not have any other type of interconnection agreement with BPA but is generating power within the BPA BAA.
2. The Generator Owner is the applicable party to execute the BAASA. Should the Generator Owner assign the operations of a generating plant to a third party Generator Operator, then a stand-alone agreement will be needed between BPA, the Generator Owner, and the Generator Operator. The Generator Owner is responsible for obtaining and paying for Control Area Services.
3. For Generator Owners with an executed BAASA, a new Interconnection Request should be made for each new generator as well as for an increase in capacity of existing generators.
   a. A generator may not operate above the approved capacity.
   b. If the Generator Owner, or its assignee, desires to increase the approved capacity of its plant above that specified in the BAASA, the owner shall submit an Interconnection Request for the desired increase in capacity. Any increase in approved capacity shall be described in an amended or new BAASA.
   c. If the Generator Owner, or its assignee intends to change the status or operating configuration of the generator as described in the BAASA, the Generator Owner, or its assignee, shall notify BPA no less than 180 Calendar ~~d~~Days in advance of any such proposed change. A System Impact Study may need to be performed by BPA, at the Generator Integration C~~c~~ustomer's expense, to assess the potential impacts of the proposed change on the BPA Transmission System.
4. Unless a generator moves 100% of its generation output out of BPA's BAA via a ~~p~~Pseudo-~~t~~Tie or other means of telemetry, the Generator Owner must execute a BAASA, or other agreements as appropriate, with BPA.
   a. Specific requirements associated with ~~d~~Dynamic ~~t~~Transfers are found in the Dynamic Transfer Operating and Scheduling Requirements ~~b~~Business ~~p~~Practice, ~~or successor,~~ and the Dynamic Transfer Capability: Requesting and Awarding Access Business Practice~~, Pilot, or successor~~.

D. Backup Generators

1. Metering, telemetry, ~~g~~Generation ~~e~~Estimates, schedules, a BAASA or SGIA is not needed when a ~~b~~Backup ~~g~~Generator is operating during a Local Islanding Event or when it is synched to the BPA Transmission system for test purposes only.
2. Backup Generators that are interconnected to a host utility, but are generating within the BPA BAA, are exempt from submitting an ~~i~~Interconnection ~~r~~Request.
   a. Requirements for a Backup Generator for which the Generator Owner wants to directly interconnect to the BPA Transmission System will be evaluated on a case-by-case basis.
3. No additional agreements are needed for a Backup Generator that is interconnected with a host utility.
   a. Agreements necessary for a Backup Generator that is directly connecting to the BPA Transmission System will be evaluated on a case-by-case basis.

E. Additional Information

Related Business Practices & Documents

- Scheduling Transmission Service
- Scheduling Agent
- Redispatch and Curtailment Procedures
- Failure to Comply
- Small and Large Generator Interconnection
- Dynamic Transfer Capability: Requesting and Awarding Access
- Dynamic Transfer Operating and Scheduling Requirements
- Balancing Service Election for Dispatchable Energy Resource Balancing Service (DERBS) and Variable Energy Resource Balancing Service (VERBS)
- Dispatchable Energy Resource Balancing Service (DERBS)
- Operating Reserves
- Energy Imbalance
- Generation Imbalance
- Supplemental Service
- Customer Data Entry (CDE)
- BPA Metering Application Requirements
- Technical Requirements for Interconnection to the BPA Transmission Grid

Version History

Please send requests for version history to techforum@bpa.gov .