



## **Filing Receipt**

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**PROJECT NO. 54233**

**TECHNICAL REQUIREMENTS AND  
INTERCONNECTION PROCESSES  
FOR DISTRIBUTED ENERGY  
RESOURCES (DERs)**

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**PUBLIC UTILITY COMMISSION  
OF TEXAS**

**DISCUSSION DRAFT OF NEW 16 TAC §25.210, AMENDMENTS TO §25.211 AND  
REPEAL AND REPLACEMENT OF §25.212**

The staff of the Public Utility Commission of Texas (commission) requests comments on the attached discussion draft, which would propose new Texas Administrative Code (TAC) §25.210, relating to Interconnection of Distributed Energy Resources (DERs) with a Nameplate Capacity over 250kW for Parallel Operation and amend existing 16 TAC §25.211, relating to Interconnection of Distributed Energy Resources (DERs) with a Nameplate Capacity of 250kW or Less for Parallel Operation. The discussion draft would also repeal existing 16 TAC §25.212, Technical and Operational Requirements for Parallel Operation of Interconnected Distributed Energy Resources (DERs) and propose new 16 TAC §25.212, relating to Technical and Operational Requirements for Parallel Operation of Interconnected Distributed Energy Resources (DERs).

The draft rules would revise the interconnection process, and technical and operational standards, for DERs operating in parallel to the distribution system. Draft §25.210 would establish uniform interconnection standards applicable to all distribution service providers in the State of Texas, with a more limited applicability to municipally owned utilities (MOUs) and electric cooperatives, for DERs with a nameplate capacity greater than 250 kilowatts (kW). Under draft §25.210 MOUs

and electric cooperatives would be required to only permit interconnection by DER operators that comply with the technical and operational standards of §25.212, submit annual reports to the commission concerning interconnection and parallel operation of DERs, and file an open access nondiscriminatory tariff with the commission within one year of the effective date of this rule. A new interconnection agreement and interconnection application associated with draft §25.210 is also proposed. Draft amendments §25.211 would revise interconnection standards applicable to DERs with a nameplate capacity of 250 kW or less by conforming definitions and standards with those prescribed in draft §25.212 where applicable. A standardized report template is provided to be applicable to both draft §25.210 and 25.211. Draft amendments to the interconnection agreement and a new version of the interconnection application associated with draft §25.211 are also proposed. Draft §25.212 would update operational and technical requirements to current industry standards for all DERs with parallel operations in the state of Texas based upon the date a DER is interconnected, among other criteria.

### ***Public Comments***

Interested persons may file comments electronically through the interchange on the commission's website. Initial comments must be filed by **June 27, 2025**. Reply comments must be filed by **August 8, 2025**. Comments should be organized in a manner consistent with the organization of the proposed rules or forms, as applicable. All comments should refer to Project Number 54233.

Commission staff also requests comments on the following issues:

1. What factors and risks should the commission consider when weighing technological innovations against the need for standardized DER technical requirements, including how such standardized requirements may relate to the safety of utility personnel?
2. Whether and to what extent §25.210 (>250 kW “large” DER interconnection standards) should apply to municipally-owned utilities and electric cooperatives.

**Each set of comments should include a standalone executive summary as the last page of the filing. This executive summary must be clearly labeled with the submitting entity's name and should include a bulleted list covering each substantive recommendation made in the comments.**

**§25.210. Interconnection of Distributed Energy Resources (DERs) with a Nameplate Capacity over 250kW for Parallel Operation.**

(a) **Application.**

(1) Except as provided under Public Utility Regulatory Act (PURA) § 35.037, or to the extent pre-empted by federal law, this section applies to:

(A) a distribution service provider (DSP);

(B) a distributed energy resource (DER) operator with a DER that has a nameplate capacity of over 250 kilowatts (kW) and is interconnected or is seeking to interconnect with a DSP's distribution system for parallel operations in the state of Texas; and

(C) a DER operator that is required to register with the Electric Reliability Council of Texas (ERCOT) to participate in the wholesale market.

(2) Notwithstanding paragraph (1)(A) of this subsection, this section does not apply to a municipally-owned utility (MOU) or an electric cooperative, except as provided by subsections (c)(1), (h), and (k) of this section.

(b) **Definitions.** The following words and terms when used in this section have the following meanings, unless the context indicates otherwise:

(1) **Certified equipment** -- A specific generating and protective equipment system or systems that has been certified by a National Recognized Testing Lab (NRTL) as complying with applicable sections of UL-1741 and IEEE-1547 standards, as determined by the DSP, and otherwise relates to safety and reliability when paralleling with the grid at the time of interconnection.

- 1           (2)     **Commercial operations date** – The date that a generator has completed all steps  
2                   necessary to legally perform the listed services in the interconnection application.
- 3           (3)     **Distributed natural gas generation facility** -- A DER that uses natural gas to  
4                   generate not more than two megawatts (MW) of electricity.
- 5           (4)     **Distribution energy resource (DER)** -- A source of electric power interconnected  
6                   at a voltage less than 60 kilovolts (kV).
- 7           (5)     **DER operator**-- Any entity operating a DER or seeking to interconnect a DER in  
8                   Texas.
- 9           (6)     **In-service date** – The date that the DSP's interconnection facilities will be  
10                  constructed and ready for the DER to start using the DSP's facilities to interconnect  
11                  the DER to the DSP's distribution system.
- 12          (7)     **Interconnection** -- The physical connection of a DER to a distribution system to  
13                  enable parallel operation with the distribution system.
- 14          (8)     **Interconnection agreement** -- The commission-prescribed contractual agreement  
15                  under subsection (l) of this section.
- 16          (9)     **Interconnection application** – The commission-prescribed form under subsection  
17                  (m) of this section.
- 18          (10)    **Network** – Consists of two or more primary distribution feeder sources  
19                  electronically tied together on the DSP's secondary (or low voltage) side to form  
20                  one power source for one or more customers.
- 21          (11)    **Parallel operation** -- The operation of a DER while the DER is interconnected to  
22                  the distribution system.

(12) **Point of interconnection (POI)** -- The point where the electrical conductors of the distribution system are interconnected to a DER's conductors and where any transfer of electric power between the DER and the distribution system takes place, such as the switchgear near the meter.

(13) **Protective function** – A function carried out using hardware and, potentially, software that is designed to respond to unsafe operating conditions before, during, and after the interconnection of a DER with a distribution system. For purposes of this definition, unsafe operating conditions are conditions that, if left uncorrected, would result in harm to personnel, damage to equipment, unacceptable system instability or operation outside legally established parameters affecting the quality of service to other customers connected to the distribution system.

(c) **Requirement for interconnection of a DER.** A DER may be interconnected with a DSP's distribution system if the criteria of this subsection are met and maintained on an ongoing basis.

(1) A DER operator must comply with the technical and operational requirements of § 25.212 of this title (relating to Technical and Operational Requirements for Parallel Operation of Interconnected Distributed Energy Resources (DERs)).

(2) For each DER, a DER operator must have:

(A) a currently effective executed interconnection agreement with the DSP that provides all of the required information about the DER; and

(B) permission to operate from the DSP following successful commissioning and testing.

(d) **Terms of service.** A DSP must provide service to an interconnected DER under the following terms.

(1) **Prohibited costs.** A DSP is prohibited from charging a DER operator fees for the disconnection of a DER at the order of a DSP in accordance with clauses (2)(A)-(E) of this subsection.

(2) **Disconnection and reconnection.** A DSP may only disconnect a DER from the DSP's distribution system in accordance with the conditions of this paragraph.

(A) **Termination of interconnection agreement.** Upon expiration or termination of the executed interconnection agreement with the DER operator, the DSP may disconnect the DER in accordance with the terms of the executed interconnection agreement.

(B) **Safety and reliability issue caused by DER.** For purposes of this subparagraph, a "safety and reliability issue" means an issue that represents a threat to public safety, the safety of the DSP's or DER operator's personnel, the safety of the DSP's customers, or to the reliability and continuity of electric service.

(i) Upon discovery of a safety or reliability issue the DER operator or DSP must immediately disconnect the DER from the distribution system and notify the other party of the disconnection.

(ii) If the interconnected DER is the cause of a safety or reliability issue, such an issue must be resolved prior to re-interconnection and a DSP



may require the following in accordance with subsections (f) of this section:

- (I) a new impact study to be performed;
- (II) the executed interconnection agreement to be revised; or
- (III) additional testing to be conducted.

(C) **DER non-compliance.** If at any time a DER no longer meets the interconnection requirements listed under subsection (c) of this section, then a DSP must disconnect the DER. Upon notification from the DER operator that the DER has been restored to compliance with the requirements listed under subsection (c) of this section, the DSP must

- (i) verify such compliance prior to reconnection as quickly as is reasonably practicable, but not to exceed 15 working days; and
- (ii) upon verification, the DSP must reconnect the DER and notify the DER operator of the reconnection.

(D) **System emergency causing an unscheduled outage.** A DSP may temporarily disconnect a DER when directed by the reliability coordinator or independent system operator, as applicable, to shed load or during an unscheduled outage of a DSP's distribution system.

- (i) During and after an unscheduled outage of a DSP's distribution system the DSP must, as quickly as is reasonably practicable:
  - (I) notify the DER operator of an unscheduled outage of the DSP's distribution system that affects the DER;
  - (II) initiate repairs if any; and

1 (III) reconnect the DER.

2 (ii) During an unscheduled outage due to load shed directed by the  
3 reliability coordinator or independent system operator, as  
4 applicable, the DSP must reconnect the DER as soon as reasonably  
5 practicable while abiding by the commission's rules for  
6 reconnecting customers designated as critical customers under §  
7 25.497 of this title (relating to Critical Load Industrial Customers,  
8 Critical Load Public Safety Customers, Critical Care Residential  
9 Customers, and Chronic Condition Residential Customers) or  
10 critical loads under §25.52 of this title (relating to Reliability and  
11 Continuity of Service).

12 (E) **Scheduled outages for routine maintenance, repairs, and modifications.**

13 A DSP may temporarily disconnect a DER from the DSP's distribution  
14 system for a scheduled outage, provided that the DSP issues notice in  
15 writing to the DER operator at least seven working days prior to such a  
16 disconnection. The DSP must reconnect the DER as quickly as is reasonably  
17 practicable and notify the DER operator following any such service  
18 interruption.

19 (3) **Tariff updates.** Not later than 30 calendar days after the effective date of this  
20 section, a DSP that is also a transmission and distribution utility (TDU) must file a  
21 tariff amendment with the commission that complies with this section.

(4) **New or amended interconnection agreements.** Newly executed or amendments to currently effective interconnection agreements must meet the requirements of this section within:

(A) 30 calendar days after the approval of a compliance tariff for a DSP that is also a TDU is approved by the commission, or

(B) 90 calendar days after the adoption of this section for a DSP that is not is not a TDU.

(5) **Fee Schedule.** DSPs must publish a fee schedule on its website.

(A) The fee schedule must include the cost of a prescreen study and the cost of an impact study, and must be easily accessible on the DSP's website related to DERs.

(B) The fee schedule published on the DSP's website must be clearly labeled as only applying to DERs larger than 250kW.

(e) **Pre-screen study.** A DER operator may request a pre-screen study for one or more proposed sites for a DER prior to submitting an interconnection application under subsection (f) of this section. A pre-screen study must be performed in accordance with good utility practice. A pre-screen study does not represent a commitment to procure or utilize particular equipment, either by the DSP or the DER operator, and does not change the requirement for an impact study. A pre-screen study will not, on its own, reserve or hold capacity on the distribution system.

(1) The DER operator must provide the DSP the following, at a minimum, to initiate a pre-screen study:

(A) the intended operation of the DER, such as a dispatchable resource for energy or ancillary services with an independent system operator, a settlement only generator with ERCOT, or only to be used as on-site back-up power;

(B) the proposed commercial operations date of the DER;

(C) the type of generator equipment;

(D) the GPS coordinates or address of the requested POI, the DER, and the interconnecting substation;

(E) the nameplate capacity of the DER;

(F) the fuel source of the DER;

(G) the approximate generation exporting level; and

(H) if the DER is an energy storage resource, then the approximate load charging level.

(2) A DSP's results from a pre-screen study are estimations and the DSP is not required to complete a detailed engineering analysis or provide a detailed cost estimate. A DSP's results from a pre-screen study must:

(A) indicate whether the requested operations, generation exporting level, and as applicable load charging level, of the DER can be accommodated at the DSP's applicable distribution feeder and substation;

(B) identify known potential limitations on the DSP's distribution system;

(C) list the additions or upgrades needed to accommodate interconnection of the DER at the DSP's substation which may include a new feeder, substation, and any additional bay requirements, transformer replacements in an

existing substation, or another major modification to the existing substation known by the DSP;

(D) identify the distance to the nearest substation from the requested POI provided by the DER operator; and

(E) provide the prevalent distribution voltage at the requested POI the DER operator submitted to the DSP to study.

(3) All DERs with executed and fully-funded interconnection agreements must be included when conducting the requested pre-screen study.

(4) The DSP must perform a pre-screen study once the DSP has received all the documentation required by the DSP and payment from the DER operator for the pre-screen study.

(A) A pre-screen study is undertaken as of a stated date and a DSP must use best efforts to provide the results of a pre-screen study within 15 working days of that stated date, but not to exceed 30 working days.

(B) Such time may be extended if a DER operator and its affiliates collectively request pre-screen studies for more than ten sites currently pending with the DSP, or if the total number of pre-screen studies pending with the DSP exceeds ten sites.

(B) If the pre-screen study involves interconnection to a network, the pre-screen may take an additional ten working days to complete.

1 (f) **Interconnection Process.** A DSP must permit a DER operator to interconnect any DER  
2 that meets the requirements of § 25.212 of this title and has successfully met the  
3 requirements of paragraphs (1)-(4) of this subsection.

4 (1) **Interconnection application.** To initiate the interconnection process, a DER  
5 operator must submit to the DSP a completed interconnection application and all  
6 supporting documentation necessary for a DSP to conduct an impact study as  
7 required by paragraph (2) of this section. A DSP must review the interconnection  
8 application and supporting documentation for completeness and adherence to all  
9 applicable technical criteria. Upon concluding its review, the DSP must approve,  
10 suspend, or reject the interconnection application, and promptly notify the DER  
11 operator of the decision in writing.

12 (A) The DSP must promptly notify the DER operator in writing of any  
13 deficiencies in the interconnection application or supporting documentation  
14 and provide a reasonable timeframe to cure the deficiencies.

15 (B) An interconnection application is deemed withdrawn if a DER operator  
16 submits a notice of termination to the DSP.

17 (C) A DSP may reject an interconnection application if:

18 (i) The DSP can demonstrate specific reliability or safety reasons  
19 indicating why the DER should not be interconnected at the  
20 requested site, which must be communicated to the DER operator in  
21 writing;

22 (ii) The DER operator fails to timely remit payment for the impact study  
23 to the DSP under subparagraph (2)(A) of this subsection; or

(iii) The DSP cannot accommodate the capacity requested by a DER operator because of capacity reserved by the DSP to support necessary planned projects.

(I) Planned projects must have an executed agreement for energization with the DSP. Such agreements must have an energization date within two years of the DER submitting its interconnection application.

(II) Upon request, the DSP must provide such agreements within 15 calendar days. The DSP may redact confidential information, as applicable.

(D) A DSP may suspend an interconnection application if more than one impact study application at the same substation is under review by the DSP.

(i) The DSP must notify the DER operator of the suspension and provide an estimated timeline for resuming review of the interconnection application in writing as soon as is reasonably practicable.

(ii) The DSP must resume its review of the interconnection application based on the order in which the applications were deemed complete and in adherence with all applicable technical criteria.

(2) **Impact Study.** An impact study may consist of one or more service studies, coordination studies, distribution system impact studies, or other studies as determined by the DSP. After approval of a DER operator's interconnection application under paragraph (1) of this subsection, a DSP must complete an impact

study of the DER in accordance with the details provided in the interconnection application and this paragraph. In performing an impact study, a DSP must review reasonable methods to safely and reliably interconnect a DER with the distribution system which, for certain DERs, may include options other than the standard radial feed, as determined by the interconnecting DSP.

(A) Upon determination by a DSP that an interconnection application is approved, the DSP must notify the DER operator in writing. The notice will also include any additional technical studies that are required by the DSP. The DSP must proceed with the impact study after receipt of the study fee from the DER operator.

(B) The DSP must use good-faith efforts to complete the impact study and provide the study results to the DER operator within 60 working days, but not to exceed 90 working days, after the DSP's receipt of the study fee.

(i) Timelines may be extended if a DER operator and its affiliates collectively request studies for more than ten sites currently pending with the DSP, or if the total number of impact studies pending with the DSP exceeds ten sites.

(ii) If the DER operator's proposed interconnection is to a network, the timeline will be extended to 120 working days after the DSP's receipt of the study fee.

(C) The results of an impact study must include:

(i) a list of impact study assumptions, including the allowable physical operating capabilities of the DER;



- 1 (ii) details of any required facilities or upgrades needed to interconnect  
2 the DER at its requested service level;
- 3 (iii) an estimate of the itemized costs of any required facilities or  
4 upgrades needed to allow parallel operation of the DER which  
5 should contain, at a minimum, a description of and estimated costs  
6 for distribution system upgrades, a description of and estimated  
7 costs for substation upgrades, any applicable allowance for  
8 interconnection as provided in the DSP's tariff, and applicable fees  
9 and taxes, to the extent the DSP is able to determine this information  
10 for the particular DER;
- 11 (iv) the amount of such costs the DSP requires to be covered by a  
12 contribution in aid of construction (CIAC); and
- 13 (v) a list of additional devices, operating schemes, or other  
14 specifications that, as determined by the DSP, may be required for  
15 interconnection of the DER described in an interconnection  
16 application.

17 (D) No later than 30 working days following the DER operator's receipt of the  
18 impact study results, the DER operator must issue a notice to proceed to the  
19 DSP that indicates in writing whether the DER operator plans to proceed  
20 with the interconnecting the DER.

21 (E) The DSP may require a new impact study to be performed at the DER  
22 operator's expense if, after beginning the initial impact study of the DER,  
23 there are any unexpected changes to the DER's commercial operations date,

design configuration, equipment (including the make and model of any components), operational requirements, or easement requirements that would potentially change the results of the initial impact study. The DSP may require a new impact study be performed at the DER operator's expense if, within 60 working days following the DER provider's receipt of the impact study results:

- (i) An interconnection agreement has not been executed in accordance with paragraph (3) of this subsection.
- (ii) The DER operator has not provided the DSP a CIAC as required by paragraph (g)(3) of this section.
- (iii) The DER operator has not demonstrated it has secured all necessary authorization or ownership to build at the selected location.

(3) **Interconnection Agreement.** After completion of an impact study and the notice to proceed has been issued by the DER operator, the DSP and the DER operator must execute an interconnection agreement to proceed with interconnecting the DER.

(A) Within 15 working days of the date the DER operator issues the notice to proceed, the DSP must provide an interconnection agreement to the DER operator that includes the estimated in-service date for the DSP's interconnection facilities.

- (i) The in-service date may be contingent on the receipt of the items listed in subclauses (ii)(I) and (ii)(II) of this subparagraph.

(ii) The DSP must commence construction by no later than 60 calendar days after the DSP's receipt of the following items, as applicable:

(I) evidence that all necessary easements have been obtained by the DER operator, and

(II) payment of the CIAC by the DER operator to the DSP.

(B) The interconnection agreement may be modified upon the DSP's and DER operator's mutual agreement.

(i) Modifications to an interconnection agreement must be consistent with the requirements of this section, §25.212 of this title, and, as applicable, rules and protocols established by the applicable independent system operator and regulatory authority. Any modifications to an interconnection agreement that conflict with the applicable law are void.

(ii) If the modified interconnection agreement contains substantially different terms or conditions than those provided in the standard form interconnection agreement, then the DSP must file with the commission the executed version of the modified, amended, or revised interconnection agreement within 30 calendar days of the execution. A cover letter must be included summarizing the contents of the amendments. Portions of an executed interconnection agreement may be filed confidentially to protect critical energy infrastructure information and competitively sensitive commercial or financial information.

(C) The DSP may terminate an executed interconnection agreement if the DER operator is unable meet the commercial operations date and begin providing the services the DER operator sought through the interconnection agreement within 12 months after the DER's stated in-service date that is provided in the interconnection agreement and as adjusted day-by-day for any delay in the DSP meeting the in-service date.

(4) **Testing.** The DER operator and DSP must coordinate to complete all interconnection and interoperability equipment testing before the commercial operations date specified in the executed interconnection agreement.

(A) The DER operator must provide notice to the DSP at least 15 calendar days before the initial energizing, start-up testing, and any interoperability testing of the DER. The DSP may observe the testing of any equipment and protective systems associated with the interconnection.

(i) Testing of protection systems must include procedures to functionally test all protective elements and telemetry equipment of the DER up to and including tripping of the DER at the point of interconnection. Testing must verify an established communication signal for telemetry to the DSP, all protective set points, and breaker trip timing. The DSP may have specific testing requirements and may observe the testing of the DER, including installed switchgear and protection systems.

(ii) If modifications to a DER are deemed to be necessary by a DSP or DER operator after testing of the DER under this paragraph, a DER

operator must submit a revised interconnection application to the DSP within ten working days with information reflecting any necessary or foreseeably necessary modifications to the DER. A DSP may only deem a modification to be necessary if the safe and reliable operation of the DSP's distribution system may be impacted or if the modification is otherwise required by law, including local ordinances or codes.

(B) A DSP may require additional testing of the DER upon any modifications of the DER or protective functions after the commencement of commercial operations. A DSP must not require additional testing of the DER if modifications are a replacement of like-for-like components.

(g) **Responsibilities during and after interconnection.**

(1) **Communications.** A DER operator must provide the DSP with complete and detailed written information concerning the proposed DER during each stage of the interconnection process.

(A) A DER operator and DSP must provide updates to each other as quickly as possible, and no later than two working days thereafter each time the DER operator or DSP becomes aware of a change to the expected timeline for interconnection that is expected to impact the in-service date or commercial operations date under the interconnection agreement.

(B) Timelines stipulated in this section can be extended, as necessary, if agreed upon in writing by the DSP and DER operator. Communications concerning

1 the DER must be consistent with § 25.84 of this title (relating to Reporting  
2 of Affiliate Transactions for Electric Utilities), § 25.272 of this title (relating  
3 to Code of Conduct for Electric Utilities and their Affiliates), and § 25.273  
4 of this title (relating to Contracts between Electric Utilities and their  
5 Competitive Affiliates).

6 (2) **Anticompetitive practices prohibited.** A DSP and its affiliates must not use  
7 knowledge of a proposed DER submitted to it for pre-screen study, impact study,  
8 or interconnection to prepare competing proposals to the DER operator that offer  
9 either discounted rates in return for not installing the DER, or offer competing  
10 DERs. Furthermore, a DSP must not use this information for any purpose other than  
11 its intended purpose without the written agreement of the DER operator.

12 (3) **Contribution in aid of construction.** Notwithstanding any other law, a DSP may  
13 require a CIAC from a DER operator for the reasonably estimated, detailed costs  
14 that a DSP incurs to design, procure, construct, install, or upgrade interconnection  
15 facilities that are necessary to operate the DER at the impact study determined  
16 service level which may include transmission system upgrades and such facilities  
17 inside the DSP's substation, and for the costs of any acquisitions of the additional  
18 facilities required by the DSP for safe and reliable interconnection of the DER.  
19 Such costs are limited to those specified in an executed interconnection agreement  
20 and, if applicable, exceed any allowance for interconnection in accordance with the  
21 DSP's tariff.

22 (A) The DSP must provide the DER operator an estimation of the itemized costs  
23 to be collected through the CIAC, which must contain, at a minimum, a

description of, and estimated costs for, distribution system upgrades including for substation upgrades, any applicable allowance for interconnection as provided in the DSP's tariff, and applicable fees and taxes, to the extent the DSP is able to determine this information for the particular DER. The DSP must provide this estimation of the itemized costs consistent with its tariff and the DSP's standard process for addressing other load-serving costs as applicable.

(B) A DSP must reconcile invoices for the total DSP upgrade costs with the total CIAC payment made by the DER operator within 180 calendar days from the date the DSP is notified that the DER is commencing commercial operations. A DSP must provide this reconciliation to the DER operator for the facilities the DSP procured and installed to enable the DER to interconnect to the distribution system.

(i) If the invoiced amounts are less than the sum of the CIAC and any allowance provided in accordance with the DSP's tariff, then the DSP must reimburse the DER operator all excess funds the DER operator paid the DSP.

(ii) If an allowance provided in accordance with the DSP's tariff, exceeds the DSP's interconnection costs, then the DSP will not reimburse the DER operator any amount of an allowance.

(h) **Reporting Requirements.**

- (1) Each DSP must maintain records concerning applications received for interconnection and parallel operation of DERs. Such records must include:
- (A) the name of the applicant;
  - (B) the business address of the applicant;
  - (C) the location of the proposed facility by county;
  - (D) the capacity rating of the facility in kilowatts;
  - (E) whether the facility is a renewable energy resource as defined in § 25.173 of this title (relating to Goal for Renewable Energy);
  - (F) the date each application is received;
  - (G) documents generated in the course of processing each application;
  - (H) correspondence regarding each application; and
  - (I) the final disposition of each application.
- (2) The owner of a DER facility that is interconnected under this section must report to the DSP any change in ownership of the facility and the cessation of operations of a facility within 14 working days of such change.
- (3) By March 30 of each calendar year, each DSP must file with the commission the commission-prescribed reporting form under subsection (n) of this section. The form must be filed in native Microsoft Excel format and must permit basic data manipulation functions, such as copying and pasting of data. The report will list:
- (A) the new DER facilities interconnected with the system since the previous year's report;
  - (B) any change in ownership or the cessation of operations of any DER that has been reported to the DSP and not included in the previous report;



(C) the capacity of each facility and whether it is a renewable energy resource;

(D) the feeder or other point on the DSP's distribution system where the facility is interconnected; and

(E) all applications for interconnection received during the previous one-year period, and the disposition of such applications.

(i) **Distributed natural gas generation facility.** This section applies only to a DER that is a distributed natural gas generation facility geographically located within the ERCOT power region.

(1) Upon request of an owner or operator of a distributed natural gas generation facility, a DSP must:

(A) allow the owner or operator to interconnect with and utilize transmission and distribution facilities to transmit electricity to another entity that is acceptable to the owner or operator; and

(B) comply with Chapter 25, Subchapter I, Division 1 §§ 25.191–25.203 (relating to Open- Access Comparable Transmission Service for Electrical Utilities in the Electric Reliability Council of Texas) of this title, or a tariff approved by the Federal Energy Regulatory Commission (FERC)

(2) In the event that a DSP seeks to recover an amount in excess of the estimate provided under PURA § 35.036(e) by more than 5%, an owner or operator of a distributed natural gas generation facility may petition the commission to address the discrepancy.

(3) This subsection does not require an electric cooperative to transmit electricity to a retail POI in the certificated area of the electric cooperative if the electric cooperative has not adopted customer choice.

(j) **Alternative requirements and standards.** An independent system operator may establish interconnection requirements and standards for interconnecting DERs in addition to the requirements and standards prescribed under this section.

(k) **Open access tariff.** Within one year from the effective date of this rule, a DSP, including an MOU or electric cooperative, must file with the commission a nondiscriminatory open access tariff for wholesale transmission service at distribution voltage. The tariff must:

(1) provide for open access to the DSP's distribution system; and

(2) establish nondiscriminatory terms of access that are comparable to the rates and terms of the DSP's use of its system.

(l) **DER Interconnection Agreement.** Figure: 16 TAC § 25.210(l)

(m) **Application for Interconnection of a DER.** Figure: 16 TAC § 25.210(m)

(n) **Annual DER Report.** Figure: 16 TAC § 25.210(n)

**§25.211. Interconnection of Distributed Energy Resources (DERs) with a Nameplate Capacity of 250kW or Less for Parallel Operation.**

(a) **Application.** Unless the context indicates otherwise, this section applies to an electric utility and a customer that owns or operates a distributed energy resource (DER) that has a nameplate capacity of 250 kilowatts (kW) or less and is interconnected or seeking interconnection, except to the extent preempted by federal law.

(1) This section establishes the terms and conditions that govern the interconnection and parallel operation of DERs to implement Public Utility Regulatory Act (PURA) §39.101(b)(3) and a natural gas distributed generation facility to implement PURA §35.036.

(2) Sales of power by on-site DER and distributed natural gas generation facility in the intrastate wholesale market are subject to Subchapter I, §§25.191-25.203 of this chapter (relating to Open-Access Comparable Transmission Service for Electrical Utilities in the Electric Reliability Council of Texas).

(3) The only part of this section that applies to an electric cooperative is subsection (n) of this section, as applicable.

(b) **Definitions.** The following words and terms when used in this section have the following meanings, unless the context indicates otherwise:

(1) **Certified equipment** – A specific generating and protective equipment system or systems that has been certified by a National Recognized Testing Lab (NRTL) as complying with applicable sections of UL-1741 and IEEE-1547 standards, as

determined by the DSP and relating to safety and reliability when paralleling with the grid at the time of interconnection.

(2) **Company** -- An electric utility operating a distribution system that is not an electric cooperative.

(3) **Customer** -- Any entity that owns or operates a DER that is 250kw or less, not registered with ERCOT, and is interconnected or seeking interconnection to a company's distribution system.

(4) **Distributed energy resource (DER)** -- A source of electric power connected at a voltage of less than 60 kilovolts (kV).

(5) **Distributed natural gas generation facility** -- A DER installed on the customer's side of the meter that uses natural gas to generate not more than 2,000 kilowatts of electricity.

(6) **Distribution system** -- A company's system operating under 60 kV.

(7) **Facility** -- An electrical generating installation consisting of one or more on-site DER units, including a distributed natural gas generation facility.

(8) **Interconnection** -- The physical connection of a DER to a distribution system to enable parallel operation.

(9) **Interconnection agreement** -- The commission-prescribed contractual agreement under subsection (p) of this section.

(10) **Interconnection application** -- The commission-prescribed form under subsection (q) of this section.

- 1           (11) **Network** -- Two or more primary distribution feeder sources electrically tied  
2                           together on the secondary (or low voltage) side to form one power source for one  
3                           or more customers.
- 4           (12) **Parallel operation** -- The operation of a DER while the DER is interconnected to  
5                           the distribution system.
- 6           (13) **Point of interconnection (POI)** -- The point where the electrical conductors of  
7                           the company's distribution system are connected to the customer's conductors and  
8                           where any transfer of electric power between the customer and the company's  
9                           distribution system takes place, such as switchgear near the meter.
- 10          (14) **Pre-interconnection study** -- A study or studies that may be undertaken by a  
11                           company in response to its receipt of a completed application for interconnection  
12                           and parallel operation with the company's distribution system. Pre-interconnection  
13                           studies may include, but are not limited to, service studies, coordination studies and  
14                           system impact studies.
- 15          (15) **Protective function** -- A function carried out using hardware and, potentially,  
16                           software that is designed to respond to unsafe operating conditions before, during,  
17                           and after the interconnection of a DER with a distribution system. For purposes of  
18                           this definition, unsafe operating conditions are conditions that, if left uncorrected,  
19                           would result in harm to personnel, damage to equipment, unacceptable system  
20                           instability or operation outside legally established parameters affecting the quality  
21                           of service to other customers connected to the distribution system.
- 22          (16) **Unit** -- A power generator.
- 23

(c) **Terms of Service.**

(1) **Distribution line charge.** No distribution line charge will be assessed to a customer for exporting energy to the distribution system.

(2) **Interconnection operations and maintenance costs.** No charge for operation and maintenance of a distribution system's facilities will be assessed against a customer for exporting energy to the distribution system.

(3) **Transmission charges.** No transmission charges will be assessed to a customer for exporting energy. For purposes of this paragraph, the term "transmission charges" means transmission access and line charges, transformation charges, and transmission line loss charges.

(4) **New or amended interconnection agreements.** A new or amended interconnection agreement entered into 30 or more days after the commission's approval of a company's compliance tariff filed in accordance with paragraph (5) of this subsection must meet the requirements of this section.

(5) **Tariffs.** Not later than 30 days after the effective date of this amended section, a company must file with the commission for approval tariff amendments to comply with this amended section, including the interconnection agreement under subsection (p) of this section and the interconnection application under subsection(q) of this section. A company must include in its tariff the fees for interconnection studies. A company that sells electricity must also include back-up, supplemental, and maintenance power services for DERs in its tariff.

(d) **Disconnection and reconnection.** A company may disconnect a DER unit from the distribution system under the following conditions:

(1) **Expiration or termination of interconnection agreement.** The interconnection agreement specifies the effective term and termination rights of the company and customer. Upon expiration or termination of the interconnection agreement with a customer, in accordance with the terms of the agreement, the company may disconnect customer's facilities.

(2) **Non-compliance with the technical requirements specified in §25.212 of this title.** A company may disconnect a DER facility if the facility is not in compliance with the technical requirements specified in §25.212 of this title. Within two working days from the time the customer notifies the company that the facility has been restored to compliance with the technical requirements of §25.212 of this title, the company will have an inspector verify such compliance. Upon such verification, the customer, in coordination with the company, may reconnect the facility.

(3) **System emergency.** A company may temporarily disconnect a customer's facility without prior written notice in cases where continued interconnection will endanger persons or property. During the forced outage of a distribution system, the company will have the right to temporarily disconnect a customer's facility to make immediate repairs on the distribution system. When possible, the company will provide the customer with reasonable notice and reconnect the customer as quickly as reasonably practical.

(4) **Routine maintenance, repairs, and modifications.** A company may disconnect a customer or a customer's facility with seven working days prior written notice of a

1 service interruption for routine maintenance, repairs, and distribution system  
2 modifications. The company will reconnect the customer as quickly as reasonably  
3 possible following any such service interruption.

4 **(5) Lack of approved application and interconnection agreement.** In order to  
5 interconnect DER to a distribution system, a customer must first submit to the  
6 company an application for interconnection and parallel operation with the  
7 distribution system and execute an interconnection agreement on the forms  
8 prescribed by the commission. The company may refuse to connect or may  
9 disconnect the customer's facility if such application has not been received and  
10 approved.

11  
12 **(e) Incremental demand charges.** During the term of an interconnection agreement a  
13 company may require a customer to disconnect its DER unit or take the DER unit off-line  
14 as a result of distribution system conditions described in subsection (d)(3) and (4) of this  
15 section. Incremental demand charges arising from the disconnection of the DER as  
16 directed by the company during such periods will not be assessed by the company to the  
17 customer.

18  
19 **(f) Pre-interconnection studies for non-network interconnection of DERs.** A company  
20 may conduct a service study, coordination study or system impact study prior to  
21 interconnection of a DER facility. In instances where such studies are deemed necessary,  
22 the scope of such studies must be based on the characteristics of the particular DER facility  
23 to be interconnected and the company's distribution system at the specific proposed



location. By agreement between the company and the customer, studies related to the interconnection of on-site DER on the customer's premises may be conducted by a qualified third party.

(1) **DER facilities for which no pre-interconnection study fees may be charged.** A company may not charge a customer a fee to conduct a pre-interconnection study for a DER using certified equipment that export not more than 15% of the total load on a single radial feeder and contribute not more than 25% of the maximum potential short circuit current on a single radial feeder.

(2) **DER facilities for which pre-interconnection study fees may be charged.** Prior to the interconnection of a DER facility not described in paragraph (1) of this subsection, a company may charge a customer a fee to offset the company's costs incurred in the conduct of a pre-interconnection study. In those instances where a company conducts a pre-interconnection study the following must apply:

- (A) The conduct of such pre-interconnection study must take no more than four weeks;
- (B) A company must prepare written reports of the study findings and make them available to the customer;
- (C) The company must consider both the costs incurred and the benefits realized as a result of the interconnection of the DER to the company's distribution system; and
- (D) The customer must receive an estimate of the study cost before the company initiates the study.

(g) **Network interconnection of DERs.** In instances where a customer requests interconnection to a secondary network system, the company and the customer must use reasonable efforts to complete the interconnection and the company must utilize the following guidelines:

(1) A company must approve applications for DER facilities that use inverter-based protective functions unless total generation (including the new facility) on affected feeders represents more than 25% of the total load of the secondary network under consideration.

(2) A company must approve applications for other on-site generation facilities whose total generation is less than the local customer's load unless total generation (including the new facility) on affected feeders represents more than 25% of the total load of the secondary network under consideration.

(3) A company may postpone processing an application for a DER facility under this section if the total existing generation on the targeted feeder represents more than 25% of the total load of the secondary network under consideration. In such an event, the company must conduct interconnection and network studies to determine whether, and in what amount, additional DER facilities can be safely added to the feeder or accommodated in some other fashion. These studies must be completed within six weeks from the completion of the additional studies, and application processing should then resume. If an interconnection application is delayed, the customer must be informed in writing within ten calendar days of the delay and be provided an estimated interconnection date.

(4) A company may reject applications for a DER facility under this section if the company can demonstrate specific reliability or safety reasons why the DER should not be interconnected at the requested site. In such an event, the company must work with the customer to attempt to resolve such problems to their mutual satisfaction.

(5) A company must make all reasonable efforts to seek methods to safely and reliably interconnect DER facilities that will export power. This may include switching service to a radial feed if practical and if acceptable to the customer.

(h) **Pre-Interconnection studies for network interconnection of DERs.** Prior to charging a pre-interconnection study fee for a network interconnection of a DER, a company must first advise the customer of the potential problems associated with interconnection of a DER with its network system. For potential interconnections to network systems there will be no pre-interconnection study fee assessed for a facility with inverter systems under 20 kW. For all other facilities the company may charge the customer a fee to offset its costs incurred in the conduct of the pre-interconnection study. In those instances where a company conducts a pre-interconnection study, the following requirements apply:

(1) The conduct of such pre-interconnection studies must take no more than four weeks;

(2) A company must prepare written reports of the study findings and make them available to the customer;

(3) The studies must consider both the costs incurred and the benefits realized as a result of the interconnection of the DER to the company's distribution system; and

(4) The customer must receive an estimate of the study cost before the company initiates the study.

(i) **Communications concerning proposed DER projects.** In the course of processing an application for interconnection and parallel operation and in the conduct of pre-interconnection studies, the customer must provide the company detailed information concerning proposed DER facilities. Communications concerning the nature of proposed DER facilities must be made subject to the requirements of §25.84 of this title (relating to Annual Reporting of Affiliate Transactions for Electric Utilities), §25.272 of this title (relating to Code of Conduct for Electric Utilities and their Affiliates), and §25.273 of this title (relating to Contracts between Electric Utilities and their Competitive Affiliates). A company and its affiliates must not use such knowledge of a proposed DER project submitted to it for interconnection or study to prepare competing proposals to the customer that offer either discounted rates in return for not installing the proposed DER project, or offer a competing DER project.

(j) **Equipment certification.** A DER unit that is certified to be in compliance by an NRTL must be installed on a company's distribution system in accordance with an approved interconnection control and protection scheme without further review of their design by the company.

(k) **Designation of company contact persons for matters relating to DER interconnection.**

(1) Each company must designate a person or persons who will serve as the company's contact for all matters related to DER interconnection.

(2) Each company must identify to the commission its DER contact person.

(3) Each company must provide convenient access through its internet web site to the names, telephone numbers, mailing addresses and electronic mail addresses for its DER contact person.

**(1) Time periods for processing applications for interconnection and parallel operation.**

To apply for interconnection the customer must provide the company a completed application for interconnection and parallel operation. The interconnection of a DER must occur in accordance with the following schedule:

(1) For a DER facility with certified equipment, interconnection must occur within four weeks of the company's receipt of a completed application.

(2) For a DER facility without certified equipment, interconnection must occur within six weeks of the company's receipt of a completed application.

(3) If interconnection of a particular DER facility will require substantial capital upgrades to the company's distribution system, the company must provide the customer an estimate of the schedule and cost attributable to the customer for the upgrade. If the customer desires to proceed with the upgrade, the customer and the company will execute a contract for the completion of the upgrade. The interconnection must occur no later than two weeks following the completion of such upgrades, except in situations in which a customer is not able to connect within two weeks following the completion of such upgrades, this time may be extended

1 by agreement of the company and the customer. The company must employ best  
2 reasonable efforts to complete such system upgrades in the shortest time reasonably  
3 practical.

4 (4) A company must use best reasonable efforts to interconnect facilities within the time  
5 frames described in this subsection. In the event a company determines that it cannot  
6 interconnect a facility within the time frames prescribed by this subsection, the  
7 company must notify the applicant in writing. The notification must identify each  
8 reason interconnection could not be performed in accordance with the schedule and  
9 provide an estimated date for interconnection.

10 (5) Each application for interconnection and parallel operation must be processed by the  
11 company in a non-discriminatory manner. An application must be processed in the  
12 order that it is received. In the event an application requires minor modifications  
13 while the application is under review by the company, such minor modifications will  
14 neither render the application incomplete nor require the application to be treated as  
15 a new or separate application.

16  
17 (m) **Reporting requirements.**

18 (1) Each company must maintain records concerning applications received for  
19 interconnection and parallel operation of DERs. Such records will include:

- 20 (A) the name of the applicant;
- 21 (B) the business address of the applicant;
- 22 (C) the location of the proposed facility by county;
- 23 (D) the capacity rating of the facility in kilowatts;

(E) whether the facility is a renewable energy resource as defined in §25.173 of this title (relating to Goal for Renewable Energy);

(F) the date each application is received;

(G) documents generated in the course of processing each application;

(H) correspondence regarding each application; and

(I) the final disposition of each application.

(2) The owner of a DER facility that is interconnected in accordance with this section must report to the company any change in ownership of the facility or the cessation of operations of a facility within 14 days of such change.

(3) By March 30 of each calendar year, every company must file with the commission the form prescribed by subsection (r) of this section . The form must be filed in a format native to Microsoft Excel and must permit basic data manipulation functions, such as copying and pasting of data. report must list:

(A) each new DER facility interconnected with the system since the previous year' report;

(B) any change in ownership or the cessation of operations of any DER that has been reported to the company and not included in the previous report;

(C) the capacity of each facility and whether it is a renewable energy resource;;

(D) the feeder or other point on the company's distribution system where the facility is interconnected; and

(E) all applications for interconnection received during the previous one-year period, and the disposition of such applications.

(n) **Distributed natural gas generation facility.** This section applies only to a DER that is a distributed natural gas generation facility geographically located within the ERCOT power region.

(1) Upon request of an owner or operator of a distributed natural gas generation facility, a company must:

(A) allow the owner or operator to interconnect with and utilize transmission and distribution facilities to transmit electricity to another entity that is acceptable to the owner or operator; and

(B) comply with Chapter 25, Subchapter I, Division 1 §§25.191–25.203 (relating to Open- Access Comparable Transmission Service for Electrical Utilities in the Electric Reliability Council of Texas) of this title, or a tariff approved by the Federal Energy Regulatory Commission (FERC).

(2) In the event that a company seeks to recover an amount in excess of the estimate provided under PURA §35.036(e) by more than 5%, an owner or operator of a distributed natural gas generation facility may petition the commission to address the discrepancy.

(3) This subsection does not require an electric cooperative to transmit electricity to a retail POI in the certificated area of the electric cooperative if the electric cooperative has not adopted customer choice.

(o) **Alternative requirements and standards.** An independent system operator (ISO) may establish interconnection requirements and standards for DERs interconnecting to, and



1 registering with, that ISO in addition to the requirements and standards prescribed under  
2 this section.

3  
4 (p) **DER Interconnection Agreement.** Figure: 16 TAC §25.211(p)

5  
6 (q) **Application for Interconnection of DERs.** Figure: 16 TAC §25.211(q)

7  
8 (r) **Annual DER Report.** Figure: 16 TAC §25.211(r)

**§25.212. Technical Requirements for Interconnection and Parallel Operation of On-Site Distributed Generation. (REPEAL)****§25.212. Technical and Operational Requirements for Parallel Operation of Interconnected Distributed Energy Resources (DERs).**

(a) **Application.** This section prescribes the minimum technical and operational requirements that must be maintained on an ongoing basis for all distributed energy resources (DERs) in Texas, interconnected and operating in parallel with a Distribution Service Provider's (DSP) distribution system.

(b) **Definitions.** The following words and terms when used in this section have the following meanings, unless the context indicates otherwise:

(1) **Certified equipment** – A specific generating and protective equipment system or systems that has been certified by a National Recognized Testing Lab (NRTL) as complying with applicable sections of UL-1741 and IEEE-1547-2018 standards, as determined by the DSP and relating to safety and reliability when paralleling with the grid at the time of interconnection.

(2) **DER** – A source of electric power connected at a voltage less than 60 kilovolts (kV).

(3) **DER operator** – Any entity operating a DER or seeking to interconnect a DER in Texas.

(4) **Distribution system** – A DSP's electric system operating under 60 kV.

(5) **Interconnection** – means the physical connection of a DER to a DSP's distribution system in accordance with the requirements of §25.210 or §25.211, as applicable.

- 1       (6)    **Legacy DER** – A DER interconnected on or before 90 calendar days from the  
2           effective date of this section; or a DER for which a completed interconnection  
3           application was received by the DSP prior to 90 calendar days after the effective  
4           date of this section. A DER that is registered with ERCOT, or is over one MW and  
5           interconnected within the ERCOT region, is not a legacy DER.
- 6       (7)    **Nationally Recognized Testing Laboratory (NRTL)** – An organization  
7           recognized by the Occupational Safety and Health Administration (OSHA).
- 8       (8)    **Parallel operation (includes parallel, paralleling, and operates in parallel)** –  
9           The operation of a DER while the DER is interconnected to the distribution system.
- 10      (9)    **Point of interconnection (POI)** – The point where the electrical conductors of the  
11           distribution system are interconnected to a DER's conductors and where any  
12           transfer of electric power between the DER and the distribution system takes place,  
13           such as the switchgear near the meter.
- 14      (10)   **Protective Function** – A function carried out using hardware and, potentially,  
15           software that is designed to respond to unsafe operating conditions before, during,  
16           and after the interconnection of a DER. For purposes of this definition, unsafe  
17           operating conditions are conditions that, if left uncorrected, would result in harm to  
18           personnel, damage to equipment, unacceptable system instability or operation  
19           outside legally established parameters affecting the quality of service to other  
20           customers connected to the distribution system.
- 21      (11)   **Stabilized** – A distribution system is considered stabilized when, following a  
22           disturbance, the distribution system returns to normal range of voltage and

frequency for a duration of no less than two minutes, unless a shorter time is specifically permitted by the interconnecting DSP.

(c) **Operational standards and performance requirements for DERs.** A DER, except for a legacy DER, must comply with the requirements of this subsection on an ongoing basis.

(1) **Power quality.**

(A) A DER must not cause the primary and secondary circuit voltage to exceed the nominal operating ranges established in American National Standards Institute, Incorporated (ANSI) C84.1.

(B) A DER must comply with the following power quality requirements.

(i) A DER that qualifies for primary service must not cause step or ramp changes in the root mean squared (RMS) voltage at the point of interconnection exceeding 3% of nominal and exceeding 3% per second averaged over a period of one second.

(ii) A DER that qualifies for secondary service must not cause step or ramp changes in the RMS voltage exceeding 5% of nominal and exceeding 5% per second averaged over a period of one second.

(iii) Flicker must be measured and assessed by methods defined in IEEE 1453-2015 and must be no more than:

$E_{Pst}$	$E_{Ph}$
0.35	0.25

(I)  $E_{P_{st}}$  is the emission limit for the short-term flicker severity ( $P_{st}$ ). If not specified differently, the  $P_{st}$  evaluation time is 600 seconds.

(II)  $E_{P_{lt}}$  is the emission limit for long-term flicker severity ( $P_{lt}$ ). If not specified differently, the  $P_{lt}$  evaluation time is two hours.

(iv) The following current distortion limits are exclusive of any harmonics present in the DSP's distribution system without the DER connected. Current distortion must be no more than:

Individual odd harmonic order (h)	$h < 11$	$11 \leq h < 17$	$17 \leq h < 23$	$23 \leq h < 35$	$35 \leq h < 50$	Total Rated current distortion (TRD)
Percent (%)	4.0	2.0	1.5	0.6	0.3	5.0

Individual even harmonic order	$h=2$	$h=4$	$h=6$	$8 \leq h < 50$
Percent (%)	1.0	2.0	3.0	Range and limits as defined for odd harmonics

(C) For short-circuit faults on the distribution system to which a DER is connected, the DER must cease to energize and trip within ten cycles if the voltage on one or more phases falls below -30% of nominal voltage on the

utility system serving the DER unless specified otherwise by the DSP. This requirement is not applicable to faults that cannot be detected by the DSP's protection systems.

(D) A DER must detect and cease to energize and trip all phases to which the DER is connected for any open-phase condition. The DER must cease to energize and trip within two seconds of the open-phase condition.

(2) **Frequency and voltage.** A DER, except for a legacy DER, must comply with the requirements of this paragraph on an ongoing basis unless the DER is over one MW or registered with ERCOT and alternative requirements have been established in accordance with paragraph (3) of this subsection.

(A) A DER must detect any unintentional island condition and, within two seconds of the formation of the island, must cease to energize and trip. The DER must not remain connected to or energize a de-energized circuit owned by the DSP. When restoring output after momentary cessation, the restore output settings of the DER must be coordinated with the DSP's reclosing timing.

(B) A DER must not connect and operate in parallel with the distribution system unless it is capable of detecting the system voltage and frequency, and synchronizing with the DSP's distribution system, and the applicable system voltage and frequency are within the ranges specified below:

Enter Service Criteria		System
Applicable voltage within range	Minimum	0.917 per unit (p.u.)
	Maximum	1.05 p.u.

<b>Frequency within range</b>	Minimum	59.5 Hz
	Maximum	60.1 Hz

<b>Aggregate rating of DER units (kVA)</b>	<b>Frequency difference (Hz)</b>	<b>Voltage difference (p.u.)</b>	<b>Phase Angle difference (degrees)</b>
0-500 kVA	0.3	0.10	20
>500-1500 kVA	0.2	0.05	15
>1500 kVA	0.1	0.03	10

- (C) Each DER must have frequency droop parameters set to a maximum of 5% at 0.017 Hz.
- (D) Each DER utilizing synchronous generation must have over-voltage and under-voltage set to trip during the following abnormal operating:

<b>Synchronous Must-Trip Settings</b>	<b>Voltage (V) (p.u. of nominal)</b>	<b>Clearing Time (seconds)</b>
<b>OV2</b>	$\geq 1.20$	0.16
<b>OV1</b>	$\geq 1.10$	2
<b>UV1</b>	$\leq 0.70$	2
<b>UV2</b>	$\leq 0.45$	0.16

- (E) Each DER utilizing synchronous generation must ride through the following abnormal operating conditions:

<b>Voltage (p.u. of nominal)</b>	<b>Minimum Ride-Through Time (seconds)</b>
$0.88 \leq V \leq 1.10$	continuous
$0.70 \leq V < 0.88$	Linear slope of 4 seconds/1 p.u. voltage starting at 0.7 seconds at 0.7 p.u.

- (F) Each DER utilizing inverter-based generation must have over-voltage and under-voltage relays set to trip during the following abnormal operating conditions:

<b>Inverter Must-Trip Settings</b>	<b>Voltage (p.u. of nominal)</b>	<b>Clearing Time (seconds)</b>
<b>OV2</b>	$\geq 1.20$	0.16
<b>OV1</b>	$\geq 1.10$	13.0
<b>UV1</b>	$\leq 0.88$	21.0
<b>UV2</b>	$\leq 0.50$	2.0

- (G) Each DER utilizing inverter-based generation must ride-through the following abnormal operating conditions:

<b>Voltage (p.u. of nominal)</b>	<b>Ride-Through Mode</b>	<b>Minimum Ride-Through Time (seconds)</b>
$1.10 < V \leq 1.20$	Momentary Cessation	12



$0.88 \leq V \leq 1.10$	Continuous Operation	continuous
$0.70 \leq V < 0.88$	Mandatory Operation	20
$0.50 \leq V < 0.70$	Mandatory Operation	10
$V < 0.50$	Momentary Cessation	1

- (H) Each DER must have under-frequency and over-frequency relays set to trip during the following abnormal operating conditions:

Must-Trip Function	Frequency (Hz)	Clearing Time (seconds)
OF2	62.0	0.16
OF1	61.2	300.0
UF1	58.5	300.0
UF2	56.5	0.2

- (I) Each DER must ride-through the following abnormal operating conditions:

Frequency (f) (Hz)	Ride-Through Mode	Minimum Ride-through Time (seconds)
$f > 61.8$	No ride-through requirements	
$61.2 < f \leq 61.8$	Mandatory Operation	299
$58.8 \leq f \leq 61.2$	Continuous Operation	continuous
$57.0 \leq f < 58.8$	Mandatory Operation	299
$f < 57.0$	No ride-through requirements	

- (J) Each DER must meet the reactive power requirements below and, if capable, must have dynamic voltage support enabled.

Category of DER	Injection capability as percent of nameplate apparent power rating (kVA)	Absorption capability as percent of nameplate apparent power rating (kVA)
A (non-inverter based)	44	25
B (inverter based)	44	44

- (K) A DER which parallels with the distribution system for 100 milliseconds or less (high speed closed transition switching), must also have at minimum the following protective devices: an interconnect disconnect device, a generator disconnect device, a breaker failure scheme, and an automatic synchronizing check for a DER with stand-alone capability. The DER provider may be required to provide the DSP test reports that demonstrate that the system operated in less than 100 milliseconds and that breaker failure, hung breaker, and shunt trip protective safety measures were installed and tested. Written comments are to be placed in the test report by the testing agent stating the system operated as designed.

(3) **Alternative frequency and voltage.** DERs with a nameplate capacity of over one MW or that are registered with ERCOT may be subject to alternative frequency and voltage standards than those under paragraph (2) of this subsection.

(A) **ERCOT.**

(i) ERCOT must establish and maintain rules for technical and operational requirements of DERs over one MW and for DERs registered with ERCOT that are interconnected in the ERCOT region. The rules must cover the same subject matter established in paragraph (2) of this subsection.

(ii) DERs located in the ERCOT region that have a nameplate capacity of one MW or more or that are registered with ERCOT must follow requirements established by ERCOT under this paragraph.

(B) **DSPs located outside the ERCOT region.**

(i) A DSP located outside of the ERCOT region may establish and maintain technical and operational requirements that are different, but cover the same subject matter, as those established in paragraph (2) of this subsection but, as applicable, are consistent with the operational requirements established by the DSP's applicable ISO. A DSP that establishes and maintains technical and operational requirements must:

(I) Make the requirements publicly available on the DSP's website;

(II) Provide all interconnected DER operators and DER operators in the process of seeking interconnection a copy of the published DSP's technical and operational requirements; and

(III) Must provide all existing interconnected DER operators that are subject to requirements under this subsection, at a minimum, six months to come into compliance with the new technical and operational requirements.

(ii) If a DSP located outside the ERCOT region establishes alternative requirements, and a DER has a nameplate capacity over one MW, is interconnected to the DSP's distribution system, then the DER is required to comply with the requirements established by a DSP under this paragraph.

**(d) Transition from legacy DER standards.**

(1) Beginning 90 calendar days after the effective date of this section, any equipment or facilities installed on a legacy DER must comply with the standards under subsection (c) of this section.

(2) A legacy DER must transition to the standards under subsection (c) of this section within 90 calendar days from the occurrence of any of the following actions:

(A) A change in the mode of energy production of any one or more of the generators, including equipping a generator to be dual fuel capable if the DER was not previously dual fuel capable.

- 1 (B) The replacement of any generator, inverter, or protective relay.
- 2 (C) Any changes to the DER that would result in the DER's nameplate
- 3 capacity to increase:
- 4 (i) by more than 10% of the DER's nameplate capacity at the
- 5 time this section becomes effective; or
- 6 (ii) 100 kW or more.
- 7 (3) Within 90 days from the effective date of this section, a DER that is registered with
- 8 ERCOT, or is over one MW and interconnected within the ERCOT region must
- 9 transition to or otherwise comply with the standards under subsection (c) of this
- 10 section.
- 11
- 12 (e) **Operational standards and performance requirements for legacy DERs.** A legacy
- 13 DER must comply with the requirements of this subsection on an ongoing basis
- 14 (1) **Voltage.** A DER operator must operate the generating equipment of a legacy DER
- 15 in such a manner that the voltage levels on a DSP's distribution system are in the
- 16 same range as if the generating equipment were not connected to a DSP's
- 17 distribution system. A DER operator must provide an automatic method of
- 18 disconnecting the legacy DER from a DSP's distribution system if a sustained
- 19 voltage deviation in excess of +5.0 % or -10% from nominal voltage persists for
- 20 more than 30 seconds, or a deviation in excess of +10% or -30% from nominal
- 21 voltage persists for more than ten cycles. A legacy DER may be reconnected when
- 22 a DSP's distribution system voltage and frequency return to normal range and are
- 23 stabilized.

- (2) **Flicker.** A legacy DER must not cause excessive voltage flicker on a DSP's distribution system. This flicker must not exceed 3.0% voltage dip, in accordance with IEEE 519 as measured at the point of interconnection.
- (3) **Frequency.** The operating frequency of a legacy DER must not deviate more than +0.5 Hz or -0.7 Hz from a 60 Hz base. A legacy DER must automatically disconnect from a DSP's distribution system within 15 cycles if this frequency tolerance cannot be maintained. A legacy DER may be reconnected when a DSP's distribution system voltage and frequency return to normal range and are stabilized.
- (4) **Harmonics.** In accordance with IEEE 519 the total harmonic distortion voltage must not exceed 5.0% of the fundamental 60 Hz frequency nor 3.0% of the fundamental frequency for any individual harmonic when measured at the point of interconnection with a DSP's distribution system.
- (5) **Fault and line clearing.** A legacy DER must automatically disconnect from a DSP's distribution system within ten cycles if the voltage on one or more phases falls below -30% of nominal voltage on a DSP's distribution system. This disconnect timing also ensures that a legacy DER is disconnected from a DSP's distribution system prior to automatic re-close of breakers. A legacy DER may be reconnected when a DSP's distribution system voltage and frequency return to normal range and stabilized. To enhance reliability and safety and with a DSP's approval, a DER operator may have installed a modified relay scheme with delayed tripping or blocking using communications equipment between the legacy DER and the DSP.

**(6) Requirements specific to a DER paralleling for sixty cycles or less (closed transition switching).** A legacy DER that operates in parallel with the distribution

system for 60 cycles or less must have the following protective devices:

(A) an interconnect disconnect device;

(B) a generator disconnect device;

(C) as applicable, an automatic synchronizing check for generators with stand-alone capability;

(D) an over-voltage trip;

(E) an under-voltage trip;

(F) an over-frequency and under-frequency trip; and

(G) as required by the DSP, either of the following:

(i) a ground over-voltage trip; or

(ii) a ground over-current trip depending on the grounding system.

**(f) General interconnection and protection requirements for DERs.**

(1) A DER must meet all applicable national, state, and local construction and safety codes and regulations.

(2) A DER must be equipped with the necessary hardware and software equipment designed to prevent the DER from:

(A) Connecting to a DSP's de-energized circuit, and

(B) Connecting or paralleling with the DSP's distribution system unless the DSP's distribution system service voltage and frequency are stabilized.

(3) The design of certified equipment may be reviewed and approved by the DSP.

- 1           (4)    If the DER is using certified equipment when interconnecting with the DSP's  
2               distribution system, the DER must:
- 3               (A)    Utilize the protective settings and operations specified by the DSP; and  
4               (B)    Interconnect in accordance with an approved interconnection control and  
5                      protection scheme.
- 6           (5)    If a synchronous DER's equipment is not certified equipment, the DER must  
7               demonstrate compliance with IEEE1547-2018 standards during the testing for  
8               startup and commissioning.
- 9           (6)    A DER operator is responsible for protecting its DER in such a manner that DSP's  
10           distribution system outages, short circuits, or other disturbances including zero  
11           sequence currents and ferroresonant over-voltages do not damage the DER. The  
12           DER's protective equipment must also prevent unnecessary tripping of the DSP's  
13           distribution system breakers that would affect the DSP's capability of providing  
14           reliable service to other customers.
- 15          (7)    For a DER that has a nameplate capacity greater than two MW, the DSP may  
16           require that a communication channel be provided by the DER operator to provide  
17           communication between the DSP and the DER.
- 18          (8)    Circuit breakers, reclosers, or other interrupting devices at the point of  
19           interconnection must be capable of interrupting the maximum available fault  
20           current. A DER that has a nameplate capacity greater than two MW and exporting  
21           energy to the DSP's distribution system must have a redundant circuit breaker  
22           unless a device suitable for the rated application is used and is capable of  
23           interrupting current to the distribution resource.



(9) A DER operator will install a manual disconnect device as part of the DER that has a visual break that is appropriate to the voltage level (a disconnect switch, a draw-out breaker, or fuse block), that is accessible to the DSP's personnel, and is capable of being locked in the open position. The DER must follow the DSP's switching, clearance, tagging, and locking procedures, which the DSP must provide to the DER operator.

(g) **Control, protection, and safety equipment requirements for all DERs.** A DSP may require a DER operator to install additional operational or protection devices on a DER exporting energy to a DSP's distribution system and may require the DER operator to coordinate with the DSP for such operations.

(1) **Single-phase generators connected to a DSP's distribution system.** The necessary control, protection, and safety equipment specific to a single-phase generator that has a nameplate capacity of 50 kW or less connected to a secondary or primary system includes an interconnect disconnect device, a generator disconnect device, an over-voltage trip, an under-voltage trip, an over-frequency and under-frequency trip, and a synchronizing check for synchronous and other types of generators with stand-alone capability.

(2) **Three-phase synchronous generators, induction generators, and inverter systems.**

(A) **Three-phase synchronous generators.** DER circuit breakers must be three-phase devices with electronic or electromechanical control. A DER

operator is solely responsible for properly synchronizing its DER with a DSP's distribution systems.

(i) The excitation system response ratio must not be less than 0.5. A DER's excitation systems must conform, as near as is reasonably achievable, to the field voltage versus time criteria specified in the most recent version of IEEE C50.13 to permit adequate field forcing during transient conditions.

(ii) For a DER that has a nameplate capacity greater than two MW the DER operator must at all times maintain the automatic voltage regulator (AVR) for each generating unit in service and operable. If the AVR is removed from service for maintenance or repair, the DSP may require that the DSP dispatching office be notified, and the DER must be removed from service until the AVR is returned to service. The DSP must be notified regarding both the removal and return to service of the AVR.

**(B) Three-phase induction generators and inverter systems.** A DER utilizing induction generation may be interconnected and brought up to synchronous speed (as an induction motor) if the DER operator can demonstrate that the initial voltage drop measured on the DER side of the POI is within the visible flicker stated in subparagraph (c)(1)(B)(iii) of this section or paragraph (e)(2) of this section for legacy DERs, as applicable. If the DER operator cannot demonstrate that the initial voltage drop measured on the distribution system is within the visible flicker

1 requirement, then the DER operator may be required to install hardware or  
2 employ other techniques to bring voltage fluctuations to acceptable levels.

3 (i) Line-commutated inverters do not require synchronizing equipment.

4 (ii) Self-commutated inverters, whether of a DSP interactive type or  
5 stand-alone type, must be used in parallel with a DSP's distribution  
6 system only with synchronizing equipment.

7 (iii) Direct-current generation must not be operated in parallel with the  
8 DSP's distribution system.

9 (C) **Protective function requirements.** The protective function requirements  
10 for three-phase facilities of different sizes and technologies are listed below.

11 (i) A DER that has a nameplate capacity of ten kW or less must have  
12 an interconnect disconnect device, a generator disconnect device, an  
13 over-voltage trip, an under-voltage trip, an over-frequency and  
14 under-frequency trip, and for facilities with stand-alone capability a  
15 manual or automatic synchronizing check.

16 (ii) A DER that has a nameplate capacity in excess of ten kW but not  
17 more than 500 kW must have an interconnect disconnect device, a  
18 generator disconnect device, an over-voltage trip, an under-voltage  
19 trip, an over-frequency and under-frequency trip, for facilities with  
20 stand-alone capability a manual or automatic synchronizing check,  
21 either a ground over-voltage trip or a ground over-current trip  
22 depending on the grounding system if required by the DSP, and  
23 reverse power sensing if the DER is not exporting energy.

1 Communication based telemetry and transfer trip may also be  
2 required by the DSP as part of a transfer tripping or blocking  
3 protective scheme.

4 (iii) A DER that has a nameplate capacity of more than 500 kW but not  
5 more than 2,000 kW must have an interconnect disconnect device,  
6 a generator disconnect device, an over-voltage trip, an under-voltage  
7 trip, an over-frequency and under-frequency trip, either a ground  
8 over-voltage trip or a ground over-current trip depending on the  
9 grounding system if required by the DSP, an automatic  
10 synchronizing check for facilities with stand-alone capability, and  
11 reverse power sensing if the DER is not exporting energy. If the  
12 DER is exporting energy, the power direction protective function  
13 may be used to block or delay the under-frequency trip if the DSP  
14 agrees in writing to such use. Communication based telemetry and  
15 transfer trip may also be required by the company as part of a  
16 transfer tripping or blocking protective scheme.

17 (iv) A DER that has a nameplate capacity of more than two MW must  
18 have an interconnect disconnect device, a generator disconnect  
19 device, an over-voltage trip, an under-voltage trip, an over-  
20 frequency and under-frequency trip, either a ground over-voltage  
21 trip or a ground over-current trip depending on the grounding system  
22 if required by the DSP, reverse power sensing if the DER is not  
23 exporting energy and, for facilities with stand-alone capability, an

automatic synchronizing check and AVR for facilities. If the DER is exporting energy, the power direction protective function may be used to block or delay the under-frequency trip if the DSP agrees in writing to such use. A DSP may also require communication-based telemetry and transfer trip by the company as part of a transfer tripper or blocking protective scheme.

(h) **Maintenance.** A DER operator is responsible for routine maintenance of the DER and for maintaining control, protection, and safety equipment.

(1) A DER operator must use good utility practice to maintain each DER and associated interconnection facilities under its ownership or control to reduce the likelihood of adverse impacts on other customers or the distribution system.

(2) A DER operator must maintain records of such maintenance activities, which the DSP may review at reasonable times.

(3) For a DER that has a nameplate capacity greater than 500 kW, the DER operator must keep a log of the DER operations.

(i) At a minimum, the log must include the date, DER time on, DER time off, and MW and megavar output.

(ii) The DSP may review such logs at least once every 30 calendar days.

**APPLICATION FOR INTERCONNECTION AND  
PARALLEL OPERATION OF DISTRIBUTED ENERGY RESOURCES (DERs) WITH  
A NAMEPLATE CAPACITY OF MORE THAN 250KW**

Distribution Service Providers (DSP) and DER operators will interconnect DERs for parallel operation in accordance with 16 Texas Administrative Code (TAC) § 25.210, relating to Interconnection of Distributed Energy Resources (DERs) with a Nameplate Capacity over 250kW for Parallel Operation and comply with the technical and operational requirements under 16 TAC § 25.212, relating to Technical and Operational Requirements for Parallel Operation of Interconnected Distributed Energy Resources (DERs) for interconnected DERs on an ongoing basis.

A DER operator seeking interconnection and parallel operation of a DER with a DSP must complete and submit this Application for Interconnection and Parallel Operation of a DER with the DSP.

APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
WITH A NAMEPLATE CAPACITY GREATER THAN 250KW

X.X Distributed Energy Resource Interconnection

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**Application for Interconnection and Parallel Operation of  
a DER with a Nameplate Capacity of More than 250kW**

**Introduction:**

This application, utilized with the attached generator type forms, is for the interconnection and parallel operation of a DER to the DSP's distribution system. Applicants will also need to submit the appropriate DER Pre- Interconnection study fee. Reference your local DSP's study fee schedule, provided on its' website, for more information.

Emergency or stand-by DERs utilizing "break before make" type switching, where the DER switches by breaking the connection from power sources before switching and exporting to the distribution system, do not require an interconnection application.

All interconnections are required to follow all local, state, and national codes (i.e. such as International Building Code, National Electric Code, etc.)

Utilize the appropriate Exhibits from the Commission standard form Interconnection Agreement provided under 25.210(l) to provide equipment details for DERs requested to be interconnected. If you are adding to an existing system, then please show all existing and proposed new facilities. For all interconnection requests, including changes of ownership of a DER, please contact your local DSP.

APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
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**Return Completed Application to (DSP's name and address):**

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**Requested POI Address:**

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**Service Point Information Status**

New Service Location \_\_\_\_\_ Yes \_\_\_\_\_ No

If Yes, then Meter Number (optional): \_\_\_\_\_

**DER System Information**

New generation Interconnection \_\_\_\_\_ Yes \_\_\_\_\_ No

Addition to existing generation \_\_\_\_\_ Yes \_\_\_\_\_ No

**Customer Information**

End-use Customer Name: \_\_\_\_\_

(End-use customer is the entity that is responsible for the electric bill)

Business Entity Type (e.g. Corporation or LLC): \_\_\_\_\_

State of Formation (E.g. Texas): \_\_\_\_\_

Corporate Address: \_\_\_\_\_

Contact Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone: \_\_\_\_\_



APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
WITH A NAMEPLATE CAPACITY GREATER THAN 250KW

X.X Distributed Energy Resource Interconnection

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**Generation Ownership Interest**

	<b>Owner of DER System</b>	<b>Assigned Ownership Rights to Energy Produced</b>
<b>Legal Name</b>		
<b>Entity Type</b>		
<b>Corporate Address</b>		
<b>Contact Name</b>		
<b>Email</b>		
<b>Phone Number</b>		

**Place a check mark indicating the responsible party to be utilized in the Interconnection Agreement:**

- ☐ End-use customer
- ☐ Entity other than the End-Use customer that owns the DER facility and will sign the Interconnection Agreement
- ☐ Entity other than the end-use customer that owns the premises upon which the DER facility will be located and will sign the Interconnection Agreement
- ☐ Entity who by contract is assigned ownership rights to energy produced from DER located at the premises of the End-use customer on the End-use customer's side of the meter, will act as a Party to this Agreement.

**Total Requested Generation Connected and Exporting Capacity**

Total requested generation connected capacity of all attached Application Exhibit/Forms	_____ kW
Total requested generation capable of exporting (generally for small renewable systems connected and exporting are the same)	_____ kW

**APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
WITH A NAMEPLATE CAPACITY GREATER THAN 250KW**

X.X Distributed Energy Resource Interconnection

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**Intended Operation**

\_\_\_\_\_ DER has no substantial co-located load

\_\_\_\_\_ DER co-located with load (check one of the below options)

<input type="checkbox"/>	DER is back-up only
<input type="checkbox"/>	DER is back-up and used to off-set load [peak shaving]
<input type="checkbox"/>	DER will be for continuous use but only meant to serve load [intended to run continuously with only minor down times]
<input type="checkbox"/>	DER will be for continuous use for serving load and for exporting to the grid [intended to run continuously and export to grid continuously with only minor down times]
<input type="checkbox"/>	Other:

**Only Applicable if in ERCOT, Plans for ERCOT Registration**

\_\_\_\_\_ Settlement Only Distributed Generator (SODG)

\_\_\_\_\_ DER (DESR or DGR)

\_\_\_\_\_ Not planning to register with ERCOT

**Desired Service Dates**

Energization or Start-up:	
Permission to operate (PTO):	

**APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
WITH A NAMEPLATE CAPACITY GREATER THAN 250KW**

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**Requested Delivery Voltage**

	240/120 V-1 phase, 3 wire
	208/120 V-3 phase, 4 wire
	480/277 V-3 phase, 4 wire
	4,160/2,400 V-3 phase, 4 wire
	12,470/7,200 V-3 phase, 4 wire
	13,200/7,620 V-3 phase, 4 wire
	21,600/12,470 V-3 phase, 4 wire
	24,900/14,400 V-3 phase, 4 wire
	Other:

**Only Applicable if in ERCOT, Metering**

If in competitive areas of the state, do you request your local DSP measure and report surplus generation to your REP?

\_\_\_\_\_ Yes \_\_\_\_\_ No

Special instructions: \_\_\_\_\_

**Required Attachments**

Dependent on your application type, specific additional details may be required. contact your local DSP for the additional details. Additional details that may be required include a one-line diagram and layout sketch.

**APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
WITH A NAMEPLATE CAPACITY GREATER THAN 250KW**

X.X Distributed Energy Resource Interconnection

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**Point of delivery information**

Please indicate your point of delivery type by checking one of the options:

	Underground Service – Meter Base
	Overhead Service – Meter Base
	DSP distribution cabinet or enclosure
	Secondary compartment of pad mounted transformer
	Overhead service to customer weather head
	Overhead primary metering
	Other:

**Authorized Release of Information List**

By signing this Application the End-use Customer or Owner of the premises authorizes DSP to release Customer's proprietary information to facilitate the interconnection process to the following:

<b>Name</b>	<b>Phone Number</b>	<b>E-Mail Address</b>

APPLICATION FOR INTERCONNECTION AND PARALLEL OPERATION OF DERS  
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**End-Use Customer:**

**Entity other than the End-Use Customer  
(that owns the DER facility):**

Name: \_\_\_\_\_

Name: \_\_\_\_\_

By: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

**Prepared By:**

Information Prepared and Submitted By: \_\_\_\_\_

Signature: \_\_\_\_\_

Signed Date: \_\_\_\_\_

**Standard Distributed Energy Resource Interconnection Agreement**  
**Figure: 16 TAC §25.210(l)**  
**Effective \_\_/\_\_/2025**  
**(P 54233)**

**DISTRIBUTED ENERGY RESOURCE  
INTERCONNECTION AGREEMENT**

Between

---

as a Distributed Energy Resource Provider, and

---

as the Distribution Service Provider, for

---

\_\_\_\_\_, 20\_\_

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## DISTRIBUTED ENERGY RESOURCE INTERCONNECTION AGREEMENT

**1. Agreement.** This Distributed Energy Resource Interconnection Agreement (“Agreement”) is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_ (“Distribution Service Provider” or “DSP”), and \_\_\_\_\_ (“Generator”), each hereinafter may be referred to individually as “Party” or both referred to collectively as the “Parties.”

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

**2. Objective and Scope.** Distribution Service Provider (DSP) represents that it is a public utility that owns and operates facilities for the distribution of electricity within the state of Texas. Generator represents that it will own and operate a Distributed Energy Resource (DER), and seeks to interconnect that DER to the Distribution System operated by DSP. This Agreement states the terms and conditions under which Generator’s DER will be interconnected to DSP’s Distribution System.

**3. Definitions.** The following capitalized terms, when used in this Agreement, have the following meanings, except as otherwise specified:

- a. “Affiliates” means a Party’s corporate parent company, associated and affiliated companies and the respective directors, officers, agents, servants and employees of such companies.
- b. “Agreement” means this Agreement, including Exhibits A through H, and any additional exhibits, schedules and attachments added as required by this Agreement, or added by any authorized amendment to this Agreement.
- c. “ANSI Standards” means the American National Standards Institute Standards in effect at the time a new Point of Interconnection (POI) is constructed or an existing POI is modified.
- d. “Applicable Independent System Operator” or “Applicable ISO” means the Independent System Operator (ISO) that has authority in the power region where Generator seeks to interconnect to the DSP’s Distribution System.
- e. “Applicable ISO Requirements” means any applicable rules, regulations, criteria, standards, procedures, operating requirements, other binding documents, and related amendments adopted by an Applicable ISO or its successor. Applicable ISO Requirements includes the Electric Reliability Council of Texas (ERCOT) Nodal Protocols, Midcontinent Independent System Operator (MISO) Business Practice Manuals, and Southwest Power Pool (SPP) Criteria, as amended from time to time. Applicable ISO Requirements also could include Western Electricity Coordinating Council (WECC) standards, applicable balancing authority standards, applicable reliability coordinator standards, North American Reliability Corporation (NERC) standards, and Federal Energy Regulatory Commission (FERC) regulations, orders, and standards.
- f. “Applicable Law” means any valid constitution, statute, law (including common law), ordinance, rule, regulation, rate, ruling, order, judgment, legally binding guideline, restriction, requirement, writ, injunction, notice, or decree which has been enacted, issued



or promulgated by, and any tariffs approved by, any Governmental Authority that affect a Party, a Party's standard course of business, or performance of a Party under this Agreement.

- g. "Cessation of Operations" means the permanent de-energization of the DER at the POI.
- h. "Change in Law" means any material change in Applicable Law that makes a Party's performance impossible or makes one or more obligations or requirements under this Agreement illegal.
- i. "Commercial Operation" means construction of the DER has been substantially completed, testing and commissioning of the DER has been completed, and the DER is ready to generate power.
- j. "Commercial Operation Date" means the date that Commercial Operation commences.
- k. "Confidential Information" means any information that a Party claims is competitively sensitive, commercial or financial information under this Agreement.
- l. "CIAC" means a Contribution in Aid of Construction (CIAC) payment made by Generator to DSP to pay for all or a portion of the capital and overhead costs incurred by the DSP to construct or modify the DSP Interconnection Facilities (DIF).
- m. "COP" means Current Operation Plan (COP) and means a plan by a Qualified Scheduling Entity (QSE) reflecting anticipated operating conditions for each of the resources that it represents for upcoming days and hours. It includes information on resource operational data, resource status, and ancillary service schedule.
- n. "Default" means the failure of either Party to perform any obligation in the time or manner provided by this Agreement. No Default exists where such failure to discharge an obligation is expressly excused under this Agreement or is the result of an act or omission of the other Party or any of its agents, such as by Force Majeure.
- o. "DER" means a source of electric power connected at a voltage less than 60 kilovolts (kV), and, as context indicates in this Agreement, the specific DER described on Exhibit A.
- p. "Distribution System" means a DSP's electric system operating under 60 kV.
- q. "DIF" means DSP Interconnection Facilities (DIF) which are the electrical, communication, and other equipment and facilities specifically described and listed under Exhibit A that are under the ownership or control of DSP and are to be utilized to connect the Distribution System to the DER at the POI. DIF include any upgrades, modifications or reconfigurations of existing DSP equipment and facilities to accommodate interconnection.
- r. "Force Majeure" means any cause beyond the reasonable control of the Party claiming Force Majeure, and without the fault or negligence of such Party, which materially prevents or impairs the performance of such Party's obligations under this Agreement or would

otherwise constitute a Default, including storm, flood, lightning, earthquake, fire, explosion, failure or imminent threat of failure of facilities, civil disturbance, pandemic, strike or other labor disturbance, sabotage, war, national emergency, or restraint by any Governmental Authority. A scheduled or unscheduled outage under Section 12 of this Agreement is not a Force Majeure.

- s. “GIF” means Generator Interconnection Facilities (GIF) which are the Generator electrical, communication, and other equipment and facilities specifically described and listed under Exhibit A that are under the ownership or control of Generator and are utilized to connect the DER to the Distribution System at the POI, GIF include any upgrades, modifications or reconfigurations of existing GIF equipment and facilities to accommodate interconnection.
- t. “Good Utility Practice” has the meaning provided under § 25.5 of the Public Utility Commission of Texas (PUCT) Substantive Rules at the time this Agreement is executed.
- u. “Governmental Authority” means the Applicable ISO, the PUCT, the NERC, and any other duly constituted federal, state, local or municipal body having jurisdiction over a Party in the United States of America.
- v. “IEEE Standards” means the Institute of Electrical and Electronic Engineers (IEEE) Standards in effect at the time a new POI is constructed or an existing POI is modified.
- w. “Interconnection Studies” means the technical studies required by the DSP, the Applicable ISO, and any other applicable Governmental Authority in order to interconnect the DER with the Distribution System in accordance with all DSP operating requirements and the Applicable ISO Requirements, and which identify the additional necessary upgrades, improvements, or changes required to support safe and reliable operations through the Distribution System and into the applicable transmission system resulting from such interconnection. Such technical studies must be provided by Generator at its cost, unless otherwise prescribed by this Agreement or agreed to by the Parties in an amendment to this Agreement.
- x. “In-Service Date” means the date stated in Exhibit F, that indicates when the DIF will be ready to connect to the GIF at the POI.
- y. “Intrastate Operation” means a synchronous or an asynchronous interconnection between ERCOT and any other transmission facilities operated outside of ERCOT unless ordered by the FERC under Section 210 of the Federal Power Act.
- z. “NEC” means the National Electrical Code (NEC) published by the National Fire Protection Association in effect at the time a new POI is constructed or an existing POI is modified.
- aa. “NESC” means the National Electrical Safety Code (NESC) published by the IEEE Standards in effect at the time a new POI is constructed or an existing POI is modified.

- bb. “NERC” means the North American Electric Reliability Corporation (NERC), and any regional entity exercising the expressly delegated authority of NERC, including Texas Reliability Entity Inc.
- cc. “Notice to Proceed” means the notice from Generator to DSP authorizing DSP to commence the design, procurement and construction of the DIF.
- dd. “Person” means any individual, partnership, firm, corporation, limited liability company, association, trust, unincorporated organization or other entity.
- ee. “POI” means the Points of Interconnection (POI) specified in Exhibit A and has the meaning of the point where the electrical conductors of the Distribution System are interconnected to a Generator’s conductors and where any transfer of electric power between the Generator and the Distribution System takes place, such as the switchgear near the meter.
- ff. “PUCT” means the Public Utility Commission of Texas (PUCT) or its successor in function.
- gg. “PUCT Substantive Rules” means the regulations promulgated by the PUCT and codified in Title 16, Part II, Chapter 25 of the Texas Administrative Code.
- hh. “QSE” means the entity responsible for communication with the Applicable ISO on behalf of the Generator.

#### **4. Term and Termination; Cost Recovery Upon Termination; Disconnection**

This Agreement is effective upon execution by both Parties and is effective until terminated by a Party for any of the reasons specified by Subsection 4(A). Upon termination of this Agreement, both Parties must use commercially reasonable efforts to mitigate the damages and costs that each respective Party may incur as a consequence of termination. Subsection 4(A) and Subsection 4(B) will survive termination of this Agreement until all applicable obligations under those subsections are performed.

- A. This Agreement may be terminated for any of the following reasons:
  - (i) Generator may terminate this Agreement at any time by providing sixty (60) calendar days’ advance written notice to DSP.
  - (ii) DSP may terminate this Agreement by providing written notice to Generator if the DER does not commence Commercial Operations twelve (12) calendar months from the In-Service Date.
  - (iii) DSP may terminate this Agreement by giving written notice to Generator if the Generator does not issue a Notice to Proceed and a CIAC by the date specified in Exhibit F or fails to provide the required CIAC to DSP in the manner and in the amount specified by Section 5 and in Exhibit E within

three (3) months of the date this Agreement is executed by DSP and Generator.

- (iv) A Party may terminate this Agreement upon an uncured Default of the other Party, in accordance with the terms of Section 19.
- (v) DSP may terminate this Agreement by providing Generator at least sixty (60) calendar days' advance written notice, if practicable, in the event of a Change in Law. Upon such advance written notice, (i) DSP must cease any activities relating to the engineering or construction of the DIF or connecting the DIF to the GIF; and (ii) Parties must use commercially reasonable efforts to either amend this Agreement or execute a new agreement to reflect the Change in Law.

B. If DSP or Generator terminates this Agreement for a reason specified in Subsection 4(A), including termination due to an uncured Default by Generator in accordance with the terms of Section 19, within thirty (30) calendar days from the date of termination, DSP must provide Generator a written invoice reasonably detailing all costs reasonably incurred by DSP in association with Generator's performance under this Agreement up to the date of termination and subtracting all amounts that have been already paid as a CIAC. DSP's reasonably incurred costs do not include costs that were incurred after the date of termination, unless such costs were committed to be incurred prior to the date of termination. Within fifteen (15) working days from receipt of a reasonably detailed invoice from DSP, Generator must pay all costs listed on the invoice that were reasonably incurred by DSP minus all CIAC paid by Generator and not excluded by this subsection. If the resulting net amount is negative, then the DSP shall refund any remaining CIAC to Generator. Reasonable costs incurred by DSP that Generator is responsible for paying include:

- (i) The costs associated with construction of the DIF and connection of the DIF to the GIF, including costs that DSP has incurred for licensing, planning, designing, engineering, installing, maintaining, procuring equipment and materials, acquiring rights of way, and any other related costs such as taxes and the increased tax liability of DSP as a result of Generator's payments to DSP under Section 5.
- (ii) The costs that DSP has committed to incur under this Agreement that it is unable to avoid using commercially reasonable steps.
- (iii) Capital and operational costs incurred by DSP after the date of termination to return the Distribution System to a condition consistent with DSP's construction standards and all Applicable Law.
- (iv) Costs incurred by DSP in association with disconnection of the GIF from the DIF, or removal of the GIF and, if applicable, the DIF from the premises of DSP under Subsection 4(C). Such costs also include removal of the GIF and Generator's equipment from the DSP's premises and restoration of the

Distribution System to the condition prior to interconnection of the Generator.

- C. Upon termination of this Agreement, the Parties will disconnect the GIF from the DIF. The Parties must use commercially reasonable efforts to coordinate such disconnection and the removal of the GIF from any property owned or controlled by DSP. If the GIF is not disconnected within thirty (30) calendar days of written notice by DSP to Generator and commercially reasonable efforts to coordinate disconnection have failed, DSP will have the right to disconnect the GIF from the DIF without coordinating with Generator. If, after sixty (60) calendar days after disconnection of the GIF, the GIF is not removed by the Generator and commercially reasonable efforts to coordinate removal have failed, DSP will have the right to remove the GIF from property owned or controlled by DSP, and restore the Distribution System to a condition consistent with DSP's construction standards and Applicable Law.

## **5. Performance Obligation; Cost Allocation; and CIAC**

- A. Parties agree to interconnect the GIF and the DIF in accordance with the terms and conditions of this Agreement. Costs associated with performance under this Agreement other than termination under Section 4 or Default under Section 19, will be allocated in the following manner.
- (i) Unless otherwise specified in PUCT Substantive Rules, Generator must design, procure, install, construct and maintain the GIF at its sole expense.
  - (ii) Generator must pay all costs associated with modifications to the GIF, including costs incurred by DSP for modifications to the DIF to accommodate a modification to the GIF and for upgrades to the GIF, DIF, or DER that are necessary to comply with changes in Applicable Law.
  - (iii) Generator must pay DSP a CIAC for the reasonably estimated costs associated with the construction of the DIF and interconnection of the DIF to the GIF. If DSP's tariff includes an allowable expenditure amount for interconnection, the CIAC must account for such an allowable expenditure amount. The CIAC must be included as part of this Agreement as Exhibit E. The CIAC must be paid by Generator to DSP in the amounts described in Exhibit E and payment from the CIAC must be delivered to DSP by Generator on or before the date specified in Exhibit F. The CIAC must be in an amount sufficient to pay for the reasonably estimated costs of construction of DIF and connection of GIF to DIF, including licensing, planning, designing, engineering, installing, maintaining, procuring equipment and materials, acquiring rights of way, and any other related costs such as taxes or any increased tax liability of DSP. The CIAC also includes overhead and labor expenses that the DSP normally and reasonably applies to construction projects of this nature increased by an adder agreed to by the Parties and specified as part of Exhibit E to cover the effects of

Generator's payment on DSP's tax liability and, where applicable, costs associated with the recovery of franchise fees for conducting business that were necessary for DSP to incur in order to perform its obligations under this Agreement.

- (iv) DSP must provide to Generator a reasonably detailed written invoice for the CIAC thirty (30) calendar days from the date specified for delivery of the CIAC in Exhibit F. Within thirty (30) calendar days from the date the In-Service Date occurs, DSP must provide to Generator a reasonably detailed invoice for all actual costs incurred by DSP for construction of the DIF and connecting the GIF to the DIF.
  - (v) DSP must design, procure, install, construct and maintain the DIF at its sole expense. DSP must use funds from the CIAC to recover such expenses, as specified under Paragraph 5(A)(iii). DSP must begin procurement and construction of the DIF within sixty (60) calendar days of receiving the CIAC in the amounts described in Exhibit E. DSP is not obligated to begin procurement or construction of the DIF until the CIAC is received by DSP in the amounts described in Exhibit E. A DSP's failure to perform its obligations in the event of an insufficient or delinquent CIAC is not a Default of this Agreement.
- B. Within one hundred and eighty (180) calendar days from the date the DER commences Commercial Operations, DSP must true-up the actual costs incurred by DSP for construction of the DIF and connecting the GIF to the DIF against the amount of the CIAC and the initial costs estimates for the project. Upon such a true-up of actual incurred costs, DSP must reimburse Generator for any overpayment, relating to the actual costs incurred by DSP. DSP must provide to Generator a reasonably detailed invoice and reasonable documentation of the actual costs incurred and of the true-up performed by DSP.
- C. The Parties agree to design, install and construct their respective facilities in accordance with: (i) Good Utility Practice; (ii) Applicable Law and (iii) applicable provisions of the NESC, ANSI Standards, and IEEE Standards in effect at the time of construction and installation of the GIF, the DIF, and the DER. Generator must also design, install and construct the GIF and the DER in accordance with the NEC and Applicable Law. Applicable ISO Requirements will govern in the event there is a conflict between the Applicable ISO Requirements and either the NEC or Applicable Law. Applicable Law will govern if there is a conflict between the Applicable Law and the NEC.
- D. Exhibit F prescribes the Parties' anticipated dates for completion of their respective construction and performance activities. Exhibit E prescribes the terms and specific amount to be included in the CIAC to be paid by Generator to DSP for the costs listed under Section 5, including the estimated costs under Paragraph 5(A)(iii). Exhibit E also includes other information necessary to remit payment from Generator to DSP for such costs. Generator acknowledges that DSP has no

obligation to commence any construction or performance activities under this Agreement until DSP has received the Notice to Proceed and the CIAC by the date specified in Exhibit F. Generator also acknowledges that DSP has no such obligations to commence or perform under this Agreement unless the amount of the CIAC provided by the Generator to the DSP is in the amount specified in Exhibit E.

- E. Generator and DSP must communicate to resolve outstanding issues related to cost allocation, performance obligations, or other responsibilities under this Agreement on a regular basis. The first date of such communication between DSP and Generator must occur at least twenty (20) working days from the date the DSP has received the Notice to Proceed as specified in Exhibit F and at least once every fifty (50) working days thereafter until the Commercial Operation Date. The Parties may, upon mutual agreement, establish in Exhibit F a more frequent communication schedule than what is specified by this Subsection. All such communications between a Generator and DSP must be reduced to writing. Some communications must comply with certain provisions of the PUCT Substantive Rules as specified by §25.210 of the PUCT Substantive Rules.

## **6. Right of Access; Equipment Installation; Removal and Inspection**

- A. Upon reasonable notice prior to the Commercial Operation Date, DSP will be granted access to Generator's premises to inspect the GIF and observe the commissioning (including any testing, startup, and initial operation) of the DER.
- B. Generator warrants that it has obtained all necessary rights, permits, or agreements to provide DSP access to Generator's premises, to the extent required for DSP to exercise its rights and perform its obligations under this Agreement.
- C. Generator must secure and maintain access agreements for ingress, egress, survey, geotechnical, and environmental assessments on behalf of DSP on all lands for which land rights or interests will be conveyed to DSP under Section 23 until the In-Service Date. Such access agreements must be obtained in a timely manner to minimize any delay by DSP associated with completion of the DIF by the In-Service Date. Any delay of the In-Service Date by DSP that is caused by Generator's failure to timely obtain such access agreements will not be considered a Default of this Agreement by the DSP. Failure of Generator to timely provide such access agreements may delay the In-Service Date at no fault of the DSP. Any additional costs incurred by the DSP that is caused by Generator's failure to timely obtain such access agreements will be owed by the Generator to the DSP as an addition to the CAIC.
- D. To the extent that the DSP accesses Generator's premises in accordance with this Agreement, DSP must require its personnel, including independent third-party contractors hired by the DSP, to comply with all safety requirements and procedures provided by Generator and Applicable Law.

## **7. Modifications of Generator Facilities**

- A. Generator agrees to provide DSP with a description of the service, including ancillary services, the Generator anticipates providing for the duration of this Agreement as part of Exhibit A. If a modification is necessary to provide service under this Agreement, Generator must obtain approval for the modification in the manner prescribed by Subsection 7(B).
- B. Generator agrees that prior to making any modifications to the DER or the GIF that vary from the DER or GIF studied by the DSP as part of the interconnection request, Generator must submit to DSP a written notification and receive written approval from DSP prior to making such modifications. Such modifications include changes in the operating parameters studied at the time of interconnection that substantially affect the interconnection facilities associated system protection equipment, system protection settings, or other parameters associated with the interconnection between the DIF and the GIF (which may include the installation of new or upgraded facilities).
- C. Prior to making any modifications to GIF including but not limited to changes in ancillary services provided or the services studied at the time of interconnection that substantially affect the interconnection facilities, associated system protection equipment, system protection settings, or other parameters associated with the interconnection between the GIF and DIF (including but not limited to the installation of new or upgraded facilities) Generator must provide notification to the DSP. DSP must approve the request within ten (10) working days of receipt of the notification unless such modification would impair the standard operation of the DSP's facilities, or violate DSP's safety requirements and procedures, a requirement of this agreement, or Applicable Law.

## **8. Service Interruptions**

- A. DSP will have the right to suspend service where continuance of service to Generator will foreseeably endanger Persons or property as specified by the applicable provisions of the PUCT Substantive Rules or Applicable ISO Requirements. During an unscheduled outage of the DIF, DSP will have the right to suspend service to effect immediate repairs of the DIF.
- B. DSP must disconnect the DER from the DIF under the conditions specified by the applicable provisions of the PUCT Substantive Rules and Applicable ISO Requirements.
  - (i) Generator must coordinate with DSP to promptly disconnect the DER from the DIF when required by, and in accordance with, the applicable provisions of the PUCT Substantive Rules or Applicable ISO Requirements. DSP has the right to disconnect the DER from the DIF if Generator fails to comply with any such disconnection requirement.



Generator must notify DSP in writing when the DER has been returned to compliance.

(ii) Within fifteen (15) working days from the date Generator notifies DSP that the DER has been restored to compliance with the PUCT Substantive Rules or Applicable ISO Requirements, DSP must verify such compliance. DSP may retain an inspector to verify Generator's compliance.

(iii) Upon verification, the DSP must reconnect the DER.

## **9. Metering, Telemetry, and Communication Requirements**

- A. Metering, telemetry, and communication of data by DSP and Generator under this Agreement must be in accordance with Applicable Law and Good Utility Practice. If applicable, DSP must, in accordance with Applicable ISO Requirements, install, own, operate, inspect, test, maintain polled settlement metering, and certain telemetry and communications equipment associated with the interconnection of the GIF to the DIF and the operation of the DER. DSP must specify the data, including the form, manner, and frequency of such data, Generator must provide to DSP using DSP's communication equipment in Exhibit A.
- B. Generator must, in accordance with Applicable Law and Good Utility Practice, install, own, operate, inspect, test, calibrate, and maintain certain metering, telemetry, and communications equipment associated with the interconnection and operation of the DER. The interconnection of the DER to the Distribution System must not interfere with the operation of DSP's metering, telemetry, or communications equipment.
- C. DSP must notify Generator at least seven (7) working days in advance of any planned maintenance, inspection, testing, or calibration of metering equipment, telemetry, or communications equipment unless otherwise agreed to in writing. Generator has the right to be present for any maintenance activities performed by DSP. DSP must provide to Generator copies of appropriate documents related to the maintenance procedures and results of such maintenance within five (5) working days of such an activity.
- D. Prior to the interconnection of the DER to the Distribution System, acceptance tests must be performed by the Parties to ensure the proper functioning of all metering, telemetry and communications equipment associated with the interconnection and operation of the DER, and to verify the accuracy of data received by DSP and Generator. All acceptance tests will be performed consistent with PUCT Substantive Rules, the Applicable ISO Requirements, and Good Utility Practice.
- E. Generator must obtain and install the necessary communications equipment and facilities for provision of supervisory control and data acquisition communications and telemetry to Generator's energy management system and to DSP's system dispatch center and if applicable, they must be consistent with the Applicable ISO Requirements. All communications facilities delivery data to DSP must meet

DSP's data requirements set forth in Exhibit A, which may exceed the minimum standards of the Applicable ISO Requirements with respect to communications facilities.

- F. DSP must, in accordance with Good Utility Practice and Applicable Law, specify the communications facilities necessary to transmit data from Generator's metering and telemetry facilities to DSP's system dispatch center.
- G. Each Party must promptly advise the other Party in writing if any metering, telemetry or communications equipment error or malfunction that requires attention is detected or otherwise learned of. The Party owning or controlling such equipment must correct such error or malfunction as soon as reasonably feasible in accordance, and if applicable, in accordance with the Applicable ISO Requirements and promptly notify the other Party of the correction in writing.
- H. Any change or modification by Generator to the DER's metering, telemetry or communication equipment that affect communications or data transmitted to or received by the DSP must be approved in writing by DSP in the manner specified by Subsection 7(C) prior to Generator making such a change or modification.

#### **10. System Protection and Other Controls Requirements**

- A. Generator must install and maintain equipment necessary to automatically disconnect the GIF from the DIF in the event of a fault on the bulk power system or the Distribution System, or to prevent an unintentional island. Design of the GIF, and the DER is subject to DSP review for safe, compatible, and reliable interconnection and operation with the Distribution System so as to not reduce or adversely impact the quality or continuity of electric service provided by DSP to all customers. Generator must provide to DSP a relaying one-line diagram as part of Exhibit C and any related drawings or other documents pertaining to system protection as part of Exhibit D. The GIF must include a fault interrupting device at the POI capable of interrupting the available fault current. For an unintentional islanding event in which the DER energizes a portion of the Distribution System through the POI, the Generator's system protection facilities must detect such islanding, automatically disconnect the DER from the Distribution System, and cease to energize the DER within the timeframe specified by DSP in Exhibit A.
- B. The DER and the GIF will comply with the PUCT Substantive Rules on operational standards and if applicable, will comply with the Applicable ISO Requirements concerning voltage ride-through, under-frequency and over-frequency relaying, and primary frequency response. The DER must not cause objectionable interference with the continuity of electric service provided to other customers of DSP nor jeopardize the security of the DSP's distribution system or the bulk power system.

## **11. System Disturbance Analysis; Testing and Commissioning**

- A. Each Party must test, operate and maintain system protection equipment in accordance with DSP requirements, PUCT Substantive Rules, and the Applicable ISO Requirements. Prior to the In-Service Date, and again prior to the Commercial Operation Date, each Party or its agent must perform all required testing of system protection equipment. Generator agrees that acceptable relay test reports will be provided to DSP and on-site commissioning acceptance testing must be performed prior to final commissioning of the DER. Generator agrees to submit to DSP preliminary relay settings for all applicable relaying. After DSP and Generator agree on the applicable relay settings, Generator will provide final relay settings to DSP. Upon completion of acceptance testing, Generator will provide its relay testing documentation to DSP certifying that all relaying and protection equipment has been properly tested as a condition to the DER achieving the Commercial Operation Date.
- B. At intervals suggested by Good Utility Practice, or at intervals described in the Applicable ISO Requirements, if defined, and following any apparent malfunction of the system protection equipment, each Party must perform required testing or functional tests of its system protection equipment. Each Party must provide reasonable advance notice to the other Party of testing of its system protection equipment under this section and, if requested, allow the Party to have representatives present during testing of its system protection equipment.
- C. If applicable, recording equipment must be installed to analyze all system disturbances in accordance with the Applicable ISO Requirements.

## **12. System Operation and Maintenance**

- A. Each Party must operate and maintain its facilities in accordance with Applicable Law and Good Utility Practice. The Generator must operate and maintain the DER in accordance with NEC and NESC standards.
- B. Subject to any necessary approval by the Applicable ISO, each Party must provide necessary equipment outages to allow the other Party to perform periodic maintenance, repair or replacement of the GIF, the DER, or the DIF. Such outages must be scheduled at mutually agreeable times, unless conditions exist which a Party believes, in accordance with Good Utility Practice, may endanger Persons or property, provided, in the event that the Parties make all commercially reasonable efforts to schedule an outage but are unable to agree on a mutually agreeable schedule, DSP's schedule will control.
- C. No changes will be made in the normal operation of the POI without the mutual agreement of the Parties except as otherwise provided in this Agreement. All testing of the DER that will affect the operation of the GIF, the DIF, or the Distribution System must be coordinated between DSP and Generator, and will be conducted in

accordance with DSP requirements and as applicable, the Applicable ISO Requirements.

- D. Any switching or clearances of the GIF or DIF will be done in accordance with the DSP's switching procedures, Good Utility Practice, and as applicable, Applicable ISO Requirements.
- E. Generator must be responsible for the proper synchronization of the DER with the Distribution System consistent with the Parties' mutually accepted procedures, and as applicable, Applicable ISO Requirements.
- F. If applicable, generator must procure, install, maintain and operate power system stabilizers in accordance with the Applicable ISO Requirements, if required.
- G. If applicable, the Parties must maintain network operating model updates in accordance with the Applicable ISO Requirements.
- H. Each Party must establish and maintain a response plan that requires immediate response in the event of an emergency. Each Party must have a control center that is staffed twenty-four (24) hours per day, seven (7) calendar days per week, with personnel capable of operating and controlling the respective DIF and GIF by the DSP and Generator, respectively, at the POI (or make appropriate arrangements for a third-party, including for the Generator, its Qualified Scheduling Entity (QSE), to establish and maintain such a control center on a Party's behalf). For purposes of communications between the Parties' control centers or the assigned contact personnel, all contact information must be exchanged and each Party must be notified of any changes on an ongoing basis.
- I. DSP must promptly notify Generator of any scheduled outage, or as soon as practicable after any unscheduled outage under Section 13, of any distribution facility controlled by DSP that impacts, or that foreseeably could impact, the operation of the DER. As applicable, following such notification, Generator must, within the time specified by the Applicable ISO Requirements, update the DER's Current Operating Plan (COP), if appropriate the telemetered status, and as required, the Applicable ISO's outage scheduler to reflect the unavailability of the DER consistent with the impact of that outage or of any other scheduled outage or unscheduled outage of distribution facilities under the ownership or control of DSP.

### **13. Scheduled and Unscheduled Outages; Clearances**

- A. Each Party must provide outage notification to the other Party, including for scheduled outages and unscheduled outages, in accordance with provisions of the PUCT Substantive Rules, Good Utility Practice, and as applicable, Applicable ISO Requirements.
- B. In the event of an unscheduled outage, including involuntary load shed imposed by the Applicable ISO, occurring within the Distribution System that will affect service to the DER, DSP must promptly notify Generator and Generator's QSE in writing or by telephone as soon as practicable after the occurrence of the outage. Telephone notices given under to this Section must be confirmed in writing as soon as reasonably possible. Notice involving unscheduled outages must specifically state all details regarding the unscheduled outage, the time and date when the unscheduled outage occurred and when the unscheduled outage is reasonably expected to cease. If Generator is registered with the Applicable ISO and required to provide the ISO a COP, then Generator must update its COP status, and if appropriate, the telemetered status, and if required by the Applicable ISO Requirements, the ISO's outage scheduler accordingly. Following restoration of the affected Distribution System facilities, DSP must promptly notify Generator when the DER is ready to be re-energized. Re-energization of the DER must be coordinated among DSP, Generator, the Applicable ISO, and QSE, as necessary.
- C. In the event of an unscheduled outage of the DER or GIF, Generator must immediately notify DSP and provide all details of the outage in writing, including GIF affected, expected duration of the outage, request for clearance, and any other relevant information as soon as practicable after the outage occurrence. Generator must update the Applicable ISO's outage scheduler, if required, in accordance with the Applicable ISO Requirements. If clearance is requested, Generator must not perform restoration of the affected GIF or DER until DSP has notified Generator that it may proceed with restoration. Following restoration of the GIF or DER, Generator must promptly notify DSP when the GIF is ready to be re-energized. Re-energization of the GIF will be coordinated among DSP, Generator, the Applicable ISO, and QSE, as necessary.
- D. In the event of a scheduled outage of the Distribution System affecting the DIF, DSP must notify Generator no less than seven (7) working days prior to the scheduled outage. DSP must notify Generator when the DER is ready to be re-energized. Re-energization of the DER must be coordinated among DSP, Generator, the Applicable ISO, and QSE, as necessary.
- E. In the event of a scheduled outage of the DER, Generator must notify DSP no less than seven (7) working days prior to the requested outage and provide DSP details of the outage in writing, including GIF affected, expected duration of the outage, request for clearance, and any other relevant information. Generator must notify DSP when the DER is ready to be re-energized. Re-energization of the DER will be coordinated among DSP, Generator, the Applicable ISO, and QSE, as necessary.

## **14. Insurance**

Each Party must, at its own expense, maintain in force throughout the period of this Agreement and until released by the other Party, with insurers authorized to do business in Texas, the following minimum insurance coverages and requirements:

- A. Employers' liability and worker's compensation insurance providing statutory benefits in accordance with the laws and regulations of the State of Texas. The minimum limits for the employer's liability insurance must be one million dollars (\$1,000,000) each accident bodily injury by accident, one million dollars (\$1,000,000) each employee bodily injury by disease, and one million dollars (\$1,000,000) policy limit bodily injury by disease.
- B. Commercial general liability insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification), products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of one million dollars (\$1,000,000) per occurrence/one million dollars (\$1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.
- C. Comprehensive automobile liability insurance for coverage of owned, non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum combined single limit of one million dollars (\$1,000,000) per occurrence for bodily injury, including death, and property damage.
- D. Excess public liability insurance over and above the employer's liability, commercial general liability and comprehensive automobile liability insurance coverage, with a minimum combined single limit of fifteen million dollars (\$15,000,000) per occurrence/fifteen million dollars (\$15,000,000) aggregate.
- E. The commercial general liability insurance, comprehensive automobile liability insurance, and excess public liability insurance policies must name the other Party and that Party's Affiliates as additional insured. All policies must contain provisions by which the insurers waive all rights of subrogation in accordance with the provisions of this Agreement against the other Party's Affiliates and provide thirty (30) calendar days' advance written notice to the other Party's Affiliates prior to anniversary date of cancellation or any material change in coverage or condition.
- F. The commercial general liability insurance, comprehensive automobile liability insurance and excess public liability insurance policies must contain provisions that specify that the policies are primary and will apply to such extent without consideration for other policies separately carried and will state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability will not be increased beyond the amount for which the insurer

would have been liable had only one insured been covered. Each Party is responsible for its respective deductibles or retentions.

- G. The commercial general liability insurance, comprehensive automobile liability insurance and excess public liability insurance policies, if written on a claims first made basis, will be maintained in full force and effect for two (2) years after termination of this Agreement, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- H. The requirements contained in this Agreement to the types and limits of all insurance to be maintained by each Party are not intended to and do not in any manner, limit or qualify the liabilities and obligations assumed by each Party under this Agreement.
- I. Within ten (10) calendar days following execution of this Agreement, and as soon as practicable after the end of each fiscal year or within ninety (90) calendar days from the renewal of the insurance policy, each Party must provide to the other Party certification of all insurance required by this Agreement, executed by each insurer or by an authorized representative of each insurer.
- J. A Party may self-insure to the extent it maintains a self-insurance program, provided that such Party's senior secured debt is rated at investment grade, or better, by Standard & Poor's or Moody's Investor's Service. For any period of time that such Party's senior secured debt is unrated by Standard & Poor's and Moody's Investor's Service or is rated at less than investment grade by Standard & Poor's and Moody's Investor's Service, such Party must comply with the insurance requirements applicable to it under Sections 14(A) through (I). Otherwise, if a Party is permitted to self-insure under this Section, such Party is not required to comply with the applicable insurance requirements under Sections 14(A) through (I).
- K. Each Party must report to the other Party in writing as soon as practicable all accidents or occurrences resulting in injuries to any Person, including death, and any property damage arising out of this Agreement.

## **15. Limitation of Liability and Indemnification**

- A. Neither Party is liable to the other for damages for any act that is beyond such Party's control, including any event that is a result of an act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, pandemic or epidemic, storm or flood, explosion, breakage or accident to machinery or equipment, a curtailment, order, regulation or restriction imposed by governmental, military, or lawfully established civilian authorities, or by the making of necessary repairs upon the property or equipment of either Party.
- B. Notwithstanding the provisions of Section 15(A), each Party must assume all liability for, and must indemnify each other for, any losses resulting from (i) negligence or other fault in the design, construction, or operation of their respective facilities, including the DIF, GIF, and DER; or (ii) negligent acts of a Party or such

Party's representatives while such Party or its representative is located on, or is attempting to access, the other Party's premises. Such liability includes Party's monetary losses, costs and expenses of defending an action or claim made by a third Person, payments for damages related to the death or injury of any Person, damage to the property of the Party, payments for damages to the property of a third Person, and damages for the disruption of the business of a third Person. This paragraph does not create a liability on the part of any Party to a customer or other third Person, but requires indemnification where such liability exists. The indemnification required under this paragraph does not include responsibility for any Party's costs and expenses of prosecuting or defending an action or claim against the other, or damages for the disruption of the business of a Party. The limitations on liability described in this Section do not apply in cases of gross negligence or intentional wrongdoing by a Party.

- C. Unless specifically included in Subsection 4B or Section 5, in no event will either Party be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential or punitive damages, including loss of profit or revenue, loss of the use of equipment, cost of capital, or the cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; unless, that damage for which a Party may be liable to the other Party under another agreement will not be considered special, indirect, incidental, consequential or punitive damages under this Agreement.
- D. DSP will make reasonable provisions to meet the In-Service Date but does not guarantee the completion or suitability of the DIF by that date for Generator's specific uses. Except in cases of DSP's gross negligence or willful misconduct, DSP will not be liable for any damages, whether direct or consequential, including, without limitation, loss of profits, loss of revenue, or loss of production capacity, occasioned by the failure to meet the In-Service Date.
- E. DSP and Generator must use commercially reasonable efforts to avoid or mitigate respective damages or losses suffered as a result of the other Party's culpable behavior.

## **16. Notices**

Except as otherwise provided in Exhibit B or as otherwise specified by this Agreement, any formal notice, demand or request provided for in this Agreement must be in writing and may be delivered physically or electronically, such as through electronic mail, fax, or physical mail delivered in person, by courier, or by the United States Postal Service. Physical mail includes registered or certified mail, postage prepaid mail, and overnight mail. An obligation by a Party to provide, submit, or respond to a formal notice, demand, or request under this Agreement is deemed satisfied upon issuance by the sender to the address or number identified in Exhibit B. Either Party may change the notice information in Exhibit B by giving five (5) working days' written notice to the other Party prior to the effective date of the change.



## **17. Successors and Assignments**

- A. This Agreement may be assigned by either Party only with the written consent of the other Party; provided that either Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that Generator will have the right to assign this Agreement, without the consent of DSP, for collateral security purposes to aid in providing financing for the DER, provided that Generator will require any secured party, trustee or mortgagee to notify DSP of any such assignment.
- B. Any financing arrangement entered into by Generator in accordance with this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify DSP of the date and particulars of any such exercise of assignment right(s).
- C. Any attempted assignment that violates this Section is void. Any assignment under this Agreement does not relieve a Party of its obligations, nor will a Party's obligations be enlarged, in whole or in part, by any assignment. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## **18. Governing Law and Applicable Tariffs**

- A. This Agreement for all purposes is construed in accordance with and governed by the laws of the State of Texas, excluding conflicts of law principles that would refer to the laws of another jurisdiction. The Parties submit to the jurisdiction of the federal and state courts in the State of Texas.
- B. This Agreement is subject to all Applicable Law.
- C. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.
- D. This Agreement is applicable only to the interconnection of DER to the Distribution System at the POI and does not obligate either Party to provide, or entitle either Party to receive, any service not expressly provided for in this Agreement. Each Party is responsible for making the arrangements necessary for it to receive any other service that it may desire from the other Party or any third Person. This Agreement does not address the sale or purchase of any electric energy or ancillary services by either Party, either before or after the Commercial Operation Date.
- E. This Agreement, including all exhibits hereto, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the DER at the POI expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the

subject matter hereof if not set forth or provided for herein. This Agreement replaces all other agreements and undertakings, oral and written, between the Parties with regard to the subject matter of this Agreement. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for by this Agreement and that such agreements are unaffected by this Agreement.

## **19. Default and Force Majeure**

- A. Upon discovery of a Default, the non-defaulting Party may give written notice of such Default to the defaulting Party. Except as provided in the next paragraph, the defaulting Party will have thirty (30) calendar days from receipt of the Default notice within which to cure such Default; provided, however, if such Default is not capable of cure within thirty (30) calendar days, the defaulting Party will commence such cure within twenty (20) calendar days after receipt of the Default notice and continuously and diligently exercise its efforts to complete such cure within ninety (90) calendar days from receipt of the Default notice; and, if cured within such time, the Default specified in such notice will cease to exist.
- B. If a Default is not cured as provided in this Section, or if a Default is not capable of being cured within such period, the non-defaulting Party will have the right, subject to receipt of any regulatory approvals required by Applicable Law, (i) to terminate this Agreement and disconnect the DER, in its sole discretion, by written notice at any time until cure occurs (ii) to be relieved of any further obligation under this Agreement (other than obligations associated with its own Defaults, if any, occurring prior to termination) if that Party has elected to terminate this Agreement and, (iii) if the Generator is the defaulting Party, to recover from the defaulting Party all amounts due under Subsection 4(B) and receive all other remedies to which it is entitled under this Agreement. The provisions of this Section will survive the termination of this Agreement.
- C. If the defaulting Party is the Generator, the DSP may recover costs as described under Subsection 4(B). If the defaulting Party is the DSP, the Generator will invoice the DSP for the full amount of funds it provided to the DSP as the CIAC.
- D. Neither Party will be considered to be in Default with respect to any obligation of this Agreement, other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any such obligation by reason of Force Majeure must give notice and all details regarding such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given under to this Section must be confirmed in writing as soon as reasonably possible. Notice involving Force Majeure must specifically state all details regarding the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected must exercise due diligence to remove such disability with reasonable dispatch, but will not be required to accede or agree to any provision not satisfactory to it in order

to settle and terminate a strike or other labor disturbance. The In-Service Date will be extended by one calendar day for each day that DIF construction is delayed due to Force Majeure. The Commercial Operation Date will be extended by one calendar day for each day that the construction of the GIF or the DER construction is delayed due to Force Majeure.

- E. The failure of a Party to insist, on any occasion, upon strict performance of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties by this Agreement.

## **20. Interconnection Outside of the ERCOT region**

The operation of the DER by Generator must not cause or create circumstances resulting in Intrastate Operation. The Parties recognize and agree that any such Intrastate Operation will constitute an adverse condition giving DSP the right to immediately disconnect the DER from the Distribution System, until such interconnection has been disconnected.

## **21. Representations and Warranties**

- A. DSP represents and warrants to Generator that DSP has authority to construct the DIF and to interconnect the Distribution System with the GIF and DER at the POI in accordance with all Applicable Law and Governmental Authorities having jurisdiction over DSP.
- B. Generator represents and warrants to DSP that Generator has authority to construct and operate the DER and the GIF, and to interconnect the DER with the DIF and the Distribution System at the POI in accordance with all Applicable Law and Government Authorities having jurisdiction over Generator.
- C. Generator also represents and warrants to DSP that as of the Commercial Operation Date, the DER, as applicable, will be registered with the Applicable ISO and the DER will have satisfied all Applicable ISO Requirements for Commercial Operation.
- D. Generator represents and warrants that it does not meet any of the ownership, control, or headquarters criteria listed in Lone Star Infrastructure Protection Act, Chapter 113 of the Texas Business & Commerce Code, as added by Act of June 18, 2021, 87th Leg., R.S., Ch. 975 (S.B. 2116) and as amended by S.B. 2013 of the 88th Leg., R.S. (relating to China, Iran, North Korea, Russia, and any other country designated by the Texas governor under such legislation).

## **22. Invoicing and Payment**

Unless the Parties otherwise agree (in a manner permitted by applicable PUCT Substantive Rules or DSP's tariff), invoicing and payment rights and obligations under this Agreement will be governed by the DSP's tariff and PUCT Substantive Rules or the rules and regulations of the applicable Governmental Authority. Invoices must be rendered by the paying Party to the recipient Party at the address specified in Exhibit E of this Agreement, and payments must be made in accordance with this Agreement.

## **23. Land Rights and Easements**

- A. Generator must deliver to DSP the grant of all necessary land rights, including but not limited to, fee ownership, easements, and third-party access agreements, in a written medium reasonably acceptable to DSP, so as not to delay DSP's access to the property to perform its obligations under this Agreement. Except as provided in Subsection 23(B), any costs incurred by DSP for the acquisition of such land rights must be reimbursed by Generator to the extent such costs are not included in the CIAC.
- B. DSP must reimburse Generator up to market value of the acquired land rights necessary for a DSP substation or switchyard. DSP reserves the right to a certified appraisal for the land rights acquired.
- C. Terms and conditions addressing the rights of DSP and Generator regarding any facilities located on the other Party's property must, if necessary, be addressed in a separate, duly executed and recorded easement agreement between the Parties.
- D. Generator must provide DSP copies of any underlying land right acquisition agreements entered into between Generator and a third-party landowner concerning any land that will contain DIF or any other DSP equipment or facilities required for the interconnection.

## **24. Confidentiality**

- A. Subject to the exceptions in this Section, Confidential Information must not be disclosed by the other Party to any Person not employed or retained by the other Party, except to the extent disclosure is:
  - (i) Required by Applicable Law or if such disclosure is deemed by the disclosing Party to be required in connection with effectuating the terms of this Agreement, a dispute between or among the Parties, or litigation or a dispute by the other Party with any third-party that relates to this Agreement.
  - (ii) Permitted by consent of the other Party. Such consent must not to be unreasonably withheld by the other Party.

- (iii) Necessary for a DSP to fulfill its obligations under this Agreement or, including disclosure of the Confidential Information to the PUCT and/or the Applicable ISO. The Party asserting confidentiality must promptly notify the other Party in writing of the information claimed as confidential. Prior to any disclosures of the other Party's Confidential Information under this Section, or if any third-party or Governmental Authority makes any request or demand for a Party's Confidential Information, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures. This provision does not apply to any information that was or will be in the public domain (except as a result of a breach of this provision). Each Party agrees to:
- ii. Furnish Confidential Information to the other party, upon reasonable request of the other Party in accordance with the requirements of this Section;
- jj. Execute and deliver to the other Party such documents, including Confidential Information to the extent necessary to fulfill the reasonable request of the other Party; and
- kk. At the reasonable request of the other Party, perform other acts for the purpose of carrying out the intent of this Agreement and the documents referred to in this Agreement. At any time after the execution of this Agreement, Generator may reasonably request for DSP to prepare and provide such information, including Confidential Information, in connection with this Agreement as may be reasonably required by any potential lender to Generator under a proposed loan agreement. The fulfillment of such a request will be at Generator's expense. Such information may include, if available, resolutions, authorizations, agreements, certificates, opinions of counsel, financial statements, or other documents relating to DSP's corporate authorization and ability to enter into and undertake the obligations of this Agreement. DSP will use commercially reasonable efforts to obtain any document reasonably requested by Generator, but DSP will not be in Default of any obligation under this Agreement if DSP is unable to provide any document or documents that will satisfy any potential lender to Generator. Specifically, upon the written request of a Party, the other Party must provide the requesting Party with a letter stating whether, up to the date of the letter, that Party is satisfied with the performance of the requesting Party under this Agreement.
- B. If the cost estimates or the actual costs incurred in accordance with Section 5, or supporting documentation, including documents related to independent third-party contractors retained by Generator, contain confidential information, the DSP must identify the information as confidential and Generator must maintain such confidential information as confidential.
- C. If required by the DSP, any third-party contractor retained by Generator, Generator must execute a non-disclosure agreement or similar agreement for the benefit of such a third-party.

## **25. No Annexation**

All equipment placed on the premises of a Party will be and remain the personal property of the Party providing such equipment regardless of the manner of annexation or attachment of such equipment to real property, unless otherwise mutually agreed to in writing by the Parties. Equipment placed on the premises of a Party will not be considered to be abandoned, unless written confirmation by the Party providing such equipment is issued to the other Party.

## **26. Generator Construction Delay**

Generator agrees that if substantial Generator project construction does not begin within six (6) months of the execution of this Agreement, then DSP may require new Interconnection Studies included in Exhibit G and Generator may be subject to revised DSP interconnection requirements which could result in an increase in the CIAC amount due under Exhibit E. If a construction delay requiring new Interconnection Studies is caused by a delay of the DSP, the DSP will procure such Interconnection Studies at its cost.

## **27. Miscellaneous Provisions**

- A. This Agreement must not affect the obligations or rights of either Party with respect to other agreements. Each Party represents to the other that there is no agreement or other obligation binding upon it, which, as such Party is presently aware, would limit the effectiveness or frustrate the purpose of this Agreement.
- B. This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.
- C. If any provision in this Agreement is finally determined to be invalid, void or unenforceable by any court having jurisdiction, such determination will not invalidate, void or make unenforceable any other provision, agreement or covenant of this Agreement.

This Agreement is fully executed only upon the signing and dating of this Agreement by each Party via their duly authorized representative, in the manner prescribed below.

The signing and dating of this Agreement by each Party indicates the Parties express and mutual acknowledgement of, and agreement to, the terms, conditions, and obligations of performance prescribed by this Agreement.

**[DSP]**

**[GENERATOR]**

SIGNATURE OF REPRESENTATIVE:

SIGNATURE OF REPRESENTATIVE:

\_\_\_\_\_

\_\_\_\_\_

PRINTED NAME: \_\_\_\_\_

PRINTED NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

**EXHIBIT A  
INTERCONNECTION DETAILS**

1. DER Name: \_\_\_\_\_
2. DER Location: \_\_\_\_\_
3. POI Locations: \_\_\_\_\_
4. Delivery Voltage: \_\_\_\_\_
5. Number and Size of Generating Units: \_\_\_\_\_
6. Maximum Export Generation Capacity\*: \_\_\_\_\_

\*Upon execution of this Agreement the Generator agrees that each inverter will be limited and the site controller will measure the aggregate power delivered to the POI and will limit the export output to the agreed upon export limit.

7. Load Capacity: \_\_\_\_\_
8. Type of Generating Unit: \_\_\_\_\_
9. Interconnection Facilities to be furnished by Generator (GIF): \_\_\_\_\_
10. Interconnection Facilities to be furnished by DSP (DIF): \_\_\_\_\_
11. By Applicable ISO, any ancillary services planned to be provided:  
\_\_\_\_\_
12. Supplemental Terms & Conditions:

Generator agrees to abide by the recommendations, operating limitations, and any other provision from the Interconnection Studies. Generator and DSP must agree and abide by the specific terms and conditions of interconnection as described by this Exhibit, including the following:

- a. Single Energization Path. DSP has performed Interconnection Studies utilizing a designated single energization path through DSP's substation to the transmission system and therefore will only allow this path for the interconnection.
- b. System Protection Requirements. DSP must also provide to Generator any procedures maintained by the DSP for disconnection of the Distribution Resource from the Distribution System, including specific procedures in the case of a fault, island, interruption, or other disruption described under Section 8 of this Agreement. Generator must consent, and at all times abide by, DSP's system protection requirements and disconnection procedures for the term of this Agreement and until no longer necessary after termination and disconnection."



- c. Power Factor for Load. When the DER is operating as a load, Generator must provide appropriate reactive compensation to ensure a minimum of 0.95 lagging power factor at the POI.
- d. Voltage and Reactive Power Control. Generator's DER will be designed to provide voltage regulation capability for changes in reactive power. Generator agrees to design and operate a generation system with an adjustable capability of operating between 0.95 lagging to 0.95 leading power factor. Generator agrees to operate their system in constant power factor mode set at unity. Generator agrees upon reasonable notification from DSP to alter this setting anywhere within the specified range or change the operating mode.
- e. Facility Control and Ramp Rate. Generator charging and discharging operational requirements are as follows:

<b>Charging / Discharging Operational Requirements</b>	
Approved Charging Capacity	#__ kW (MW)
Approved Discharging Capacity	#__ kW (MW)
<b>Operations Limitations</b>	
Maximum ramp rate for charging (battery charge rate)	#__ kVA/sec (per inverter)
Maximum number of fluctuations <sup>2</sup> between idling <sup>1</sup> to a full discharging ramp rate	#__ /hour
Maximum number of fluctuations <sup>2</sup> from idling <sup>1</sup> to maximum charging ramp rate	#__ /hour
Maximum number of full load cycles <sup>3</sup> in a one hour period	#__ /hour

<b>ERCOT Specific System Emergency Operations – Ancillary Services</b>	
Maximum charging and discharging ramp rate for Fast Frequency Response (FFR) (six cycle reaction time and nine cycle ramp – 15 cycle requirement from ERCOT)	#__ kVA/cycle (per inverter)
Maximum charging or discharging response rates: Fast Responding Regulation Down Service (FRRS-Down <sup>4</sup> ) Fast Responding Regulation Up Service (FRRS-Up <sup>4</sup> ) (40 cycle reaction time and 20 cycle ramp)	#__ kVA/cycle (per inverter)
<p>1      Idling will mean a state where the DER is not charging or discharging for 55 seconds or longer at the POI.</p> <p>2      A fluctuation is considered a movement from one state of charge of the DER to another state of charge.</p>	

- |   |   |
|---|---|
| 3 | A full load cycle means going from a state of fully charging at maximum rate to a state of fully discharging at the maximum rate or vice versa.   |
| 4 | Fast Responding Regulation Service (FRRS) – required to deploy the capacity within 60 cycles of receiving a deployment signal from the Applicable ISO or measuring a frequency deviation in excess of 0.09Hz. |

- f. Facility Control and Ramp Rate Verification Data. DSP may request detailed operational data to verify adherence to the ramp rate and fluctuation requirements stated in the operational table above. Data provided should be submitted in the same units as stated in the operational table. Data requests may include these parameters, but is not limited to any information. When requested, Generator agrees to provide information within five (5) working days.

**EXHIBIT B**  
**NOTICE INFORMATION**

- a) With the exception of outage notifications, which are addressed in subsections (b) and (c) below, all notices of an operational nature must be in writing and/or may be sent between the Parties via electronic means including emails as follows:

DSP: [\_\_\_\_\_]

Generator: [\_\_\_\_\_]

- b) All notifications of scheduled outages will be in writing and/or may be sent between the Parties via electronic means including email as follows:

DSP: [\_\_\_\_\_]

Generator: [\_\_\_\_\_]

- c) All notifications of unscheduled outages will be communicated via telephone as follows:

DSP: [\_\_\_\_\_]

Generator: [\_\_\_\_\_]

- d) Notices of an administrative nature:

DSP: [\_\_\_\_\_]

Generator: [\_\_\_\_\_]

- e) Notice for statement and billing purposes:

DSP: [\_\_\_\_\_]

Generator: [\_\_\_\_\_]

A Party may change any of its foregoing notice information by providing written notice to the other Party, in accordance with the terms of the Agreement.

## **EXHIBIT C ONE-LINE DIAGRAM**

Note: Shown one-line drawing represents the most current drawing(s) available as of the signing of this Agreement. DSP and Generator agree drawing(s) may be updated to meet as-built or design changes that occur during construction. Generator understands and agrees that any changes that substantially affect the protective or functional requirements required by the DSP will need to be reviewed and accepted by DSP.