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January 12, 2024

<u>Via Electronic Mail</u> Lora W. Johnson, CMC, LMMC Clerk of Council Room 1E09, City Hall 1300 Perdido Street New Orleans, LA 70112

## Re: Entergy New Orleans, LLC's Compliance Filing for Resolution R-23-507 (Docket No. UD-23-01)

Dear Ms. Johnson:

Entergy New Orleans, LLC ("ENO") respectfully submits its Compliance Filing in accordance with Resolution No. R-23-507 in the above-referenced docket. As a result of the remote operations of the Council's office related to Covid-19, ENO submits this filing electronically and will submit the original and requisite number of hard copies once the Council resumes normal operations, or as you direct. ENO requests that you file this submission in accordance with Council regulations as modified for the present circumstances.

Should you have any questions regarding the above/attached, please do not hesitate to contact me.

Sincerely,

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Leslie M. LaCoste

LML/jlc Enc.

cc: Official Service List by Electronic Mail

#### **BEFORE THE**

#### **COUNCIL OF THE CITY OF NEW ORLEANS**

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IN RE: RESOLUTION AND ORDER RELATED TO MADISON ENERGY INVESTMENTS, INC. MOTION TO AMEND COMMUNITY SOLAR RULES

DOCKET NO. UD-18-03

#### **COMPLIANCE FILING PURSUANT TO RESOLUTION NO. R-23-507**

Entergy New Orleans, LLC ("ENO" or the "Company") respectfully submits this Compliance Filing in accordance with Resolution No. R-23-507 ("Resolution") issued by the Council of the City of New Orleans ("Council").

#### 1. Background

The Council issued the Resolution on November 2, 2023, directing ENO to submit a revised Form CSG-4—Standard Offer Power Purchase Agreement, and a revised Rate Schedule CSGF—Community Solar Generating Facilities, consistent with the updated Community Solar Rules approved through the Resolution, by December 29, 2023. In preparing this Compliance Filing, the Company identified certain questions regarding the required revisions as well as possible changes to other Community Solar forms that may help improve the application and interconnection process for Subscriber Organizations. On December 21, 2023, the Company filed a motion requesting a brief extension of time past the holidays to prepare the updated documents.

As will be discussed in detail below, this Compliance Filing includes redlined and clean versions of a revised Form CSG-4 – Standard Offer Purchase Power Agreement, and two different options for Council consideration of a revised Rate Schedule CSGF – Community Solar Generating Facilities, that reflect changes included in the revised Community Solar Rules approved through the Resolution. This filing also includes a new Form CSG-APP that combines in one document the substance of existing Forms CSG-1—Program Application, and CSG-2—

Interconnection Application, and an updated process flow chart reflecting the new CSG-APP form. This filing includes a new Form CSG-RPAR—Request for Pre-Application Report, that will provide a means for Subscriber Organizations to request information on possible Community Solar Generating ("CSG") Facility sites in advance of the formal interconnection application process. Finally, for information purposes, this filing includes the current version of the Company's Distributed Energy Resource Interconnection Standard, DR07-01, effective May 1, 2022, attached hereto as Exhibit 7.

#### 2. <u>Revised Form CSG-4—Standard Offer PPA</u>

The Resolution, ordering paragraph 4, directs that current Form CSG-4 be modified to reflect a Purchase Power Agreement ("PPA") term of twenty years instead of the initial ten-year term and two five-year renewal options currently in place. Revised Form CSG-4, attached hereto as Exhibit 1, incorporates that change. With the change to the twenty-year PPA term, the references to Initial Term and Renewal Period are no longer required and have been removed to avoid any possible confusion regarding the intent of the parties to the PPA. This is consistent with Madison Electric Investment ("MEI") Inc.'s original Motion to Amend the Community Solar Rules, wherein MEI requested the change to a twenty-year term rather than the existing ten-year term plus two five-year renewals.<sup>1</sup> MEI's Motion made no mention of renewals beyond the twenty-year term, and the possibility of renewals beyond the twenty-year term was not raised by any party in any subsequent pleadings filed in the docket, presumably because the CSG facilities in question would not be expected to continue operating for another twenty years.

Additional edits to Form CSG-4 capture other approved changes to the Community Solar Rules, including the increase in maximum CSG Facility size from two to five megawatts, the

<sup>&</sup>lt;sup>1</sup>Motion of Madison Energy Investments to Amend Community Solar Rules, filed July 13, 2022.

treatment of renewable energy credits ("RECs"), and the threshold for qualification as a Low-Income Customer.

## 3. <u>Revised Schedule CSGF—Community Solar Generating Facilities</u>

The Resolution provides that the kWh credit rate for Subscribers who do not qualify as Low-Income Subscribers shall be revised to be the "full retail rate," including all applicable rider schedules that would be applicable to the Subscriber on a per kWh basis. Given the different possible interpretations of the Council's intent for the "full retail rate" language as applied to nonresidential customers, ENO has prepared two draft revised Schedules CSGF for the Council's consideration. Included below is a discussion of the Council's policy supporting the Subscriber credits under current Schedule CSGF to help frame the consideration of these two options.

#### a. Policy Supporting Subscriber Credits Under Current Schedule CSGF

The current methodology started from the policy position that Low-Income Subscribers should receive a credit amount in line with the credit received by a customer participating under Schedule NEM (Net Metering), which grants a kWh credit for each excess solar-generated kWh sent to the grid. It is important to note that credits under Schedule NEM apply solely to the volumetric energy portion of the customer's bill; the customer still pays the applicable customer charge, non-bypassable riders, and franchise fees calculated under their bill. This is the case for both residential and non-residential customers who participate under Schedule NEM.

Under current Schedule CSGF, Low-Income Subscriber credits likewise exclude the value of the customer charge, non-bypassable riders, and franchise fees, consistent with the NEM approach. This calculation still approximates the full residential retail rate since most of the residential rate is recovered volumetrically. Residential customers who do not qualify as LowIncome Subscribers, as well as all non-residential Subscribers, receive credits pursuant to a formula that quantifies an adjusted avoided cost value rather than a "full retail rate."

#### b. Credit Calculations Under Updated Community Solar Rules

The updated Rules dispense with the adjusted avoided cost calculation for non-Low-Income Subscribers and instead require a credit representing the "full retail rate," which highlights a key difference between residential and non-residential rates. Unlike residential rates, nonresidential rates include demand charge components set and approved by the Council to ensure the rates reasonably recover the cost to serve those classes of customers. As a result, a smaller portion of the overall retail rate is recovered through the volumetric energy portion than is the case under the residential rate, which is almost completely recovered through the volumetric usage.

As noted above, a non-residential customer participating under Schedule NEM only receives credits that can be used to offset the volumetric energy portion of its monthly bill; it still must pay the demand charges associated with its retail rate as well as any non-bypassable riders and franchise fees. Thus, the value of the NEM credit represents a smaller percentage of the non-residential customer's overall rate than it would the residential customer's rate, given the demand charge portion in place to help recover fixed costs.

Because of this important distinction between residential and non-residential rates, ENO is unclear on the Council's expectations regarding the "full retail rate" Subscriber credits to be calculated under Revised Schedule CSGF. Therefore, the Company is presenting two options for the Council's consideration for calculating Subscriber credits for non-residential customers taking service under rate schedules Small Electric (SE), Large Electric (LE), and Large Electric-High Load Factor (LE-HLF): Revised Schedule CSGF Option 1—The attached Exhibit 2 follows the methodology used to calculate the Subscriber credit for Low-Income Subscribers under the current Schedule CSGF originally approved by the Council. That is, the Subscriber credit calculation under Option 1 is consistent with the methodology used to grant credits through Schedule NEM and results in a "full retail rate" for residential and non-residential Subscriber credits that accounts for the volumetric energy portion of the rate schedule less non-bypassable riders and franchise fees. The value of any demand charges under the applicable non-residential rate schedules is excluded from the Subscriber credit calculation, consistent with treatment under Schedule NEM.

<u>Revised Schedule CSGF Option 2</u>—The attached Exhibit 3 includes the same methodology for residential Subscriber credits as Option 1 but employs a new methodology for non-residential Subscriber credits that includes the value of demand charge revenue in the monthly Subscriber credit calculation for the applicable rate classes. While non-bypassable riders and franchise fees are still excluded, the inclusion of demand charge revenue results in a credit that approximates the "full retail rate" credit as calculated under current Schedule CSGF for Low-Income Subscribers.

Following adoption of a resolution providing direction on the desired option for Revised Schedule CSGF and approving this Compliance Filing, ENO will require approximately 3-4 months to make the necessary modifications to its billing systems to accommodate the updated credit rates.

#### 4. <u>New Form CSG-APP</u>

Included with this filing is a new Form CSG-APP—Application, attached hereto as Exhibit 4, which is intended to supersede and replace current forms CSG-1—Program Application, and CSG-2—Interconnection Application. The consolidation of these two forms into one is intended to streamline the application processes for Subscriber Organizations seeking to participate in the

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program. The application process flow, attached hereto as Exhibit 5, has been updated to reflect this new nomenclature.

Based on discussions with solar industry contacts, ENO has modified two requirements from previous Form CSG-1. New Form CSG-APP omits a requirement previously included in Form CSG-1 that a Subscriber Organization must provide proof of application for all applicable permits to construct and operate the CSG Facility at the time it submits the form. The Company's understanding is that a Subscriber Organization would not be able to apply for the necessary permits until later in the process after the interconnection application has been submitted and reviewed. Under the current ENO NEM interconnection process, all permits must be submitted by the installer prior to ENO's approving and executing the interconnection agreement. ENO proposes to follow the same process with community solar and require that all permits be submitted before the interconnection agreement for any CSG Facility is approved and executed. The second modification broadens the acceptable proof of site control required at the time application is made to include Letters of Intent and Memoranda of Understanding which are more likely to be available at this point in the process. This modified requirement should still ensure that the Subscriber Developer intends to pursue the CSG Facility project at the time it submits the Form CSG-APP.

#### 5. <u>New Form CSG-RPAR</u>

Included with this filing is a new Form CSG-RPAR—Request for Pre-Application Report, attached hereto as Exhibit 6. This form is intended to provide a means for Subscriber Organizations to request preliminary information about possible project location(s) before the point at which they submit a full interconnection application. Under this RPAR process, which is based on model interconnection procedures issued by the Interstate Renewable Energy Council

("IREC"),<sup>2</sup> the Subscriber Organization submits preliminary information about the site in question and pays a nominal \$300 fee to cover the administrative costs to assemble the requested report. Within twenty (20) business days following receipt and approval of the Request (i.e., confirmation by ENO that the Subscriber Organization has provided all required information), ENO will provide a Pre-Application Report to the applicant using the form shown in Exhibit 6. This new form and process will facilitate timely responses to *ad hoc* requests from Subscriber Organizations seeking to site new CSG facilities, which the Company expects could become frequent in the future. While the Pre-Application Report will provide helpful information to Subscriber Organizations that are seeking to develop CSG facilities, the information provided will not remove the need for the Subscriber Organization to complete the distribution interconnection application and process. Subscriber Organizations will still be required to complete the interconnection process prior to interconnecting any CSG Facility to the ENO system.

#### **Conclusion**

ENO requests that the Council issue a resolution directing implementation of one of the two options for revised Schedule CSGF described in Section 3, above, and accepting the revised Form CSG 4—Standard Offer Power Purchase Agreement. ENO will begin using the new Forms CSG-APP—Application, and CSG-RPAR—Request for Pre-Application Report, to streamline the process for handling applications and requests from Subscriber Organizations.

<sup>&</sup>lt;sup>2</sup>https://irecusa.org/resources/irec-model-interconnection-procedures-2023

# Standard Offer Community Solar Power Purchase Agreement

# Form CSG-4

This Standard Offer Community Solar Power Purchase Agreement ("Agreement") is made and entered into this \_\_\_\_\_\_ 20\_\_\_\_, by and between Entergy New Orleans, LLC ("ENO" or "Company"), a Texas limited liability company, whose principal place of business is 1600 Perdido Street, New Orleans, Louisiana 70112 and \_\_\_\_\_\_ ("Subscriber Organization") a\_\_\_\_\_\_ whose principal place of business is \_\_\_\_\_\_, each of which may be referred to herein individually as a "Party" or collectively as the "Parties." Subscriber Organization [owns and operates] [operates] the CSG Facility defined below.

#### **RECITALS**:

This Agreement governs the relationship between ENO and Subscriber Organization, both on behalf of itself and as authorized agent for Subscribers (as defined in Section 1.22 below) and the CSG Facility Owner (as defined in Section 1.6 below), if applicable, with respect to the Output generated by the community solar generating facility (the "CSG Facility") installed, or to be installed, at the location described in Exhibit A attached hereto, with a generating capacity rating of \_\_\_\_\_[not to exceed twofive (5) megawatts as measured by the alternating current rating of the inverter (MW<sub>AC</sub>)].

Any references to "Rules" pertain to the New Orleans Community Solar Rules promulgated by the Council for the City of New Orleans ("Council") in <u>Council</u> Docket UD-18-03.

In consideration of the premises and mutual covenants herein contained, the Parties hereto agree as follows:

#### ARTICLE I DEFINITIONS

As used herein, the following terms shall have the meanings specified or referred to below which shall apply equally to single and plural forms. Except as otherwise provided for herein, capitalized terms shall have the meanings set forth in the Rules, which specify the facilities, entities, functions and requirements of the New Orleans community solar program ("Community Solar Program"), implemented by the City Council of New Orleans, as of the date of this Agreement.

1.1. "Allocation" shall mean the monthly allocation, stated in kilowatts ("kW") as a share of the total nameplate capacity of the CSG Facility, applicable to each Subscriber's Subscription reflecting such Subscriber's allocable portion of Output produced by the CSG Facility in a particular Production Month. In accordance with Section 4.6 below, the Subscriber Organization is required to timely provide the Allocation to ENO monthly, which ENO will in turn use to calculate the Credit for each billing month.

1.2. "Baseline Annual Usage" shall refer to a Subscriber's accumulated electricity use in kilowatt-hours (kWh) for the previous 12-month period at the time the Subscription is entered into, as measured at ENO's meter, net of any distributed generation provided by the Subscriber to the utility system at that meter. For a Subscriber that does not have a record of 12 months of electricity use at the time of the Subscriber's most recent Subscription, an estimate of the Subscriber's accumulated 12 months of electricity use in kWh, determined in a manner specified in the Community Solar Program Implementation Plan submitted by ENO and approved by the Council in Council Docket UD-18-03 ("Plan").

1.3. "Community Solar Generating Facility" or "CSG Facility" shall mean a solar energy facility that: (i) converts solar energy to electricity; (ii) has a generating capacity/nameplate rating that does not exceed twofive (25) megawatts (MW); (iii) can provide power to or is connected to ENO's distribution system; (iv) is located in ENO's service territory; (v) is individually metered; (vi) has at least three Subscribers; (vii) sells the Output from the facility to ENO and which the purchase of the Output from the facility shall take the form of a credit against the Subscriber's electric bill; and (viii) the beneficial use and renewable attributes of the Output of the facility belongs to the Subscribers, in the absence of an agreement to transfer said renewable attributes to the Subscriber Organization.

1.4. "Council" means the Council of the City of New Orleans.

1.5. "Credit" shall mean the dollar amount per kilowatt hour ("kWh") paid by ENO to each Subscriber as a credit on the Subscriber's monthly retail electric service bill to compensate the Subscriber for its allocated share of Output produced by the applicable CSG Facility and delivered to ENO, in accordance with ENO's Community Solar Generating Facilities Subscription Service rate schedule ("Schedule CSGF").

1.6. "CSG Facility Owner" shall mean the entity or entities holding legal title or otherwise having full rights of ownership in and to the CSG Facility. If the CSG Facility Owner is the same entity as Subscriber Organization, then Section 3.2 hereof shall not be applicable.

1.7. "Customer" means a retail electric customer account holder of ENO. For purposes of this Agreement, this term shall not be applied to a Subscriber Organization that is issued a retail electric customer account number for a CSG Facility by ENO.

1.8. "Date of Commercial Operation" shall mean the day upon which Commercial Operation is first achieved pursuant to Section 4.3 hereof.

1.9. "Electric Tariffs" shall mean ENO's rates for electric service as in effect and on file with the Council from time to time.

1.10. "Force Majeure" shall have the meaning as set forth in Section 6.1 of this Agreement.

1.11. "House Power" shall mean the supply of retail power for consumption at the Site.

1.12. "Initial Subscriber Report" shall mean the list of potential Subscribers for a CSG Facility provided by the Subscriber Organization to ENO as required by the Plan. The Initial Subscriber Report shall be in the form required by ENO and shall include for each potential Subscriber the name, identifying information, and the proposed Allocation applicable to the Subscription such that ENO can verify the potential Subscriber's eligibility to participate in the program.

1.13. "Interconnection Agreement" shall mean the separate agreement to be entered into between Subscriber Organization and ENO providing the terms and conditions by which Subscriber Organization will interconnect and operate the CSG Facility in parallel with ENO's electric distribution system at the Site.

1.14. "Low-Income Customer" shall mean a Customer whose gross annual household income is at or below <u>fifty sixty</u> percent (560%) of the Area Median Income for the year of subscription or who is certified for any federal, state or local assistance program that limits participation to households whose income is at or below <u>fifty sixty</u> percent (560%) of the Area Median Income.

1.15. "Low-Income Subscriber" means a Subscriber who is a Low-Income Customer.

1.16. "Monthly Subscription Information" shall mean the information submitted to ENO on the Initial Subscription Report as modified by the information provided on the Monthly CSG Facility Subscription Updates required by the Plan and as described in Section 4.6, below.

1.17. "Output" means the energy and power produced by a CSG Facility.

1.18. "Production Month" shall mean the calendar month during which Output is produced by the CSG Facility and delivered to ENO at the Service Connection.

1.19. "Renewable Energy Credit" or "REC" shall mean a contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets and allowances, howsoever entitled, directly attributable to a specific amount of electric energy generated from a renewable energy resource.

1.20. "Service Connection" is the location on the CSG Facility's premises/facilities at which a point of delivery of power between ENO and the CSG Facility is established.

1.21. "Site" shall mean the parcel of real property within ENO's territory on which the CSG Facility will be constructed and located, including any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the CSG Facility. The Site is more specifically described in Exhibit A to this Agreement.

1.22. "Subscriber" shall mean a Customer of ENO that holds a Subscription to one or more CSG Facilities and has identified one or more individual meters or accounts related to electric service to which the Subscription(s) shall be attributed. A "Subscriber" shall also mean a Low-Income Subscriber.

1.23. "Subscription" shall mean a proportional interest owned or held by a Subscriber in the CSG Facility, which meets all of the requirements set forth in Section 3.3, below.

1.24. "Unsubscribed Energy" refers to any energy Output of a CSG Facility in kWh that is not allocated to a Subscriber as part of a Subscription.

## **ARTICLE II**

# SALE AND DELIVERY OF OUTPUT AND OWNERSHIP OF RENEWABLE ENERGY CREDITS

2.1 Sale and Delivery of Subscribed Output. Effective upon the Date of Commercial Operation, Subscriber Organization shall sell and deliver to ENO at the Production Meter all of the Output produced by the CSG Facility and attributable to Subscriptions held by all Subscribers in the CSG Facility. As set forth in the Rules, ENO shall not be obligated to make any payment to Subscriber Organization for the Subscribed Output but instead will render monthly Credits to Subscribers as described below.

2.2 For each Subscriber, ENO shall apply a monthly Credit each billing period to such Subscriber's bill for retail electric service in accordance with ENO's Rate Schedule CSGF based upon the Allocation as set forth in the applicable Monthly Subscription Information. ENO is only obligated to apply monthly bill Credits for Subscribed Output produced and delivered by the CSG Facility to the Production Meter.

2.3 For purposes of applying the monthly Credit to Subscribers' bills, ENO shall be entitled to rely exclusively on the Monthly Subscription Information as updated by Subscriber Organization in accordance with the procedures required by the Plan referenced in Section 4.6, below. The correction of previously-applied monthly Credits among Subscribers due to any inaccuracy reflected in such Monthly Subscription Information with regard to a Subscriber's Subscription in the CSG Facility and the beneficial share of Output produced by the CSG Facility shall be the full responsibility of the Subscriber Organization.

2.4 The ownership and title to all renewable energy attributes or RECs associated with the CSG Facilities shall belong to the individual Subscribers, in the absence of an agreement to transfer said renewable attributes or RECs to the Subscriber Organization.

2.5 If the Subscriber Organization can demonstrate an increased value provided directly to Subscribers with ownership and title of the RECs by the Subscriber Organization, the Subscriber Organization should provide said support to the Council, which may allow the Subscriber Organization to offer Subscribers the opportunity to redeem the value of such RECs on an individual or consolidated basis.

2.62.5 Purchase and Sale of Unsubscribed Energy. Effective upon the Date of Commercial Operation, Subscriber Organization agrees to sell, and ENO agrees to purchase, up to twenty percent (20%) of the monthly Unsubscribed Energy produced by the CSG Facility and delivered to ENO at the Production Meter. The rate per kWh that ENO shall pay Subscriber Organization for the up-to-twenty percent (20%) portion of Unsubscribed Energy pursuant to this Section shall

be ENO's estimated avoided energy costs for the appropriate time period from ENO's most recent biennial filing with the Clerk of Council of the City of New Orleans pursuant to the Public Utilities Regulatory Policies Act of 1978, Section 201. As provided in the Rules, ENO shall receive all Unsubscribed Energy beyond the up-to-twenty percent (20%) portion without any obligation or requirement to render payment therefor. The amount of monthly Unsubscribed Energy shall be determined after all Subscribers have been billed and credited based on the monthly Output of each applicable CSG Facility.

2.72.6 Title, Risk of Loss, and Warranty of Title. As between the Parties, Subscriber Organization shall be deemed to be in control of the energy output from the CSG Facility up to and until delivery and receipt by ENO at the Service Connection and ENO shall be deemed to be in control of such energy from and after delivery and receipt at such Service Connection. Subscriber Organization warrants and represents to ENO that it has or will have at the time of delivery good and sufficient title to all Output and/or the ability to transfer good and sufficient title of same to ENO.

2.82.7 Exclusive Dealing. Subscriber Organization shall not sell any Output generated from the CSG Facility to any person or entity other than ENO during the Term of this Agreement.

## ARTICLE III <u>REPRESENTATIONS OF THE PARTIES AND CONDITIONS PRECEDENT</u>

3.1 Subscriber Organization represents and warrants as follows:

(a) it is registered with the Council and has a valid identification number, which shall be maintained and renewed annually in accordance with the Rules;

(b) it has and will maintain acceptable proof of Site control such as evidence of property ownership, an executed lease agreement, or a signed option to purchase a lease;

(c) it has the right and authority to sell the Unsubscribed Energy produced by the CSG Facility to ENO on behalf of the CSG Facility Owner, the Subscribers and itself; and

(d) it will at all times maintain a valid Interconnection Agreement.

3.2 If the CSG Facility Owner and the Subscriber Organization are not the same person, then the undersigned CSG Facility Owner hereby agrees and consents to the terms of this Agreement and hereby authorizes Subscriber Organization to perform any and all acts necessary on its behalf to carry out the duties, responsibilities and obligations provided for herein as Subscriber Organization, and to sell on the CSG Facility Owner's behalf any and all of CSG Facility Owner's interest in the Output produced by the CSG Facility to ENO in accordance with the terms hereof.

3.3 <u>Requirements and Restrictions Applicable to Subscribers and Subscriptions</u>. The conditions set forth in the following subparagraphs (a) through (d) of this Section 3.3 must be satisfied at all times during the Term of this Agreement, except as specifically provided otherwise below. ENO reserves the right to refuse to accept any additions, deletions or changes to the Monthly Subscription Information to the extent such addition, deletion or change results in non-compliance with any of such conditions. For purposes of this Agreement, the Allocation for any Subscriber or Subscription that no longer satisfies the below conditions for qualification as a

valid Subscriber or Subscription shall be treated as an unsubscribed portion, and the Monthly Subscription Information automatically changed accordingly, unless and until such Allocation is changed by Subscriber Organization in a manner that satisfies all such conditions.

(a) A Customer may not hold Subscriptions representing a total amount of energy in the Community Solar Program that exceeds 100 percent (100%) of the value of the Subscriber's Baseline Annual Usage and must comply with the provisions of Section III.A.(3) of the Rules.

(b) No Customer may own more than a forty percent (40%) interest in the beneficial use of the electricity generated by the CSG Facility, including without limitation, the renewable energy and RECs associated with or attributable to the CSG Facility.

(c) Each Subscription shall be sized to represent at least one kW of the CSG Facility's nameplate rating. The minimum one kW sizing requirement herein shall not apply to Subscriptions owned by an eligible Low-Income Subscriber.

(d) CSG Facilities shall be classified into one of two categories: (i) Open Category: CSG Facilities of any size up to five (5)two MW as measured by the alternating current rating of the system's inverter; and (ii) Low-Income Category: CSG Facilities of any size up to two-five (5) MW as measured by the alternating current rating of the system's inverter in which a minimum of 30 percent (30%) of the CSG Facility's Output is provided to Low-Income Subscribers.

3.4 <u>Requirements and Restrictions Applicable to the CSG Facility</u>. The conditions set forth in the following subparagraphs (a) through (d) of this Section 3.4 must be satisfied at all times during the Term of this Agreement. ENO shall have the right hereunder to refuse to purchase any and all Output from the CSG Facility during the period it is not in compliance with any of such conditions if the Subscriber Organization does not remedy the deficiency in a timely manner.

(a) The CSG Facility shall have at least three (3) Subscribers.

(b) The CSG Facility's generating capacity/nameplate rating must not exceed two (2) MW as measured by the alternating current rating of the system's inverter.

(c) The CSG Facility must be located within ENO's service territory, must be individually metered and must connect to ENO's distribution system.

(d) The total number of accounts per CSG Facility may be determined by the Subscriber Organization; however, each Subscription shall be sized to represent at least one kW of the CSG Facility's nameplate rating. The minimum one kW sizing requirement herein shall not apply to Subscriptions owned by an eligible Low-Income Subscriber.

3.5 <u>Responsibility for Verification of Subscriber Eligibility</u>. The Subscriber Organization and ENO shall jointly verify that each Subscriber is eligible to be a Subscriber in the CSG Facility, except for a Subscriber's eligibility to be considered a Low-Income Subscriber, which shall be the sole responsibility of the Subscriber Organization. The Subscriber Organization shall provide an Initial Subscriber Report to ENO within the deadline and in the form required by

the Plan. Should ENO determine that any of the customer information provided is either incorrect or incomplete, the Subscriber Organization shall correct the deficiency within the required deadline. The Initial Subscriber Report shall include, at a minimum, each potential Subscriber's name and ENO Account number, the percentage share of the CSG Facility Allocation owned by the Subscriber, the effective date of the ownership of that Subscription, the premises to which the Subscription is attributed for the purpose of applying billing credits, and whether the Subscriber meets the criteria to be eligible as a Low-Income Subscriber. Changes in the Subscriber enrollment records shall be communicated by the Subscriber Organization to ENO electronically using the Monthly CSG Facility Subscription Update form required by the Plan, as described in Section 4.6, below. Transfers of Subscriptions shall also be communicated by the Subscriber Organization to ENO using the required Monthly CSG Facility Subscription Update form and will be handled as described in the Plan and Section 4.6, below.

3.6 <u>Compliance with Laws</u>. A Subscriber Organization, and, where relevant, thirdparty-owner/developer, are responsible for ensuring that its CSG Facility is constructed, maintained, and operated in compliance with all relevant local, state and federal laws, rules, regulations and standards, including but not limited to, reliability, safety, zoning, permitting, occupational safety and health, and environmental laws, rules, regulations and standards, as well as adherence to ENO's interconnection policies and procedures and the Rules.

3.7 <u>False Representation</u>. Any representation or warranty made by Subscriber Organization in this Agreement that shall prove to have been false or misleading in any material respect when made or ceases to remain true during the Term if such cessation would reasonably be expected to result in a material adverse impact on ENO, shall constitute an event of default subject to Section 7.1 hereof.

3.8 <u>ENO Disclaimer</u>. Nothing in this Agreement shall be construed as a representation or warranty by ENO of the design, installation or operation of the CSG Facility or any component thereof, and ENO expressly disclaims all warranties of the equipment as to workmanship, quality, or performance, including the fitness of the equipment for the purpose intended.

#### ARTICLE IV <u>TERM, RENEWAL OPTIONS, COMMERCIAL OPERATION AND</u> PERFORMANCE

4.1 <u>Term</u>. This Agreement shall become effective upon its execution by the Parties and shall continue in effect for a Term of <u>twenty (20)10</u> years from and after the Date of Commercial Operation ("Initial Term"), subject to early termination as set forth herein, or until the termination of any Interconnection Agreement associated with the CSG Facility, whichever occurs first. Applicable provisions of this Agreement shall continue in effect after termination, including early termination, to the extent necessary to enforce or complete the duties, obligations or responsibilities of the Parties arising prior to termination and, as applicable, to provide for final billings and adjustments related to the period prior to termination, repayment of any money due and owing to either Party pursuant to this Agreement, and the indemnifications specified in this Agreement.

4.2 <u>Renewal</u>. If Subscriber Organization is in compliance with the terms of this Agreement, it will have the option to renew for up to 10 years in two 5-year renewal periods ("Renewal Period"). Company will send Subscriber Organization a renewal notice three (3)

#### months prior to the expiration of the Initial Term.

4.34.2 Project Development. Prior to the Commercial Operation Date, Subscriber Organization agrees to provide Company with a schedule of the projected completion and inservice dates for the project, and inform Company of any changes to the schedule within five (5) business days of the time that the Subscriber Organization becomes aware of such changes. Upon request, the Company shall have the right to monitor the testing and operation of the CSG Facility at the CSG Facility for compliance with this Agreement, *provided, however, that* Company shall comply with all of Subscriber Organization's applicable safety and health rules and requirements. Company's monitoring of the CSG Facility shall not be construed as inspections or endorsing the design thereof nor as any express or implied warranties including performance, safety, durability, or reliability of the CSG Facility.

4.4<u>4.3 Commercial Operation</u>. Commercial Operation is achieved when: (a) 100% of the nameplate capacity of the CSG Facility is installed; (b) the CSG Facility has operated without experiencing any abnormal or unsafe operating conditions, as witnessed by ENO personnel at the Site; (c) all permits necessary to authorize the production and, if applicable, delivery to ENO of Output generated by the CSG Facility have been obtained; (d) the Production Meter has been installed; and (e) the Interconnection Agreement has been entered into between ENO and Subscriber Organization and the CSG Facility has been interconnected with ENO's electric distribution system pursuant to the Interconnection Agreement.

4.54.4 Deposit. If Commercial Operation is not achieved within 12 months of any approved application, Subscriber Organization shall provide to ENO an additional deposit of \$50 per kW to continue under the Community Solar Program as required under Section VII(D)(11) of the Rules. ENO shall return the CSG Facility deposit upon commencement of Commercial Operation, unless the CSG Facility fails to begin operating within 18 months of an approved application, in which case the deposit shall be forfeited, and this Agreement terminated.

4.64.5 Maintenance and Repair of CSG Facility. The Subscriber Organization shall maintain the CSG Facility and the individual components thereof in good working order at all times during the Term of this Agreement. If, during the Term of this Agreement the CSG Facility or any of the individual components of the system should be damaged or destroyed such that the extent of the damage affecting output exceeds twenty (20) percent of the CSG Facility's nameplate rating, the Subscriber Organization shall provide ENO written notice of such damage, a description of the equipment damaged, the corresponding reduction to the CSG Facility's output, and the anticipated duration of repairs to the facility to return the facility to its original nameplate rating. If, after such damage, the CSG Facility is not returned to its original nameplate rating within one hundred and eighty (180) days, ENO shall have the right, exercisable at its sole option, to terminate this Agreement upon not less than thirty (30) days written notice, with no further obligation of the Parties to perform hereunder following the effective date of such termination. In all other situations, if the CSG Facility is out of operation for more than ninety (90) consecutive days during the Term of this Agreement, ENO shall have the right to terminate this Agreement by providing written notice to Subscriber Organization anytime during the period following the expiration of such ninety (90) days and before the CSG Facility has been made fully operational again.

4.74.6 Updating of Subscription Information. Subscriber Organizations are required to

provide real time reporting of production as specified by ENO. For CSG Facilities greater than 250 kW, the Subscriber Organization shall provide real time access to production data. ENO may require different real time reporting for CSG Facilities 250 kW and smaller. As required by the Plan, the Subscriber Organization will provide electronically to ENO a Monthly CSG Facility Subscription Update for each CSG Facility listing Subscribers who have been added or deleted since the prior month along with their applicable Subscription amounts. The monthly update shall follow a standard format specified by ENO in order to integrate data into ENO's billing system. The monthly update shall also include the amount of the CSG Facility's capacity that remains unsubscribed. The update must be provided within the deadline imposed by the Council-approved Plan for updates to take effect for the first billing cycle of the next month. If the Subscriber Organization provides the update after the specified deadline, updates would take effect on the first billing cycle of the month following the next month.

4.84.7 Certification of Low-Income Qualification. The Subscriber Organization shall certify to ENO in writing that the Subscriber Organization has verified the eligibility of all Low-Income Subscribers needed to qualify for the program prior to receiving permission to operate from ENO. By May 1 of each year, the Subscriber Organization shall re-certify in writing to the Company the Low-Income Subscriber status of all Subscribers to its CSG Facilities that are designated as such.

4.94.8 Audits. ENO reserves the right, upon thirty (30) days written notice, to audit Subscriber Organization's Subscriber and Subscription records and to inspect the CSG Facility at any time during the Term of this Agreement, and for an additional period of one year thereafter.

# ARTICLE V PRODUCTION METER AND INTERCONNECTION

5.1 <u>Production Meter</u>. Upon the initial satisfaction of all of the conditions set forth in Sections 3.3 and 3.4 above, and any applicable requirements of the Distribution Interconnection Standards, ENO shall install, and thereafter own, operate, maintain and read the Production Meter, which shall be sufficiently sized to measure all Output generated by the CSG Facility, and Subscriber Organization shall reimburse ENO for the cost of installing the Production Meter. Such reimbursement shall be due within thirty (30) days from the date a bill is presented to Subscriber Organization by ENO after the Production Meter is installed. If Subscriber Organization does not make payment in full within that time, the unpaid balance shall bear interest at the rate of one and one half percent (1.5%) per month. ENO reserves the right to replace the Production Meter, at its sole cost, at any time and for any reason.

5.2 <u>Telecommunications Equipment</u>. Subscriber Organization shall cause to be provided, and shall own, operate and maintain at the Subscriber Organization's sole cost any necessary electronic communications equipment or devices that are required to provide real-time access to 15-minute interval data regarding the Output produced by the CSG Facility. Unless otherwise notified in writing by ENO that an alternative telecommunication device is acceptable, such equipment shall include an active, wired telephone or data line capable of transmitting the monthly 15-minute interval data to ENO. ENO reserves the right to replace the telecommunication equipment at its sole cost.

5.3 Failure to Maintain Telecommunication Line. If the telecommunication line required to be maintained by Subscriber Organization pursuant to Section 5.2 is inactive or nonoperational during any Production Month when ENO attempts to access measurement data from the telemetry equipment on the Production Meter, Subscriber Organization shall be assessed a Trip Charge applicable to non-gratuitous labor service at the currently-effective rate set forth in the Schedule of Charges for Rendering Service section of ENO's electric tariff. If the telecommunication line is inactive or non-operational for three consecutive Production Months, then, in addition to the applicable Trip Charges, all energy produced and delivered from the CSG Facility shall be treated and priced as unsubscribed energy hereunder effective as of the first calendar day of such third Production Month and continuing until the subsequent Production Month during which the telecommunication line is made operational and active. Subscriber Organization's payment of Trip Charges hereunder shall be due within thirty (30) days from the date a bill is presented to Subscriber Organization by ENO. If Subscriber Organization does not make payment in full within that time, the unpaid balance shall bear interest at the rate of one and one half percent (1.5%) per month to be invoiced monthly.

5.4 House Power. This Agreement does not provide for House Power. Subscriber Organization shall be solely responsible for arranging retail electric service exclusively from ENO in accordance with ENO's Electric Tariffs. Subscriber Organization shall obtain House Power solely through separately metered retail service and shall not obtain House Power through any other means, and waives any regulatory or other legal right to the contrary, except the right to self-generate as provided in this Section 5.4. Subscriber Organization's right to self-generate hereunder shall be limited to the electrical energy consumed at the Site that is directly related to the CSG Facility's generation, including system operation, performance monitoring and associated communications, and shall not include energy necessary for domestic or other purposes, such as for perimeter lighting, a visitor's center or any other structures or facilities at the Site. The Parties acknowledge and agree that the performance of their respective obligations with respect to House Power shall be a separate from this Agreement and shall be interpreted independently of the Parties' respective obligations under this Agreement. Notwithstanding any other provision in this Agreement, nothing with respect to the arrangements for House Power shall alter or modify Subscriber Organization's or ENO's rights, duties, and obligations under this Agreement. This Agreement shall not be construed to create any rights between Subscriber Organization and ENO with respect to the arrangements for House Power.

5.5 <u>Interconnection Agreement</u>. The Parties recognize that Subscriber Organization and ENO will enter into a separate Interconnection Agreement consistent with the provisions of Entergy's Distribution Design Basis/Standards DR7-01 or DR7-02. The Parties acknowledge and agree that the performance of their respective obligations with respect to the interconnection of the CSG Facility pursuant to the Interconnection Agreement shall be subject to the prior satisfaction of all of the conditions set forth in Sections 3.3 and 3.4 above, but that in all other respects the Interconnection Agreement shall be a separate and free-standing contract and shall be interpreted independently of the Parties' respective obligations under this Agreement. Notwithstanding any other provision in this Agreement, nothing in the Interconnection Agreement shall alter or modify Subscriber Organization's or ENO's rights, duties and obligations under this Agreement. This Agreement shall not be construed to create any rights between Subscriber Organization and ENO with respect to the Interconnection Agreement.

# ARTICLE VI FORCE MAJEURE

Definition of Force Majeure. (a) The term "Force Majeure," as used in this 6.1 Agreement, means causes or events beyond the reasonable control of, and without the fault or negligence of the Party claiming Force Majeure, including, without limitation, acts of God, sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes; high winds of sufficient strength or duration to materially damage a CSG Facility or significantly impair its operation such that it is no longer capable of generating Output; long-term material changes in Output flows across the CSG Facility caused by climatic change, lightning, fire, ice storms, sabotage, vandalism caused by others despite reasonable efforts of Subscriber Organization to secure and protect the CSG Facility, terrorism, war, riots, fire; explosion, insurrection, strike, slow down or labor disruptions (even if such difficulties could be resolved by conceding to the demands of a labor group), and actions or inactions by any governmental authority taken after the date hereof (including the adoption or change in any rule or regulation or environmental constraints lawfully imposed by such governmental authority), but only if such requirements, actions, or failures to act prevent or delay performance, and inability, despite due diligence, to obtain any licenses, permits, or approvals required by any governmental authority having jurisdiction.

(b) The term Force Majeure does not include (i) any acts or omissions of a n y third party, including, without limitation, any vendor, materialman, customer, or supplier of Subscriber Organization, unless such acts or omissions are themselves excused by reason of Force Majeure; (ii) any full or partial curtailment in the electric output of the CSG Facility that is caused by or arises from a mechanical or equipment breakdown or other mishap or events or conditions attributable to normal wear and tear or flaws, unless such mishap is caused by one of the following: catastrophic equipment failure; acts of God; sudden actions of the elements, including, but not limited to: floods; hurricanes, tornadoes; sabotage; terrorism; war; riots; and emergency orders issued by a governmental authority or (iii) changes in market conditions that affect the cost of ENO's or Subscriber Organization's supplies, or that affect demand or price for any of ENO's or Subscriber Organization's products.

6.2 <u>Applicability of Force Majeure</u>. (a) Neither Party shall be responsible or liable for any delay or failure in its performance under this Agreement, nor shall any delay, failure, or other occurrence or event become an event of default, to the extent such delay, failure, occurrence or event is substantially caused by conditions or events of Force Majeure, provided that:

- i. the non-performing Party gives the other Party prompt written notice describing the particulars of the occurrence of the Force Majeure;
- ii. the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;
- iii. the non-performing Party proceeds with reasonable diligence to remedy its inability to perform and provides weekly progress reports to the other Party describing actions taken to end the Force Majeure; and
- iv. when the non-performing Party is able to resume performance of its obligations under this Agreement, that Party shall give the other Party written notice to that effect.

(b) Except as otherwise expressly provided for in this Agreement, the existence of a condition or event of Force Majeure shall not relieve the Parties of their obligations under this Agreement (including, but not limited to, payment obligations) to the extent that performance of such obligations is not precluded by the condition or event of Force Majeure. Notwithstanding this provision, ENO shall have no obligation to make any payment for Output under this Agreement except for actual production as measured by the metering provisions of this Agreement.

6.3 <u>Limitations on Effect of Force Majeure</u>. In no event will any delay or failure of performance caused by any conditions or events of Force Majeure extend this Agreement beyond its stated Term. In the event that any delay or failure of performance caused by conditions or events of Force Majeure continues for an uninterrupted period of three hundred sixty-five (365) days from its occurrence or inception, as noticed pursuant to Section 6.2(a)(i) above, the Party not claiming Force Majeure may, at any time following the end of such three hundred sixty-five (365) day period terminate this Agreement upon written notice to the affected Party, without further obligation by either Party except as to costs and balances incurred prior to the effective date of such termination. The Party not claiming Force Majeure may, but shall not be obligated to, extend such three hundred sixty-five (365) day period, for such additional time as it, at its sole discretion, deems appropriate, if the affected Party is exercising due diligence in its efforts to cure the conditions or events of Force Majeure.

## ARTICLE VII DEFAULT, REMEDIES AND DISPUTE RESOLUTION

7.1 Events of default. Any of the following events shall constitute an event of default if such event has not been cured as provided for below:

(A) Third-party owner/developer, Subscriber Organization and their affiliated and parent companies' failure at any time during the Term of this Agreement to meet the requirements under Section 3.1(d) (Interconnection Agreement). In such event Company may, and in its sole discretion, terminate this Agreement. Upon such termination Company shall have no further financial or other obligation to the Subscriber Organization as a result of such termination. The provisions of paragraph 7.3 shall not apply to an event of default under this paragraph.

(B) The failure by either Party to perform or observe any other material term or provision of this Agreement, that is not excused by Force Majeure, and such failure remains unremedied for 30 days after notice thereof shall have been given by the non-defaulting Party.

7.2 Prior to commencing any action to enforce this Agreement, the non-defaulting Party shall provide written notice of default to the Party asserted to be in default and the Party asserted to be in default shall have a period of thirty (30) days following receipt of such written notice within which to cure the asserted default (or if the asserted default is of a nature which cannot reasonably be cured within such 30-day period, to commence and thereafter diligently pursue a cure thereof.)

7.3 Failure of either Party to assert a default or to enforce any term or condition of this Agreement shall not constitute a waiver of any other similar or other default, or waiver of such term or condition or of any other term or condition of this Agreement. Each Party hereby irrevocably and unconditionally waives any right to a trial by jury for the resolution of any dispute

arising under this Agreement.

7.4 If any disputes arise concerning this Agreement, including but not limited to enforcement of any term or condition of the Agreement, the prevailing Party in any action brought for the purpose of enforcing such provisions shall be entitled to recover its reasonable attorney fees, expenses and costs of such action from the non-prevailing Party.

## ARTICLE VIII LIABILITY AND INDEMNIFICATION

8.1 <u>Limitation of Liability</u>. ENO shall not be responsible or liable for any personal injury or property damage caused by the CSG Facility or any individual component equipment of the system. ENO shall not be liable to the Subscriber Organization for any punitive, special, exemplary or consequential damages, including but not limited to, lost profits, loss of use, and costs of replacement, whether based in contract, tort, upon any theory of indemnity, or otherwise. ENO makes no warranty or representation concerning the taxable consequences, if any, to Subscriber Organization with respect to the production and sale of Output, and Subscriber Organization is urged to seek professional advice regarding this issue.

8.2 <u>Indemnification by Subscriber Organization</u>. Subscriber Organization shall indemnify, defend, and hold ENO, its employees, agents, successors, assigns, subsidiaries and affiliates harmless against any and all claims, demands, liens, lawsuits, judgments or actions of whatsoever nature that may be brought on account of the installation, maintenance, operation, repair, or replacement of the CSG Facility or any component equipment of the system, or Subscriber Organization's administration of Subscriptions or the performance of its responsibilities as a subscriber organization.

## ARTICLE IX LAWS AND REGULATORY BODIES

9.1 <u>Agreement Subject to Laws and Regulations</u>. This Agreement and the rights and obligations of the Parties hereunder shall be subject to all valid applicable state, local and federal laws, rules, regulations, ordinances, orders and decisions issued or promulgated for or by any court or regulatory agency having or asserting jurisdiction over this Agreement, the services to be performed hereunder, or either of the Partieshereto.

9.2 <u>Rights Upon Regulatory Agency or Court Action</u>. Except as may be otherwise provided herein, in the event that any court or regulatory agency having or asserting jurisdiction over these premises takes any action or issues any determination that directly or indirectly prohibits performance to a material extent under this Agreement by either or both parties or otherwise makes such performance illegal or impossible, such action or determination will be considered to be an event of Force Majeure. In the event that any such court or regulatory agency takes any action or issues any determination that directly or indirectly effects a material adverse change to any substantive provision of this Agreement, in the terms of performance or with respect to the rights or obligations of either party hereto (in that party's reasonable good faith opinion), then the party materially adversely affected may: (i) continue to perform its obligations under the Agreement as changed, (ii) seek to renegotiate the terms of this Agreement by providing written notice to the other party of its desire to renegotiate, or (iii) at any time during a period of ninety (90) days next following receipt by the other party of written notice of any such action by any such court or regulatory agency, terminate this Agreement by providing written notice to the other party hereto on or before the end of such ninety (90) day period, such termination to be effective on the first day of the month next following ninety (90) days after the receipt of such notice of termination; provided however that, if such action or determination is rescinded prior to the effectiveness of such notice, such notice will be deemed invalid. In the event the Agreement terminates under this provision, all further rights and obligations of ENO and Subscriber Organization under this Agreement will be null and void. Each party hereto shall provide reasonable and prompt notice to the other party hereto as to any regulatory proceedings or actions described herein that could affect the rights and obligations of the Parties hereto.

9.3 <u>Performance Pending Renegotiation or Termination</u>. Irrespective of any action by any court or regulatory agency as contemplated by Sections 9.1 or 9.2, above, each of the Parties hereto shall continue to honor and perform all of their respective warranties, representations and obligations under this Agreement including, but not limited to, the obligations of Subscriber Organization to sell and deliver the Output of the CSG Facility to ENO and the obligations of ENO to accept and pay Subscriber Organization as provided herein, until the Parties either mutually renegotiate the terms of this Agreement or until this Agreement terminates pursuant to the provisions of Section 9.2 above.

9.4 <u>Governing Law</u>. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Louisiana.

# ARTICLE X MISCELLANEOUS PROVISIONS

10.1 <u>Counterparts</u>. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all constitute one and the same instrument. The Parties agree that a facsimile copy of a counterpart signed by the other Party will be deemed original and binding.

10.2 <u>Assignment, Successors and Assigns</u>. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the respective Parties hereto and shall not be assigned by either Party without the written consent of the non-assigning Party, which consent shall not be unreasonably withheld. In no event shall any assignment by Subscriber Organization become effective before a new Subscriber Agency Agreement has been entered into between Subscriber Organization's assignee and each and every Subscriber.

10.3 <u>Relationship of the Parties</u>. Nothing herein is intended nor shall ever be construed to create a joint venture, partnership or any other type of association between the Parties, nor shall either Party have the right to act in behalf of or bind the other for any liability, cost, expense or undertaking except as set forth in this Agreement.

10.4 <u>Amendments or Modifications</u>. No amendment, modification, or change of this Agreement shall be binding upon the Parties unless such amendment, modification, or change is in writing and executed by the Parties.

10.5 <u>Construction</u>. No understandings or agreements not expressly stated herein shall be binding on the Parties in the construction or fulfillment hereof unless such understandings or agreements are reduced to writing and signed by the respective parties. The rule of construction that ambiguous provisions shall be interpreted against the drafter shall not apply to this Agreement.

10.6 <u>No Third-Party Beneficiaries</u>. Except as otherwise specifically provided herein, this Agreement is not intended to, and shall not, create rights, remedies, or any benefits of any character whatsoever, in favor of any person, corporation or other entity other than the Parties hereto, and the obligations herein assumed are for the use and benefit of the Parties, their successors in interest, and permitted assigns.

10.7 <u>Remedies Cumulative</u>. Except as otherwise specifically provided herein, each remedy provided for under this Agreement shall be taken and construed as cumulative and in addition to every other remedy provided for herein or available at law or in equity.

10.8 <u>Notices</u>. All notices, reports or other communications provided for in this Agreement shall be in writing and shall be deemed to have been sent when delivered by hand, sent by facsimile with verification, or when deposited in the United States mail, postage prepaid and properly addressed or when sent via overnight courier:

If to ENO:

If to Subscriber Organization:

or at such other address as either party may hereafter designate to the other in writing.

[INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned Parties have executed this Agreement as of the date and year first above written.

SUBSCRIBER ORGANIZATION Name (printed):	
Signature:	Date:
ENTERGY NEW ORLEANS, LLC	
Name (printed):	
Title:	
Signature:	Date:
CSG FACILITY OWNER (if different	from Subscriber Organization)
Name (printed):	
Title:	
Signature:	Date:

EXHIBIT 1 Redline Form CSG-4 17 of 17

No. \_\_\_\_\_

# Exhibit A

**DESCRIPTION OF CSG Facility SITE:** 

# Standard Offer Community Solar Power Purchase Agreement

# Form CSG-4

This Standard Offer Community Solar Power Purchase Agreement ("Agreement") is made and entered into this \_\_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_, by and between Entergy New Orleans, LLC ("ENO" or "Company"), a Texas limited liability company, whose principal place of business is 1600 Perdido Street, New Orleans, Louisiana 70112 and \_\_\_\_\_\_ ("Subscriber Organization") a\_\_\_\_\_\_ whose principal place of business is \_\_\_\_\_\_, each of which may be referred to herein individually as a "Party" or collectively as the "Parties." Subscriber Organization [owns and operates] [operates] the CSG Facility defined below.

#### **RECITALS**:

This Agreement governs the relationship between ENO and Subscriber Organization, both on behalf of itself and as authorized agent for Subscribers (as defined in Section 1.22 below) and the CSG Facility Owner (as defined in Section 1.6 below), if applicable, with respect to the Output generated by the community solar generating facility (the "CSG Facility") installed, or to be installed, at the location described in Exhibit A attached hereto, with a generating capacity rating of \_\_\_\_\_[not to exceed five (5) megawatts as measured by the alternating current rating of the inverter (MW<sub>AC</sub>)].

Any references to "Rules" pertain to the New Orleans Community Solar Rules promulgated by the Council for the City of New Orleans ("Council") in Council Docket UD-18-03.

In consideration of the premises and mutual covenants herein contained, the Parties hereto agree as follows:

#### ARTICLE I DEFINITIONS

As used herein, the following terms shall have the meanings specified or referred to below which shall apply equally to single and plural forms. Except as otherwise provided for herein, capitalized terms shall have the meanings set forth in the Rules, which specify the facilities, entities, functions and requirements of the New Orleans community solar program ("Community Solar Program"), implemented by the City Council of New Orleans, as of the date of this Agreement.

1.1. "Allocation" shall mean the monthly allocation, stated in kilowatts ("kW") as a share of the total nameplate capacity of the CSG Facility, applicable to each Subscriber's Subscription reflecting such Subscriber's allocable portion of Output produced by the CSG Facility in a particular Production Month. In accordance with Section 4.6 below, the Subscriber Organization is required to timely provide the Allocation to ENO monthly, which ENO will in turn use to calculate the Credit for each billing month.

1.2. "Baseline Annual Usage" shall refer to a Subscriber's accumulated electricity use in kilowatt-hours (kWh) for the previous 12-month period at the time the Subscription is entered into, as measured at ENO's meter, net of any distributed generation provided by the Subscriber to the utility system at that meter. For a Subscriber that does not have a record of 12 months of electricity use at the time of the Subscriber's most recent Subscription, an estimate of the Subscriber's accumulated 12 months of electricity use in kWh, determined in a manner specified in the Community Solar Program Implementation Plan submitted by ENO and approved by the Council in Council Docket UD-18-03 ("Plan").

1.3. "Community Solar Generating Facility" or "CSG Facility" shall mean a solar energy facility that: (i) converts solar energy to electricity; (ii) has a generating capacity/nameplate rating that does not exceed five (5) megawatts (MW); (iii) can provide power to or is connected to ENO's distribution system; (iv) is located in ENO's service territory; (v) is individually metered; (vi) has at least three Subscribers; (vii) sells the Output from the facility to ENO and which the purchase of the Output from the facility shall take the form of a credit against the Subscriber's electric bill; and (viii) the beneficial use and renewable attributes of the Output of the facility belongs to the Subscribers, in the absence of an agreement to transfer said renewable attributes to the Subscriber Organization.

1.4. "Council" means the Council of the City of New Orleans.

1.5. "Credit" shall mean the dollar amount per kilowatt hour ("kWh") paid by ENO to each Subscriber as a credit on the Subscriber's monthly retail electric service bill to compensate the Subscriber for its allocated share of Output produced by the applicable CSG Facility and delivered to ENO, in accordance with ENO's Community Solar Generating Facilities Subscription Service rate schedule ("Schedule CSGF").

1.6. "CSG Facility Owner" shall mean the entity or entities holding legal title or otherwise having full rights of ownership in and to the CSG Facility. If the CSG Facility Owner is the same entity as Subscriber Organization, then Section 3.2 hereof shall not be applicable.

1.7. "Customer" means a retail electric customer account holder of ENO. For purposes of this Agreement, this term shall not be applied to a Subscriber Organization that is issued a retail electric customer account number for a CSG Facility by ENO.

1.8. "Date of Commercial Operation" shall mean the day upon which Commercial Operation is first achieved pursuant to Section 4.3 hereof.

1.9. "Electric Tariffs" shall mean ENO's rates for electric service as in effect and on file with the Council from time to time.

1.10. "Force Majeure" shall have the meaning as set forth in Section 6.1 of this Agreement.

1.11. "House Power" shall mean the supply of retail power for consumption at the Site.

1.12. "Initial Subscriber Report" shall mean the list of potential Subscribers for a CSG Facility provided by the Subscriber Organization to ENO as required by the Plan. The Initial Subscriber Report shall be in the form required by ENO and shall include for each potential Subscriber the name, identifying information, and the proposed Allocation applicable to the Subscription such that ENO can verify the potential Subscriber's eligibility to participate in the program.

1.13. "Interconnection Agreement" shall mean the separate agreement to be entered into between Subscriber Organization and ENO providing the terms and conditions by which Subscriber Organization will interconnect and operate the CSG Facility in parallel with ENO's electric distribution system at the Site.

1.14. "Low-Income Customer" shall mean a Customer whose gross annual household income is at or below sixty percent (60%) of the Area Median Income for the year of subscription or who is certified for any federal, state or local assistance program that limits participation to households whose income is at or below sixty percent (60%) of the Area Median Income.

1.15. "Low-Income Subscriber" means a Subscriber who is a Low-Income Customer.

1.16. "Monthly Subscription Information" shall mean the information submitted to ENO on the Initial Subscription Report as modified by the information provided on the Monthly CSG Facility Subscription Updates required by the Plan and as described in Section 4.6, below.

1.17. "Output" means the energy and power produced by a CSG Facility.

1.18. "Production Month" shall mean the calendar month during which Output is produced by the CSG Facility and delivered to ENO at the Service Connection.

1.19. "Renewable Energy Credit" or "REC" shall mean a contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets and allowances, howsoever entitled, directly attributable to a specific amount of electric energy generated from a renewable energy resource.

1.20. "Service Connection" is the location on the CSG Facility's premises/facilities at which a point of delivery of power between ENO and the CSG Facility is established.

1.21. "Site" shall mean the parcel of real property within ENO's territory on which the CSG Facility will be constructed and located, including any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the CSG Facility. The Site is more specifically described in Exhibit A to this Agreement.

1.22. "Subscriber" shall mean a Customer of ENO that holds a Subscription to one or more CSG Facilities and has identified one or more individual meters or accounts related to electric service to which the Subscription(s) shall be attributed. A "Subscriber" shall also mean a Low-Income Subscriber.

1.23. "Subscription" shall mean a proportional interest owned or held by a Subscriber in the CSG Facility, which meets all of the requirements set forth in Section 3.3, below.

1.24. "Unsubscribed Energy" refers to any energy Output of a CSG Facility in kWh that is not allocated to a Subscriber as part of a Subscription.

#### ARTICLE II SALE AND DELIVERY OF OUTPUT AND OWNERSHIP OF RENEWABLE ENERGY CREDITS

2.1 Sale and Delivery of Subscribed Output. Effective upon the Date of Commercial Operation, Subscriber Organization shall sell and deliver to ENO at the Production Meter all of the Output produced by the CSG Facility and attributable to Subscriptions held by all Subscribers in the CSG Facility. As set forth in the Rules, ENO shall not be obligated to make any payment to Subscriber Organization for the Subscribed Output but instead will render monthly Credits to Subscribers as described below.

2.2 For each Subscriber, ENO shall apply a monthly Credit each billing period to such Subscriber's bill for retail electric service in accordance with ENO's Rate Schedule CSGF based upon the Allocation as set forth in the applicable Monthly Subscription Information. ENO is only obligated to apply monthly bill Credits for Subscribed Output produced and delivered by the CSG Facility to the Production Meter.

2.3 For purposes of applying the monthly Credit to Subscribers' bills, ENO shall be entitled to rely exclusively on the Monthly Subscription Information as updated by Subscriber Organization in accordance with the procedures required by the Plan referenced in Section 4.6, below. The correction of previously-applied monthly Credits among Subscribers due to any inaccuracy reflected in such Monthly Subscription Information with regard to a Subscriber's Subscription in the CSG Facility and the beneficial share of Output produced by the CSG Facility shall be the full responsibility of the Subscriber Organization.

2.4 The ownership and title to all renewable energy attributes or RECs associated with the CSG Facilities shall belong to the individual Subscribers, in the absence of an agreement to transfer said renewable attributes or RECs to the Subscriber Organization.

2.5 <u>Purchase and Sale of Unsubscribed Energy</u>. Effective upon the Date of Commercial Operation, Subscriber Organization agrees to sell, and ENO agrees to purchase, up to twenty percent (20%) of the monthly Unsubscribed Energy produced by the CSG Facility and delivered to ENO at the Production Meter. The rate per kWh that ENO shall pay Subscriber Organization for the up-to-twenty percent (20%) portion of Unsubscribed Energy pursuant to this Section shall be ENO's estimated avoided energy costs for the appropriate time period from ENO's most recent biennial filing with the Clerk of Council of the City of New Orleans pursuant to the Public Utilities Regulatory Policies Act of 1978, Section 201. As provided in the Rules, ENO shall receive all Unsubscribed Energy beyond the up-to-twenty percent (20%) portion without any obligation or requirement to render payment therefor. The amount of monthly Unsubscribed Energy shall be determined after all Subscribers have been billed and credited based on the monthly Output of each

applicable CSG Facility.

2.6 <u>Title, Risk of Loss, and Warranty of Title</u>. As between the Parties, Subscriber Organization shall be deemed to be in control of the energy output from the CSG Facility up to and until delivery and receipt by ENO at the Service Connection and ENO shall be deemed to be in control of such energy from and after delivery and receipt at such Service Connection. Subscriber Organization warrants and represents to ENO that it has or will have at the time of delivery good and sufficient title to all Output and/or the ability to transfer good and sufficient title of same to ENO.

2.7 Exclusive Dealing. Subscriber Organization shall not sell any Output generated from the CSG Facility to any person or entity other than ENO during the Term of this Agreement.

#### ARTICLE III <u>REPRESENTATIONS OF THE PARTIES AND CONDITIONS PRECEDENT</u>

3.1 Subscriber Organization represents and warrants as follows:

(a) it is registered with the Council and has a valid identification number, which shall be maintained and renewed annually in accordance with the Rules;

(b) it has and will maintain acceptable proof of Site control such as evidence of property ownership, an executed lease agreement, or a signed option to purchase a lease;

(c) it has the right and authority to sell the Unsubscribed Energy produced by the CSG Facility to ENO on behalf of the CSG Facility Owner, the Subscribers and itself; and

(d) it will at all times maintain a valid Interconnection Agreement.

3.2 If the CSG Facility Owner and the Subscriber Organization are not the same person, then the undersigned CSG Facility Owner hereby agrees and consents to the terms of this Agreement and hereby authorizes Subscriber Organization to perform any and all acts necessary on its behalf to carry out the duties, responsibilities and obligations provided for herein as Subscriber Organization, and to sell on the CSG Facility Owner's behalf any and all of CSG Facility Owner's interest in the Output produced by the CSG Facility to ENO in accordance with the terms hereof.

3.3 <u>Requirements and Restrictions Applicable to Subscribers and Subscriptions</u>. The conditions set forth in the following subparagraphs (a) through (d) of this Section 3.3 must be satisfied at all times during the Term of this Agreement, except as specifically provided otherwise below. ENO reserves the right to refuse to accept any additions, deletions or changes to the Monthly Subscription Information to the extent such addition, deletion or change results in non-compliance with any of such conditions. For purposes of this Agreement, the Allocation for any Subscriber or Subscription that no longer satisfies the below conditions for qualification as a valid Subscriber or Subscription shall be treated as an unsubscribed portion, and the Monthly Subscription Information automatically changed accordingly, unless and until such Allocation is changed by Subscriber Organization in a manner that satisfies all such conditions.

(a) A Customer may not hold Subscriptions representing a total amount of energy in the Community Solar Program that exceeds 100 percent (100%) of the value of the

Subscriber's Baseline Annual Usage and must comply with the provisions of Section III.A.(3) of the Rules.

(b) No Customer may own more than a forty percent (40%) interest in the beneficial use of the electricity generated by the CSG Facility, including without limitation, the renewable energy and RECs associated with or attributable to the CSG Facility.

(c) Each Subscription shall be sized to represent at least one kW of the CSG Facility's nameplate rating. The minimum one kW sizing requirement herein shall not apply to Subscriptions owned by an eligible Low-Income Subscriber.

(d) CSG Facilities shall be classified into one of two categories: (i) Open Category: CSG Facilities of any size up to five (5) MW as measured by the alternating current rating of the system's inverter; and (ii) Low-Income Category: CSG Facilities of any size up to five (5) MW as measured by the alternating current rating of the system's inverter in which a minimum of 30 percent (30%) of the CSG Facility's Output is provided to Low-Income Subscribers.

3.4 <u>Requirements and Restrictions Applicable to the CSG Facility</u>. The conditions set forth in the following subparagraphs (a) through (d) of this Section 3.4 must be satisfied at all times during the Term of this Agreement. ENO shall have the right hereunder to refuse to purchase any and all Output from the CSG Facility during the period it is not in compliance with any of such conditions if the Subscriber Organization does not remedy the deficiency in a timely manner.

(a) The CSG Facility shall have at least three (3) Subscribers.

(b) The CSG Facility's generating capacity/nameplate rating must not exceed two (2) MW as measured by the alternating current rating of the system's inverter.

(c) The CSG Facility must be located within ENO's service territory, must be individually metered and must connect to ENO's distribution system.

(d) The total number of accounts per CSG Facility may be determined by the Subscriber Organization; however, each Subscription shall be sized to represent at least one kW of the CSG Facility's nameplate rating. The minimum one kW sizing requirement herein shall not apply to Subscriptions owned by an eligible Low-Income Subscriber.

3.5 <u>Responsibility for Verification of Subscriber Eligibility</u>. The Subscriber Organization and ENO shall jointly verify that each Subscriber is eligible to be a Subscriber in the CSG Facility, except for a Subscriber's eligibility to be considered a Low-Income Subscriber, which shall be the sole responsibility of the Subscriber Organization. The Subscriber Organization shall provide an Initial Subscriber Report to ENO within the deadline and in the form required by the Plan. Should ENO determine that any of the customer information provided is either incorrect or incomplete, the Subscriber Organization shall correct the deficiency within the required deadline. The Initial Subscriber Report shall include, at a minimum, each potential Subscriber's name and ENO Account number, the percentage share of the CSG Facility Allocation owned by the Subscriber, the effective date of the ownership of that Subscription, the premises to which the Subscriber is attributed for the purpose of applying billing credits, and whether the Subscriber

meets the criteria to be eligible as a Low-Income Subscriber. Changes in the Subscriber enrollment records shall be communicated by the Subscriber Organization to ENO electronically using the Monthly CSG Facility Subscription Update form required by the Plan, as described in Section 4.6, below. Transfers of Subscriptions shall also be communicated by the Subscriber Organization to ENO using the required Monthly CSG Facility Subscription Update form and will be handled as described in the Plan and Section 4.6, below.

3.6 <u>Compliance with Laws</u>. A Subscriber Organization, and, where relevant, thirdparty-owner/developer, are responsible for ensuring that its CSG Facility is constructed, maintained, and operated in compliance with all relevant local, state and federal laws, rules, regulations and standards, including but not limited to, reliability, safety, zoning, permitting, occupational safety and health, and environmental laws, rules, regulations and standards, as well as adherence to ENO's interconnection policies and procedures and the Rules.

3.7 <u>False Representation</u>. Any representation or warranty made by Subscriber Organization in this Agreement that shall prove to have been false or misleading in any material respect when made or ceases to remain true during the Term if such cessation would reasonably be expected to result in a material adverse impact on ENO, shall constitute an event of default subject to Section 7.1 hereof.

3.8 <u>ENO Disclaimer</u>. Nothing in this Agreement shall be construed as a representation or warranty by ENO of the design, installation or operation of the CSG Facility or any component thereof, and ENO expressly disclaims all warranties of the equipment as to workmanship, quality, or performance, including the fitness of the equipment for the purpose intended.

# **ARTICLE IV**

# TERM, COMMERCIAL OPERATION AND PERFORMANCE

4.1 <u>Term</u>. This Agreement shall become effective upon its execution by the Parties and shall continue in effect for a Term of twenty (20) years from and after the Date of Commercial Operation, subject to early termination as set forth herein, or until the termination of any Interconnection Agreement associated with the CSG Facility, whichever occurs first. Applicable provisions of this Agreement shall continue in effect after termination, including early termination, to the extent necessary to enforce or complete the duties, obligations or responsibilities of the Parties arising prior to termination and, as applicable, to provide for final billings and adjustments related to the period prior to termination, repayment of any money due and owing to either Party pursuant to this Agreement, and the indemnifications specified in this Agreement.

4.2 <u>Project Development</u>. Prior to the Commercial Operation Date, Subscriber Organization agrees to provide Company with a schedule of the projected completion and inservice dates for the project and inform Company of any changes to the schedule within five (5) business days of the time that the Subscriber Organization becomes aware of such changes. Upon request, the Company shall have the right to monitor the testing and operation of the CSG Facility at the CSG Facility for compliance with this Agreement, *provided, however, that* Company shall comply with all of Subscriber Organization's applicable safety and health rules and requirements. Company's monitoring of the CSG Facility shall not be construed as inspections or endorsing the design thereof nor as any express or implied warranties including

performance, safety, durability, or reliability of the CSG Facility.

4.3 <u>Commercial Operation</u>. Commercial Operation is achieved when: (a) 100% of the nameplate capacity of the CSG Facility is installed; (b) the CSG Facility has operated without experiencing any abnormal or unsafe operating conditions, as witnessed by ENO personnel at the Site; (c) all permits necessary to authorize the production and, if applicable, delivery to ENO of Output generated by the CSG Facility have been obtained; (d) the Production Meter has been installed; and (e) the Interconnection Agreement has been entered into between ENO and Subscriber Organization and the CSG Facility has been interconnected with ENO's electric distribution system pursuant to the Interconnection Agreement.

4.4 <u>Deposit</u>. If Commercial Operation is not achieved within 12 months of any approved application, Subscriber Organization shall provide to ENO an additional deposit of \$50 per kW to continue under the Community Solar Program as required under Section VII(D)(11) of the Rules. ENO shall return the CSG Facility deposit upon commencement of Commercial Operation, unless the CSG Facility fails to begin operating within 18 months of an approved application, in which case the deposit shall be forfeited, and this Agreement terminated.

4.5 Maintenance and Repair of CSG Facility. The Subscriber Organization shall maintain the CSG Facility and the individual components thereof in good working order at all times during the Term of this Agreement. If, during the Term of this Agreement the CSG Facility or any of the individual components of the system should be damaged or destroyed such that the extent of the damage affecting output exceeds twenty (20) percent of the CSG Facility's nameplate rating, the Subscriber Organization shall provide ENO written notice of such damage, a description of the equipment damaged, the corresponding reduction to the CSG Facility's output, and the anticipated duration of repairs to the facility to return the facility to its original nameplate rating. If, after such damage, the CSG Facility is not returned to its original nameplate rating within one hundred and eighty (180) days, ENO shall have the right, exercisable at its sole option, to terminate this Agreement upon not less than thirty (30) days written notice, with no further obligation of the Parties to perform hereunder following the effective date of such termination. In all other situations, if the CSG Facility is out of operation for more than ninety (90) consecutive days during the Term of this Agreement, ENO shall have the right to terminate this Agreement by providing written notice to Subscriber Organization anytime during the period following the expiration of such ninety (90) days and before the CSG Facility has been made fully operational again.

4.6 <u>Updating of Subscription Information</u>. Subscriber Organizations are required to provide real time reporting of production as specified by ENO. For CSG Facilities greater than 250 kW, the Subscriber Organization shall provide real time access to production data. ENO may require different real time reporting for CSG Facilities 250 kW and smaller. As required by the Plan, the Subscriber Organization will provide electronically to ENO a Monthly CSG Facility Subscription Update for each CSG Facility listing Subscribers who have been added or deleted since the prior month along with their applicable Subscription amounts. The monthly update shall follow a standard format specified by ENO in order to integrate data into ENO's billing system. The monthly update shall also include the amount of the CSG Facility's capacity that remains unsubscribed. The update must be provided within the deadline imposed by the Council-approved Plan for updates to take effect for the first billing cycle of the next month. If the Subscriber Organization provides the update after the specified deadline, updates would take effect on the first

billing cycle of the month following the next month.

4.7 <u>Certification of Low-Income Qualification</u>. The Subscriber Organization shall certify to ENO in writing that the Subscriber Organization has verified the eligibility of all Low-Income Subscribers needed to qualify for the program prior to receiving permission to operate from ENO. By May 1 of each year, the Subscriber Organization shall re-certify in writing to the Company the Low-Income Subscriber status of all Subscribers to its CSG Facilities that are designated as such.

4.8 <u>Audits</u>. ENO reserves the right, upon thirty (30) days written notice, to audit Subscriber Organization's Subscriber and Subscription records and to inspect the CSG Facility at any time during the Term of this Agreement, and for an additional period of one year thereafter.

## ARTICLE V PRODUCTION METER AND INTERCONNECTION

5.1 <u>Production Meter</u>. Upon the initial satisfaction of all of the conditions set forth in Sections 3.3 and 3.4 above, and any applicable requirements of the Distribution Interconnection Standards, ENO shall install, and thereafter own, operate, maintain and read the Production Meter, which shall be sufficiently sized to measure all Output generated by the CSG Facility, and Subscriber Organization shall reimburse ENO for the cost of installing the Production Meter. Such reimbursement shall be due within thirty (30) days from the date a bill is presented to Subscriber Organization by ENO after the Production Meter is installed. If Subscriber Organization does not make payment in full within that time, the unpaid balance shall bear interest at the rate of one and one half percent (1.5%) per month. ENO reserves the right to replace the Production Meter, at its sole cost, at any time and for any reason.

5.2 <u>Telecommunications Equipment</u>. Subscriber Organization shall cause to be provided, and shall own, operate and maintain at the Subscriber Organization's sole cost any necessary electronic communications equipment or devices that are required to provide real-time access to 15-minute interval data regarding the Output produced by the CSG Facility. Unless otherwise notified in writing by ENO that an alternative telecommunication device is acceptable, such equipment shall include an active, wired telephone or data line capable of transmitting the monthly 15-minute interval data to ENO. ENO reserves the right to replace the telecommunication equipment at its sole cost.

5.3 <u>Failure to Maintain Telecommunication Line</u>. If the telecommunication line required to be maintained by Subscriber Organization pursuant to Section 5.2 is inactive or nonoperational during any Production Month when ENO attempts to access measurement data from the telemetry equipment on the Production Meter, Subscriber Organization shall be assessed a Trip Charge applicable to non-gratuitous labor service at the currently-effective rate set forth in the Schedule of Charges for Rendering Service section of ENO's electric tariff. If the telecommunication line is inactive or non-operational for three consecutive Production Months, then, in addition to the applicable Trip Charges, all energy produced and delivered from the CSG Facility shall be treated and priced as unsubscribed energy hereunder effective as of the first calendar day of such third Production Month and continuing until the subsequent Production Month during which the telecommunication line is made operational and active. Subscriber Organization's payment of Trip Charges hereunder shall be due within thirty (30) days from the date a bill is presented to Subscriber Organization by ENO. If Subscriber Organization does not make payment in full within that time, the unpaid balance shall bear interest at the rate of one and one half percent (1.5%) per month to be invoiced monthly.

5.4 House Power. This Agreement does not provide for House Power. Subscriber Organization shall be solely responsible for arranging retail electric service exclusively from ENO in accordance with ENO's Electric Tariffs. Subscriber Organization shall obtain House Power solely through separately metered retail service and shall not obtain House Power through any other means, and waives any regulatory or other legal right to the contrary, except the right to self-generate as provided in this Section 5.4. Subscriber Organization's right to self-generate hereunder shall be limited to the electrical energy consumed at the Site that is directly related to the CSG Facility's generation, including system operation, performance monitoring and associated communications, and shall not include energy necessary for domestic or other purposes, such as for perimeter lighting, a visitor's center or any other structures or facilities at the Site. The Parties acknowledge and agree that the performance of their respective obligations with respect to House Power shall be a separate from this Agreement and shall be interpreted independently of the Parties' respective obligations under this Agreement. Notwithstanding any other provision in this Agreement, nothing with respect to the arrangements for House Power shall alter or modify Subscriber Organization's or ENO's rights, duties, and obligations under this Agreement. This Agreement shall not be construed to create any rights between Subscriber Organization and ENO with respect to the arrangements for House Power.

5.5 Interconnection Agreement. The Parties recognize that Subscriber Organization and ENO will enter into a separate Interconnection Agreement consistent with the provisions of Entergy's Distribution Design Basis/Standards DR7-01 or DR7-02. The Parties acknowledge and agree that the performance of their respective obligations with respect to the interconnection of the CSG Facility pursuant to the Interconnection Agreement shall be subject to the prior satisfaction of all of the conditions set forth in Sections 3.3 and 3.4 above, but that in all other respects the Interconnection Agreement shall be a separate and free-standing contract and shall be interpreted independently of the Parties' respective obligations under this Agreement. Notwithstanding any other provision in this Agreement, nothing in the Interconnection Agreement shall alter or modify Subscriber Organization's or ENO's rights, duties and obligations under this Agreement. This Agreement shall not be construed to create any rights between Subscriber Organization and ENO with respect to the Interconnection Agreement.

# ARTICLE VI FORCE MAJEURE

6.1 <u>Definition of Force Majeure</u>. (a) The term "Force Majeure," as used in this Agreement, means causes or events beyond the reasonable control of, and without the fault or negligence of the Party claiming Force Majeure, including, without limitation, acts of God, sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes; high winds of sufficient strength or duration to materially damage a CSG Facility or significantly impair its operation such that it is no longer capable of generating Output; long-term material changes in Output flows across the CSG Facility caused by climatic change, lightning, fire, ice storms,

sabotage, vandalism caused by others despite reasonable efforts of Subscriber Organization to secure and protect the CSG Facility, terrorism, war, riots, fire; explosion, insurrection, strike, slow down or labor disruptions (even if such difficulties could be resolved by conceding to the demands of a labor group), and actions or inactions by any governmental authority taken after the date hereof (including the adoption or change in any rule or regulation or environmental constraints lawfully imposed by such governmental authority), but only if such requirements, actions, or failures to act prevent or delay performance, and inability, despite due diligence, to obtain any licenses, permits, or approvals required by any governmental authority having jurisdiction.

(b) The term Force Majeure does not include (i) any acts or omissions of a n y third party, including, without limitation, any vendor, materialman, customer, or supplier of Subscriber Organization, unless such acts or omissions are themselves excused by reason of Force Majeure; (ii) any full or partial curtailment in the electric output of the CSG Facility that is caused by or arises from a mechanical or equipment breakdown or other mishap or events or conditions attributable to normal wear and tear or flaws, unless such mishap is caused by one of the following: catastrophic equipment failure; acts of God; sudden actions of the elements, including, but not limited to: floods; hurricanes, tornadoes; sabotage; terrorism; war; riots; and emergency orders issued by a governmental authority or (iii) changes in market conditions that affect the cost of ENO's or Subscriber Organization's products.

6.2 <u>Applicability of Force Majeure</u>. (a) Neither Party shall be responsible or liable for any delay or failure in its performance under this Agreement, nor shall any delay, failure, or other occurrence or event become an event of default, to the extent such delay, failure, occurrence or event is substantially caused by conditions or events of Force Majeure, provided that:

- i. the non-performing Party gives the other Party prompt written notice describing the particulars of the occurrence of the Force Majeure;
- ii. the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;
- iii. the non-performing Party proceeds with reasonable diligence to remedy its inability to perform and provides weekly progress reports to the other Party describing actions taken to end the Force Majeure; and
- iv. when the non-performing Party is able to resume performance of its obligations under this Agreement, that Party shall give the other Party written notice to that effect.

(b) Except as otherwise expressly provided for in this Agreement, the existence of a condition or event of Force Majeure shall not relieve the Parties of their obligations under this Agreement (including, but not limited to, payment obligations) to the extent that performance of such obligations is not precluded by the condition or event of Force Majeure. Notwithstanding this provision, ENO shall have no obligation to make any payment for Output under this Agreement except for actual production as measured by the metering provisions of this Agreement.

6.3 <u>Limitations on Effect of Force Majeure</u>. In no event will any delay or failure of performance caused by any conditions or events of Force Majeure extend this Agreement beyond its stated Term. In the event that any delay or failure of performance caused by conditions or
events of Force Majeure continues for an uninterrupted period of three hundred sixty-five (365) days from its occurrence or inception, as noticed pursuant to Section 6.2(a)(i) above, the Party not claiming Force Majeure may, at any time following the end of such three hundred sixty-five (365) day period terminate this Agreement upon written notice to the affected Party, without further obligation by either Party except as to costs and balances incurred prior to the effective date of such termination. The Party not claiming Force Majeure may, but shall not be obligated to, extend such three hundred sixty-five (365) day period, for such additional time as it, at its sole discretion, deems appropriate, if the affected Party is exercising due diligence in its efforts to cure the conditions or events of Force Majeure.

#### ARTICLE VII DEFAULT, REMEDIES AND DISPUTE RESOLUTION

7.1 Events of default. Any of the following events shall constitute an event of default if such event has not been cured as provided for below:

(A) Third-party owner/developer, Subscriber Organization and their affiliated and parent companies' failure at any time during the Term of this Agreement to meet the requirements under Section 3.1(d) (Interconnection Agreement). In such event Company may, and in its sole discretion, terminate this Agreement. Upon such termination Company shall have no further financial or other obligation to the Subscriber Organization as a result of such termination. The provisions of paragraph 7.3 shall not apply to an event of default under this paragraph.

(B) The failure by either Party to perform or observe any other material term or provision of this Agreement, that is not excused by Force Majeure, and such failure remains unremedied for 30 days after notice thereof shall have been given by the non-defaulting Party.

7.2 Prior to commencing any action to enforce this Agreement, the non-defaulting Party shall provide written notice of default to the Party asserted to be in default and the Party asserted to be in default shall have a period of thirty (30) days following receipt of such written notice within which to cure the asserted default (or if the asserted default is of a nature which cannot reasonably be cured within such 30-day period, to commence and thereafter diligently pursue a cure thereof.)

7.3 Failure of either Party to assert a default or to enforce any term or condition of this Agreement shall not constitute a waiver of any other similar or other default, or waiver of such term or condition or of any other term or condition of this Agreement. Each Party hereby irrevocably and unconditionally waives any right to a trial by jury for the resolution of any dispute arising under this Agreement.

7.4 If any disputes arise concerning this Agreement, including but not limited to enforcement of any term or condition of the Agreement, the prevailing Party in any action brought for the purpose of enforcing such provisions shall be entitled to recover its reasonable attorney fees, expenses and costs of such action from the non-prevailing Party.

#### ARTICLE VIII LIABILITY AND INDEMNIFICATION

8.1 <u>Limitation of Liability</u>. ENO shall not be responsible or liable for any personal injury or property damage caused by the CSG Facility or any individual component equipment of the system. ENO shall not be liable to the Subscriber Organization for any punitive, special, exemplary or consequential damages, including but not limited to, lost profits, loss of use, and costs of replacement, whether based in contract, tort, upon any theory of indemnity, or otherwise. ENO makes no warranty or representation concerning the taxable consequences, if any, to Subscriber Organization with respect to the production and sale of Output, and Subscriber Organization is urged to seek professional advice regarding this issue.

8.2 <u>Indemnification by Subscriber Organization</u>. Subscriber Organization shall indemnify, defend, and hold ENO, its employees, agents, successors, assigns, subsidiaries and affiliates harmless against any and all claims, demands, liens, lawsuits, judgments or actions of whatsoever nature that may be brought on account of the installation, maintenance, operation, repair, or replacement of the CSG Facility or any component equipment of the system, or Subscriber Organization's administration of Subscriptions or the performance of its responsibilities as a subscriber organization.

#### ARTICLE IX LAWS AND REGULATORY BODIES

9.1 <u>Agreement Subject to Laws and Regulations</u>. This Agreement and the rights and obligations of the Parties hereunder shall be subject to all valid applicable state, local and federal laws, rules, regulations, ordinances, orders and decisions issued or promulgated for or by any court or regulatory agency having or asserting jurisdiction over this Agreement, the services to be performed hereunder, or either of the Partieshereto.

Rights Upon Regulatory Agency or Court Action. Except as may be otherwise 9.2 provided herein, in the event that any court or regulatory agency having or asserting jurisdiction over these premises takes any action or issues any determination that directly or indirectly prohibits performance to a material extent under this Agreement by either or both parties or otherwise makes such performance illegal or impossible, such action or determination will be considered to be an event of Force Majeure. In the event that any such court or regulatory agency takes any action or issues any determination that directly or indirectly effects a material adverse change to any substantive provision of this Agreement, in the terms of performance or with respect to the rights or obligations of either party hereto (in that party's reasonable good faith opinion), then the party materially adversely affected may: (i) continue to perform its obligations under the Agreement as changed, (ii) seek to renegotiate the terms of this Agreement by providing written notice to the other party of its desire to renegotiate, or (iii) at any time during a period of ninety (90) days next following receipt by the other party of written notice of any such action by any such court or regulatory agency, terminate this Agreement by providing written notice to the other party hereto on or before the end of such ninety (90) day period, such termination to be effective on the first day of the month next following ninety (90) days after the receipt of such notice of termination; provided however that, if such action or determination is rescinded prior to the effectiveness of such notice, such notice will be deemed invalid. In the event the Agreement terminates under this provision, all further rights and obligations of ENO and Subscriber Organization under this Agreement will be null and void. Each party hereto shall provide reasonable and prompt notice to the other party hereto as to any regulatory proceedings or actions described herein that could affect the rights and obligations of the Parties hereto.

9.3 <u>Performance Pending Renegotiation or Termination</u>. Irrespective of any action by any court or regulatory agency as contemplated by Sections 9.1 or 9.2, above, each of the Parties hereto shall continue to honor and perform all of their respective warranties, representations and obligations under this Agreement including, but not limited to, the obligations of Subscriber Organization to sell and deliver the Output of the CSG Facility to ENO and the obligations of ENO to accept and pay Subscriber Organization as provided herein, until the Parties either mutually renegotiate the terms of this Agreement or until this Agreement terminates pursuant to the provisions of Section 9.2 above.

9.4 <u>Governing Law</u>. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Louisiana.

#### ARTICLE X MISCELLANEOUS PROVISIONS

10.1 <u>Counterparts</u>. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all constitute one and the same instrument. The Parties agree that a facsimile copy of a counterpart signed by the other Party will be deemed original and binding.

10.2 <u>Assignment, Successors and Assigns</u>. This Agreement shall be binding upon and inure to the benefit of the successors and assigns of the respective Parties hereto and shall not be assigned by either Party without the written consent of the non-assigning Party, which consent shall not be unreasonably withheld. In no event shall any assignment by Subscriber Organization become effective before a new Subscriber Agency Agreement has been entered into between Subscriber Organization's assignee and each and every Subscriber.

10.3 <u>Relationship of the Parties</u>. Nothing herein is intended nor shall ever be construed to create a joint venture, partnership or any other type of association between the Parties, nor shall either Party have the right to act in behalf of or bind the other for any liability, cost, expense or undertaking except as set forth in this Agreement.

10.4 <u>Amendments or Modifications</u>. No amendment, modification, or change of this Agreement shall be binding upon the Parties unless such amendment, modification, or change is in writing and executed by the Parties.

10.5 <u>Construction</u>. No understandings or agreements not expressly stated herein shall be binding on the Parties in the construction or fulfillment hereof unless such understandings or agreements are reduced to writing and signed by the respective parties. The rule of construction that ambiguous provisions shall be interpreted against the drafter shall not apply to this Agreement.

10.6 <u>No Third-Party Beneficiaries</u>. Except as otherwise specifically provided herein, this Agreement is not intended to, and shall not, create rights, remedies, or any benefits of any character whatsoever, in favor of any person, corporation or other entity other than the Parties hereto, and the obligations herein assumed are for the use and benefit of the Parties, their

successors in interest, and permitted assigns.

10.7 <u>Remedies Cumulative</u>. Except as otherwise specifically provided herein, each remedy provided for under this Agreement shall be taken and construed as cumulative and in addition to every other remedy provided for herein or available at law or in equity.

10.8 <u>Notices</u>. All notices, reports or other communications provided for in this Agreement shall be in writing and shall be deemed to have been sent when delivered by hand, sent by facsimile with verification, or when deposited in the United States mail, postage prepaid and properly addressed or when sent via overnight courier:

If to ENO:

If to Subscriber Organization:

or at such other address as either party may hereafter designate to the other in writing.

[INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the undersigned Parties have executed this Agreement as of the date and year first above written.

SUBSCRIBER ORGANIZATION		
Name (printed):		
Title:		
Signature:	Date:	
ENTERGY NEW ORLEANS, LLC		
Name (printed):		
Title:		
Signature:	Date:	
CSG FACILITY OWNER (if different f	from Subscriber Organization)	
Name (printed):		
Title:		
Signature:	Date:	

EXHIBIT 1 Clean Form CSG-4 17 of 17

No. \_\_\_\_\_

# Exhibit A

**DESCRIPTION OF CSG Facility SITE:** 

#### ENTERGY NEW ORLEANS, LLC

ELECTRIC SERVICE

Effective: Filed: January 12, 2024 Supersedes: CSGF Effective 1/28/21 Schedule Consists of: Three Pages and Attachment A

SCHEDULE CSGF-1 [OPTION 1]

#### COMMUNITY SOLAR GENERATING FACILITIES

#### I. AVAILABILITY

This Community Solar Generating Facilities Subscription Service ("CSGF") schedule is available to all customers qualifying as Subscribers to a Community Solar Generating ("CSG") Facility pursuant to the Community Solar Rules approved by the Council of the City of New Orleans ("Council").

#### II. DESCRIPTION

Pursuant to the Community Solar Rules, Entergy New Orleans, LLC ("ENO" or "Company"), customers have the option to subscribe to a portion of the Output from one or more CSG Facilities. ENO will provide a monthly credit to customers with such Subscriptions based on the customer's proportionate share of the CGS Facility's monthly energy Output times a dollars per kWh rate. Participating ENO customers are Subscribers with a Subscriber Organization. The Subscriber Organization is responsible for providing ENO with the Subscription information necessary for monthly billing under this schedule in a timely manner.

#### III. MONTHLY BILLING TO CSG SUBSCRIBERS

The monthly Subscriber credit will be based on the applicable metered CSG Facility energy Output on a two-month lag basis.

- A. Monthly Subscriber Energy = (Customer's kW Subscription for the applicable CSG Facility / Capacity of applicable CSG Facility) x applicable metered Monthly CSG Facility kWh Output.
- B. Credit for Residential Customers who do not qualify as Low-Income Subscribers: Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on the applicable retail energy-related revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of amounts attributable to nonbypassable riders. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.
- C. Credit for Customers who qualify as Low-Income Subscribers: Monthly Low-Income Subscriber Credit = Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on the applicable retail energy-related revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of amounts attributable to nonbypassable riders, plus 2.0 cents/kWh. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.
- D. Credit for Non-Residential Customers: Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on the applicable retail energy-related revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of

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| T | N amounts attributable to nonbypassable riders. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.

In a monthly billing period, if the Subscriber's credit exceeds the Subscriber's bill for electric service, the excess billing credit will be rolled over as a dollar amount bill credit from month to month. Such credits will apply to the final bill if customer terminates service, however, no payment from ENO will be made for any remaining bill credit associated with the Subscriber's Subscription if the amount of the credit exceeds the final bill.

#### IV. DEFINITIONS

Baseline Annual Usage - A Subscriber's accumulated kWh electricity use for the previous 12-month period at the time the subscription is entered into, as measured at the ENO meter, net of any distributed generation provided by the Subscriber to the utility system at that meter. For a Subscriber that does not have a record of 12 months of electricity use at the time of the Subscriber's most recent Subscription, an estimate of the Subscriber's accumulated 12 months of electricity use in kWh would be developed based on historical data for the customer class.

CSG Facility– A solar energy facility that meets the definition and requirements of the Community Solar Rules.

Low-Income Subscriber – A Subscriber whose gross annual household income is at or below 60 percent of Area Median Income for the year of subscription or who is certified as eligible for any federal, state, or local assistance program that limits participation to households whose income is at or below 60 percent of Area Median Income. The operator of a low-income multi-family dwelling unit may apply to the Council to qualify as a Low-Income Subscriber for the purposes of the Community Solar Program. The operator should demonstrate to the Council that the Subscription Credits will be credited to the tenants of the low-income multi-family dwelling.

Output - The energy and power produced by a CSG Facility. CSG Facility Output will be measured on a calendar month basis.

Subscriber – An ENO customer that holds a Subscription to one or more CSG Facilities and has identified one or more individual meters or accounts related to electric service to which the Subscription(s) shall be attributed.

Subscriber Organization - A person or legal entity that owns and operates a CSG Facility, or operates a CSG Facility that is built and owned by a third party under contract with such Subscriber Organization. A Subscriber Organization may also be a Subscriber to the facility, subject to the Limitations on Subscriptions as described in the Community Solar Rules.

Subscription – The portion or proportionate interest of Output of a CSG Facility that is allocated to a Subscriber, including the Renewable Energy Credits associated with or attributable to the CSG Facility.

#### V. TERMS OF SERVICE

A. All customer classes are eligible to subscribe to a CSG Facility. A customer may subscribe to a CSG Facility regardless of the customer's participation in other ENOsponsored renewable programs, such as Net Metering Service, provided that the customer's participation does not violate, individually or collectively, eligibility limits as specified in Section III of the Council's Community Solar Rules.

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- B. A customer may not hold Subscriptions representing a total amount of energy exceeding 100 percent of the value of the Subscriber's Baseline Annual Usage, as estimated by the Company.
- C. A customer may purchase multiple Subscriptions from one or more CSG Facilities provided that the total of the Subscriptions does not exceed the Subscriber's Baseline Annual Usage, as estimated by the Company.
- D. No customer may own more than 40 percent interest in the capacity and associated Output from a CSG Facility.
- E. Solar Rules including but not limited to requirements for eligibility, capacity limits, registration and records, verification of low-income status, and any other obligations as described in the Community Solar Rules.
- F. Changes in Subscriber enrollment records will be communicated by Subscriber Organization to ENO, in electronic form, on a monthly basis.
- G. A Subscriber may release all or part of a Subscription back to the Subscriber Organization making it available for transfer to a person or entity who qualifies to be a Subscriber.
- H. Through a Subscriber Organization, a Subscriber who moves to a different location within ENO's service area may change the premises to which the Subscription is attributed. If necessary, the Subscriber must adjust his Subscription, so that it does not exceed 100 percent of the Baseline Annual Usage at the new location as estimated by the Company.
- I. Subscriber Organizations will provide the Company with updated Subscriber information no later than the tenth calendar day of each month for CSG credits to be reflected on customer bills during the upcoming billing month. Any updated Subscriber information provided after the tenth calendar day of the month will be reflected on customer bills during the next billing month following the upcoming billing month.

#### EXHIBIT 2 4 of 4

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Attachment A Page 1 of 1 Effective Date:

#### ENTERGY NEW ORLEANS, LLC COMMUNITY SOLAR GENERATING FACILITIES CSGF

CSG SUBSCRIBER:	
Residential Non-Low Income Subscriber Credit	\$-x.xxx per kWh
Low Income Subscriber Credit	\$-x.xxx per kWh
Non-Residential Credit-Schedule SE	\$-x.xxx per kWh
Non-Residential Credit-Schedule LE	\$-x.xxx per kWh
Non-Residential Credit-Schedule LE-HLF	\$-x.xxx per kWh

SCHEDULE CSGF-1

#### ENTERGY NEW ORLEANS, LLC

ELECTRIC SERVICE

Effective: Filed: January 12, 2024 Supersedes: CSGF Effective 1/28/21 Schedule Consists of: Three Pages and Attachment A

SCHEDULE CSGF-1 [OPTION 2]

#### COMMUNITY SOLAR GENERATING FACILITIES

#### I. AVAILABILITY

This Community Solar Generating Facilities Subscription Service ("CSGF") schedule is available to all customers qualifying as Subscribers to a Community Solar Generating ("CSG") Facility pursuant to the Community Solar Rules approved by the Council of the City of New Orleans ("Council").

#### II. DESCRIPTION

Pursuant to the Community Solar Rules, Entergy New Orleans, LLC ("ENO" or "Company"), customers have the option to subscribe to a portion of the Output from one or more CSG Facilities. ENO will provide a monthly credit to customers with such Subscriptions based on the customer's proportionate share of the CGS Facility's monthly energy Output times a dollars per kWh rate. Participating ENO customers are Subscribers with a Subscriber Organization. The Subscriber Organization is responsible for providing ENO with the Subscription information necessary for monthly billing under this schedule in a timely manner.

#### III. MONTHLY BILLING TO CSG SUBSCRIBERS

The monthly Subscriber credit will be based on the applicable metered CSG Facility energy Output on a two-month lag basis.

- A. Monthly Subscriber Energy = (Customer's kW Subscription for the applicable CSG Facility / Capacity of applicable CSG Facility) x applicable metered Monthly CSG Facility kWh Output.
- B. Credit for Residential Customers who do not qualify as Low-Income Subscribers: Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on the applicable retail energy-related revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of amounts attributable to nonbypassable riders. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.
- C. Credit for Customers who qualify as Low-Income Subscribers: Monthly Low-Income Subscriber Credit = Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on the applicable retail energy-related revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of amounts attributable to nonbypassable riders, plus 2.0 cents per kWh. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.
- D. Credit for Non-Residential Customers: Monthly Subscriber Energy x the dollar per kWh value representative of the monthly retail rate based on both the applicable retail energy-related revenue and demandrelated revenue by rate schedule and the corresponding kWh as recorded on the Company's financial records, exclusive of amounts attributable to nonbypassable

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riders. Such value will be applied on a two month lag basis as shown on CSGF Attachment A.

In a monthly billing period, if the Subscriber's credit exceeds the Subscriber's bill for electric service, the excess billing credit will be rolled over as a dollar amount bill credit from month to month. Such credits will apply to the final bill if customer terminates service, however, no payment from ENO will be made for any remaining bill credit associated with the Subscriber's Subscription if the amount of the credit exceeds the final bill.

#### IV. DEFINITIONS

Baseline Annual Usage - A Subscriber's accumulated kWh electricity use for the previous 12-month period at the time the subscription is entered into, as measured at the ENO meter, net of any distributed generation provided by the Subscriber to the utility system at that meter. For a Subscriber that does not have a record of 12 months of electricity use at the time of the Subscriber's most recent Subscription, an estimate of the Subscriber's accumulated 12 months of electricity use in kWh would be developed based on historical data for the customer class.

CSG Facility– A solar energy facility that meets the definition and requirements of the Community Solar Rules.

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Output - The energy and power produced by a CSG Facility. CSG Facility Output will be measured on a calendar month basis.

Subscriber – An ENO customer that holds a Subscription to one or more CSG Facilities and has identified one or more individual meters or accounts related to electric service to which the Subscription(s) shall be attributed.

Subscriber Organization - A person or legal entity that owns and operates a CSG Facility, or operates a CSG Facility that is built and owned by a third party under contract with such Subscriber Organization. A Subscriber Organization may also be a Subscriber to the facility, subject to the Limitations on Subscriptions as described in the Community Solar Rules.

Subscription – The portion or proportionate interest of Output of a CSG Facility that is allocated to a Subscriber, including the Renewable Energy Credits associated with or attributable to the CSG Facility.

#### V. TERMS OF SERVICE

A. All customer classes are eligible to subscribe to a CSG Facility. A customer may subscribe to a CSG Facility regardless of the customer's participation in other ENOsponsored renewable programs, such as Net Metering Service, provided that the customer's participation does not violate, individually or collectively, eligibility limits as specified in Section III of the Council's Community Solar Rules. |т |т

- B. A customer may not hold Subscriptions representing a total amount of energy exceeding 100 percent of the value of the Subscriber's Baseline Annual Usage, as estimated by the Company.
- C. A customer may purchase multiple Subscriptions from one or more CSG Facilities provided that the total of the Subscriptions does not exceed the Subscriber's Baseline Annual Usage, as estimated by the Company.
- D. No customer may own more than 40 percent interest in the capacity and associated Output from a CSG Facility.
- E. Solar Rules including but not limited to requirements for eligibility, capacity limits, registration and records, verification of low-income status, and any other obligations as described in the Community Solar Rules.
- F. Changes in Subscriber enrollment records will be communicated by Subscriber Organization to ENO, in electronic form, on a monthly basis.
- G. A Subscriber may release all or part of a Subscription back to the Subscriber Organization making it available for transfer to a person or entity who qualifies to be a Subscriber.
- H. Through a Subscriber Organization, a Subscriber who moves to a different location within ENO's service area may change the premises to which the Subscription is attributed. If necessary, the Subscriber must adjust his Subscription, so that it does not exceed 100 percent of the Baseline Annual Usage at the new location as estimated by the Company.
- I. Subscriber Organizations will provide the Company with updated Subscriber information no later than the tenth calendar day of each month for CSG credits to be reflected on customer bills during the upcoming billing month. Any updated Subscriber information provided after the tenth calendar day of the month will be reflected on customer bills during the next billing month following the upcoming billing month.

#### EXHIBIT 3 4 of 4

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Attachment A Page 1 of 1 Effective Date:

#### ENTERGY NEW ORLEANS, LLC COMMUNITY SOLAR GENERATING FACILITIES CSGF

CSG SUBSCRIBER:	
Residential Non-Low Income Subscriber Credit	\$-x.xxx per kWh
Low Income Subscriber Credit	\$-x.xxx per kWh
Non-Residential Credit-Schedule SE	\$-x.xxx per kWh
Non-Residential Credit-Schedule LE	\$-x.xxx per kWh
Non-Residential Credit-Schedule LE-HLF	\$-x.xxx per kWh

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# ENTERGY NEW ORLEANS, LLC COMBINED PROGRAM AND INTERCONNECTION APPLICATION FOR COMMUNITY SOLAR GENERATING FACILITIES LOCATED IN ORLEANS PARISH FORM CSG-APP

#### Application Instructions

This Form is to be used by a Subscriber Organization to apply to participate in the Council's Community Solar program and to initiate an application for interconnection of a Community Solar Generating Facility to the Entergy New Orleans, LLC ("ENO" or "the Company") electric distribution system.

All required information and supporting documentation must be submitted by Subscriber Organization for this Application to be considered complete. Submit this completed Form CSG-APP and all supporting documentation to ENO via email: <u>NewOrleansCouncilCommunitySolar@Entergy.com</u>. Any questions related to this form should also be sent to <u>NewOrleansCouncilCommunitySolar@Entergy.com</u>.

The following documentation must be submitted with this Application:

- Proof of Subscriber Organization registration with New Orleans City Council via the Council's Utility Regulatory Office ("CURO");
- Proof of Site Control (e.g., Letter of Intent or Memorandum of Understanding to secure long term rights to property, evidence of property ownership, executed option to purchase lease, or executed lease agreement);
- One-line Diagram with location of accessible disconnect clearly shown; and
- Manufacturer literature describing the specific system to be installed.

#### Section 1. <u>Subscriber Organization Information</u>

Subscriber Organization Name:			
Subscriber Organization Identification Number (provided by Council through the Council's Utility Regulatory Office):	ne		
Mailing Address:			
City:	State:		Zip Code:
Contact Person:			
Telephone Number:		Email:	
Entergy Account Number (may be assigned if account does not yet exist):			

# ENTERGY NEW ORLEANS, LLC COMBINED PROGRAM AND INTERCONNECTION APPLICATION FOR COMMUNITY SOLAR GENERATING FACILITIES LOCATED IN ORLEANS PARISH FORM CSG-APP

Proposed Location of Comm	unity Solar Generating Facility:	
Facility Address:		
City:	State:	Zip Code:
Contact Person:		
Telephone Number:	En	nail:
Proposed Generating Capacit	y of Community Solar Generatin	ng Facility:
Kilowatts-DC:	Kilowatts-AC:	
Expected Annual Energy Proc	Juction of Community Solar Gen	erating Facility:
MWh per year:		
Classification Pursuant to Sec	tion V(B)(1) of the Council's Con	nmunity Solar Rules (select one):
Open Category	Low-Income Cat	egory
Was a Pre-Application Repor	t requested for this site?	
Yes No		

# ENTERGY NEW ORLEANS, LLC COMBINED PROGRAM AND INTERCONNECTION APPLICATION FOR COMMUNITY SOLAR GENERATING FACILITIES LOCATED IN ORLEANS PARISH <u>FORM CSG-APP</u>

Section 2.	Generator/Facility Information	
Provide the following	Solar Generator	Inverter
Manufacturer:		
Model Number:		
Number of Units:		
Kilowatt Rating(s) (95° at location)		
Ampere Rating:	N/A	
Short Circuit Current:	N/A	
Tilt Angle (°):		N/A
Azimuth Angle (°):		N/A
Number of Phases at Interconnection Point:		N/A
Voltage at Interconnection Point:		N/A
Proposed Output at this site (kW-AC):		N/A

Does the unit:

- Disconnect intertie within 10 cycles of a service interruption or fault?
   Yes \_\_\_\_\_ No \_\_\_\_\_
- Block Generator from energizing dead circuits for five minutes after most recent fault?
   Yes \_\_\_\_\_ No \_\_\_\_\_

# ENTERGY NEW ORLEANS, LLC COMBINED PROGRAM AND INTERCONNECTION APPLICATION FOR COMMUNITY SOLAR GENERATING FACILITIES LOCATED IN ORLEANS PARISH FORM CSG-APP

#### Codes, Standards, and Rules

The system shall be installed in compliance with the Building/Electrical Code of the City of New Orleans, Orleans Parish and Form CSG-3, Interconnection and Parallel Operation of Community Solar Generating Facility Agreement ("Interconnection Agreement"), executed by and between Subscriber Organization and ENO. This system meets the most current version of the applicable Entergy Standard DR07-01 "Distributed Energy Resource Standards for Distribution Interconnection." The interconnection protection system is tested and listed for compliance with the latest published edition of Underwriters Laboratories (UL) 1741 including the anti-islanding test. The system will be installed in compliance with IEEE 929 and/or IEEE 1547 as applicable, all manufacturer specifications, the National Electric Code, and all local codes. No protection settings affecting anti-islanding have been or will be adjusted or modified. The system shall be installed in accordance with the attached one-line diagram.

The Community Solar Generating ("CSG") Facility shall meet the requirements of the New Orleans Community Solar Rules ("Rules") promulgated by the Council in Resolution No. R-23-507, in Docket No. UD-18-03.

The parties shall be subject to the provisions of the Rules, the terms and conditions set forth in this Application, the Company's applicable rate tariff schedules, and the executed Interconnection Agreement.

#### Permits and Authorizations

The Subscriber Organization shall obtain and maintain any governmental authorizations and permits required for the construction and operation of the Facility and interconnection facilities before the facility is interconnected. The Subscriber Organization shall maintain the Facility and interconnection facilities in a safe and reliable manner and in conformance with all applicable laws and regulations.

#### Interconnection Agreement

Interconnection of the CSG Facility shall be subject to the terms and conditions of the Interconnection Agreement, executed by and between Subscriber Organization and ENO. The CSG Facility <u>shall not</u> commence commercial operation until it has been inspected and approved by the Company and the Form CSG-3 Interconnection Agreement has been executed between the parties.

## ENTERGY NEW ORLEANS, LLC COMBINED PROGRAM AND INTERCONNECTION APPLICATION FOR COMMUNITY SOLAR GENERATING FACILITIES LOCATED IN ORLEANS PARISH <u>FORM CSG-APP</u>

I hereby certify that the information provided on this Combined Program and Interconnection Application is true and correct and that the CSG Facility will comply with the conditions stated above.

Company Name:		
Signature of Subscriber Organization*:		
Printed Name:		
Title:		
Date:		
Mailing Address:		
City:	State:	Zip Code:
Telephone:	Projected Installation Date: _	

\*Application must contain signature of authorized Subscriber Organization representative to be processed.

A Company representative will execute and date below once all required information has been submitted, any required study fees have been paid, and the Application has been approved. That approval date shall represent the start of the time period contemplated under Section VII(D)(11-12) of the Council's Community Solar Rules.

Company Name:Entergy New Orleans, LLC
Signature:
Printed Name:
Title:
Date:

EXHIBIT 5 1 of 2





## Instructions

This Form is to be used by a Subscriber Organization to request initial information about a possible location for a Community Solar Generating ("CSG") Facility in Orleans Parish prior to submission of an Interconnection Application.

This form may only be submitted by Subscriber Organizations that have completed the registration process and received a Subscriber Organization Identification Number from the Council's Utility Regulatory Office ("CURO").

All required information and supporting documentation must be submitted, and a non-refundable \$300 processing fee paid, by Subscriber Organization for this Request to be considered complete. Submit this completed application and all supporting documentation to Entergy New Orleans, LLC ("ENO" or "the Company") via email: <u>NewOrleansCouncilCommunitySolar@Entergy.com</u>. Any questions related to this form should also be sent to <u>NewOrleansCouncilCommunitySolar@Entergy.com</u>. Following receipt of the Request, a company representative will contact the requestor to collect the non-refundable \$300 processing fee.

The following documentation must be submitted with this Request:

- Proof of Subscriber Organization registration with New Orleans City Council via the Council's Utility Regulatory Office ("CURO");
- Proof of Site Control (e.g., Letter of Intent or Memorandum of Understanding to secure longterm rights to property, evidence of property ownership, executed option to purchase lease, or executed lease agreement); The proposed Point of Interconnection defined by latitude and longitude, site map, street address, parcel identifier, or some combination of the above to sufficiently identify the location of the proposed Point of Interconnection.

#### Section 1. Subscriber Organization Information

Subscriber Organization Name:			
Subscriber Organization Identification Number (provided by Council through th Council's Utility Regulatory Office):	ne		
Mailing Address:			
City:	State:		Zip Code:
Contact Person:			
Telephone Number:		Email:	

City:	State:	Zip Code
Contact Person:		
Telephone Number:	E	mail:
Parcel ID:		
Proposed Point of Intercor	nection (lat/long):	
Site Map Included?		
Yes No		
Proposed Generating Capac	ity of Community Solar Generati	ing Facility:
Kilowatts-DC:	Kilowatts-AC:	
Expected Annual Energy Pro	oduction of Community Solar Ge	nerating Facility:
MWH per year:		
Single or Three-Phase Confi	guration:	
Single Phase:	Three Phase:	
DER is stand-alone or will se	ervice onsite load:	
	Convo Opolita Laad	

# Applicant Subscriber Organization acknowledges the following:

In requesting a Pre-Application Report, the applicant acknowledges the following:

- The existence of "available capacity" in no way implies that an interconnection up to this level may be completed without impacts due to the many variables that need to be studied as part of the interconnection review process.
- 2) The Electric Delivery System is dynamic and subject to change.
- 3) Data provided in the Pre-Application Report may become outdated and not useful at the time of submission of the complete Interconnection Application.

I hereby certify that the information provided on this Request for Pre-Application Report is true and correct.

Company Name:			
Signature of Subscriber Organi	zation*:		
Printed Name:			
Title:			
Date:			
Mailing Address:			
City:	State:	Zip Code:	
Telephone:	Email:		-
Projected Installation Date:			

\*Application must contain signature of Subscriber Organization representative to be processed.

A Company representative will execute and date below once all required information and payment have been submitted and the Request has been approved. Within twenty (20) business days of approval, ENO will provide a Pre-Application Report to the applicant using the form shown below.

## PRE-APPLICATION REPORT

## [TO BE COMPLETED BY ENTERGY NEW ORLEANS REPRESENTATIVE)

#### 1. Interconnection Customer

This Pre-Application Report is for the following Subscriber Organization:

2. Proposed Point of Interconnection

The Subscriber Organization has requested information regarding the interconnection of a Community Solar Generating Facility at the following Point of Interconnection:

3. Substation and Feeder Serving the Proposed Point of Interconnection

The proposed Point of Interconnection for the Subscriber Organization's CSG Facility would likely be served by the following substation(s)/area bus(es), bank(s), or circuit(s):

4. Information Regarding the Proposed Point of Interconnection and the Identified Substation

The following information is based on an interconnection at the proposed Point of Interconnection served by the substation/area bus, bank, or circuit identified above.

a. Total capacity of the identified substation/area bus, bank or circuit based on normal or operating ratings:

b. Existing aggregate generation nameplate capacity interconnected to the identified substation/area bus, bank, or circuit (i.e., amount of generation online):

- c. Aggregate queued generation capacity for the identified substation/area bus, bank or circuit (i.e., amount of generation in the queue):
- d. Substation nominal distribution voltage and/or transmission line nominal voltage (if applicable):
- e. Nominal distribution circuit voltage at the proposed Point of Interconnection:
- f. Approximate circuit distance between the proposed Point of Interconnection and the substation:
- g. Relevant line section(s)/station(s):

Actual or Estimated Peak Load:

Substation Transformer: Feeder:	Substation Transformer:	Fe	eeder:
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Actual or Estimated Daytime Minimum Load (If Available):

Substation Transformer: \_\_\_\_\_ Feeder: \_\_\_\_\_

- h. Number of Protective devices between the proposed Point of Interconnection and the substation/area.
- i. Number of phases available at the proposed Point of Interconnection:

a. If a single phase, distance from the three-phase circuit: \_\_\_\_\_

j.	Limiting conductor ratings from the proposed Point of Interconnection to the distribution substation:
К.	Is the proposed Point of Interconnection located on a spot network, grid network, or radial supply:
Company	Name: Entergy New Orleans, LLC
Company	Representative:
Title:	
Date:	



# Distributed Energy Resource Standards for Distribution Interconnection

# Effective May 01, 2022

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The latest version is available at www.entergy.com. (Under "for producers" click on your State. On your State webpage, under "your business", click on Builder Standards)

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# Utility Operations DISTRIBUTION DESIGN BASIS

TITLE: Distributed Energy Resource Standards for Distribution Interconnection	STANDARD NUMBER: DR07-01, Rev. 19	EFFECTIVE DATE: 05/01/2022
PREPARED BY: <b>DER Team</b>	APPROVED BY: Shawn (	Corkran
Distribution Design Basis	Manager, Distribution	on Design Basis

# INTRODUCTION AND SUMMARY OF INTERCONNECTION TYPES

The Distributed Energy Standards for Interconnection contemplate seven distinct configurations (Cases) based on the project type that is being connected, planned to be connected, or facility additions and/or modifications to existing facilities interconnected to the Distribution System of one of the utility operating companies.

Distributed Energy Resources (DER) (or generators) installed within one of the Company's utility's service areas will fall into one of seven cases:

Case 1.	<ul> <li>The Customer may build facilities that are NEVER connected to the Company Distribution System; some examples are:</li> <li>A backup generator with automatic open-circuit transfer switch.</li> <li>An emergency generator, where electric cords are run directly to the generator for essential lights and appliances.</li> <li>A house with a switch, rated for the Customer's generator size that does not allow electricity to flow from the generator into the facility when the facility is connected to the electric utility system.</li> <li>No Interconnection Application is required unless the Customer is</li> </ul>
	<ul> <li>No interconnection Application is required unless the customer is participating in a demand response program.</li> </ul>



# Refer to your local electrical inspector in this case (if applicable).

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Case 2.	I he Customer may build facilities that are connected to their building or
	internal electrical system and are not intended to be connected to the
	internal electrical system and are not interded to be connected to the
	Company's Distribution System. The Customer shall supply an open and
	visible break verifiable by Company personnel. The location shall be on the
	outside of the facility accessible to Company personnel at all hours. A main
	disconnect in the off position qualifies as an open break. It is recommended
	that the Customer tag the disconnect to help prevent accidental closing.
	Failure to have a visible Disconnect Switch is a reason for being
	<b>disconnected</b> and may subject Customer to liability for resulting injury
	to people or property.
	No Interconnection Application is required.

TITLE: Distributed Energy Resource Standards for Distribution Interconnection	STANDARD NUMBER: DR07-01, Rev. 19	EFFECTIVE DATE: 05/01/2022	
Interconnection		00/01/2022	

Case 3.	The Customer may build facilities that are NOT NORMALLY connected to the Company Distribution System. Total connection time is 10 CYCLES OR LESS (@60 cycles/second). Some or all loads' generated capacity could
	become displaced. No energy is sold or exported to the Company.
	No Interconnection Application is required with industry certified
0	automatic sync and transfer controls.
Case 4.	The Customer may build facilities that are connected to the Company
	Distribution System more than 10 cycles (may be nours, days, months, etc.).
	Some or all of the Customer's load may become displaced. Stand-by facilities
	may or may not be requested. No energy is sold or sent to the Company.
	An Interconnection Application is required.
Case 5.	The Customer may build facilities that are normally connected to the Company
	Distribution System. Some or all of the Customer's load may become
	displaced. Stand-by facilities are requested. Depending on the jurisdiction,
	some form of contract may be required for Customer to export energy to the
	Company and to be credited or compensated for said energy deliveries.
	An Interconnection Application is required.
Case 6	The Customer may build facilities that are normally connected to the Company Distribution System. The Customer has no significant on-site load (mainly
	station-service load). Depending on the jurisdiction, some form of contract
	may be required for Customer to export energy to the Company and to be
	credited or compensated for said energy deliveries.
	An Interconnection Application is required.
Case 7.	The Customer may build facilities that are normally connected to the Company
	Distribution System. Depending on the jurisdiction and only if allowed by law,
	some form of contract is required with the Company for wheeling energy
	output to the Midcontinent Independent System Operator, Inc. (MISO)
	wholesale market. The differentiation between Case 6 and Case 7 is MISO
	involvement.
	An Interconnection Application is required.

The above provisions are the minimum requirements for any DER operating in parallel with the Company's Distribution System for voltages up to and including 34.5kV.

DERs of significant size on radial distribution systems can cause relaying and voltage control problems. The Company therefore retains the option to require upgrades where necessary to maintain reliable service or to refuse interconnection of any DER at distribution voltage if such DER will cause reliability issues that cannot be adequately mitigated.

Interconnections of any DER to the Company's Distribution System shall be directly connected to electrical circuits/feeders configured in one of the following options:

**Express Feeder** – dedicated distribution circuit constructed to strictly support the proposed interconnected DER application.

TITLE: Distributed Energy Resource	STANDARD NUMBER:	EFFECTIVE DATE:
Standards for Distribution	DR07-01, Rev. 19	05/01/2022
Interconnection		

**Existing Feeder** – existing distribution circuit/network. The Customer must request interconnection of the DER requiring evaluation in support of parallel operations and possibly the exporting of energy if the size of the DER and/or its configuration will lead to exports to the Company's Distribution System.

Hosting capacity for any existing feeder will be one of the determining factors for evaluating an Interconnection Application along with any required design changes and/or infrastructure upgrades specified to support the Interconnection Application request.

#### **Unintentional Islanding**

Under no circumstances will a Customer's DER be allowed to sustain an island condition with any part of the Company's Distribution System beyond the Point of Common Coupling due to potential damage to Company or other Customers' equipment. The Customer's DER must be equipped with protection to sense a possible island and disengage from the Company's Distribution System within the 2-second time frame of the formation of an island condition as specified by Institute of Electrical and Electronics Engineers (IEEE) Standard1547-2018 (or any successor standard).

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# **1.0** Introduction

# 1.1 Purpose

The Distribution Interconnection Process is the overall process for queuing, processing, executing, and maintaining Interconnection Agreements for any DER 20 mega volt ampere (MVA) and smaller in size connecting to a Company utility via its Distribution System. The purpose of this standard is to describe the requirements for safe and effective connection and operation of a DER on the Company Distribution System. A Customer proposing to install a generator larger than 20 MVA or who would interconnect at transmission-level voltage (69kV and above) should contact the Company's Transmission organization. **Customers are encouraged to contact the Company early in the process and learn about interconnection requirements due to the size of the proposed DER, its configuration, and its location on the electric grid. Customers may call 1-800-ENTERGY to get a local engineer involved to assist with the interconnection process.** 

A Customer shall operate 60 Hertz (Hz), three-phase or single-phase equipment in parallel with the Distribution System pursuant to an executed Interconnection Agreement, provided that the equipment meets or exceeds the Company standards. Certain Federal Energy Regulatory Commission (FERC) Qualifying Facilities or small power producers may have specified rates and requirements in each jurisdiction allowing for the sale of energy to the Company. Customers shall not inject energy onto the Company's Distribution System without an express written agreement with the Company.

The interconnection process is initiated by a Customer (or their designated representative) submitting a completed Interconnection Application signed by the Customer along with a single-line diagram of the proposed design of the interconnected DER.

This standard describes typical interconnection requirements. Certain specific interconnection locations and conditions may require more information from the Customer and/or the installation of infrastructure upgrades and use of more sophisticated protective devices and operating schemes.

If the Company concludes that an Interconnection Application describes a DER that may require additional infrastructure upgrades including devices and operating schemes, the Company shall make those additional requirements known to the Customer at the time any required interconnection studies are completed.
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#### **1.1.1 Interconnection Agreement Requirements**

A written Interconnection Agreement will be required between the Company and the Customer outlining the liability provisions, indemnities, payment of costs to modify the Distribution System (if not paid in advance), and other items affecting service under this standard. This Interconnection Agreement will explain in detail the authority or responsibilities of the parties involved. <u>An interconnection of a DER between the Company and a</u> <u>Customer will not be allowed prior to the execution of a written</u> <u>Interconnection Agreement covering parallel operation.</u>

## **1.1.2 Explicit Criteria for Parallel Operation**

These requirements apply to interconnecting a DER that is intended to operate in parallel with the Company's Distribution System and in some cases, export energy to the Company's Distribution System.

A Customer that produces energy may elect to operate a DER in parallel with the Company's Distribution System or as a separate system with the capability of non-parallel load transfer between the two independent electrical systems. The requirements provided in this standard are applicable to interconnect a DER intending to operate in parallel or nonparallel load transfer with some control of the Customer-owned DER by the Company subject to agreement with Customer.

#### 1.1.2.1 Safety

The Customer's DER will be held to the same Standard of Care as the Company is required to maintain of its own facilities. In addition, the safety of the general public and the personnel and equipment of the Company shall in no way be reduced or impaired as a result of an interconnection.

The Customer's DER shall be equipped with Protective Functions designed to prevent the DER from being connected to a deenergized circuit owned by the Company.

The Customer's DER shall be equipped with the necessary Protective Functions designed to prevent connection or Parallel Operation of the Customer's DER with the Company's Distribution System unless the Distribution System service voltage and frequency are of normal magnitude. The design of some DERs provide these Protective Functions without adding equipment at the Point of Common Coupling. Each DER not providing additional protective devices at the Point of Common Coupling must be shown to be capable of providing these Protective Functions without adding such equipment.

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## 1.1.2.2 Customer Impact

The quality, reliability, and availability of service to the Company's other customers shall not be diminished or impaired as a result of the proposed interconnection. This standard describes typical interconnection requirements. Some DER installations, however, may require more extensive Interconnection Facilities, and will be addressed on a case-by-case basis. For example, this situation may be triggered when more than one Customer desires to connect a DER to the same transformer or on the same distribution feeder.

## **1.1.2.3 Protective Device Requirements**

Operating a DER while interconnected to the Company's Distribution System requires that certain protective devices (relay, circuit breakers, isolation devices, etc.) must be installed at any location where a Customer desires to operate its DER. The purpose of these devices is to isolate faults from the Distribution System and promptly disconnect the Customer's DER from the Company's Distribution System when faults or abnormal operating conditions jeopardize the reliable operation of equipment or the safety of Company personnel or the public. Certain modifications to the Company's Distribution System and/or protective relays may also be required in order to accommodate parallel operation. The Company assumes no responsibility for determining protective equipment needed to protect the Customer's facilities.

#### 1.1.2.4 Hazards

Distribution lines are subject to a variety of natural and humanmade hazards. Among these hazards are lightning, storms, animals, fire, earthquakes, damage from vehicles, mischief, and human error. Customers that self-generate energy are subject to these same hazards, but not necessarily to the same degree since the Company's Distribution System has greater exposure to hazards given its configuration and location in public right-of-way.

The electric problems that can result from these hazards principally involve short circuits, grounded conductors, and broken conductors. These fault conditions require that damaged equipment be de-energized as soon as possible to ensure public safety and continued operation of the remaining Distribution System.

The Company has the responsibility to install protective equipment as necessary to detect faulted equipment or other operating abnormalities and to isolate the problem from the remaining Distribution System. A non-utility-owned DER interconnected to and operated in parallel with the Company's Distribution System

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can represent another source of power on the energized Distribution System. The Company requires that such DERs also have adequate protective devices installed to react to abnormal electric system conditions and isolate from the interconnected Distribution System to preserve the reliability of the distribution system. The following are specific Distribution System hazards requiring response:

A. Unintended Islanding: A DER operating in parallel with the Company's Distribution System must also be equipped to detect another condition referred to as "unintended islanding." Unintended Islanding is the abnormal operating condition where a portion of the Company's Distribution System and loads become isolated from the remainder of the Distribution System while still connected to and receiving energy from one or more DERs within an electrical island. When unintentional islanding occurs, all DERs within the electrical island must be disconnected to prevent continued operation and damage to the connected loads.

The protective devices and other specified requirements are intended to provide protection against hazards associated with unintentional islanding by ensuring that DERs operating in parallel with the Company's Distribution System are disconnected when Abnormal Operating Conditions occur.

- B. Loss of Phase: A DER operating in parallel with the Company's Distribution System shall be equipped to detect a loss of any one phase for which an immediate shutdown is required. The DER shall have the ability to detect, cease to energize, and trip all phases to which the DER is connected for any open phase condition occurring directly at the Point of Common Coupling. The DER shall cease to energize and trip within 2.0 seconds of the open phase condition.
- C. Loss of Synchronization: Operation of the Customer's synchronous generator (or other DER) out of synchronization with the Company's Distribution System may cause large voltage fluctuations to other connected customers and may cause severe damage to the Customer's generator (or DER). In any situation in which a loss-of-synchronization (out-of-step) is likely to occur for a DER installation, a specific detection relaying scheme shall be required and implemented.

# **1.2** How to Interpret and Apply the Standard

When reading this document, the following terms will be interpreted as defined:

**Shall:** Any requirement that uses the term "shall" is mandatory and strictly enforced.

**Should**: Any requirement that uses the term "should" indicates that options may exist, but that the requirement specifies the best engineering expertise as written, but such requirements are not mandatory.

**Recommend:** Any requirement using the term "recommend" has more than one option, and the Company prefers that the Customer use the option given, but such choice is up to the Customer's discretion.

May: Any requirement using the term "may" means the Customer has discretion.

## 2.0 **Definitions**

**Abnormal Operating Conditions** – When the Company is operating the Distribution System in other than normal configuration or under conditions that do not normally exist. Examples of Abnormal Operating Conditions include: (1) peak load days when customers may be requested to conserve energy or, (2) switching feeders out of use for repairs and switching in alternate feeders to deliver energy to customers.

**Ampere (Amp):** The unit of measurement of the rate of flow of electricity. It is the unit of current produced in a circuit by one volt acting through a resistance of one ohm.

Agreement for Service (or Contract): The agreement between the Company and the Customer under which service is taken. Unless and until a written Agreement for Service has been signed, service rendered by the Company is subject solely to the provisions of the applicable Company's service regulations, policies, and applicable rate schedule and riders. The provisions of the Company's standard application or terms of service will be presumed to apply. The supplying and taking of such service shall constitute an Agreement for Service.

Authority (Having Jurisdiction) ("AHJ"): The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. Among other things, the role of an AHJ is to verify that a Customer DER installation complies with the National Electrical Code ("NEC"), Company policies and procedures, and requirements imposed by Company's Retail Regulator.

Central Business District ("CBD") Networks, Spot Networks and Downtown Underground Radially-Fed Installations: Typically located in downtown areas in cities including New Orleans, Baton Rouge, Lake Charles, West Monroe,

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Beaumont, Jackson, Little Rock, Pine Bluff, and Hot Springs. The common CBD setup is to have two or more transformers, each connected to a separate feeder and paralleled on the low voltage side through network protectors associated with each transformer. These protectors are commonly configured so that a small amount of fault current (usually in the range of one Amp) will cause the protector to trip. Injecting energy with a DER will have a negative effect on reliability. Also see Network Service.

**Code:** National Electrical Safety Code ("NESC"), current edition and any other applicable Codes and governmental regulations, such as Occupational Safety and Health Administration (OSHA) live working clearance rules. Also, the NEC provides the basis for proper installation and maintenance of electrical systems for the general public to be kept free from hazards and is also the basis for Entergy's Customer Installation Standards for Electric Service.

**Company:** An individual regulated utility Operating Company subsidiary of Entergy Corporation, including its officers, agents, employees, successors, or assigns.

Contract: See "Agreement for Service".

**Converter (or Power Converter):** An electrical or electro-mechanical device for converting electrical energy. It may be converting AC (single-phase) to AC (3-phase) or from DC to AC, or the voltage or frequency, or some combination of these.

**Current:** The rate of flow of electricity usually measured in amperes. The Company supplies alternating current (AC) and will not supply direct current (DC).

**Customer:** An individual, firm, partnership, association, corporation, organization, or governmental agency that is "taking service" as defined by the Company's Retail Regulator and that is seeking to interconnect and operate a DER. When used in lowercase form (i.e., "customer"), refers to all other Company customers who are not seeking to interconnect, but who may be operationally or otherwise affected by the requested interconnection.

**Customer's Facilities:** In general, all the wires, appliances, devices or apparatus of any kind or character on the Customer's side of the Point of Delivery (or PCC) except the meters, metering devices and facilities of the Company that may be located on the Customer's side of the Point of Delivery used in providing Service to the Customer. The Customer's wiring and electrical equipment within or on the premises shall be installed and maintained in accordance with all applicable building and wiring codes, and local laws and ordinances.

**Displaced Load:** The Customer's entire electrical requirement or a portion of it that, except for the utilization of the Customer's DER, would have been served by the Company.

**Distributed Energy Resource (DER)**: Distributed-scale resources connected to the grid at distribution-level voltage; or to the transmission network interconnected directly to a substation at distribution voltage-level. DER may be further defined by Company's Retail Regulator.

**Distributed Generation (DG)**: See Distributed Energy Resource.

**Distribution System**: The Company's wires, equipment, and facilities with a voltage below 69kV to which the DER is interconnected.

**Facility:** An electrical generating installation consisting of one or more on-site distributed generation units, which includes a standalone energy storage system or other similar application. The total capacity of a facility's individual on-site distributed generation units may exceed 20 MVA. Units greater than 20 MVA will require consultation with Transmission.

**Energy:** The total work done as distinguished from the rate of doing work (power), usually measured in kilowatt-hours ("kWh"). Its amount depends upon the power and the time that the power is taken. For instance, a power rate of one kilowatt maintained for one hour is one kilowatt-hour of energy.

**Generator:** a dynamo or similar machine for converting mechanical energy into electricity. Prime mover includes diesel/gasoline/natural gas-fueled combustion engines and turbines, hydroelectric turbine, steam turbine, wind, etc.

**Hertz:** Unit of frequency in cycles per second. For example, the Company furnishes 60 Hertz alternating current (AC).

**Induction Generator (**or **asynchronous generator**) is a type of alternating current (AC) electrical generator that uses the principles of induction motors to produce electric power. Induction generators operate by mechanically turning their rotors faster than synchronous speed.

**Interconnection:** The physical connection of a DER to the Company's Distribution System in accordance with the requirements of this standard so that parallel operation can occur.

**Interconnection Agreement:** The written executed document that sets forth the contractual conditions under which the Company and a Customer agree that one or more DERs may be interconnected with the Company's Distribution System.

**Interconnection Application:** A document prepared by the Customer (or their designated representative) to facilitate an Interconnection Agreement in which specific capabilities of a Customer's DER are identified along with requirements to support any parallel operations based on hosting capacity of the Company's Distribution System.

**Interconnection Facilities:** All facilities installed solely to interconnect and deliver/receive energy from/to the Customer's DER to/from the Company's system including, but not limited to, connection, transmission, distribution, engineering, administration, transformation, switching, metering, and safety equipment. Interconnection Facilities shall include any additions and/or modifications to the Company's Distribution System deemed by the Company to be necessary to reliably and safely interconnect the Customer's DER.

**Inverter:** Equipment that converts DC power to AC power. Includes auxiliary devices such as transfer switches, alternate source transformers and regulators, input rectifiers (other than battery chargers), and isolation devices (e.g., blocking diodes).

**Islanding:** A condition in which a portion of a Distribution System is energized solely by one or more interconnected DERs through the associated Point of Common Coupling(s) while that portion of the area Distribution System is electrically separated from the rest of the area distribution system.

**Load:** The amount of electric power delivered or required by Customer at any specified point or points on the Company's Distribution System.

**Meter:** A device or devices together with auxiliary equipment used for measuring any of the following: apparent, real, and reactive power and/or energy, which are supplied to any Customer at a single Point of Delivery.

**Momentary Cessation:** A protective mode when no current is injected into the Distribution System by the inverter during low or high voltage conditions outside of its continuous operating range. This is accomplished by blocking the power electronics' firing commands and the inverter does not produce real or reactive current.

**Net Metering:** Refers to a policy implemented by the Company's Retail Regulator that addresses interconnection, operation, and treatment of a qualifying DER on the Company's Distribution System. Refer to the Company's website for additional information governing interconnection and operation of a DER that may be eligible for Net Metering.

**Network Service:** Two or more primary distribution feeder sources electrically tied together on the secondary (or low voltage) side to form one power source for one or more customers. This configuration is designed to maintain service to customers even after the loss of one of these primary distribution feeder sources.

**Ohm:** The unit of measurement of electrical resistance or impedance. It is that resistance through which one volt will produce a current of one ampere.

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**On-site Distributed Generation (Distributed Generation or DG)**: An electrical generating facility located at Customer's Point of Delivery (Point of Common Coupling) with a generating capacity of twenty MVA (called "apparent power") or less and connected at a voltage less than or equal to 34.5 kilovolts (kV), which may also be connected in parallel operation to the Company's Distribution System.

**Parallel Operation:** The operation of DG by a Customer while the Customer's facilities are electrically connected to the Company's Distribution System.

**Phase (or Number of Phases):** Term which designates characteristics of alternating current. It is a term used in the electric industry relating to the characteristics of the electrical service available or supplied at a given location or required for the operation of a given electrical device.

Point of Delivery: (also called Point of Common Coupling or PCC): The physical location where the Customer's service terminals or wires are joined to the Company's facilities or such other point specifically designated by written agreement.

**Power:** The time rate of doing work, generating, transferring, or using electric energy, usually expressed in kilowatts (kW).

**Power Factor:** The ratio of real power (kW) to apparent power (kVA) for any given load and time. Normally, power factor is expressed as a ratio and stated as a percentage.

**Pre-Interconnection Study**: A study or studies that may be undertaken by the Company in response to its receipt of a completed Interconnection Application for interconnection and parallel operation with the Company's Distribution System.

A system that uses hardware (including switching **Protective Functions:** devices), relay protection schemes, and software to prevent unsafe operating conditions from occurring before, during, and after the interconnection of the DER with the Company's Distribution System. Protective Functions may include isolating the Customer's DER or decoupling it from the Company's Distribution System.

**Quality of Service**: An operating state of the Distribution System that provides usable power to a Customer. This state of usable power includes the parameters specified for voltage flicker, voltage surges and sags, power factor, frequency, and harmonics.

**Reactive-kilovolt-amperes** (kVAR) (rkVA) (kilovar): The product of the applied voltage and the magnetizing or charging current, divided by 1,000. Reactivekilovolt-amperes do no work but must be supplied to magnetic equipment, such as motors. Generators or capacitors supply it.

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**Retail Regulator**: The political subdivision or government entity vested with authority to oversee the rates and operations of Company, e.g., the Arkansas Public Service Commission, the Council for the City of New Orleans, the Louisiana Public Service Commission, the Mississippi Public Service Commission, or the Public Utility Commission of Texas.

**Sag (Voltage Sag):** A decrease in AC Voltage at the power frequency for duration of 0.5 cycles to 1 minute. Typical values are 0.1 to 0.9 per unit.

**Service (or Electric Service):** The availability of electric power and energy to the Customer, regardless of whether any power and energy is actually used. Supplying service by the Company consists of the Company maintaining at the Point of Delivery the approximate nominal voltage and frequency by means of facilities adequate for supplying the Customer's contracted load.

**Stabilized**: The Distribution System is considered stabilized when, following a disturbance, the system returns to the normal range of voltage and frequency for a duration of five minutes or a shorter time as mutually agreed to by the Company and Customer.

**Standard of Care**: A term defining the level of awareness to maintain workplace and public safety in the design, installation, and operation of a DER.

**System Protection Facilities**: The equipment required to protect the Company's Distribution System and Customers from unsafe operating conditions occurring at the Customers' locations. This includes inverter systems and any other devices provided with a DER that provides system protection functions.

**Synchronous Generator** (or alternator): An electrical machine which converts the mechanical power from a prime mover into AC electrical power at a particular voltage and frequency.

**Transmission:** High voltage (69kV and above) lines and facilities which begin outside of the substation fence (may include 34.5kV lines serving industrial customers; these lines are considered to be transmission lines if they are under direct control of the Transmission Operation Centers.)

**Unsafe Operating Conditions**: A situation that, if left uncorrected, would result in: (1) harm to any Company personnel and/or the public, damage to any equipment, (2) unacceptable system instability or, (3) operating outside legally-established parameters affecting the quality of service to other customers connected to the Company's Distribution System.

**Uninterruptible Power Supply (UPS):** A device that provides battery backup AC power when the normal electrical power source fails or drops to an unacceptable voltage level.

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**Volt / Voltage:** A unit of electrical pressure or potential or electromotive force which, if applied to a load of one-ohm resistance, will cause a current of one ampere to flow. Primary distribution and transmission voltages are usually designated in kilovolts (kV). One kilovolt is equal to 1,000 volts.

**Volt-Ampere:** kVA is 1,000 Volt Amperes (VA) and MVA is 1,000,000 VA. The unit of apparent power, volts times amperes, which is composed of both real and reactive power.

**Watt:** An electrical unit of power. Electrical appliances and lamps are rated in watts to indicate their capacity or rate of using power for doing work. For example, a 100-watt lamp used 10 hours will use one kilowatt-hour (kWh) of energy (1,000 watt-hours).

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## 3.0 Details

# **3.1 The Electrical Distribution System**

The Distribution System supplies power to the Company's low voltage network customers from area substations at IEEE medium voltage levels of 4kV, 12.47kV, 13.2kV, 13.8kV, 23.9kV and 34.5kV (phase to phase) for primary service. Note: 69kV and above are considered by Company as Transmission System Voltages. The majority of retail customers receive IEEE low voltage service directly from the Distribution System secondary voltage levels of single-phase (120V and 240V) and three-phase (120/208V and 277/480V). Grounded four-wire distribution (phase to neutral connected loads) is the Company's standard.

# 3.2 Multi-grounded Neutral Distribution Service

Generally, the following available multi-grounded neutral service is offered for interconnection:

- Single-Phase 120/240 Volts, 3-wire
- 3-Phase 120/208 Volts, 4-wire
- 3-Phase 277/480 Volts, 4-wire
- 3-Phase 2400/4160 Volts, 4-wire
- 3-Phase 7200/12470 Volts, 4-wire
- 3-Phase 7620/13200 Volts, 4-wire
- 3-Phase 7970/13800 Volts, 4-wire
- 3-Phase 13800/23900 Volts, 4-wire
- 3-Phase 19900/34500 Volts, 4-wire

Consult the Company for further information on the availability of distribution voltages not listed.

## 3.3 Types of Allowed Generators

Single-phase or three-phase alternating current generating units can be operated in parallel with the Distribution System. They may be synchronous generators, induction generators, or inverter-controlled systems. Direct-current generation shall not be directly connected to the Company's alternating-current Distribution System. Typical capacity groups are:

- 15 KVA or Less (and depending on Retail Regulator policy), Single Phase only
- > Above 15 KVA to below 150 KVA, Single Phase (study required)
- > 150 KVA to below 300 KVA, Three-Phase only (study required)
- > 300 KVA to 20 MVA, Three-Phase only (detailed study required)

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#### **3.3.1 Limits on Single-Phase Generators**

Where necessary to avoid the potential for a generating facility to cause problems with the service of other customers, the Company may limit the capacity and operating characteristics of single-phase generators in a manner consistent with the Company's existing limitations for single-phase motors and local line equipment and configuration.

#### **3.3.2 Limits on Three-Phase Generators**

If three-phase service is not available in the area or if Company facilities must be upgraded or increased in order to enable the Customer to connect to these facilities, the Customer must bear the additional cost for such service or improvements as determined by the Company and in conformance with applicable policy of the Company's Retail Regulator. The Company reserves the right to refuse three-phase service under certain circumstances.

## **3.4 Pre-Installation Information**

The Company can expedite service connection and minimize cost to both the Customer and the Company if the Customer consults the Company before the design phase of the installation has begun. The Company is not responsible for the cost of replacing any of the Customer's facilities that do not meet the requirements for service. Connection to the Company's Distribution System is not available prior to approval by the Company. The approval process may include, in addition to the execution of an Interconnection Agreement, the acquisition of permits and/or inspections by authorities having jurisdiction, including the Company's Retail Regulator. Consult the applicable Customer Installation Standards for more information.

#### **3.5** Interconnection Agreement Required

The Customer must execute an Interconnection Agreement with the Company and receive the Company's express written permission before operating a generating facility in parallel with the Company's Distribution System. The Company shall treat all interconnection requests in a non-discriminatory manner, on a first come – first serve basis relative to when the completed documentation was received and reviewed by Company for completeness. The Company shall not unreasonably withhold its permission for parallel operation of the Customer's generating facility with the Company's Distribution System.

## **3.6 Pre-Interconnection Study**

A study or studies may be undertaken by the Company in response to its receipt of a completed application for interconnection and parallel operation with the Company's Distribution System. These may include a meeting with the Customer (and/or its designated agent). The purpose of the meeting and studies is to determine if:

- Interference with the system protective equipment may occur;
- Electricity may flow back to the substation and impact transmission;
- Available fault current may be affected;
- Capacitor banks may be impacted;
- Frequency, and/or voltage may be affected under normal and worst-case situations; or
- Conductors/lines or other devices and elements must be resized or undergo settings changes as a result of the proposed interconnection.

If no impacts on the distribution or the transmission systems are identified, the proposed interconnection will be accepted and, depending on the desired operational configuration and relevant regulatory policy involved, Customer Relations will engage with the Customer to determine next steps. Otherwise, Customer Relations will share potential impacts and future studies necessary, quote estimated costs of the chosen study(ies) and possibly provide order of magnitude estimates on costs for necessary upgrades and the interconnection. If Transmission is to be involved to discuss this stage of the process with the Customer, then Customer Relations will have Transmission contact the Customer and discuss what policies and/or procedures are involved as well as what transmission facilities may be impacted.

Pre-Interconnection studies may include, but are not limited to:

## **3.6.1 Scoping Meetings**

- A fact-finding meeting/teleconference with Customer and discussion of Customer responsibilities and requirements and applicable policies. (Customer Relations and Asset Planning). Company to gather information of the Customer project (size, type, role, etc.).
- Determining the minimum information for attaching a Distributed Energy Resource at a particular location on the Distribution System or identifying the necessity of further engineering studies or determining if transmission involvement is necessary.

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- Certified inverter-based generating facilities rated 15 kVA or less and located on radial distribution systems may be eligible for direct interconnection without the need for a complete Feasibility Study.
- If the Company determines the interconnection request is eligible for direct interconnection, the application request shall be approved to proceed forward with the execution of an Interconnection Agreement.
- All other interconnection requests will be required to go through the Feasibility Study Initial Screening Review as well as any other supplemental reviews or studies as determined necessary.

# **3.6.2 Interconnection Initial Screening Review**

- The Interconnection Initial Screening Review consists of high-level technical screens/analysis of all applications above 15 KVA; however, more in-depth engineering screens/analysis is typically required for DERs above 300 KVA.
- The Initial Screening Review addresses the following technical areas, including but not limited to:
  - DER size
  - Transformer capacity size
  - DELTA Transformer winding
  - Other DER interconnection(s)
  - Distribution Feeder analysis
- The output of this Interconnection Initial Screening Review will determine if the proposed interconnection request can proceed forward with the execution of an Interconnection Agreement or require a Feasibility Study be performed.

## 3.6.3 Feasibility Study

- The Feasibility Study consists of technical screens and power flow modeling and analysis and is used to identify any issues that may arise from an interconnection application and determine if mitigations are necessary or if more detailed studies may be required.
- The Company requires a \$1,000 deposit for the Feasibility Study. The study is done at actual cost and the Customer is responsible for any additional cost (or refund) depending on the specific requirements involved.
- The Feasibility Study addresses the following technical areas, including but not limited to:
  - Generator size and grounding
  - Generator installed location and line configuration
  - Line Penetration

- Short Circuit Contribution and interrupt ratings
- The Supplemental Review Analysis will further analyze the following technical areas, including but not limited to:
  - Power Quality
  - ➢ Voltage
  - Maximum Line Penetration
  - Safety and Reliability
  - DELTA Transformer winding requirement and source grounding
- The output of the Feasibility Study will determine if the proposed interconnection request can proceed forward with the execution of an Interconnection Agreement, require a System Impact Study be performed, or require a Facilities Study be performed.

## 3.6.4 System Impact Study

- The System Impact Study is a detailed formal study intended to identify and detail the electric system impacts that would result if the proposed generating facility were interconnected without project modifications or electric system modifications, including identification of potential system upgrades required to allow the generating facility to interconnect to the Company's Distribution System.
- The System Impact Study will further analyze any potential impacts found within the Feasibility Study, and provide additional detailed analysis related to the following:
  - Power Flows
  - Voltage Deviations
  - Voltage Regulation/Tap Changers
  - DELTA Transformer Winding and source grounding requirements
  - Fault Protection and Coordination
  - Grounding and Overvoltage
  - Unintentional Islanding
  - Transfer Trip Analysis
  - Transmission Impacts
- Additional Transmission Engineering Design review is required for any interconnection request that could result in impact on the Transmission system. Consideration of Transmission impact is required for Cases 4 through 7 with any interconnection request for a generator in excess of

5 MVA. Company reserves the right (depending on the specific circumstances involved) to consider Transmission impact for any size generator.

- The Company requires a \$20,000 deposit for the System Impact Study. The study is done at actual cost and the Customer is responsible for any additional cost (or refund) depending on the specific requirements involved.
- The output of the System Impact Study will determine if the proposed interconnection request can proceed forward with the execution of an Interconnection Agreement, or require a Facilities Study be performed based on the system upgrades and interconnection facilities identified by the System Impact Study.

# 3.6.5 Facilities Study

- A Facilities Study is an extensive study detailing the electric system infrastructure and the impacts to the Transmission and/or Distribution systems that would result if the proposed interconnection request were connected without project modifications or electric system modifications.
- This study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including protection) needed to implement the conclusions of any System Impact Study(ies).
- The Company requires a deposit of the good faith estimated costs for the Facilities Study as determined by the Company. The study is done at actual cost and Customer is responsible for any additional cost (or refund) depending on the specific requirements involved.

## **3.7 Required Drawings**

Adequate drawings of the Customer's proposed generation facility, which will include a one-line diagram and proposed relay systems, must be submitted to the Company for review during the planning stage. Additional drawings may be required on a case-by-case basis.

# **3.8** Allowable Tie Points

Normally, only one tie point between the Customer and the Company will be allowed at the Customer's location with any required communication available for utility interconnection at the Point-of-Common Coupling.

# **3.9 Central Business District Networks**

The Company will not allow interconnections involving parallel operation of DERs in Central Business District Underground Secondary Networks and Spot Networks. In Central Business District Underground Secondary Networks and

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Spot Networks, the installation of a generator could have a negative effect on electric power quality and reliability and the safety of employees that maintain these systems. This policy will affect all Underground Secondary Networks and Spot Networks installations including those in New Orleans, Baton Rouge, Lake Charles, West Monroe, Beaumont, Jackson, Little Rock, Pine Bluff, and Hot Springs. Note: backup generation is allowed only if it complies with the requirements of Cases 1, 2, or 3 and the back-up generator NEVER exports power onto the Company's Distribution System.

## **3.10** General Interconnection Requirements

The Customer's generation facilities shall meet the technical requirements as prescribed in this section and in the latest revision of IEEE 1547. Review of Customer equipment by the Company can be performed to determine acceptability due to revisioning in the latest versions of Underwriters Laboratories (UL) 1741-SA and IEEE 1547.

## **3.11** Customer's Equipment and Interconnection Standards

The Customer's generation and interconnection installation must meet all applicable national, state, and local construction and safety codes.

The Customer shall be responsible for the design, installation, operation, testing and maintenance of all equipment and facilities installed or that will be installed on the Customer's side of the Point of Common Coupling. Such design shall meet the latest standards of IEEE, National Electrical Manufacturers Association (NEMA), American National Standards Institute (ANSI), NEC, FERC, or other national codes and any local codes pertaining to the design and construction of electrical facilities. The Customer's generation shall be subject to the requirements of all authorities having jurisdiction and shall comply with all applicable codes and ordinances.

## 3.12 Rating of Customer's Equipment

The equipment selected by the Customer for interconnection shall be rated for continuous operation with the Company's Distribution System.

# **3.13 Protection of Customer's Equipment**

The Customer will be responsible for protecting its generating equipment in such a manner that distribution delivery system outages, short circuits or other disturbances, including zero sequence currents and ferroresonance overvoltages, do not damage the Customer's equipment. The Customer's protective equipment shall also prevent unnecessary tripping of the Company's Distribution System breakers that would affect the Company's Distribution System's capability to provide reliable service to other Company customers.

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## 3.14 Manually-Operated Load Break Switch / Reasons for Disconnect from the Company's Distribution System

In support of safe deenergized work plan practices for Electrical Works and Emergency Responders, the Customer's generation facilities shall have a manually-operated, visible-break isolation load break switch that is lockable in the open position. This manually operated load break switch shall be in a location accessible to the Company's personnel at all hours with no notice. (Pull-out type switches or breakers are not accepted). For a three-phase generator, this disconnect must be a group-operated device that through one operation will open/close all three phases simultaneously. As shown within the below 2017 NEC Handbook Exhibit, this utility required disconnect should be located near the meter, but must be within sight and within 10 ft of the equipment. If the disconnecting means cannot be installed near the utility meter, then a plaque located within 3 ft of the utility meter is required describing the location and configuration with an arrow pointing to is stating distance (Example: 30kVA Solar PV System Disconnect, 5 ft. $\Rightarrow$ )



**EXHIBIT 690.6** Simplified circuit schematic of a rooftop grid-connected system.

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**EXHIBIT 690.3** An interactive inverter. (Inverter courtesy of SolarEdge Technologies; Photo courtesy of Michael and Diane Mello)

Customer shall label disconnecting means with type and size of distributed generation. Example:

AC PHOTOVOLTAIC	
DISCONNECT	
30 kVA, 240V	

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EXHIBIT 690.10 PV system disconnect.

Also, system disconnecting means where the line and/or load terminals may be energized in the open position, the device shall be marked with the following words or equivalent:

> WARNING ELECTRIC SHOCK HAZARD TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

Permanently attached tags are required. The lettering on each tag shall be 3/16 inch or larger and be either raised or incised on each tag. Each tag shall be riveted or glued to the disconnect switch.

For high single-phase current application up to 150 kVA or compartmental applications, each system disconnecting means shall consist of not more than six (6) switches or six (6) sets of circuit breakers, or a combination of not more than six (6) switches and sets of circuit breakers, mounted in a single enclosure, or in a group of separate enclosures with the above labeling requirements. Parallel feeder circuit isolation is not allowed. Each switch/breaker must isolate a dedicated section of the system and lockable in the open position, manually-operated with visible-break isolation. Note: a racked out breaker meets this visible-break isolation requirement. Also, systems with more than a single disconnecting means require a plaque located within 3 ft of the utility meter describing the isolating operations (Example: Open all switches/breakers for isolation within enclosure label "Solar PV Disconnect", 5 ft  $\Rightarrow$ ).

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For large current applications, a dedicated underground switchgear and/or switchgear with circuit breaker(s) is allowed that shall also be in a location accessible to the Company's personnel at all hours with no notice. This separate switchgear also requires the above labeling requirements. Also, each switch/breaker must isolate a dedicated section of the system and lockable in the open position, manually-operated with visible-break isolation. Note: a racked out switch/breaker meets this visible-break isolation requirement.

The Company reserves the right, but has no responsibility either actual or implied, to open the disconnect switch without prior notice to the Customer for any of the following reasons:

- A. Distribution System emergency,
- B. Routine maintenance, repairs, and modifications,
- C. Elimination of a safety hazard, protection of the public or on-site personnel, or if instructed to do so by public safety personnel (law enforcement, fire department, or other governmental personnel),
- D. Inspection of Customer's generating equipment and protective equipment reveals a hazardous condition, a lack of scheduled maintenance or maintenance records,
- E. The operation of the Customer's generating equipment results in a deteriorated quality of service or safety issue with other Customers or with the operation of the Company's Distribution System, or

The Company may disconnect a Customer's generation unit from the Company's Distribution System under the following conditions:

- F. Expiration or termination of interconnection agreement
- G. Non-compliance with the technical requirements
- H. Lack of approved application and Interconnection Agreement
- I. Unauthorized modifications to the Customer's interface equipment.

When possible, the Company shall provide the Customer with reasonable notice and reconnect the Customer as quickly as reasonably practical.

# 3.15 Remotely-Operated Load Break Switch / Reasons for Disconnect from the Distribution Delivery System

The Company reserves the right to require the Customer's generating facility to be isolated from the Company Distribution System through a dedicated remotely-operated load-break switch. The remotely-operated load-break switch shall either be provided by the Company at the Customer's expense, purchased from the Company by the Customer, or purchased from a third party and conform to the Company's specifications. The purpose of the dedicated remotely-operated load-break switch is to (i) remotely isolate the generating facility at the Point of Common Coupling to avoid any severe power condition that could result in any negative consequence back onto the Company's Distribution System, transmission system, and/or other customers, and (ii) provide any operational support.

This remotely-operated load-break switch shall have the capabilities for communication of telemetry data along with receiving and responding to transfer-trip signals from the substation while isolating upon demand. The device shall be capable of establishing communication (i.e., SCADA) over existing company networks via fiber connection, radio, cellular, or Wi-Fi.

**Typical Application:** Remotely-Operated Isolated Device (i.e. Reclosure) is used for protection coordination within the Company's Distribution System design to guard against any negative results from active generators following the loss of the power grid. Situational examples include, but are not limited to:

- Unintentional islanding from generator providing back-fed power onto the Company's Distribution System that could result in damage to other connected customers' equipment.
- Excessive voltage transformations from generator providing undesired back-fed power onto the transmission system that could result in damage to Company-owned equipment.
- Any interconnection request in which the total proposed generator capacity (including any previously-approved interconnections) would exceed the minimum projected daytime running feeder load.

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### **3.16 Direct Transfer Trip**

As stated above, the Company reserves the right to require the Customer's generating facility to be isolated from the Company's Distribution System through a dedicated remotely-operated load-break switch. Only Direct Transfer Trip signal from the Company's Distribution System to the Customer shall be allowed for isolation protection. Any isolation protection installed by the Customer shall only operate the Customer's internal dedicated load-break device in isolating the Customer's generating equipment from the Company's Distribution System.

#### **Typical Application:**

- Generator or other DER with capacity greater than the minimum daytime loading of the connected distribution circuit.
- Generator or other DER with capacity greater than 50% of the total capacity of the connected distribution circuit.

# 3.17 Customer's Owned Systems

Generation systems owned and managed by the Customer shall have no maintenance agreement with the Company for equipment including the stepup transformer supplied by the contracted vendor. The Customer shall perform periodic maintenance as necessary on Customer-owned and operated circuit breakers, relays, transformers, generators, inverters, batteries, and other equipment to meet the Company's specifications unless the manufacturer recommends a more frequent schedule for maintenance.

In the event it is necessary for the Customer to disconnect from Company service, the Customer shall notify the Company of the planned disconnection in advance of the disconnection. When interconnecting another Customer or other work such as routine maintenance will interrupt service to a Customer, the Company will contact the Customer to arrange a mutually-agreeable time, if possible, for such Company work to be performed. When interruption of service is required that impacts Customer, service will be restored as quickly as possible.

## **3.18** Company Partnerships or Company-Owned Systems

All new generators proposed to be interconnected to the Company's Distribution System regardless of size shall operate at the following generally available standard output voltage transformations (+/- 5% from the following nominal):

IEEE Offered Low Voltages: Single-Phase Voltage: 120V or 240V Three-Phase Voltage: 208V or 480V with 480V preferred.

IEEE Offered Medium 3-Phase Voltages: 4160V, 12.47kV, 13.2kV, 13.8kV, 23.9kV, or 34.5kV

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#### **3.19 Transformation Requirements**

Customer is encouraged to contact the Company early in the process and learn about Customer-specific requirements due to the Customer's location (or desired point of interconnection) on the Distribution or Transmission System. Customer may call 1-800-ENTERGY to get a local engineer assigned.

Step-Up Transformer Winding Standard is Wye-Wye. System Impact Study at a minimum is required for Wye-Delta, Delta-Wye, or Delta-Delta Transformer winding configurations.

If Customer's existing generation facilities need additional transformation, a different grounding system, or other upgrades, the Customer shall be required to design, pay for, and maintain all upgrades necessary to comply with Company's interconnection standards and other policies.

The Customer's grounding, transformer, relaying, and generator system shall be designed to handle the normal imbalance on the Company's Distribution System.

The Customer's additional generation-related transformation and other facilities should be owned, operated and maintained by the Customer. At the Company's option, a standard Company-specified transformer / transformer bank may be provided at the Customer's expense.

**For Cases 3 through 7**, the Customer shall monitor the Company's Distribution System and react based upon specifications in this Standard. Grounded Wye to Grounded Wye transformers are preferred with no impedance or resistance grounds.

System Impact Studies are required to design/specify a monitoring method (transfer trip or another method of reading the Company distribution feeder) if:

- Zero sequence path isolation occurs, some examples of which follow:
  - Impedance/resistance grounds limit fault current and fault signal.
  - Ungrounded connections/ configurations between the Customer's generator and the Company may not consistently detect faults on the Company's Distribution System.
- Delta configurations exist because they:
  - balance the Company's Distribution System load per phase, making the feeder difficult to monitor
  - may be ungrounded.

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## 3.20 Dedicated Distribution Transformer

The Company reserves the right to require the Customer's generating facility to interconnect to the Company Distribution System through a dedicated transformer. The transformer shall be provided by the Company at the Customer's expense, purchased from the Company by the Customer, or purchased from a third party if it conforms to the Company's specifications. The purpose of the dedicated transformer is to confine the Point of Common Coupling away from existing load and/or generation to support independent isolation and operational support.

## 3.21 Grounding

All generators 1 MVA and larger must have ground mats that shall be designed in accordance with good engineering practice per IEEE 80 "Guide for Safety in AC Substation Grounding." If local governmental requirements are more stringent (e.g., building codes), those requirements shall prevail. Customer shall perform appropriate tests, including soil resistivity test, to demonstrate that their ground grid design meets the standard. Mats should be tested at regular intervals to ensure their effectiveness.

# **3.22** General Equipment Design and Operating Requirements

From the perspective of interconnection, there are four main types of generation systems that interface to the distribution or transmission system. These include:

- Induction Generators (e.g., Combustion Engine-Driven, Hydro, Wind)
- Synchronous Generators (e.g., Flywheel, Motors, Motor-Generators)
- Static Power Converters (Inverters, Static Converters)
- Battery Storage (Inverter-Charger units)

Each type has its own specific characteristics regarding synchronization equipment, protective functions, starting practices, and electrical operating behavior. Whether the generation is a dynamo machine (i.e., windings) or electro-static (i.e. SCRs/diodes), there are specific common interface requirements that will always apply. There may also be additional specific requirements that may be identified as part of any study (or studies) conducted by the Company for a specific Customer location. Generating facilities operating in parallel with the Company's Distribution System shall be equipped with the following load control functions:

- Voltage and frequency ride-through
- Soft-start reconnection
- Ramp-rate controls
- Constant power factor mode
- Voltage-reactive power mode
- Active power-reactive power mode

- Constant reactive power mode
- Updated unintentional-islanding requirements when disconnected from parallel operations (excludes Synchronous Generators designed for extended ride-through loading)

The following unintentional-islanding detection methods are approved by the Company:

- o Active: frequency shift
- Hybrid: rate of change of frequency
- Communication
- Telemetry data
- Remote shutdown command capability
- All communication interfaces shall be available at the PCC.
- Under-voltage time delay for loss of power backup loading in support of designed reclosing (i.e., Reclosure) cycling
- Reclosing lockout during parallel operations to block loss of synchronization (out-of-step) condition (excludes Synchronous Generators designed for extended ride-through loading)
- Loss of phase detection

## **3.22.1 General Equipment Protection Requirements**

From the perspective of smart inverter functions, the following features shall be active in the priority listed unless otherwise defined by a Company-performed study:

- 1. Volt-VAR management
- 2. Volt-Watt
- 3. Soft Start
- 4. Constant power factor (1 MVA or greater)

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# 3.22.2 Typical Volt/VAR Curves

Regarding smart inverter functions, the following Volt/VAR Curves should be established unless provided within a detailed study from the Company:

Typical Volt/VAR Settings for Interconnections				
Express Feeder			Existing Feeder	
Point	Values		Point	Values
P1	(0.95, 1)		P1	(0.95, 1)
P2	(0.98, 0)		P2	(0.98, 0)
P3	(1.04, 0)		P3	(1.02, 0)
P4	(1.15, -1)		P4	(1.10, -1)





# **3.22.3 Typical Types of Generation Systems**

The following sub-sections describe the four main types of interconnected generation systems, which include figures that illustrate typical installation for equipment protection. These are the legends for IEEE device numbers referred to in the figures:

#### Legend

#### Protective Device Numbers and Description

- 2 Time Delay Starting or Closing Relay
- 7 Rate of Change Relay
- 24 Volts per Hertz Relay
- 25 Synchronizing or Synchronization Check Relay
- 27 Under-voltage Relay
- 29 Isolating Contactor or Switch
- 31 Separate Excitation
- 32 Power Direction Relay
- 40 Loss of Field Detection Relay
- 46 Reverse-phase or Phase-Balance Current Relay
- 47 Voltage Phase Sequence Relay
- 50 Instantaneous Overcurrent (Breaker Failure) Relay
- 51 Time Over-current Relay
- 52 AC Circuit Breaker
- 59 Over-voltage Relay
- 60 Voltage or Current Balance Relay
- 64 Ground Detector Relay
- 67 Voltage Restrained/Controlled Directional Time Overcurrent Relay
- 78 Loss of Synchronization (Out-of-Step) Relay
- 79 Reclosing Relay
- 81 Over/Under-frequency Relay
- 85 Communications, Carrier or Pilot-Wire Relay
- 87 Differential Protective Relay
- **NOTE**: for additional information on device number, refer to ANSI C37.2.

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## 3.22.3.1 Induction Generators

All new interconnected generators having suitable systems must comply with the Company's minimum operating reliability criteria for governor droop.

These requirements are necessary to provide an equitable and coordinated system response to load/generation imbalances. Governor droop typically ranges between 3% and 5% without excessive dead-bands and will be established based on designed study requirements.



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## 3.22.3.2 Synchronous Generators

Synchronous Generators are to remain in-service during system faults (three-phase faults with normal clearing and single-line-toground with delayed clearing) unless clearing the fault effectively disconnects the generator from the system. During the transient period, the generator is required to remain in-service for the low voltage and frequency excursions as specified in the design requirements. The Generator may be tripped after the fault period if this action is intended for direct equipment protection.

A separately excited excitation system is also required on these synchronous generators for additional reactive power (VAR) support during normal parallel/synchronous operation.



## 3.22.3.3 Static Power Converters / Inverter Technology

All electro-static power generation systems must use a smart inverter that complies with testing protocol UL 1741-SA and IEEE 1547 latest version. Functions of compliant inverters are noted in the above section: **General Equipment Design and Operating Requirements**; however, the following additional procurement requirements shall be included:

• UPS grade inverters requiring no additional filtering that support direct connection to breaker/fuse-protected loads or a standard distribution class Wye-Wye Transformer winding.



Company Line with required metering and disconnect

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## **3.22.3.4 Battery Storage System using Inverter Technology**

All typical Battery Storage Systems will use Inverter Technology; therefore, smart inverter functions shall be applied that complies with testing protocol UL 1741-SA and IEEE 1547 latest version. Functions of compliant inverters are noted above within the section: **General Equipment Design and Operating Requirements**; however, the following additional procurement requirements shall be included:

• UPS grade inverters requiring no additional filtering that support direct connection to breaker/fuse-protected loads or a standard distribution class Wye-Wye Transformer winding.



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#### 3.23 Synchronizing Requirements

The Customer shall be solely responsible for synchronizing and properly connecting and disconnecting its electrical system relative to parallel operation with the Company's Distribution System in accordance with the latest version of IEEE 1547. The Customer shall provide an automatic or semi-automatic synchronizing scheme to prevent the closing of its circuit breaker when the two electrical systems are out of synchronization.

#### **3.24 Power Quality Parameters**

Standard DZ02-04 "Power Quality Standards for Electrical Service" provides general guidelines on the quality of power a Customer can expect to receive at the point of delivery. Additionally, Standard DZ02-04 lists the restrictions the Company places upon the electrical distortion allowed on the power system that may be caused by a Customer's equipment. These requirements help ensure that the Company's and other customers' equipment will not be adversely impacted by a new Customer's generator or an existing Customer's planned expansion.

The Company should be consulted early in the design phase for new installations and load additions to address specific installation requirements for new facilities and planned expansions.

## 3.25 Energy Flow During Emergencies

Purchases of energy from or sales of energy to a Customer during periods of system emergencies may be discontinued according to the Retail Regulator's applicable rules and policies, and the Company's rates, riders, and/or contract with the Customer.

#### 3.26 Power Factor

The power factor of the Customer's generation facilities at the interconnection point with the Company shall be maintained according to the applicable rate schedule for the Customer's installation.

#### 3.27 Reactive Power Requirements

The Customer's generation facility shall be capable of injecting reactive power (over-excited) and absorbing reactive power (under-excited) for active power output levels greater than or equal to the minimum steady-state active power capability or per the latest version of IEEE 1547 rated active power, whichever is greater. Should the Customer be unable or unwilling to supply the reactive power, a separate rate schedule shall apply, and the installation shall be metered for VAR flow.

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## **3.28 Voltage Surges or Sags**

The Customer will operate its generating equipment in such a manner that the voltage levels on the Company's Distribution System are in the same range as if the generating equipment were not connected to the Company's Distribution System. The Customer shall be liable for any damages done to their own facilities, the Company's facilities, or the facilities of other Customers due to any under voltage or over voltage contribution from the Customer's equipment.

The Customer shall provide an automatic method of disconnecting the generating equipment from the Company's Distribution System in accordance with Table 11, IEEE Std 1547 latest version.

Shall TRIP – Category I					
Shall	Default Setting		Ranges of allowable Settings		
TRIP	Voltage	Clearing	Voltage	Clearing Time	
Function	(pu of nominal voltage)	Time (s)	(pu of nominal voltage)	(S)	
OV2	1.20	0.16	Fixed at 1.20	Fixed at 0.16	
OV1	1.10	2.0	1.10 – 1.20	1.0 – 13.0	
UV1	0.70	2.0	0.0 - 0.88	2.0 - 21.0	
UV2	0.45	0.16	0.0 – 0.50	0.16 – 2.0	

Shall TRIP – Category II					
Shall	Default Setting		Ranges of allowable Settings		
TRIP	Voltage	Clearing	Voltage	Clearing Time	
Function	(pu of nominal voltage)	Time (s)	(pu of nominal voltage)	(s)	
OV2	1.20	0.16	Fixed at 1.20	Fixed at 0.16	
OV1	1.10	2.0	1.10 – 1.20	1.0 – 13.0	
UV1	0.70	10.0	0.0 - 0.88	2.0 - 21.0	
UV2	0.45	0.16	0.0 - 0.50	0.16 - 2.0	

Shall TRIP – Category III					
Shall	Default Setting		Ranges of allowable Settings		
TRIP	Voltage	Clearing	Voltage	Clearing Time	
Function	(pu of nominal voltage)	Time (s)	(pu of nominal voltage)	(S)	
OV2	1.20	0.16	Fixed at 1.20	Fixed at 0.16	
OV1	1.10	13.0	1.10 – 1.20	1.0 – 13.0	
UV1	0.88	21.0	0.0 - 0.88	21.0 - 50.0	
UV2	0.50	2.0	0.0 – 0.50	2.0 - 21.0	

Voltage ride-through requirements for abnormal operating performance shall be in accordance with the latest version of IEEE Std 1547.

# **3.29** Voltage Flicker, Harmonic Distortion, Transients and other Power Quality Issues

The Customer's generator shall not create objectionable flicker, Harmonic Distortion, Transients, etc. for the Company's other Customers. The Customer should also consult Company's Power Quality Standards for Electric Service, the latest edition available on the Company web site at <u>www.entergy.com</u>. The Customer should select the appropriate state, then "Your Business", and the Builder Standards.

#### Minimum Individual DER Flicker Emission Limits (IEEE Std 1547)

Epst	Eplt
0.35	0.25

95% probability value should not exceed the emission limit based on a oneweek measurement period.

## 3.30 Frequency

When the operating frequency of the Customer's generating equipment deviates from the 60 Hz base, the Customer shall automatically disconnect the generating equipment from the distribution delivery system based upon the table below:

Shall TRIP – Category I, II, and III					
Shall	Default Setting		Ranges of allowable Settings		
TRIP	Frequency	Clearing	Frequency	Clearing Time	
Function	(Hz)	Time (s)	(Hz)	(S)	
OF2	62.0	0.16	61.8 – 66.0	0.16 - 1000	
OF1	61.2	300.0	61.0 – 66.0	180.0 – 1000	
UF1	58.5	300.0	50.0 – 59.0	180.0 – 1000	
UF2	56.5	0.16	50.0 - 57.0	0.16 - 1000	

DER Response (shall TRIP) to Abnormal Frequencies:

Frequency ride-through requirements for abnormal operating performance shall be in accordance with the latest version of IEEE Std 1547.

# 3.31 Specifying Protective Equipment

The Company will have the right to specify certain protective devices, including relays and circuit breakers that the Customer must install. The Company will specify all relay settings on the intertie. Settings of interconnection protective devices on the Customer's system will be specified by the Customer, but will be checked, coordinated with, and reviewed by the Company before application and subsequent modification.

## **3.32 Common Protection Requirements**

Generating facilities operating in parallel with the Company's Distribution System shall be equipped with protective devices that will sense abnormal conditions on the Company's Distribution System and will cause the generating facility to automatically disconnect from the Company's Distribution System or will prevent the generating facility from being connected to the Company's Distribution System inappropriately. The Customer's equipment shall be capable of automatically disconnecting the generation upon detection of an islanding condition and upon detection of a Company Distribution System fault. These protective functions include:

- 1) Over- and under-voltage trip functions and over- and under-frequency trip functions;
- 2) A voltage and frequency sensing and time-delay function that will prevent the generator from energizing a de-energized Company Distribution System circuit and will prevent the generating facility from reconnecting with the Company's Distribution System unless the Company's Distribution System service voltage and frequency is within Company's "Power Quality Standards for Electrical Service" (DZ02-04).
- 3) A function to prevent the generating facility from contributing to the formation of an Unintended Island and cease to energize the Company's Distribution System within two seconds of the formation of an Unintended Island.
- 4) A loss of phase trip function.
- 5) Either a ground over-voltage or over-current trip relay scheme depending on the grounding system as specified by the Company.

The protection and control scheme shall be designed to ensure that the generator remains in operation when the frequency and voltage of the Company Distribution System are within the specified limits. Upon request from the Company, the Customer shall provide documentation detailing compliance with the specified operating ranges.

Unless otherwise directed by the applicable Retail Regulator, the generator will have, as a minimum, an automatic disconnect device(s) sized to meet all applicable local, state, and federal codes and operated by over and under voltage, and over- and under-frequency protection. For three-phase installations, the over- and under-voltage protection shall be included for each phase and the over- and under-frequency protection shall be required. All phases of the generator or inverter interface shall disconnect or cease export of power when directed by the protective devices. Voltage protection shall be wired according to the type of Distribution System ground. The Company will notify the Customer on the appropriate sensing arrangement based on the configuration of the Company Distribution System at the Point of Common Coupling.
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#### 3.33 Protection/Interface Requirements

Protecting both the Customer's facilities and the Company's facilities is of great importance. Proper protective systems shall be established in the design phase and confirmed prior to start-up of the Customer's generator. An interconnection between the Company and the Customer will not be allowed prior to the proper coordination of protective devices. The Customer shall be responsible for providing to the Company the necessary documentation certifying that maintenance and testing have been satisfactorily performed.

## 3.34 Service Interruption Equipment

Circuit breakers or other interrupting devices at the Point of Common Coupling must be capable of interrupting maximum available fault current. If facilities are larger than 1MVA and an inverter or similar system is used, consult the Company for additional requirements.

## 3.35 Fault Interrupting Device

A fault-interrupting device must be installed at the point of intertie between the Company and the Customer. The device could be single-phase fuses with a group operated load break switch or a three-phase breaker. The choice will be the Company's and will be made on a case-by-case basis depending on location, available fault current, and size of the Customer's generator.

## 3.36 Susceptibility to Transmission Faults

A Customer connected to the Company's Distribution System might be affected by faults occurring on the Company's transmission system. As necessary, a member of the Company's System Protection Department may review the proposed interconnection to make recommendations concerning the Customer's susceptibility to transmission faults.

## **3.37** Changes to Company Fault Interruption Equipment

A generator source on the Distribution System will provide an additional source of fault current to the Company's distribution system. It is possible that the Customer's contribution will require the existing coordination of fault interrupting devices on the distribution feeder be changed. The Customer will be responsible for the cost of these changes to the Company's distribution system. It is also possible that the Customer's contribution will increase the available fault current on the Company's Distribution System beyond the interrupting capability of the existing devices on the Company's distribution system. The Customer may be required to limit their fault current. Should the Company also be required to make changes, the Customer shall pay the cost of the required changes. These issues will be examined on a case-by-case basis.

#### 3.38 Equipment to Block Energizing Dead Circuits <u>Under no condition will the Customer be permitted to energize a nonenergized Company distribution circuit.</u> Equipment to effectively block the Customer from energizing a non-energized Company circuit shall be installed.

# **3.39** Communication Criteria for Requiring Telemetering

Communication protocols shall be in accordance with IEEE Std 1547 latest version with any interface made available at the Point of Common Coupling that meets the DER communication interface and cyber security requirements as specified within this document.

Telemetering requirements will be based on the cases described under Interconnection "Case" Type based on the following capacity requirements:

- 1. Cases 1 through 4, no telemetering will be required.
- 2. Cases 5 and 6 may or may not require telemetering depending on the output of the Customer's generating facility.

All generators connected in parallel to the Company's Distribution System will require real-time monitoring in which the Customer shall be responsible for complying with all telemetry requirements.

A. For any Customer installation with capacity greater than 1 MVA, but less than 10 MVA:

The Customer shall furnish a telephone number that is manned during all hours of operation where the Company dispatcher can contact the Customer in the event of trouble on the distribution circuit serving the Customer. Cellular and other wireless communication systems shall be allowed in lieu of standard wired or fiber linked communications, since this telemetry/transfer trip feature supports a backup function.

The Company **may** require a dedicated telephone circuit at the site of the Customer's intertie to provide communication with the Company based on evaluation requirements.

B. For any Customer installation with capacity 10 MVA or greater:

The Company and the Customer shall maintain operating communications at the Customer's expense with the Company's system dispatcher or the designated representative. The operating communications shall include, but not be limited to, system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load schedules and reports.

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An RTU (Remote Terminal Unit) shall be installed by the Customer to gather accumulated and instantaneous data to be telemetered to a specified Company control center. The Company shall approve the RTU and its configuration. Instantaneous analog Watt flow and VAR flow information and breaker/switch status must be telemetered directly to the Company's Distribution Operations These signals will display the current status of the Center. generation facility. Additionally, these signals will be used as input to the Company's control center computer system. These inputs could assist the Company in making decisions on economic dispatch for optimum system operation. Additional programs within the control center computer system will use the input data to assist in numerous other areas of system operation, such as load forecasting, generation scheduling and maintenance, contingency analysis, and training.

Voice communication requires local Person of Contact for Customer's System.

Aggregate Generation Facility Size	Real Time	Voice
	Telemetering	
1 MVA and above, but below 10 MVA	Х*	X**
10 MVA to 20 MVA	X	X

\* Centralized RTU or equivalent successor with cellular or wireless communication system allowed.

\*\* Voice communication limited to remote designated Person of Contact for Customer System.

These interconnected facilities must comply with the Company's telemetry requirements in order to be properly integrated into the Company communication and control systems.

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Case 7 will always require the Customer to install telemetering as described in Section 3.39(2)(B) above regardless of the size of the generator.

Generator Size and Type	Data Acquisition Requirement	
less than 1 MVA	No remote telemetry is required	
1 MVA and above, but below 10 MVA	Wireless real-time telemetry for total generation. Note: Load data and hosting capacity limitations evaluation may recommend specific requirements.	
	VoltsAmpsWattsVARsLine VoltageGOB Status	
10 MVA to 20 MVA	Real-time (SCADA) telemetry for each individual generating unit 1 MVA and greater along with the following:	
	VoltsAmpsWattsVARsLine VoltageIndividual GOBStatus along with any single isolation breaker, switch, reclosure, etc.	n

#### **Telemetry Requirements Summary**

# **3.40 Metering Requirements**

A bidirectional meter shall be applied for an interconnection less than 300 KVA unless specified by a Company study.

The Company has the option to install additional metering at its cost to monitor any DER 300 KVA and above in which a separate company standard meter shall monitor any connected load supplied from the Company's Distribution System. The generator step-up transformer losses will be the Customer's responsibility; therefore, the metering shall be at the distribution voltage level.

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#### **3.41 Design Requirements**

Many design requirements that the Customer must satisfy are common to all generator types. The common requirements include the disconnect switch, industry certification standards, industry power quality standards, voltage response tables, etc.

#### **3.41.1 Distribution Circuit Models**

The importance of the accuracy of the system model cannot be overemphasized; the more closely a system model represents an actual system, the more accurate the analysis. The system model should include both the distribution circuit configuration details and interconnected DER attributes.

### **3.41.2 Summary of Protective Function Requirements**

The size, type, and expected operation of the Customer's generator dictates many of the functional requirements. The functions summarized below list the minimum protection requirements:

- an over-voltage trip,
- an under-voltage trip,
- an over/under frequency trip,
- a loss of phase trip,
- an unintentional islanding trip,
- Either a ground over-voltage or over-current trip relay scheme depending on the grounding system as specified by the Company.
- Will be investigated based under minimum feeder load circumstances. This investigation may alter the requirements.
- For generating facilities under Case 3 that are operating under a testing protocol in which the exported power exceeds the minimum daytime loading or 50% loading of the connected distribution feeder circuit, a reverse power-sensing scheme is also required within the generator controls and/or external company owned device along with a direct transfer trip protection from the feeder breaker.

#### 3.41.3 Facilities with Parallel Generation Under 300 KVA

Connecting Small Electric Generators to the Company Distribution System under 300 KVA.

- Applications 15 KVA and under would receive direct approval based on the hosting capacity of the interconnected transformer.
- Applications greater than 15 KVA and under 300 KVA would receive a Feasibility Study to evaluate the impact based on the available hosting capacity from previous interconnections.

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### 3.41.4 Facilities with Parallel Generation 300 KVA to 20 MVA

Whenever possible, generators greater than 3 MVA should be constructed in blocks that support the use of generally available 2 or 3 MVA transformers while minimizing transformer energization inrush. Using such transformers would help mitigate total system outages during sectionalized outages taken to support maintenance. Although transformer standardization is recommended for all generators interconnected to the Company's Distribution System, this is a requirement for all Company-owned equipment (including equipment managed under partnership agreements) unless the System Impact Study or Facilities Study identifies otherwise.

#### A. Facilities Rated 300 KVA to Below 10 MVA

Power quality monitoring shall be included with all interconnect applications via a Company-approved device or direct telemetry from the generator. A remotely operated PCC Recloser may be required based on evaluation/study requirements for appropriate system protection and coordination. A Direct Transfer Trip (DTT) System to support a backup function for the latest version of IEEE 1547 automatic loss of grid/unintentional islanding detection features may be required based on evaluation/study requirements for ground fault overvoltage and unintentional islanding.

#### B. Facilities Rated 10 MVA and Above

In addition to the above requirements, these facilities must include constant communication with the Distribution Operation Control Center and/or Distributed Energy Resource Management System (DERMS) along with any necessary Direct Transfer Trip (DTT) support requirements.

Also, to prevent protective feature isolations/trips of the Company's Distribution System upon transformer energizations, large generator (or DER) interconnections shall be sectionalized to limited initial transformer energization to a maximum of 10 MVA. Switchgear, manual gang switches, or a similar three-phase simultaneous switching device should be used to support these restricted transformer inrush limitations. This would also eliminate total system outages during sectionalized outages to support maintenance.

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### 3.42 Categories for Distribution-Level Interconnections

The following categories for distribution-level interconnections exist for generators that are allowed to electrically parallel with the electrical power system through a single point of interconnection. Typical installations:





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#### Category 4: Large commercial parallel generation with remote isolation device.

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## **3.43** Tests of the Customer's Equipment

The Company reserves the right, but has no responsibility either actual or implied, to observe the Customer's tests and/or inspection of any of the Customer's protective equipment that is essential to the interconnection, including relays, circuit breakers, protective devices, and related equipment. Inspection shall include simulated test tripping of the Customer's interconnection breakers by the protective relays to verify all protective set points and relay/breaker trip timing prior to connection to the Company's Distribution System.

Unless a different time is otherwise prescribed by a Retail Regulator, the Customer shall provide the Company with notice at least two weeks before the initial energizing and start-up testing of the Customer's generating equipment so that the Company may witness the testing of any equipment and protective systems associated with the interconnection.

# 3.44 Pre-parallel Testing

Commissioning testing, where required, will be performed on-site to verify protective settings and functionality. Upon initial Parallel Operation of a generator, or anytime interface hardware or software is changed that may affect the functions listed below, a commissioning test must be performed. Individual qualified in-testing protective equipment (professional engineer, factory-certified technician, or licensed electrician with experience in testing protective equipment) must perform commissioning testing in accordance with the manufacturer's recommended test procedure to verify the settings and requirements per this standard.

The Company may require that a written commissioning test procedure be submitted at least 10 working days prior to the performance of the commissioning test. The Company has the right, but not obligation, to witness any commissioning test. The Company may also require written certification by the installer describing which tests were performed and their results. Protective Functions to be tested during commissioning, particularly with respect to non-Certified Equipment, may consist of the following:

- Over and under voltage (IEEE Devices 27 and 47)
- Company Distribution System fault detection / Short Circuit Protection (Devices 51 or 67, 51-Neutral or 59-Ground)
- Over and under frequency (Device 81 Over and Under)
- Loss of Phase (Devices 27 or 47, 87)
- Anti-Islanding Function (Device 27/59, 81O, 81U)
- Non-Export Function (if applicable) (Device 46 and/or 67 or 32)

- Inability to energize dead line (Device 27)
- Time delay on restart after utility source is stable (Devices 2, 24, 27, 81, 87)
- Synchronizing controls (if applicable) (Devices 25 and 78)
- Breaker Closing/Reclosing Control (Devices 25, 47/79)
- Other Interconnection Protective Functions that may be required as part of the Interconnection Agreement

Commissioning testing shall include visual inspections of the interconnection equipment and protective settings to confirm compliance with the interconnection requirements. Other checks and tests that may need to be performed include:

- Verifying final Protective Function settings
- Trip test
- In-service test

# **3.44.1 Certified Equipment**

A generator qualifying for interconnection must incorporate UL Certified Equipment that has, at a minimum, passed the commissioning tests described in this standard and are judged to have little or no potential impact on the Company's distribution system. For such generators, it is necessary to perform the following tests:

1) Protective Function settings that have been changed after commissioning testing will require field verification. Tests shall be performed using injected secondary frequencies, voltages and currents, applied waveforms, a test connection using a generator to simulate abnormal utility voltage or frequency, or varying the set points to show that the device trips at the measured (actual) utility voltage or frequency.

2) The non-exporting function shall be checked using secondary injection techniques. This function may also be tested by adjusting the generator output and local loads to verify that the applicable non-exporting criteria (i.e., reverse power or under power) are met.

The Feasibility Study and/or a System Impact Study may impose additional components or additional testing.

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### **3.44.2 Non-Certified Equipment**

Non-Certified Equipment shall be subject to the appropriate tests and any additional requirements as well as those described above. With the Company's approval, these tests may be performed in the factory, in the field as part of commissioning, or a combination of both. The Company, at its discretion, may also approve a reduced set of tests for a particular generator or, for example, if it determines it has sufficient experience with the equipment.

# **3.44.3 Verification of Settings**

At the completion of commissioning testing, the Customer shall confirm all devices are set to Company-approved settings. Verification shall be documented in the commissioning test documentation.

# 3.45 Requirements for Commercial (Parallel) Operation

A Customer's generator and Interconnection Facilities shall be reasonably accessible to Company personnel as necessary for Company to perform its duties and exercise its rights in accordance with the Interconnection Agreement between Company and Customer.

Customer shall operate and maintain its generator and Interconnection Facilities in accordance with electrical practices and shall maintain compliance with approved Interconnection Agreement.

The Company may limit the operation, disconnect, or require the disconnection of a Customer's generator from the Company's Distribution System at any time, with or without notice, in the event of an emergency, or to correct unsafe operating conditions. In accordance with the Interconnection Agreement, the Company may also limit the operation, disconnect, or require the disconnection of Customer's generator from the Company's Distribution System upon the provision of reasonable written notice:

- 1) To allow for routine maintenance, repairs or modifications to the Company's distribution system;
- Upon the Company's determination that a Customer's generator is not in compliance with this Standard and any applicable tariffs or rules that apply to the interconnection; or
- 3) Upon termination of the Interconnection Agreement.

Upon the Customer's written request, the Company shall provide a written explanation of the reason for such curtailment or disconnection.

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# **3.46** Responsibility for Customer's Operations

The Company is not responsible for proper operations of the Customer's generation facilities connected to the Company's Distribution System.

# 3.47 Load Shed Responsibilities

If the Customer's generator drops off line in which an automatic load shed scheme is required, the Customer at this point shall shed the agreed upon load within 10 cycles of the generator dropping off line to prevent this additional load exceeding the available capacity of or causes excessive voltage sag on the distribution circuit. Such requirements shall be noted in the Interconnection Agreement and communicated to the appropriate Company's planning engineering organization.

For a Customer whose generator operations are described by Case 2, Case 3, or Case 4, and who also has a contract with the Company for stand-by or maintenance power, arrangements should be made in the design of the Customer's system to allow for load shed under emergency conditions on the Distribution System.

## **3.48** Reconnection to Distribution Delivery System

The Company may require the Customer to wait up to five minutes to reconnect after the Company's Distribution System voltage and frequency return to normal range and the system is stabilized. Consult the Company for details. (IEEE 1547 latest version)

## 3.49 Disconnecting Service to a Customer Facility

The Interconnection Agreement, tariffs, and applicable policies and procedures, including those of the Company's Retail Regulator, may state criteria for disconnection of Customer facilities which are interconnected to the Company's Distribution System. In general, Customer facilities may be curtailed or disconnected in emergency situations and/or if the Company determines that their continued operation creates a threat to personnel or the Distribution System.

## 3.50 Responsibility for Customer Maintenance

The Customer bears the sole responsibility for maintaining its electrical equipment. The Customer will maintain records of such maintenance activities, which the Company may review at reasonable times upon request. For any generator greater than 300 KVA, a log of generator operations shall be kept by the Customer. At a minimum, the log shall include the date, generator time on, and generator time off, and megawatt and megaVAR output. Maintenance records should be made available for the Company's inspection upon request. The Company reserves the right to inspect the records but has no responsibilities for maintenance either actual or implied.

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#### **3.51** Alterations to Existing Service

The Company's facilities, including meters, transformers, and other equipment, are sized and installed to satisfy the Customer's requirements at the time service is initiated and are based on information supplied by the Customer. Consulting with the Company regarding any change in the Customer's requirements is required. It is essential that the Customer give adequate prior notice to the Company of any substantial additional load or capacity (e.g., a large motor or generator) that is to be connected to the Company's Distribution System. The Customer should not proceed to make these additions until after the Company has notified the Customer that it can either supply the increased load or the conditions under which the increased load or capacity can be accommodated. The Company is not liable for any damages incurred by the Customer connecting additional equipment without notice to the Company.

# 3.52 System Changes

## **3.52.1 Company Changes to Distribution System**

The Company's Distribution System is a dynamic and changing system. If the Company changes the distribution voltage that serves the Customer's location, the Customer will be responsible for paying for all modifications of its equipment that may be required for reconnecting to the Company's reconfigured Distribution System.

## **3.52.2** Customer Changes to Interconnection

The Customer shall notify the Company to obtain prior approval for any proposed modifications to the interconnecting scheme. This includes equipment and software/firmware updates.

## **3.53** Penalty for Interconnecting without Company Authorization

A Customer who interconnects a generator without the Company's prior written authorization will be: (1) liable and responsible for all damages (including any and all third-party damages) and expenses (including all legal fees) that result; (2) responsible for all of the Company's incurred expenses to ensure the safety and reliability of the Company's Distribution System caused by the unauthorized interconnection of the Customer's generator; and (3) subject to surcharges or other penalties as permitted by the Company's Retail Regulator.

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#### 3.54 Periodic Testing

Per the latest version of IEEE-1547, periodic tests shall be performed according to a scheduled time period or other criteria to confirm the performance of any interconnected device or combination of devices forming a system. Unless otherwise specified, periodic testing for generators exporting 300 KVA or greater shall be required with a maximum interval between tests of 5 years. A log of the testing results shall be kept. All test results shall be submitted and added to the log within 30 days following the performance test. The log shall be made available to the Company upon request.

Periodic test requirements and intervals for all interconnection-related Protective Functions and any associated batteries shall be provided by equipment manufacturers or Company personnel.

Reverification of conformance with the interconnection and interoperability requirements of this Standard may be required when any of the following events occur:

- Functional software or firmware changes have been made.
- Any hardware component of the generator has been modified in the field or has been replaced or repaired with parts that are not substitutive components compliant with this Standard.
- Protection settings have been changed after factory testing.
- Protective Functions have been adjusted after the initial commissioning test process.

# 4.0 References

- IEEE 1547-2018 Standard for Interconnecting and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces
- UL 1741-SA
- California Rule 21
- Connecting Small Electric Generators to the Entergy Distribution System (less than 300kVA) (Latest Edition), Entergy Standard Number DR0702 (superseded by this Revision 17 of DR07-01)
- Connecting Large Electric Generators to the Entergy Distribution System (300kVA to 20MVA) (Latest Edition), Entergy Standard Number DR0701 (superseded by this Revision 17 of DR07-01)
- Distribution Inter-Connection Process (Latest Edition), Entergy Standard Number DR0703 (superseded by this Revision 17 of DR07-01)
- Distributed Generation Standards for Inter-Connection (Latest Edition), Entergy Standard Number DR0705 (superseded by this Revision 17 of DR07-01)
- Entergy Customer Installation Standards for Electric Service (Latest edition)
- Entergy Power Quality Standards for Electric Service, latest edition
- Midcontinent Independent System Operator, Inc. Open Access Transmission Tariff (OATT), latest version
- Operating Company Interconnection Agreements
- Applicable Retail Regulator rules, policies, and procedures

# 5.0 Responsibilities

#### **5.1 Interpretation**

Interpretation of this document is the responsibility of the Manager of Standards & Engineering Services or the Manager's designee with concurrence of the Asset Planning Department, the Distribution Business Department, and other Company personnel.

#### 5.2 **Deviation**

The Manager of Standards & Engineering Services is responsible for ensuring that this document is written in accordance with federal, state, and national code requirements as well as consideration of applicable Retail Regulator rules, policies, and procedures. Any requested deviations must be reported to the Manager of Standards & Engineering Services to be considered for inclusion in this document.

In the event requirements for a specific design, configuration, or type of equipment are not set forth in this document, the Customer may interconnect using mutually-agreed upon technical standards, as authorized by the Manager of Standards & Engineering Services and Company personnel. Deviation from this document may be made only with the consent of the Manager of Standards & Engineering Services or the Manager's designee in consultation with Company personnel. No other employee is granted independent authority to grant deviations.