

PUBLIC UTILITIES COMMISSION: CHAPTER 324 REFERENCE GUIDE

Level 1: Inverter-based facilities with a power rating of 10kW or less

1. Customer submits completed application indicating which certified interconnection equipment they intend to use.
2. Within 3 business days, BHE acknowledges the receipt of the application to the customer and whether it is complete or incomplete.
3. If the application is incomplete, BHE will provide a detailed list of all information necessary to complete the application.
4. The customer then has 10 business days to resubmit the completed application or request an extension. Otherwise, application will be deemed withdrawn.
5. Applicable Screens:
 - a. 6A-For interconnection of a proposed generator to a radial distribution circuit, the aggregated generation, including the proposed generator, on the circuit will not exceed 15% of the line section annual peak load as most recently measured at the substation. A line section is that portion of the distribution system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.
 - b. 6E-If the proposed generator is to be interconnected on single-phase shared secondary, then the aggregate generation capacity on the shared secondary, including the proposed generator, will not exceed 20 kilovolt-amps (kVA).
 - c. 6F-If the proposed generator is single-phase and is to be interconnected on a transformer center tap neutral of a 240-volt service, its addition will not create an imbalance between the two sides of the 240-volt service of more than 20% of nameplate rating of the service transformer.
 - d. 6I-The generator cannot exceed the capacity of the customer's existing electrical service.
 - e. 6J-No construction of facilities by BHE on its own system shall be required to accommodate the generator.
 - f. 7A-For interconnection of a proposed generator to a spot network circuit where the generator or aggregate of total generation exceeds 5% of the spot network's maximum load, the generator must utilize a protective scheme that will ensure that its currents flow will not affect the network protective devices, including reverse power relays or a comparable function.
6. Within 10 business days after BHE notifies the applicant that the application is complete, BHE will notify the applicant whether the customer generator facility fails any applicable screens, the customer may request the application continue to be processed under Level 2, 3 or 4. If all screens are met, within 3 days BHE will send a partially executed Level 1 interconnection agreement.
7. Once the applicant receives the interconnection agreement, they will execute the agreement and return it to BHE at least 5 business days prior to starting operation of the customer-generator facility. The applicant will indicate the anticipated start date for operation of the customer generator facility.

8. BHE may require an inspection of the customer-generator facility, the applicant will provide at least 5 business days notice to BHE prior to initiation of operations.
9. If BHE does not notify a Level 1 applicant whether the interconnection is approved or denied within 20 business days after the receipt of an application, the interconnection will be deemed approved.
10. The application fee for Level 1 interconnection application is \$50.

Level 2: Generating facilities with a power rating of 2MW or less

1. Customer submits completed application indicating which certified interconnection equipment they intend to use.
2. Within 3 business days, BHE acknowledges the receipt of the application to the customer and whether it is complete or incomplete.
3. If the application is incomplete, BHE will provide a detailed list of all information necessary to complete the application.
4. The customer then has 10 business days to resubmit the completed application or request an extension.
5. Applicable Screens:

- a. 6A-For interconnection of a proposed generator to a radial distribution circuit, the aggregated generation, including the proposed generator, on the circuit will not exceed 15% of the line section annual peak load as most recently measured at the substation. A line section is that portion of the distribution system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.
- b. 6B-The proposed generator, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high-voltage (primary) level nearest the proposed point of common coupling.
- c. 6C-The proposed generator, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but limited to substation breakers, fuse cutouts, and line reclosers), or customer equipment on the system, to exceed 90% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 90% of the short circuit interrupting capability.
- d. 6D-The proposed generator is interconnected to the EPS as shown in the table below:

<u>Prim Dist Line Configuration</u>	<u>Interconnect to Prim Dist Line</u>
Three-Phase, three-wire-----	If a three-phase or single-phase Generator, interconnection must Be phase-to phase
Three-Phase, four-wire-----	If a three-phase (grounded) or Single-phase generator, Interconnection must be line-To-neutral

- e. 6E-If the proposed generator is to be interconnected on a single-phase shared secondary, then the aggregate generation capacity on the shared secondary, including the proposed generator, will not exceed 20 kilovolt-amps (kVA).
- f. 6F-If the proposed generator is single-phase and is to be interconnected to a transformer center tap neutral of a 240-volt service, its addition will not create an imbalance between the two sides of the 240-volt service of more than 20% of nameplate rating of the service transformer.

- g. 6G-The proposed generator, in aggregate with other generation interconnected to the distribution low-voltage side of the substation transformer feeding the distribution circuit where the generator proposes to interconnect, will not exceed 10MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity.
 - h. 6H-The proposed generator's point of common coupling will not be on a transmission line.
 - i. 6I-The generator cannot exceed the capacity of the customer's existing electrical service.
 - j. 6J-No construction of facilities by BHE on its own system shall be required to accommodate the generator.
 - k. 7A-For interconnection of a proposed generator to a spot network circuit where the generator or aggregate of total generation exceeds 5% of the spot network's maximum load, the generator must utilize a protective scheme that will ensure that its currents flow will not affect the network protective devices, including reverse power relays or a comparable function.
 - l. 7B-For interconnection of a proposed generator that utilizes inverter-based protective functions to an area network, the generator, in aggregate with other exporting generators interconnected on the load side of network protective devices, will not exceed the lesser of 10% of the minimum annual load on the network or 500kW, For a photovoltaic customer-generator facility without batteries, the 10% minimum shall be determined as a function of the minimum load occurring during an off-peak daylight period.
 - m. 7C-For interconnection of generators to area networks that do not utilize inverter-based protective functions or inverter-based generators that do not meet the requirements of screen 7B above, the generator must utilize reverse power relays or other protection devices and/or methods that ensure no export of power from the customer's site including any inadvertent export that could adversely affect protective devices on the network circuit.
- 6. Within 15 business days after BHE notifies the applicant that the application is complete, BHE will notify the applicant whether the customer generator facility fails any applicable screens in 8B, the customer may request the application continue to be processed under Level 3 or 4. If all screens are met, within 3 days BHE will send a partially executed Level 2 interconnection agreement.
 - 7. Once the applicant receives the interconnection agreement under 8E, they will execute the agreement and return it to BHE within 3 business day or 10 business days prior to starting operation of the customer-generator facility. The applicant will indicate the anticipated start date for operation of the customer generator facility.
 - 8. BHE may require an inspection of the customer-generator facility, the applicant will provide at least 5 business days notice to BHE prior to initiation of operations. The customer shall not delay the return of an executed interconnection

- agreement more than 90 days beyond the date shown in the original application for initial operations except by mutual agreement between BHE and the applicant.
9. BHE may require witnessing of the commissioning testing, but it must be stated in the interconnection agreement.
 10. If the customer-generator facility fails any of the Level 2 screens, BHE can still determine the proposed interconnect to be consistent with safety, reliability, and power quality. In such a case, BHE will offer to perform an additional review. BHE will provide the applicant with a non-binding, estimate of the costs for an additional review and modifications.
 11. The application fee for Level 2 interconnection application is \$50 plus \$1 per kW of generator capacity.

Level 3: Generating facilities that do not export power beyond the point of common coupling and with a power rating of 2MW or less

1. Customer submits completed application indicating which certified interconnection equipment they intend to use.
2. Within 3 business days, BHE acknowledges the receipt of the application to the customer and whether it is complete or incomplete.
3. If the application is incomplete, BHE will provide a detailed list of all information necessary to complete the application.
4. The customer then has 10 business days to resubmit the completed application or request an extension.
5. Applicable Screens:
 - a. 6B-The proposed generator, in aggregation with other generation on the distribution circuit, will not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high-voltage (primary) level nearest the proposed point of common coupling.
 - b. 6C-The proposed generator, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but limited to substation breakers, fuse cutouts, and line reclosers), or customer equipment on the system, to exceed 90% of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 90% of the short circuit interrupting capability.
 - c. 6D-The proposed generator is interconnected to the EPS as shown in the table below:

<u>Prim Dist Line Configuration</u>	<u>Interconnect to Prim Dist Line</u>
Three-Phase, three-wire-----	If a three-phase or single-phase Generator, interconnection must Be phase-to phase
Three-Phase, four-wire-----	If a three-phase (grounded) or Single-phase generator, Interconnection must be line-To-neutral
 - d. 6E-If the proposed generator is to be interconnected on a single-phase shared secondary, then the aggregate generation capacity on the shared secondary, including the proposed generator, will not exceed 20 kilovolt-amps (kVA).
 - e. 6F-If the proposed generator is single-phase and is to be interconnected to a transformer center tap neutral of a 240-volt service, its addition will not create an imbalance between the two sides of the 240-volt service of more than 20% of nameplate rating of the service transformer.
 - f. 6G-The proposed generator, in aggregate with other generation interconnected to the distribution low-voltage side of the substation transformer feeding the distribution circuit where the generator proposes to interconnect, will not exceed 10MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity.

- g. 6H-The proposed generator's point of common coupling will not be on a transmission line.
 - h. 6I-The generator cannot exceed the capacity of the customer's existing electrical service.
 - i. 6J-No construction of facilities by BHE on its own system shall be required to accommodate the generator.
 - j. 7A-For interconnection of a proposed generator to a spot network circuit where the generator or aggregate of total generation exceeds 5% of the spot network's maximum load, the generator must utilize a protective scheme that will ensure that its currents flow will not affect the network protective devices, including reverse power relays or a comparable function.
 - k. 7B-For interconnection of a proposed generator that utilizes inverter-based protective functions to an area network, the generator, in aggregate with other exporting generators interconnected on the load side of network protective devices, will not exceed the lesser of 10% of the minimum annual load on the network or 500kW, For a photovoltaic customer-generator facility without batteries, the 10% minimum shall be determined as a function of the minimum load occurring during an off-peak daylight period.
 - l. 7C-For interconnection of generators to area networks that do not utilize inverter-based protective functions or inverter-based generators that do not meet the requirements of screen 7B above, the generator must utilize reverse power relays or other protection devices and/or methods that ensure no export of power from the customer's site including any inadvertent export that could adversely affect protective devices on the network circuit.
6. Within 17 business days after BHE notifies the applicant that the application is complete, BHE will notify the applicant whether the customer generator facility fails any applicable screens in 10B, the customer may request the application continue to be processed under Level 4. If all screens are met, within 3 days BHE will send a partially executed Level 3 interconnection agreement.
 7. Once the applicant receives the interconnection agreement under 10E, they will execute the agreement and return it to BHE within 3 business days or 10 business days prior to starting operation of the customer-generator facility.
 8. BHE may require an inspection of the customer-generator facility, the applicant will provide at least 5 business days notice to BHE prior to initiation of operations. The customer shall not delay the return of an executed interconnection agreement more than 90 days beyond the date shown in the original application for initial operations except by mutual agreement between BHE and the applicant.
 9. BHE may require witnessing of the commissioning testing, but it must be stated in the interconnection agreement.
 10. The application fee for Level 3 interconnection application is \$100 plus \$1.50 per kW of generator capacity.

Level 4: Generating facilities not qualified for Level 1, 2, or 3 and not subject to jurisdiction of FERC

1. Customer submits completed application indicating which certified interconnection equipment they intend to use or a transfer from Level 1, 2, or Level 3 procedures for failure to meet all of the requirements of those procedures.
2. BHE acknowledges the receipt of the application or the transfer from the simplified or expedited interconnection procedures.
3. BHE evaluates the application and notifies the customer within 10 days of receipt that the application is complete or incomplete. If the application is incomplete, BHE will provide notice to the customer along with a detailed list of what must be provided to complete the application. When the application is complete, BHE will assign a queue position based on the date of completed application.
4. BHE will conduct a review including a scoping meeting with the customer within 10 days of determination that an application is complete. BHE will provide pertinent information such as: available fault current, existing peak loading on the lines in the general vicinity of the proposed generator, and the configuration of the distribution lines at the proposed point of interconnection.
5. At the customer's request and within 5 days of the meeting, BHE will provide an estimate of cost and time of a feasibility study to provide a review of potential impacts on the distribution system for the proposed interconnection. The feasibility study will provide a review of short circuit currents, including contribution from the proposed generator, and coordination and potential overloading of distribution circuit protection devices.
6. Within 10 days of the completed feasibility study, BHE will provide an impact study agreement, including cost for the impact study. Where the proposed interconnection may affect electric transmission or distribution systems other than BHE, we shall transfer the interconnection application to the relevant RTO or other transmission provider for processing under FERC interconnection rules.
7. For certified generators, no review of the generator's protection equipment is required. While BHE may review a certified generator's protection scheme, it cannot charge for such a review. Otherwise, BHE shall conduct a review of generator protective devices for adherence to IEEE Standard 1547.
8. Each T & D Utility will include in its compliance tariff a description of the various elements of an impact study it would typically undertake pursuant to this section: load-flow study, short-circuit study, circuit protection and coordination study, impact on system operation, stability study, and voltage-collapse study.
9. Once the interconnecting customer executes the impact study agreement and pays pursuant to the estimate contained therewith, BHE will conduct the interconnection impact study.
10. If we determine that the electric system modifications required to accommodate the proposed interconnection are minor system modifications, the impact study will identify the scope and cost of the modifications as defined in the study results and no facilities study shall be required.

11. If we determine that the system modifications to our electric system are substantial, the results of the impact study will produce an estimate for the modifications costs within 25%. The detailed costs and modifications necessary to interconnect the customer's proposed generator will be identified in a facilities study to be completed by us.
12. Within 5 days of completion of the impact and/or facilities study, BHE will send the customer an executable interconnection agreement including a quote for any required electric system modifications.
13. Within 30 days of the receipt of an interconnection agreement, the customer shall execute and return the interconnection agreement.
14. The facilities study shall indicate the milestones for completion of the customer installation of its generator and BHE completion of any electric system modifications, and the milestones from the facilities study shall be incorporated into the interconnection agreement.
15. BHE shall inspect the completed generator installation for compliance with requirements and attend any required commissioning tests pursuant to IEEE Standard 1547.
16. Once all required commissioning tests are satisfactory, BHE will notify the customer in writing that operation of the generator is approved.
17. The customer shall notify BHE if there is any anticipated change in the proposed date of initial interconnected operations of the generator.
18. Application fee is \$100 plus \$2 per kW capacity and shall not exceed \$400, as well as charges for actual time spent on the interconnection study. Costs for BHE facilities necessary to accommodate the customer's generator interconnection shall be the responsibility of the customer.