

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSISSIPPI**

**MISSISSIPPI PUBLIC SERVICE COMMISSION**

**2011-AD-002**

**IN RE:       ORDER ESTABLISHING DOCKET TO INVESTIGATE THE  
              DEVELOPMENT AND IMPLEMENTATION    OF NET  
              METERING PROGRAMS AND STANDARDS**

**ORDER SEEKING COMMENTS ON PROPOSED RULES**

Consistent with the Order Establishing Docket entered in this matter, the Mississippi Public Service Commission (“the Commission”) declares its intent to further consider the promulgation and implementation of net metering and interconnection standards. Accordingly, the Commission issues the attached proposed Mississippi Renewable Energy Net Metering Rule (Exhibit A) and the attached proposed Mississippi Distributed Generator Interconnection Rule (Exhibit B<sup>1</sup>) for public consideration and comment pursuant to Miss. Code Ann. § 77-3-45, the Mississippi Administrative Procedures Act, Miss. Code Ann. §§ 25-43-1.101, *et. seq.*, and Rule 26 of the Public Utilities Rules of Practice and Procedure. An economic impact statement, as required by Miss. Code Ann. § 25-43-3.105, is also attached hereto as Exhibit F.

1.     At its December 7, 2010 Open Meeting, the Commission voted to open a docket for the purpose of investigating the feasibility and utility of establishing

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<sup>1</sup> Also attached are a Proposed Level 1 Application Form and Agreement for Interconnection of Distributed Generation Facilities (Exhibit C), a Proposed Level 2 and Level 3 Application Form for Interconnection of Distributed Generation Facilities (Exhibit D), and a proposed Level 2 and 3 Agreement for Interconnection of Distributed Generation Facilities (Exhibit E). These supporting documents are anticipated by the draft Interconnection Rule attached as Exhibit B.

net metering and interconnecting standards for Mississippi. Subsequently, on January 6, 2011, the Commission entered an Order Establishing Docket and initiated a three-phase proceeding to identify, investigate and assess issues concerning net metering.

2. Multiple interested parties intervened during the first phase of proceedings, and formal written comments were filed on behalf of fifteen (15) interveners. Additionally, on July 22, 2011, the Commission conducted a public information seminar at the Jackson Hilton Garden Inn King Edward to further discuss issues related to net metering and interconnection standards.

3. Thereafter, the Commission sought and obtained an independent cost-benefit analysis and report from third party consulting group Synapse Economics Group, Inc. The final report, entitled "Net Metering in Mississippi: Costs, Benefits, and Policy Considerations" ("Synapse Report"), was filed with the Commission on September 19, 2014. After outlining ways in which other states have implemented net metering, the Synapse Report concluded that adopting some form of a net metering policy in Mississippi would likely provide some benefits to Mississippi ratepayers but would depend on the rate of adoption of net metering and the scale of avoided costs.

4. In light of the comments submitted thus far by interested parties, and consistent with the conclusion of the Synapse Report, the Commission finds it is in the best interest of ratepayers to proceed with the development of proposed net metering and interconnection rules. Therefore, pursuant to the Mississippi

Administrative Procedures Act and applicable Commission Rules,<sup>2</sup> the Commission seeks comments concerning the draft rules attached hereto as Exhibits A, B, C, D, and E from all interested persons and public utilities and specifically seeks comments from Mississippi Power Company and Entergy Mississippi, Inc.

5. Any person desiring to participate in or receive further notice of these proceedings, who has not already intervened as an interested party, is required under RP 6.121 of the Commission's Public Utility Rules of Practice and Procedure to file a written petition to intervene on or before twenty (20) days from the date of notice.

6. All written comments or submissions pertaining to these proposed rules shall be filed with the Commission on or before July 1, 2015.

7. The proposed Mississippi Renewable Energy Net Metering Rule (Exhibit A) includes provisions related to the avoided cost of wholesale power, distribution system upgrades and meter costs, and electric distribution company net metering caps. To ensure that these provisions are adequately addressed, the Commission seeks comments responding to a series of issues and questions set out below. Of course, comments should not be limited only to the questions presented, and in general, the Commission seeks comments that would improve the proposed rule(s).

8. **Avoided cost of wholesale power.** The proposed net metering rule defines the avoided cost of wholesale power as the cost to generate a marginal unit

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<sup>2</sup> Miss. Code Ann. §§ 25-43-1.101, *et. seq*; Rule 26 of the Public Utilities Rules of Practice and Procedure

of energy from an EDC's most expensive operating plant: fuel and variable O&M. This is roughly equivalent to the "avoided energy" component used in the Synapse Report. The proposed rule precludes application of excess kWh credits to pay down net metered customers' fixed monthly customer charges; however, the proposed rule requires electric distribution companies to compensate net metered generators for remaining excess kWhs at the end of the annualized period.

9. The "annualized period" considered in the proposed net metering rule is 12 consecutive monthly billing periods, whereupon the conclusion of this period any surplus kWh credits are to be paid out at an avoided cost rate. Because monthly production of some distributed generation technologies (e.g. solar PV) vary significantly across the seasons, and further, because monthly consumption by customers vary significantly across the seasons, the date upon which the annualized period begins (and ends) may have a significant billing impact. If, for example, the distributed generator facility produced more than the net metered customer demanded early in the annualized period but less distributed generation than demand later in the annualized period, the customer would generate net metering credits in early months to apply to his or her bill in later months. This allows retail rate compensation for the early-month surplus generation. If, however, the distributed generator facility produced less than the net metered customer demand in early months of the annualized period but more than demand in later months, the customer would pay retail rate for the not-met-demand in early months but only

be paid at the avoided cost rate for surplus credits at the end of the annualized period.

10. Given that the Synapse Report found that avoided energy costs only represented a portion of the benefits distributed resources like solar rooftop panels would provide, the Commission seeks comments about the avoided costs calculation including: incorporating marginal line losses, the monetary value of emission allowances, the application of a capacity credit, and the inclusion of other forward-looking costs such as avoided capacity costs (in lieu of a capacity credit), avoided T&D capital investments, and avoided environmental compliance or damage costs. The Commission also seeks comment regarding the method for determining the electric distribution company's most expensive operating plant. Further, the Commission encourages suggestions on how often, under what conditions, and by whom these calculations should be made. Please carefully outline how avoided costs should be calculated and give a complete discussion of what should be included, how it should be included and how it impacts overall avoided costs. If possible, please provide a calculation example.

11. The Commission seeks responses to the following questions:

- a. Should the start date of the annualized period be defined in the rule and, if so, on what date should the period begin?
- b. Should the avoided cost of wholesale power include average or marginal line losses in order to more accurately represent the amount of energy avoided at the power plant?
- c. How can the avoided cost of wholesale power include a capacity credit for those distributed generator facilities that reduce peak load?

- d. How can the avoided cost of wholesale power include the generating capacity associated with: (i) avoiding costs of meeting NERC's reserve requirements, or (ii) avoiding line losses?
- e. If a capacity credit is to be provided to distributed generator facilities, should it be technology specific?
- f. How should forward-looking costs (including capacity, T&D capital expenses, avoided environmental variable costs or allowance prices, etc.) be incorporated into the avoided cost of wholesale power?
- g. Should the avoided cost of wholesale power be calculated by the electric distribution companies or should the Commission hire a third party to calculate such costs?
- h. How should the electric distribution companies' most expensive operating plant be determined?
- i. Should energy that is generated by a third party but purchased by an electric distribution company be included in the determination of the most expensive unit, or should the most expensive operating plant be limited to facilities owned by the electric distribution companies?
- j. How often should the avoided cost of wholesale power be recalculated to reflect changes in avoided costs?

12. **Distribution system upgrades and meter costs.** The proposed net metering rule requires that net metered customers cover the cost of meters capable of measuring bi-directional electricity flows, and also states that "Any Distribution System Upgrades, including additional equipment needed that is associated with the export of electricity, shall be at the [Renewable Energy Net Metered Interconnection Customer] RENMIC's expense." The Commission seeks comment regarding the extent to which net metered customers should be responsible for meters and distribution system upgrades.

13. The Commission seeks responses to the following questions:
- a. Should customers approved for Level 1 interconnection review be exempt from paying metering costs, distribution system upgrade costs, or both?
  - b. How should a determination of reasonable distribution system upgrade costs be made?
  - c. What is the definition of a reasonable distribution upgrade and who makes that determination?
  - d. What process should be used to ensure that customers pay for system modifications made only due to the interconnection request, and not for upgrades that the utility would have otherwise undertaken?
  - e. In the case of an overage, who should be responsible for costs that exceed the distribution system upgrade cost estimates?
  - f. How would cost sharing work in the event multiple metered customers are jointly responsible for the same upgrade?
  - g. How would cost sharing work in the event that the electric distribution company seeks to upgrade equipment above and beyond what is necessary based on company expectations of additional requirements at a future date?

14. **Electric distribution company net metering cap.** The proposed net metering rule includes a voluntary cap of total installed net metering capacity of 3 percent of electric distribution companies' current total distribution system peak demand. Electric distribution companies are permitted—but not required—to refuse additional net metering requests if a company's system has already achieved the 3-percent threshold. The Commission seeks comments on whether the 3 percent of peak demand limit should be set relative to current peak demand or the previous year's peak demand. If set relative to the previous year's peak demand, this would

automatically increase the cap if peak demand increases. Additionally, the Commission could consider a third option, that the cap be set to historic peak demand of all previous years.

15. The Commission also requests comments regarding whether or not non-exporting systems should count toward the net metering cap. By definition, small, non-exporting systems do not generate more energy than they consume from the grid, and therefore do not require the distribution utility to make additional distribution system investments.

16. The Commission seeks responses to the following questions:

- a. Who should make the peak demand determination and how should that determination be made?
- b. Should the three-percent of current total distribution system peak demand be set relative to the current or the previous year's peak?
- c. Should small distributed generator facilities count toward the voluntary cap? If not, how should the Commission determine a reasonable threshold for exclusion or inclusion?
- d. Once the three-percent cap is reached, what is the responsibility of the utility to interconnect additional customers?
- e. If distributed generator facilities are permitted to interconnect beyond the three-percent cap, how should these customers be compensated for their production?
- f. Would customers that wish to interconnect beyond the cap be considered Qualifying Facilities under PURPA?

17. The Commission is also interested in what, if any, exemptions should be made available under the proposed Mississippi Distributed Generator Interconnection Rule (Exhibit B), how electric distribution companies may be able



to streamline the interconnection process, and the reasonableness of setting limitations on aggregate generation capacity. Comments concerning the proposed interconnection rule should therefore address, but should not be limited to, the following questions:

- a. Should exemptions be allowed for non-exporting systems?
- b. Under what conditions, if any, should exemptions be made?
- c. Should a streamlined application process be provided to particularly small distributed generator facilities and, if so, what size facility should qualify?
- d. Should a streamlined application process be provided to non-exporting distributed generator facilities?
- e. How should the threshold of aggregate generation on a line section be calculated, and is a 15-percent (or alternative) limit reasonable?
- f. How should the threshold of aggregate generation capacity on a secondary line be calculated, and is a 20kW (or alternative) limit reasonable?

18. Once filed, the submissions and comments will be reviewed by the Commission and will be available to the public via the Commission's Website or by making a public records request. After the comment period has expired, the Commission will conduct a public hearing in accordance with the Mississippi Administrative Procedures Act on a future date to be determined by the Commission and noticed by the Executive Secretary.

19. The Executive Secretary is directed to provide notice to the public that the Commission is seeking comments regarding the subject matter identified herein for possible rule-making by filing such Notice with the Secretary of State's Office for

publication in its Administrative Bulletin in accordance with the Mississippi Administrative Procedures Act, Miss. Code Ann. §§ 25-43-1.101 *et seq.* The Notice shall also advise the public of where, when and how persons may comment on the possible rule-making at issue herein.

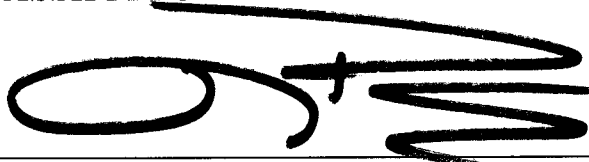
20. The Executive Secretary is further directed to transmit a copy of this Order to all parties of record, the Office of the Attorney General, all affected public utilities and any other parties of interest identified. The proposed rules, any additions and modifications thereof shown to be necessary or appropriate for adoption by the Commission through filed comments or at the public hearing may be incorporated into and become effective upon entry and proper filing of the Final Order.

21. The Executive Secretary shall also cause notice of this proceeding to be published according to applicable law.

This Order is effective upon issuance. Chairman Lynn Posey voted Aye; Vice Chairman R. Stephen Renfroe voted Aye; and Commissioner Brandon Presley voted Aye

SO ORDERED, this the 7th day of April, 2015.

MISSISSIPPI PUBLIC SERVICE COMMISSION

A large, stylized handwritten signature in black ink, appearing to be 'Lynn Posey', written over a horizontal line.

LYNN POSEY, CHAIRMAN

1287  
R. STEPHEN RENFROE, VICE-CHAIRMAN

Brandon Presley  
BRANDON PRESLEY, COMMISSIONER

ATTEST: A True Copy

Katherine Collier  
Katherine Collier,  
Executive Secretary

Effective this the 7<sup>th</sup> day of April, 2015.



## **Mississippi Renewable Energy Net Metering Rule**

The Mississippi Renewable Energy Net Metering Rule (MRENMR) sets forth technical and procedural requirements for Net Metering on qualified Distributed Generator Facilities (DGFs). These DGFs are also subject to the requirements of the Mississippi Distributed Generator Interconnection Rule (MDGIR).

### **DEFINITIONS**

The following capitalized terms, when used in this Rule, shall have the following meanings unless the context clearly indicates otherwise. These definitions are in addition to those found in the MGDIR, which also apply to the MRENMR.

**“Annualized Period”** means a period of 12 consecutive monthly billing periods. A Renewable Energy Net Metered Interconnection Customer’s (RENMIC’s) first annualized period begins on the first day of the first monthly billing period in which the RENMIC generates electricity using Renewable Energy on the electricity customer’s side of the meter under this MRENMR.

**“Avoided Cost of Wholesale Power”** means the cost to an Electric Distribution Company (EDC) of electric energy that the EDC would generate itself or purchase from another source, but for the purchase from the RENMICs. In essence, the avoided cost is the marginal cost to produce or purchase one more unit of electrical energy. When a RENMIC delivers electricity to an EDC, the EDC will reduce the equivalent amount of electricity generated at its most expensive operating plant. The cost avoided consists of the cost of fuel needed to produce that electricity and the corresponding portion of the plant’s operation and maintenance costs. No capacity credit is given as part of the calculation of Avoided Cost of Wholesale Power.

**“Exit Fee”** means a fee that is paid by a customer that reduces load by using a DGF and is intended to compensate the EDC in whole or part for the loss of fixed cost contribution from that customer. Exit fees are not allowed under this Rule.

**“Renewable Energy Net Metered Interconnection Customer” or “RENMIC”** is any electricity customer, such as an industrial, large commercial, residential or small commercial customer, that generates electricity on the customer's side of the meter using a Renewable Energy source. The electricity customer does not need to own the DGF producing the Renewable Energy on the electricity customer's side of the meter in order to qualify as a RENMIC under this MRENMR.

**“Net Metering”** means measuring the difference between the kilowatt-hours supplied by the EDC and the kilowatt-hours produced by a RENMIC and fed back to the EDC over the applicable billing period.

**“Renewable Energy”** means electric energy produced from solar technologies, wind energy, geothermal technologies, wave or tidal action, hydro-power facilities, and biomass. Any energy derived from fossil fuels is not considered renewable.

**“Biomass”** means a power source that is comprised of combustible solids or gases from forest products manufacturing, waste, or byproducts; products from agricultural and orchard crops; waste or co-products from livestock and poultry operations; waste or byproducts from food processing; urban wood waste; municipal liquid waste treatment operations; and landfill gas.

## **NET METERING REQUIREMENTS**

This MRENMR sets forth the Net Metering requirements that apply to Electric Distribution Companies (EDCs) which have customers who generate electricity with Renewable Energy on the customer's side of the meter that wish to Net Meter, as indicated by the customer on the Standard Application. These customers are referred to as a Renewable Energy Net Metered Interconnection Customers (RENMICs) in this Rule.

All EDCs shall offer Net Metering to any customer that generates electricity on the customer's side of the meter using Renewable Energy sources, provided:

- (1) For residential customers, Net Metering Nameplate Capacity of the aggregated DGFs at the facility shall be limited to 10 kW and shall meet the requirements of the MDGIR;
- (2) For non-residential customers, Net Metering Nameplate Capacity for the aggregate DGFs shall be limited to 2 MW and shall meet the requirements of the MDGIR.

EDCs may refuse additional net metering requests if the combined Net Metering capacity, as reported through these requirements, exceeds 3 percent of their current total distribution system peak demand.

Each EDC shall develop a tariff for Net Metering in concordance with this MRENMR. Each EDC shall make Net Metering available to eligible RENMICs on a first-come, first-served basis.

An EDC shall provide Net Metering at non-discriminatory rates that are identical, with respect to rate structure and level, retail rate components, and any monthly fixed charges, to the rates that a RENMIC would be charged if not a RENMIC.

In each monthly billing period, electricity supplied from the RENMIC to the EDC, up to the amount supplied from the EDC to the RENMIC, will be credited to the bill at the full retail rate.

If in any monthly billing period a RENMIC supplies more electricity to the EDC than the EDC delivers to the RENMIC, the EDC shall credit the RENMIC by carrying over any excess kWh credits earned and applying those credits to subsequent billing periods to offset any EDC-produced electricity consumed by the RENMIC in those billing periods until the end of each Annualized Period. At that point, the EDC shall compensate the RENMIC for any remaining credited excess kilowatt-hours generated at the EDC's Avoided Cost of Wholesale Power, and each new Annualized Period shall begin with zero kWh credits.

The Annualized Period shall start the first day of the first monthly billing period the RENMIC generates electricity with Renewable Energy on the customer's side of the meter under this MRENMR.

A RENMIC shall retain this Annualized Period permanently unless either of the following occurs:

- (1) The RENMIC switches EDCs. In such a case, the EDC with whom service is terminating shall treat the end of the service period as if it were the end of the Annualized Period; or
- (2) The EDC, at its discretion, chooses to accept a RENMIC's request for a new Annualized Period.

Excess kWh credits shall not be applied to reduce any fixed monthly customer charges imposed by the EDC.

An EDC shall offer a RENMIC the choice of a time differentiated energy tariff rate or a non-time-differentiated energy tariff rate, if the EDC offers the choice to customers in the same rate class as the RENMIC. If a RENMIC uses a retail billing arrangement that has time-differentiated rates, the EDC shall net any excess production against on-site consumption within the same time-of-use period in the billing period and excess kWh credits will apply to the same time-of-use period.

Any renewable energy credits (RECs) created by the RENMIC are the property of the RENMIC.

The EDC shall not charge any back-up, standby, or Exit Fees to RENMICs.

An EDC shall not charge a RENMIC any fee or charge, or require additional equipment, insurance or any other requirement, unless the fee, charge, or other requirement is specifically authorized in this MRENMR or the MDGIR, or the fee would apply to other customers in the same rate class that are not RENMICs.

All RENMICs must be electrically interconnected with their EDC pursuant to the provisions of the MDGIR. All rules and regulations for interconnected DGFs within the MDGIR apply to RENMICs. Any Distribution System Upgrades, including additional equipment needed that is associated with the export of electricity, shall be at the RENMIC's expense, per the MDGIR.

Nothing in this document shall abrogate any person's obligation to comply with all applicable Federal or State laws, rules or regulations, including the MDGIR.

## **METERS AND METERING**

A RENMIC DGF shall be equipped with metering equipment that can measure the flow of electricity in both directions at the same rate. This is typically accomplished through use of a single bi-directional meter.

A RENMIC may choose to use an existing electric revenue meter if the following criteria are met:

- (1) The meter is capable of measuring the flow of electricity both into and out of the RENMIC's facility at the same rate; and
- (2) The meter is accurate to within plus or minus five percent when measuring electricity flowing from the RENMIC facility to the Electric Distribution System (EDS).

If the RENMIC's existing electric revenue meter does not meet the requirements above, the EDC shall install a new revenue meter for the RENMIC, at the RENMIC's expense, within 10 business days after the interconnection is approved. If the RENMIC uses a retail billing arrangement that has time-differentiated rates, the meter shall have the capability to meter excess production against on-site consumption within the same time-of-use period in the monthly billing period. Any subsequent revenue meter change will be at the EDC's expense.

## **REPORTING REQUIREMENTS**

Each EDC with one or more RENMICs connected to its EDS shall submit to the Mississippi Public Service Commission a Net Metering report within 90 days of the end of the calendar year. The report shall include the following information regarding RENMICs during the reporting period:

- (1) The estimated total kilowatt-hours supplied to the EDS by RENMICs and a

description of the estimation methodology used;

- (2) The total number of RENMICs that were paid for excess generation at the end of the RENMICs' Annualized Periods;
- (3) The total dollar amount that the EDC paid to RENMICs for excess generation at the end of the RENMIC Annualized Periods;
- (4) The total number of net metering facilities by resource type;
- (5) The range and total rated generating capacity of net metering facilities by resource type; and
- (6) The percentage of distribution system peak demand represented by the total rated generating capacity of net metering facilities.

For purposes of these reporting requirements, any estimates shall be made using Commission-approved protocols unless no such protocols are available, in which case the estimates shall be accompanied by detailed calculations demonstrating how the estimates were made.



## Mississippi Distributed Generator Interconnection Rule

The Mississippi Distributed Generation Interconnection Rule (MDGIR) sets forth standards to establish the technical and procedural requirements for Distributed Generator Facilities (DGFs) to be interconnected and operated in Parallel with the Electric Distribution System (EDS) owned or operated by Electric Distribution Companies (EDCs) in Mississippi under the jurisdiction of the Mississippi Public Service Commission (Commission). Capitalized terms used in this rule have the meaning specified in the section titled DEFINITIONS.

### DEFINITIONS

When used in this chapter, the following terms and phrases shall have the following meaning:

**“Adverse System Impact”** means a negative effect, due to technical or operational limits on conductors or equipment being exceeded, that compromises the safety and reliability of the EDS.

**“Applicable Laws and Regulations”** means all duly promulgated and applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**“Certificate of Completion”** means a certificate in a completed form approved by the Commission containing information about the Interconnection Equipment to be used, its installation and local inspections.

**“Certified Interconnection Equipment” or “Certified Equipment” or “Certified”** means a designation that the Interconnection Equipment meets the following requirements:

1. The Interconnection Equipment has been tested by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA) in accordance with the following relevant codes and standards:
  - (a) IEEE 1547.1 Standard for Conformance Tests Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems; and
  - (b) Underwriters Laboratories (“UL”), UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems;
2. The Interconnection Equipment shall meet the requirements of the most current approved version of each code and standard listed above, as amended and

supplemented at the time the Interconnection Request is submitted to be deemed Certified;

3. The Interconnection Equipment has been labeled and is publicly listed by such NRTL at the time of the interconnection application;
4. The Interconnection Customer verifies that the intended use of the Interconnection Equipment falls within the use or uses for which the Interconnection Equipment is labeled and is listed by the NRTL;
5. If the Interconnection Equipment is an integrated equipment package such as an inverter, then the Interconnection Customer shall show that the generator or other electric source being utilized is compatible with the Interconnection Equipment and is consistent with the testing and listing specified for this type of Interconnection Equipment;
6. If the Interconnection Equipment includes only interface components (switchgear, multi-function relays, or other interface devices), an Interconnection Customer shall demonstrate that the generator or other electric source being utilized is compatible with the Interconnection Equipment and is consistent with the testing and listing specified for this type of Interconnection Equipment; and
7. Certified Interconnection Equipment shall not require further design testing or Production Testing, as specified by IEEE Standard 1547 Sections 5.1 and 5.2, or additional Interconnection Equipment modification to meet the requirements. However, nothing herein shall preclude the need for an on-site Witness Test or operational test by the Interconnection Customer.

**“Commission”** means the Mississippi Public Service Commission.

**“Commissioning Tests”** means the tests applied to a DGF by an Interconnection Customer after construction is completed to verify that the DGF does not create Adverse System Impacts. At a minimum, the scope of the Commissioning Tests performed shall include the commissioning test specified by IEEE Standard 1547 section 5.4 “Commissioning Tests.”

**“Distributed Generator Facility”** or **“DGF”** means the equipment used by an Interconnection Customer to generate or store electricity that operates in Parallel with the EDS. A DGF typically includes an electric generator, prime mover, and the Interconnection Equipment required to safely interconnect with the EDS or local electric power system.

**“Distribution System Upgrade”** means a required addition or modification to the EDC's EDS at or beyond the Point of Common Coupling (PCC) to accommodate the interconnection of a DGF. Distribution System Upgrades do not include Interconnection Facilities.

**“Electric Distribution Company” or “EDC”** means an electric public utility that distributes electricity to customers and is subject to the jurisdiction of the Commission pursuant to the provisions of Mississippi Code Annotated §§ 77-3-1, *et seq.*

**“Electric Distribution System” or “EDS”** means the facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries from interchanges with higher voltage transmission networks that transport bulk power over longer distances. The voltage levels at which EDSs operate differ among areas but generally carry less than 69 kilovolts of electricity. EDS has the same meaning as the term Area EPS, as defined in 3.1.6.1 of IEEE Standard 1547.

**“Facilities Study”** means an engineering study conducted by the EDC to determine the required modifications to the EDC’s EDS, including the cost and the time required to build and install such modifications as necessary to accommodate an Interconnection Request.

**“Fault Current”** means the electrical current that flows through a circuit during an electrical fault condition. A fault condition occurs when one or more electrical conductors contact ground or each other. Types of faults include phase to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase.

**“Feasibility Study”** means a study performed to identify the existence of obvious adverse impacts before additional studies are undertaken for the proposed project to continue in the process.

**“Governmental Authority”** mean any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, EDC or any affiliate thereof.

**“IEEE Standard 1547”** means the Institute of Electrical and Electronics Engineers, Inc. (IEEE) Standard 1547 (2003) "Standard for Interconnecting Distributed Resources with Electric Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.

**“IEEE Standard 1547.1”** means the IEEE Standard 1547.1 (2005) "Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.

**“Interconnection Agreement” or “Agreement”** means a form of interconnection agreement approved by the Commission which is applicable to Interconnection Requests

pertaining to DGFs. The agreement between the Interconnection Customer and the EDC governs the connection of the DGF to the EDC's EDS, as well as the ongoing operation of the DGF after it is connected to the EDC's EDS.

**“Interconnection Application” or “Application”** means a form of interconnection application approved by the Commission which is applicable to Interconnection Requests pertaining to DGFs. This application provides the information needed by the EDC to review the request for interconnection. For the Level 1 review process, the Application and Agreement are part of the same document.

**“Interconnection Customer”** means an entity that submits an Interconnection Request for a DGF to an EDC's EDS.

**“Interconnection Equipment”** means a group of equipment, components, or an integrated system connecting an electric generator with a local electric power system or an EDS that includes all interface equipment including switchgear, protective devices, inverters or other interface devices. Interconnection equipment may be installed as part of an integrated equipment package that includes a generator or other electric source.

**“Interconnection Facilities”** means facilities and equipment required by the EDC to accommodate the interconnection of a DGF. Collectively, Interconnection Facilities include all facilities and equipment between the DGF and the PCC, including modification, additions, or upgrades that are necessary to physically and electrically interconnect the DGF to the EDS. Interconnection facilities are sole use facilities and do not include Distribution System Upgrades.

**“Interconnection Request”** means an Interconnection Customer's request, in the form of an Application approved by the Commission, requesting the interconnection of a new DGF, or to increase the capacity or modify operating characteristics of an existing approved DGF that is interconnected with the EDC's EDS.

**“Line Section”** means that portion of an EDC's distribution system connected to an Interconnection Customer, bounded by automatic sectionalizing devices or the end of the distribution line.

**“Local Electric Power System” or “Local EPS”** means facilities that deliver electric power to a load that are contained entirely within a single premises or group of premises. Local electric power system has the same meaning as the term local electric power system defined in 3.1.6.2 of IEEE Standard 1547.

**“Minor Equipment Modification”** means changes to the DGF that do not have a material impact on safety or reliability of the EDS.

**“Mississippi Distributed Generation Interconnection Rule (MDGIR)”** means the most current version of the procedures for interconnecting Distributed Generator Facilities adopted by the Mississippi Public Service Commission.

**“Nameplate Capacity”** means the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer and is usually indicated on a nameplate physically attached to the power production equipment.

**“Nationally Recognized Testing Laboratory” or “NRTL”** means a qualified private organization that meets the requirements of the Occupational Safety and Health Administration's (OSHA) regulations. NRTLs perform independent safety testing and product certification. Each NRTL shall meet the requirements as set forth by OSHA in the NRTL program.

**“Parallel Operation” or “Parallel”** means the sustained state of operation over 100 milliseconds, which occurs when a DGF is connected electrically to the EDS and thus has the ability for electricity to flow from the DGF to the EDS.

**“Point of Common Coupling” or “PCC”** means the point where the DGF is electrically connected to the EDS. Point of common coupling has the same meaning as defined in 3.1.13 of IEEE Standard 1547.

**“Primary Line”** means a distribution line rated at greater than 600 volts.

**“Production Test”** means production test as defined in IEEE Standard 1547.

**“Queue Position”** means the order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, that is established based upon the date and time of receipt of the valid Interconnection Request by the EDC.

**“Radial Distribution Circuit”** means a circuit configuration where independent feeders branch out radially from a common source of supply. From the standpoint of a utility system, the area described is between the generating source or intervening substations and the customer's entrance equipment. A radial distribution system is the most common type of connection between a utility and load in which power flows in one direction from the utility to the load.

**“Scoping Meeting”** means a meeting between representatives of the Interconnection Customer and EDC conducted for the purpose of discussing alternative interconnection options, exchanging information including any EDS data and earlier study evaluations that would be reasonably expected to impact interconnection options, analyzing information, and determining the potential feasible points of interconnection.

**“Secondary Line”** means a service line subsequent to the Primary Line that is rated for 600 volts or less, also referred to as the customer's service line.

**“System Impact Study”** means a study that identifies the electric system impacts that would result if the proposed DGF were interconnected without DGF modifications or

EDS modifications, focusing on the Adverse System Impacts identified in the Feasibility Study.

**“UL Standard 1741”** means Underwriters Laboratories' standard titled "Inverters Converters, and Controllers for Use in Independent Power Systems," as amended and supplemented at the time the Interconnection Request is submitted.

**“Witness Test”** means verification (either by an on-site observation or review of documents) by the EDC that the installation evaluation required by IEEE Standard 1547 Section 5.3 and the Commissioning Test required by IEEE Standard 1547 Section 5.4, have been adequately performed. For Interconnection Equipment that has not been Certified, the Witness Test shall also include the verification by the EDC of the on-site design tests as required by IEEE Standard 1547 Section 5.1 and verification by the EDC of Production Tests required by IEEE Standard 1547 Section 5.2. All tests verified by the EDC are to be performed in accordance with the applicable test procedures specified by IEEE Standard 1547.1.

## **INTERCONNECTION REQUESTS, FEES, AND FORMS**

Interconnection Customers seeking to interconnect a DGF shall submit an Interconnection Request to the EDC that owns the EDS to which interconnection is sought, using an application approved by the Commission. Electronic versions of such Commission-proved Application forms shall be posted on the EDC's website. The EDC shall establish processes for accepting Interconnection Requests electronically.

When an Interconnection Customer is not currently a customer of the EDC at the proposed PCC, upon request from the EDC, the Interconnection Customer shall provide proof of site control evidenced by a property tax bill, deed, lease agreement, or other legally binding contract.

Interconnection fees shall be governed as follows for all Interconnection Requests and shall be published on each EDC's website:

- (a) An EDC may not charge an application, or other fee, to an applicant that requests Level 1 interconnection review. However, if an application for Level 1 interconnection review is denied because it does not meet the requirements for Level 1 interconnection review and the applicant resubmits the application under another review procedure in accordance with the MDGIR, the EDC may impose a fee for the resubmitted application, consistent with this section.
- (b) For a Level 2 interconnection review, the EDC may charge fees of up to \$50.00 plus \$1.00 per kilowatt of the customer-generator facility's capacity, plus the reasonable cost of any required minor modifications to the electric distribution system or additional review. Costs for such minor



modifications or additional review will be based on the EDC's non-binding, good faith estimates and the ultimate actual installed costs. Costs for engineering work done as part of any additional review will not exceed \$100.00 per hour.

- (c) For a Level 3 interconnection review, the EDC may charge fees of up to \$100.00 plus \$2.00 per kilowatt of the customer-generator facility's capacity, as well as charges for actual time spent on any required impact or facilities studies. Costs for engineering work done as part of an impact study or interconnection facilities study will not exceed \$100.00 per hour. If the EDC must install facilities in order to accommodate the interconnection of the customer generating facility, the cost of such facilities will be the responsibility of the applicant.

When the EDC determines that an Interconnection Request is complete, a modification of DGF design by the Interconnection Customer other than a Minor Equipment Modification that is not agreed to in writing by the EDC shall require submission of a new Interconnection Request.

## **INTERCONNECTION REVIEW LEVELS**

The EDC shall review Interconnection Requests using one of the three levels of review procedures established below. The EDC shall first use the level of DGF Agreement specified by the Interconnection Customer in the Application. The EDC may not impose additional requirements not specifically authorized unless the EDC and the Interconnection Customer mutually agree to do so in writing.

When an Interconnection Request is for an increase in capacity for an existing DGF, the Interconnection Request shall be evaluated on the basis of the new total Nameplate Capacity of the DGF.

When an Interconnection Request is for a DGF that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single PCC, the Interconnection Request shall be evaluated on the basis of the aggregate Nameplate Capacity of the multiple devices.

## **LEVEL 1 INTERCONNECTION REVIEWS**

The EDC shall use Level 1 review procedures to evaluate Interconnection Requests when:

- (a) The DGF is inverter-based;
- (b) The DGF has a Nameplate Capacity of 10 kW or less; and

- (c) The Interconnection Equipment proposed for the DGF is Certified.

For Level 1 Interconnection Review, the EDC shall first evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:

- (a) For interconnection of a proposed DGF to a Line Section on a Radial Distribution Circuit, the aggregated generation on the Line Section, including the proposed DGF, shall not exceed 15% of the Line Section annual peak load.
- (b) When a proposed DGF is to be interconnected to a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed DGF, may not exceed 20 kW.
- (c) When a proposed DGF is single-phase and is to be interconnected to a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
- (d) Construction of facilities by the EDC on its own system is not required to accommodate the DGF.

The Level 1 Interconnection Review shall then be conducted in accordance with the following procedures:

- (a) An EDC shall, within 10 business days after receipt of the Interconnection Request, inform the Interconnection Customer in writing or by electronic mail that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing.
- (b) When an Interconnection Request is complete, the EDC shall assign a Queue Position.
- (c) The EDC shall, within 15 business days after notifying a Level 1 applicant that the application is complete, indicate that the DGF equipment meets all Level 1 criteria, verify the DG can be interconnected safely and reliably using Level 1 screens, and provide a conditionally approved Level 1 Interconnection Application Form and Agreement to the Interconnection Customer.

Unless the EDC determines and demonstrates to the Interconnection Customer that a DGF cannot be interconnected safely or reliably to its system and provides a letter to the Interconnection Customer explaining its reasons for denying an Interconnection Request, the EDC's final approval of the Interconnection Agreement is subject to the following conditions:



- (a) The DGF has been approved by local or municipal electric code officials with jurisdiction over the interconnection;
- (b) The EDC has received the required information on the Certificate of Completion from the Interconnection Customer. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
- (c) The EDC has either waived the right to a Witness Test or has completed its Witness Test in accordance with the MDGIR.

Within 10 business days of the estimated commissioning date indicated on the Interconnection Request, the EDC may, upon reasonable notice and at a mutually convenient time, conduct a Witness Test of the DGF to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. If the EDC does not perform the Witness Test within the 10 business day period or such other time as is mutually agreed to by the parties, the Witness Test is deemed waived.

When a DGF is not approved under a Level 1 review, the Interconnection Customer may submit a new Interconnection Request for consideration under Level 2 or Level 3 procedures.

## **LEVEL 2 INTERCONNECTION REVIEWS**

The EDC shall use the Level 2 Interconnection Review procedure to evaluate an Interconnection Request when:

- (a) The DGF has a Nameplate Capacity rating of 2 MW or less; and
- (b) The Interconnection Equipment proposed for the DGF is Certified;

or when:

- (a) The DGF has a Nameplate Capacity of 10 MW or less; and
- (b) The aggregated total of the Nameplate Capacity of all of the generators on the circuit, including the proposed DGF, is 10 MW or less; and
- (c) The DGF uses reverse power relays or other protection functions that prevent power flow onto the EDS; and
- (d) The DGF is not served by a shared transformer.

No construction of facilities by an EDC shall be required to accommodate the DGF, except as permitted by an additional review for minimal modifications of the EDS, as described in these Level 2 procedures.

For Level 2 Interconnection Review, the EDC first shall evaluate the potential for Adverse System Impacts using the following screens, which must be satisfied:

- (a) For interconnection of a proposed DGF to a radial distribution circuit, the aggregated generation on the Line Section, including the proposed DGF, may not exceed 15% of the Line Section annual peak load.
- (b) The proposed DGF, in aggregation with other generation on the distribution circuit, may not contribute more than 10% to the distribution circuit's maximum Fault Current at the point on the Primary Line nearest the Point of Common Coupling (PCC).
- (c) The proposed DGF, in aggregate with other generation on the distribution circuit, may not cause any distribution protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers), or other customer equipment on the EDS to be exposed to Fault Currents exceeding 87.5% of the short circuit interrupting capability. The Interconnection Request may not receive approval for interconnection on a circuit that already exceeds 87.5% of the short circuit interrupting capability.
- (e) When a DGF is to be connected to three-phase, three-wire primary EDC distribution lines, a three-phase or single-phase generator shall be connected phase-to-phase.
- (f) When a DGF is to be connected to three-phase, four-wire primary EDC distribution lines, a three-phase or single-phase generator shall be connected line-to-neutral and shall be effectively grounded.
- (g) When the proposed DGF is to be interconnected on a single-phase shared Secondary Line, the aggregate generation capacity on the shared Secondary Line, including the proposed DGF, shall not exceed 20 kW.
- (h) When a proposed DGF is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition may not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.
- (i) A DGF, in aggregate with other generation interconnected to the distribution side of a substation transformer feeding the circuit where the DGF proposes to interconnect, may not exceed 10 MW in an area where

there are known or posted transient stability limitations to generating units located in the general electrical vicinity.

- (j) No construction of facilities by an EDC on its own system shall be required to accommodate the DGF.

The Level 2 Interconnection Review shall then be conducted in accordance with the following procedures:

- (a) An EDC shall, within 10 business days after receipt of the Interconnection Request, inform the Interconnection Customer in writing or by electronic mail that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing. As part of this process, the EDC shall assign a Queue Position. The Queue Position of the Interconnection Request shall be used to determine the potential Adverse System Impact of the DGF based on the relevant screening criteria. If there are higher queued Interconnection Requests on the same radial line circuit, the EDC shall evaluate the Interconnection Requests by performing any Level 2 screens requiring aggregate capacity calculations and determine if the DGF in combination with the higher queued Interconnection Requests exceeds any of the aggregate capacity requirements. If an aggregate capacity requirement is exceeded, the EDC shall notify the Interconnection Customer and shall not be obligated to meet the timeline for reviewing the Interconnection Request until such time as the EDC has completed the review of all other Interconnection Requests that have a higher Queue Position and impact the aggregate capacity calculation that has been exceeded.
- (b) At the time an EDC determines additional information is required to complete an evaluation, the EDC shall request the information. The time necessary to complete the evaluation may be extended by mutual agreement of the parties, but only to the extent of the time required for receipt of the additional information. During an extension of time to submit additional information, the EDC may not alter the Interconnection Customer's Queue Position.
- (c) Within 20 business days after the EDC notifies the Interconnection Customer that it has received a completed Interconnection Request, the EDC shall:
  - (1) Evaluate the Interconnection Request using the Level 2 screening criteria;
  - (2) Review any analysis provided by the Interconnection Customer, using the same criteria used by the customer; and

- (3) Provide the Interconnection Customer with the EDC's evaluation, including a comparison of the results of its own analyses with those of Interconnection Customer, if applicable. When an EDC does not have a record of receipt of the Interconnection Request and the Interconnection Customer can demonstrate that the original Interconnection Request was delivered, the EDC shall expedite its review to complete the evaluation of the Interconnection Request within 20 business days of the Interconnection Customer's re-submittal.

The EDC shall provide the Interconnection Customer a DGF Interconnection Agreement within 5 business days of its determination that the Interconnection Request passes the Level 2 screening criteria.

When a DGF has failed to meet one or more of the Level 2 screens, the EDC shall offer to perform additional review for minimal modifications of the EDS to determine whether minimal modifications to the EDS would enable the interconnection to be made consistent with safety, reliability and power quality criteria. The EDC shall provide the Interconnection Customer with a nonbinding, good faith estimate of the costs of additional review for minimal modifications of the EDS. The EDC shall undertake the additional review for minimal modifications of the EDS or the modifications only after the Interconnection Customer consents to pay for the review and modifications.

If the DGF fails one or more of the Level 2 screening criteria but the EDC determines that minimal modifications to the EDS would enable the DGF to interconnect safely and reliably, the EDC shall provide the Interconnection Customer a DGF Interconnection Agreement within 5 business days of making that determination.

If the EDC finds that the DGF cannot be interconnected with minimal modifications to the EDS, the EDC shall provide the Interconnection Customer a letter explaining its reasons for denying the Interconnection Request. The Interconnection Customer may submit a new Interconnection Request for consideration under a Level 3 interconnection review.

An Interconnection Customer shall have 30 business days to sign and return the Agreement. When an Interconnection Customer does not sign the DGF Interconnection Agreement within 30 business days, the Interconnection Request shall be deemed withdrawn unless the Interconnection Customer requests in writing prior to the expiration of the 30 business day period to extend the deadline. The EDC may not unreasonably deny the request for extension.

The DGF Interconnection Agreement shall not become final until:

- (a) The milestones agreed to in the DGF Interconnection Agreement are satisfied;

- (b) The DGF is approved by electric code officials with jurisdiction over the interconnection;
- (c) The Interconnection Customer provides a Certificate of Completion to the EDC. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
- (d) The Witness Test was successfully completed per the terms and conditions found in the Agreement, unless waived by the EDC.

If the DGF is not approved under a Level 2 review, the EDC shall provide the Interconnection Customer a letter explaining its reasons for denying the Interconnection Request. The Interconnection Customer may submit a new Interconnection Request for consideration under a Level 3 interconnection review. The Queue Position assigned to the Level 2 Interconnection Request shall be retained provided the request is made within 15 business days of notification that the current Interconnection Request is denied.

### **LEVEL 3 INTERCONNECTION REVIEWS**

The EDC shall use the Level 3 review procedure to evaluate an Interconnection Request when the Interconnection Customer requests Level 3 review.

The Level 3 review shall be conducted in accordance with the following process:

- (a) An EDC shall, within 10 business days of receipt of an Interconnection Request, inform the Interconnection Customer in writing or by electronic means that the Interconnection Request is complete or incomplete and indicate what, if any, materials are missing.
- (b) When the Interconnection Request is deemed not complete, the EDC shall provide the Interconnection Customer with a written list detailing information required to complete the Interconnection Request. The Interconnection Customer shall have 10 business days to provide appropriate data in order to complete the Interconnection Request, or the Interconnection Request shall be considered withdrawn. The parties may agree to extend the time for receipt of the additional information. The Interconnection Request shall be deemed complete when the required information has been provided by the Interconnection Customer, or the parties have agreed that the Interconnection Customer may provide additional information at a later time.
- (c) When an Interconnection Request is complete, the EDC shall assign a Queue Position. The Queue Position of an Interconnection Request shall be used to determine the cost responsibility necessary for the facilities to accommodate the interconnection. The EDC shall notify the

Interconnection Customer about other higher-queued Interconnection Customers that have the potential to impact the cost responsibility.

- (d) Level 3 Scoping Meetings shall be conducted as follows:
- (1) By mutual agreement of the parties, the Scoping Meeting, interconnection Feasibility Study, interconnection System Impact Study, or interconnection Facilities Study provided for in a Level 3 review may be waived;
  - (2) If agreed to by the parties, a Scoping Meeting shall be held within 10 business days, or other mutually agreed to time, after the EDC has notified the Interconnection Customer that the Interconnection Request is deemed complete. The purpose of the meeting shall be to review the Interconnection Request, existing studies relevant to the Interconnection Request, and the results of the Level 1 or Level 2 screening criteria;
  - (3) When the parties agree at a Scoping Meeting that an interconnection Feasibility Study shall be performed, the EDC shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection Feasibility Study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study;
  - (4) When the parties agree at a Scoping Meeting that an interconnection Feasibility Study is not required, the EDC shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection System Impact Study agreement, including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study; and
  - (5) When the parties agree at the Scoping Meeting that an interconnection Feasibility Study and System Impact Study are not required, the EDC shall provide to the Interconnection Customer, no later than 5 business days after the Scoping Meeting, an interconnection Facilities Study agreement including an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study.
- (e) Any required interconnection studies shall be carried out using the following guidelines:



- (1) An interconnection Feasibility Study shall include the following analyses and conditions for the purpose of identifying and addressing potential Adverse System Impacts to the EDC's EDS that would result from the interconnection:
  - (A) Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - (B) Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - (C) Initial review of grounding requirements and system protection;
  - (D) Description and nonbinding estimated cost of facilities required to interconnect the DGF to the EDC's EDS in a safe and reliable manner; and
  - (E) Additional evaluations at the expense of the Interconnection Customer, when an Interconnection Customer requests that the interconnection Feasibility Study evaluate multiple potential points of interconnection.
- (2) An interconnection System Impact Study shall evaluate the impact of the proposed interconnection on both the safety and reliability of the EDC's EDS. The study shall identify and detail the system impacts that result when the proposed DGF is interconnected without project or system modifications, focusing on the Adverse System Impacts identified in the interconnection Feasibility Study and potential impacts including those identified in the Scoping Meeting. The study shall consider all generating facilities that, on the date the interconnection System Impact Study is commenced, are directly interconnected with the EDC's system, have a pending higher Queue Position to interconnect to the system, and have a signed a DGF Interconnection Agreement.
  - (A) An interconnection System Impact Study shall be performed when the interconnection Feasibility Study identifies a potential distribution system Adverse System Impact. The EDC shall send the Interconnection Customer an interconnection System Impact Study agreement within 5 business days of transmittal of the interconnection Feasibility Study report. The agreement shall include an outline of the scope of the study and a good faith estimate of the cost to perform the study. The System Impact Study shall include:

- i. A load flow study;
  - ii. Identification of affected systems;
  - iii. An analysis of equipment interrupting ratings;
  - iv. A protection coordination study;
  - v. Voltage drop and flicker studies;
  - vi. Protection and set point coordination studies;
  - vii. Grounding reviews; and
  - viii. Impact on system operation.
- (B) An interconnection System Impact Study shall consider the following criteria:
- i. A short circuit analysis;
  - ii. A stability analysis;
  - iii. Alternatives for mitigating Adverse System Impacts on affected systems;
  - iv. Voltage drop and flicker studies;
  - v. Protection and set point coordination studies; and
  - vi. Grounding reviews.
- (C) The interconnection System Impact Study shall provide the following:
- i. The underlying assumptions of the study;
  - ii. The results of the analyses;
  - iii. A list of any potential impediments to providing the requested interconnection service;
  - iv. Required Distribution System Upgrades; and
  - v. A nonbinding good faith estimate of cost and time to construct any required Distribution System Upgrades.
- (D) The parties shall use an interconnection System Impact Study agreement approved by the Commission.
- (3) The interconnection Facilities Study shall be conducted as follows:
- (A) Within 5 business days of completion of the interconnection System Impact Study, the EDC shall send a report to the Interconnection Customer with an interconnection Facilities Study agreement, which includes an outline of the scope of the study and a nonbinding good faith estimate of the cost to perform the study;



- (B) The interconnection Facilities Study shall estimate the cost of the equipment, engineering, procurement and construction work including overheads needed to implement the conclusions of the interconnection Feasibility Study and the interconnection System Impact Study to interconnect the DGF. The interconnection Facilities Study shall identify:
  - i. The electrical switching configuration of the equipment, including transformer, switchgear, meters and other station equipment;
  - ii. The nature and estimated cost of the EDC's Interconnection Facilities and Distribution System Upgrades necessary to accomplish the interconnection; and
  - iii. An estimate of the time required to complete the construction and installation of the facilities;
- (C) The parties may agree to permit an Interconnection Customer to separately arrange for a third party to design and construct the required Interconnection Facilities. The EDC may review the design of the facilities under the interconnection Facilities Study agreement. When the parties agree to separately arrange for design and construction and to comply with security and confidentiality requirements, the EDC shall make all relevant information and required specifications available to the Interconnection Customer to permit the Interconnection Customer to obtain an independent design and cost estimate for the facilities, which shall be built in accordance with the specifications;
- (D) Upon completion of the interconnection Facilities Study, and with the agreement of the Interconnection Customer to pay for the Interconnection Facilities and Distribution System Upgrades identified in the interconnection Facilities Study, the EDC shall provide the Interconnection Customer with a DGF Interconnection Agreement within 5 business days; and
- (f) When an EDC determines, as a result of the interconnection studies conducted under a Level 3 review, that it is appropriate to interconnect the DGF, the EDC shall provide the Interconnection Customer with a DGF Interconnection Agreement. If the Interconnection Request is denied, the

EDC shall provide a written explanation setting forth the reasons for denial;

- (g) An Interconnection Customer shall have 30 business days from receipt of the DGF Interconnection Agreement, unless another mutually agreeable time frame is reached, to sign and return the DGF Interconnection Agreement to the EDC. If an Interconnection Customer does not sign the DGF Interconnection Agreement within 30 business days, the Interconnection Request shall be deemed withdrawn unless the Interconnection Customer requests in writing, prior to the expiration of the 30 business-day period, to extend the deadline. The EDC may not unreasonably deny the request for extension. When construction is required, the interconnection of the DGF shall proceed according to milestones agreed to by the parties in the DGF Interconnection Agreement. The DGF Interconnection Agreement may not be final until:

- (1) The milestones agreed to in the DGF Interconnection Agreement are satisfied;
- (2) The DGF is approved by electric code officials with jurisdiction over the interconnection;
- (3) The Interconnection Customer provides a Certificate of Completion to the EDC. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
- (4) The Witness Test was successfully completed per the terms and conditions found in the Agreement, unless waived by the EDC.

An interconnection System Impact Study is not required when the interconnection Feasibility Study concludes there is no Adverse System Impact, or when the study identifies an Adverse System Impact, but the EDC is able to identify a remedy without the need for an interconnection System Impact Study.

The parties shall use a form of interconnection Feasibility Study agreement approved by the Commission.

## **TECHNICAL STANDARDS**

The technical standard to be used in evaluating all Interconnection Requests under Level 1, Level 2, and Level 3 reviews, unless otherwise provided for in these procedures, is IEEE Standard 1547. IEEE 1547.2, "Application Guide for IEEE 1547 Standard for Interconnecting Distributed Resources with Electric Power Systems," shall be used as a guide (but not a requirement) to detail and illustrate the interconnection protection requirements that are provided in IEEE 1547.

## **POINT OF COMMON COUPLING**

To minimize the cost of interconnecting multiple DGFs, the EDC or the Interconnection Customer may propose a single PCC for multiple DGFs located at a single site. If the Interconnection Customer rejects the EDC's proposal for a single PCC, the Interconnection Customer shall pay the additional cost, if any, of providing a separate PCC for each DGF. If the EDC rejects the customer's proposal for a single PCC without providing a written technical explanation, the EDC shall pay the additional cost, if any, of providing a separate PCC for each DGF.

## **RECORDS AND REPORTS**

An EDC shall maintain records of the following for a minimum of 3 years:

- (a) The total number of and the Nameplate Capacity of the Interconnection Requests received, approved and denied under Level 1, Level 2, and Level 3 reviews;
- (b) The number of Interconnection Requests that were not processed within the timelines established in this rule;
- (c) The number of Scoping Meetings held and the number of feasibility studies, impact studies, and facility studies performed and the fees charged for these studies;
- (d) The justifications for the actions taken to deny Interconnection Requests; and

An EDC shall provide a report to the Commission containing the information required in paragraphs (a)-(d) above within 90 calendar days of the close of each year.

## **INFORMATION FOR PROSPECTIVE INTERCONNECTION CUSTOMERS**

An EDC shall designate a contact person and contact information on its website and for the Commission's website for submission of all Interconnection Requests and from whom information on the Interconnection Request process and the EDC's EDS can be obtained regarding a proposed DGF. The information shall include studies and other materials useful to an understanding of the feasibility of interconnecting a DGF at a particular point on the EDC's EDS, except to the extent that providing the materials would violate security requirements or confidentiality agreements, or otherwise would be contrary to Mississippi or federal law and regulations. In appropriate circumstances, the EDC may require execution of a confidentiality agreement prior to release of information about the EDC's EDS.

When the EDC determines that an Interconnection Request is complete, a modification of DGF design by the Interconnection Customer other than a Minor Equipment Modification that is not agreed to in writing by the EDC shall require submission of a new Interconnection Request.

### **ADDITIONAL TECHNICAL REQUIREMENTS**

DGFs shall be capable of being isolated from the EDC. For Level 2 and Level 3 interconnection, the isolation shall be by means of a lockable, visible-break isolation device whose status is clearly indicated and is accessible by the EDC. The isolation device shall be installed, owned and maintained by the owner of the DGF and located between the DGF and the PCC. A draw-out type circuit breaker with a provision for padlocking at the draw-out position can be considered an isolation device for purposes of this requirement. A draw-out type circuit breaker has a switching device capable of making, carrying and breaking currents under normal and abnormal circuit conditions such as those of a short circuit. A draw-out circuit breaker can be physically removed from its enclosure creating a visible break in the circuit. For the purposes of these regulations, the draw-out circuit breaker shall be capable of being locked in the open, draw-out position. Level 1 interconnections do not require an external isolation device.

A Level 2 or Level 3 Interconnection Customer may elect to provide the EDC access to an isolation device that is contained in a building or area that may be unoccupied and locked or not otherwise readily accessible to the EDC, by installing a lockbox provided by the EDC that shall provide ready access to the isolation device. The Interconnection Customer shall install the lockbox in a location that is readily accessible by the EDC, and the Interconnection Customer shall permit the EDC to affix a placard in a location of its choosing that provides clear instructions to EDC operating personnel on access to the isolation device. In the event that the Interconnection Customer fails to comply with the terms of this subsection and the EDC needs to gain access to the isolation device, the EDC shall not be held liable for any damages resulting from any necessary EDC action to isolate the Interconnection Customer.

Any metering necessitated by a DGF shall be installed, operated and maintained in accordance with applicable tariffs. Any such metering requirements shall be clearly identified as part of the DGF Interconnection Agreement executed by the Interconnection Customer and the EDC.

The EDC shall design, procure, construct, install, and own any Distribution System Upgrades. The actual cost of the Distribution System Upgrades, including overheads, shall be directly assigned to the Interconnection Customer. The Interconnection Customer may be entitled to financial contribution from any other EDC customers who may in the future utilize the upgrades paid for by the Interconnection Customer. Such contributions shall be governed by the rules, regulations, and decisions of the Commission.

The Interconnection Customer shall design its DGF to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EDC's applicable tariff for a comparable load customer. EDC may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3 of the "Mississippi Distributed Generator Interconnection Rule Level 2 and Level 3 Agreement for Interconnection of Distributed Generator Facilities." Under no circumstance shall these additional requirements for voltage support or reactive power exceed the normal operating capabilities of the DGF. The requirements in this paragraph may be additional to requirements in IEEE 1547.

## **DISPUTES**

A party shall attempt to resolve all disputes regarding interconnection as provided in the MDGIR promptly, equitably, and in a good faith manner.

When a dispute arises, a party may seek immediate resolution through complaint procedures available through the Commission by providing written notice to the Commission and the other party stating the issues in dispute.

When disputes relate to the technical application of the MDGIR, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the parties shall use the technical consultant to resolve disputes related to interconnection. Costs for dispute resolution conducted by the technical consultant shall be established by the technical consultant and subject to review by the Commission. The EDC and the Interconnection Customer shall share equally the costs of an outside arbitrator unless they mutually agree to a different payment arrangement.

Pursuit of dispute resolution shall not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's Queue Position.

**Mississippi Distributed Generator Interconnection Rule  
Proposed Level 1 Application Form and Agreement  
for Interconnection of Distributed Generation Facilities**

**Interconnection Customer Contact Information**

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

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Alternative Contact Information (if Different from Customer Contact Information)**

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

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Distributed Generator Facility (DGF) Equipment Contractor**

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

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Electrical Contractor** (if different from DGF equipment contractor):

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

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

License number: \_\_\_\_\_

Active license? yes \_\_\_ no \_\_\_

**Facility Address (building where DGF is located)**

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Electric account number of facility site \_\_\_\_\_

**DGF Information**

Inverter manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

Nameplate Capacity: \_\_\_\_\_ kW \_\_\_\_\_ kVA \_\_\_\_\_ AC Volts

System design capacity: \_\_\_\_\_ kW \_\_\_\_\_ kVA

Prime mover: Photovoltaic ☐ Reciprocating engine ☐ Fuel cell ☐Turbine ☐ Other \_\_\_\_\_Energy Source: Solar ☐ Wind ☐ Hydro ☐ Diesel ☐ Natural gasFuel oil ☐ Other \_\_\_\_\_Is the inverter Certified? Yes ☐

(Attach manufacturer's cut sheet showing certification listing and label information from the appropriate listing authority, e.g. UL 1741 listing. If no, facility is not eligible for Level 1 Application.)

☐ Net Meter (DGF will export power pursuant to Mississippi Renewable Energy Net Metering Contract and tariff)

Estimated Commissioning Date: \_\_\_\_\_

**Insurance Disclosure**

The attached terms and conditions contain provisions related to liability, and indemnification and should be carefully considered by the Interconnection Customer. The Interconnection Customer is not required to obtain general liability insurance coverage as a precondition for interconnection approval; however, the Interconnection Customer is advised to consider obtaining appropriate insurance coverage to cover the Interconnection Customer's potential liability under this Agreement.



### **Interconnection Customer Signature**

I hereby certify that: 1) I have read and understand the terms and conditions which are attached hereto by reference and are a part of this Agreement; 2) I hereby agree to comply with the attached terms and conditions; and 3) to the best of my knowledge, all of the information provided in this application request form is complete and true.

Interconnection Customer signature: \_\_\_\_\_

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

An application fee of \$100 is required before the application can be processed. Please verify that the fee is included with the application: Application fee included ☐

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### **Conditional Agreement to Interconnect the DGF (for EDC use only)**

Receipt of the application fee is acknowledged and, by its signature below, the EDC has determined the Interconnection Request is complete. Interconnection of the DGF is conditionally approved contingent upon the attached terms and conditions of this agreement, the return of the attached Certificate of Completion duly executed, and verification of electrical inspection and successful Witness Test or EDC waiver thereof.

EDC Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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

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### **Terms and Conditions for Interconnection**

- 1) **Construction of the DGF.** The Interconnection Customer may proceed to construct (including operational testing not to exceed 2 hours) the DGF once the conditional agreement to interconnect a DGF has been signed by the EDC.
- 2) **Final Interconnection and Operation.** The Interconnection Customer may operate the DGF and interconnect with the EDC's EDS once all of the following have occurred:
  - a) **Electrical Inspection:** Upon completing construction, the Interconnection Customer will have the DGF inspected by the local electrical wiring inspector with jurisdiction who shall establish that the DGF meets the requirements of the National Electrical Code.
  - b) **Certificate of Completion:** The Interconnection Customer shall provide the EDC with a completed copy of the Certificate of Completion (Attachment 1), including evidence of the electrical inspection performed by the local authority having jurisdiction. The evidence of completion of the electrical inspection may be provided on inspection forms used by local inspecting authorities. The interconnection request shall not be finally approved until the EDC's representative signs the Certificate of Completion.
  - c) EDC has either waived the right to a Witness Test in the interconnection request, or completed its Witness Test as per the following:
    - i) Within ten (10) business days of the estimated commissioning date, the EDC may, upon reasonable notice and at a mutually convenient time, conduct a Witness Test of the DGF



to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes.

- ii) If the EDC does not perform the Witness Test within the 10 day period or such other time as is mutually agreed to by the parties, the Witness Test is deemed waived.
- 3) **IEEE 1547.** The DGF is installed, operated, and tested in accordance with the requirements of IEEE Std 1547, "Standard for Interconnecting Distributed Resources with Electric Power Systems", as amended and supplemented, at the time the interconnection request is submitted.
- 4) **Access.** The EDC shall have direct, unabated access to the metering equipment of the DGF at all times. The EDC shall provide reasonable notice to the customer when possible prior to using its right of access.
- 5) **Metering.** Any required metering shall be installed pursuant to appropriate tariffs and tested by the EDC pursuant to the EDCs meter testing requirements
- 6) **Disconnection.** The EDC may temporarily disconnect the DGF upon the following conditions:
  - a) For scheduled outages upon reasonable notice;
  - b) For unscheduled outages or emergency conditions;
  - c) If the DGF does not operate in the manner consistent with this agreement;
  - d) Improper installation or failure to pass the Witness Test;
  - e) If the DGF is creating a safety, reliability or a power quality problem; or
  - f) The Interconnection Equipment used by the DGF is de-listed by the Nationally Recognized Testing Laboratory that provided the listing at the time the interconnection was approved.
- 7) **Indemnification.** The parties shall at all times indemnify, defend, and save the other party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other party's action or inactions of its obligations under this agreement on behalf of the indemnifying party, except in cases of gross negligence or intentional wrongdoing by the indemnified party.
- 8) **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.
- 9) **Termination.** This agreement may be terminated under the following conditions:
  - a) By Interconnection Customer - The Interconnection Customer may terminate this application agreement by providing written notice to the EDC.
  - b) By the EDC - The EDC may terminate this agreement if the Interconnection Customer fails to remedy a violation of terms of this agreement within 30 calendar days after notice, or such other date as may be mutually agreed to prior to the expiration of the 30 calendar day remedy period. The termination date can be no less than 30 calendar days after the Interconnection Customer receives notice of its violation from the EDC.
- 10) **Modification of DGF.** The Interconnection Customer must receive written authorization from the EDC before making any changes to the DGF, other than Minor Changes that do not have a significant impact on safety or reliability of the EDS as determined by the EDC. If the Interconnection Customer makes such modifications without the EDC's prior written authorization, the EDC shall have the right to temporarily disconnect the DGF until such authorization can be obtained.
- 11) **Permanent Disconnection.** In the event the agreement is terminated, the EDC shall have the right to disconnect its facilities or direct the Interconnection Customer to disconnect its DGF.
- 12) **Disputes.** Each party agrees to attempt to resolve all disputes regarding the provisions of these interconnection procedures pursuant to the dispute resolution provisions of the Mississippi Distributed Generator Interconnection Rule (MGDIR).

- 13) **Governing Law, Regulatory Authority, and Rules.** The validity, interpretation and enforcement of this agreement and each of its provisions shall be governed by the laws of the State of Mississippi. Nothing in this agreement is intended to affect any other agreement between the EDC and the Interconnection Customer. However, in the event that the provisions of this agreement are in conflict with the provisions of the EDC's tariff, the EDC tariff shall control.
- 14) **Survival Rights.** This agreement shall continue in effect after termination to the extent necessary to allow or require either party to fulfill rights or obligations that arose under the agreement.
- 15) **Assignment/Transfer of Ownership of the DGF:** This agreement shall terminate upon the transfer of ownership of the DGF to a new owner unless the transferring owner assigns the agreement to the new owner and so notifies the EDC in writing prior to the transfer of electric service.
- 16) **Definitions.** Any capitalized term used herein and not defined shall have the same meaning as the defined terms used in the MGDIR.
- 17) **Notice.** Unless otherwise provided in this agreement, any written notice, demand, or request required or authorized in connection with this agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

(If to Interconnection Customer)

Use the contact information provided in the agreement for the interconnection customer. The interconnection customer is responsible for notifying the EDC of any change in the contact party information, including change of ownership.

(If to EDC)

Use the contact information provided on the EDC's web page for DGF interconnection.

**Attachment 1****Certificate of Completion**

To be completed and returned to the EDC when the installation is complete and final electrical inspector approval has been obtained.

**Interconnection Customer Contact Information**

Name \_\_\_\_\_

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Distributed Generator Facility (DGF) Equipment or Electrical Contractor**

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

Mailing address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_

Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Final Electric Inspection and Interconnection Customer Signature**

The DGF is complete and has been approved by the local electric inspector having jurisdiction. A signed copy of the electric inspector's form indicating final approval is attached. The Interconnection Customer acknowledges that it shall not operate the DGF until receipt of the final acceptance and approval by the EDC as provided below.

Signed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature of Interconnection Customer)

Printed name: \_\_\_\_\_

Attached signed electric inspection form to this document and return to the EDC.

**Acceptance and Final Approval for Interconnection (for EDC use only)**

The Interconnection Agreement is approved and the DGF is approved for interconnected operation upon the signing and return of this Certificate of Completion by EDC:

Electric Distribution Company waives Witness Test? (Initial) Yes (\_\_\_\_\_) No (\_\_\_\_\_) \_\_\_\_\_

If not waived, date of successful Witness Test: \_\_\_\_\_ Passed: (Initial) (\_\_\_\_\_) \_\_\_\_\_

EDC signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed name: \_\_\_\_\_ Title: \_\_\_\_\_

**Mississippi Distributed Generator Interconnection Rule  
Proposed Level 2 and Level 3 Application Form  
for Interconnection of Distributed Generation Facilities**

**Interconnection Customer Contact Information**

Name: \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Alternative Contact Information (if Different from Customer Contact Information)**

Name: \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Facility Address (Building Where the Distributed Generator Facility (DFG) is Located)**

Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

**DGF Equipment Contractor**

Name: \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

**Electrical Contractor** (if different from DGF equipment contractor):

Name: \_\_\_\_\_  
Mailing address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_  
License number: \_\_\_\_\_  
Active license? yes \_\_\_ no \_\_\_

**Electric Service Information for Customer Facility Where the DGF Will Be Interconnected**

Electric account number of facility site: \_\_\_\_\_

Type of service: ☐ Single phase ☐ Three phase

If 3 phase transformer, indicate type:

Primary winding ☐ Wye ☐ Delta

Secondary winding ☐ Wye ☐ Delta

Transformer Size: \_\_\_\_\_ Impedance: \_\_\_\_\_

**Intent of Generation (choose one)**

☐ Offset load (DGF will operate in parallel, but will not export power to EDC)

☐ Net Meter (DGF will export power pursuant to the Mississippi Renewable Energy Net Energy Metering Rule and tariff)

☐ Export power (DGF will operate in parallel and will export power, but does not fit the criteria established in the Mississippi Renewable Energy Net Metering Rule and tariff)

☐ Back-up generation (Units that temporarily parallel for more than 100 milliseconds)

Backup units that do not operate in Parallel for more than 100 milliseconds do not need an Interconnection Agreement.

**Requested Procedure Under Which to Evaluate Interconnection Request**

Please indicate below which review procedure applies to the interconnection request.

☐ **Level 2** - Application fee amount is \$500.

☐ **Level 3** – Application fee amount is \$1,000, to be applied toward any subsequent studies related to this application.

Descriptions for interconnection review categories do not list all criteria that must be satisfied. For a complete list of criteria, please refer to the Mississippi Distributed Generator Interconnection Rule.

**DGF Information****Energy Production Equipment/Inverter Information**

Energy Source: ☐ Hydro ☐ Wind ☐ Solar ☐ Diesel ☐ Biomass ☐ Natural gas  
☐ Coal ☐ Oil ☐ Other \_\_\_\_\_

Energy Converter Type: ☐ Water turbine ☐ Wind turbine ☐ Photovoltaic cell  
☐ Steam turbine ☐ Combustion turbine ☐ Reciprocating engine  
☐ Other \_\_\_\_\_

Generator Type: ☐ Synchronous ☐ Induction ☐ Inverter ☐ Other \_\_\_\_\_

Nameplate Rating: \_\_\_\_\_ kW \_\_\_\_\_ kVA \_\_\_\_\_ AC Volts

System design capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)

Number of Units: \_\_\_\_\_

Rated Voltage: \_\_\_\_\_ Volts

Rated Current: \_\_\_\_\_ Amps

**Interconnection Equipment components/system(s) to be used in the DGF that are Certified (if Certified equipment is used).**

Component/System	NRTL Providing Label & Listing
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

Attach manufacturer's cut sheet showing certification listing and label information from the appropriate listing authority, e.g. UL 1741 listing.

**For Synchronous Machines:**

Note: EDC may be contacted to determine if all the information requested in this section is required for the proposed DGF.

Manufacturer: \_\_\_\_\_

Model no. \_\_\_\_\_ Version no. \_\_\_\_\_

Submit copies of the saturation curve and the vee curve

☐ Salient ☐ Non-salient

Torque: \_\_\_\_\_ lb-ft Rated RPM: \_\_\_\_\_ Field amperes: \_\_\_\_\_ at rated generator voltage  
 and current and \_\_\_\_\_ % PF over-excited

Type of exciter: \_\_\_\_\_

Output power of exciter: \_\_\_\_\_

Type of voltage regulator: \_\_\_\_\_ Locked rotor current:  
 \_\_\_\_\_ Amps Synchronous speed: \_\_\_\_\_ RPM

Winding connection: \_\_\_\_\_ Min. operating freq./time: \_\_\_\_\_

Generator connection: ☐ Delta ☐ Wye ☐ Wye grounded

Direct-axis synchronous reactance ( $X_d$ ) \_\_\_\_\_ ohms  
 Direct-axis transient reactance ( $X'_d$ ) \_\_\_\_\_ ohms  
 Direct-axis sub-transient reactance ( $X''_d$ ) \_\_\_\_\_ ohms  
 Negative sequence reactance: \_\_\_\_\_ ohms  
 Zero sequence reactance: \_\_\_\_\_ ohms  
 Neutral impedance or grounding resistor (if any): \_\_\_\_\_ ohms

### **For Induction Machines:**

Note: EDC may be contacted to determine if all the information requested in this section is required for the proposed DGF.

Manufacturer: \_\_\_\_\_  
 Model no. \_\_\_\_\_ Version no. \_\_\_\_\_  
 Locked rotor current: \_\_\_\_\_ Amps  
 Rotor resistance ( $R_r$ ) \_\_\_\_\_ ohms Exciting current \_\_\_\_\_ Amps  
 Rotor reactance ( $X_r$ ) \_\_\_\_\_ ohms Reactive power required: \_\_\_\_\_  
 Magnetizing reactance ( $X_m$ ) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (No load)  
 Stator resistance ( $R_s$ ) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (full load)  
 Stator reactance ( $X_s$ ) \_\_\_\_\_ ohms  
 Short circuit reactance ( $X''_d$ ) \_\_\_\_\_ ohms  
 Phases: ☐ Single ☐ Three-phase  
 Frame size: \_\_\_\_\_ Design letter: \_\_\_\_\_ Temperature rise: \_\_\_\_\_ °C.

### **Additional Information For Inverter-Based DGF**

Inverter information:

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
 Type: ☐ Forced commutated ☐ Line commutated  
 Rated output \_\_\_\_\_ Watts \_\_\_\_\_ Volts  
 Efficiency \_\_\_\_\_ % Power factor \_\_\_\_\_ %  
 Inverter UL1547 Listed: : ☐ Yes ☐ No

DC source / prime mover:

Rating: \_\_\_\_\_ kW Rating: \_\_\_\_\_ kVA  
 Rated voltage: \_\_\_\_\_ Volts  
 Open circuit voltage (If applicable): \_\_\_\_\_ Volts  
 Rated current: \_\_\_\_\_ Amps  
 Short circuit current (If applicable): \_\_\_\_\_ Amps

### **Other Required Facility Information:**

One line diagram attached: ☐ Yes  
 Plot plan attached: ☐ Yes

**Estimated Commissioning Date:** \_\_\_\_\_



**Interconnection Customer Signature**

I hereby certify that all of the information provided in this application request form is true.

Interconnection Customer signature: \_\_\_\_\_

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

An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application (see page two):

Application fee included ☐

Amount \_\_\_\_\_

**EDC Acknowledgement**

Receipt of the application fee is acknowledged and the interconnection request is complete.

EDC signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed name: \_\_\_\_\_ Title: \_\_\_\_\_

**Definitions**

Any capitalized term used herein shall have the same meaning as the defined terms used in the Mississippi Distributed Generator Interconnection Rule.

**Mississippi Distributed Generator Interconnection Rule  
Proposed Level 2 and Level 3 Agreement  
for Interconnection of Distributed Generation Facilities**

This Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_, by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of \_\_\_\_\_ (“Interconnection Customer”), and \_\_\_\_\_, a \_\_\_\_\_ existing under the laws of \_\_\_\_\_ (“Electric Distribution Company (EDC)”). Interconnection Customer and EDC each may be referred to as a “Party,” or collectively as the “Parties.”

**Recitals:**

**Whereas**, Interconnection Customer is proposing to, install or direct the installation of a Distributed Generator Facility (DGF), or is proposing a generating capacity addition to an existing DGF, consistent with the Interconnection Request completed by Interconnection Customer on \_\_\_\_\_; and

**Whereas**, the Interconnection Customer will operate and maintain, or cause the operation and maintenance of the DGF; and

**Whereas**, Interconnection Customer desires to interconnect the DGF with EDC’s Electric Distribution System (EDS).

**Now, therefore**, in consideration of the premises and mutual covenants set forth herein, and other good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, the Parties covenant and agree as follows:

**Article 1.      Scope and Limitations of Agreement**

- 1.1      This Agreement shall be used for all Level 2 and Level 3 Interconnection Requests according to the procedures set forth in the Mississippi Distributed Generator Interconnection Rule (MDGIR).
- 1.2      This Agreement governs the terms and conditions under which the DGF will interconnect to, and operate in Parallel with, the EDC’s EDS.
- 1.3      This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer’s power.
- 1.4      Nothing in this Agreement is intended to affect any other agreement between the EDC and the Interconnection Customer. However, in the event that the provisions of this Agreement are in conflict with the provisions of the EDC’s tariff, the EDC tariff shall control.
- 1.5      Responsibilities of the Parties
  - 1.5.1    The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations.

- 1.5.2 The EDC shall construct, own, operate, and maintain its Interconnection Facilities in accordance with this Agreement, IEEE Standard 1547, the National Electrical Safety Code and applicable standards promulgated by the Mississippi Public Service Commission.
- 1.5.3 The Interconnection Customer shall construct, own, operate, and maintain its DGF in accordance with this Agreement, IEEE Standard 1547, the National Electrical Code and applicable standards promulgated by the Mississippi Public Service Commission.
- 1.5.4 Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Common Coupling.
- 1.5.5 The Interconnection Customer agrees to design, install, maintain and operate its DGF so as to minimize the likelihood of causing an Adverse System Impact on an electric system that is not owned or operated by the EDC.

#### 1.6 Metering

The Interconnection Customer shall be responsible for the cost of the purchase and installation of metering equipment specified in Attachments 2 and 4 of this Agreement if new meter equipment is required by a tariff or study associated with the DGF interconnection.

#### 1.7 Reactive Power

The Interconnection Customer shall design its DGF to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the power factor range required by the EDC's applicable tariff for a comparable load customer. EDC may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 3. Under no circumstance shall these additional requirements for reactive power or voltage support exceed the normal operating capabilities of the DGF. The requirements in 1.7 may fall outside the requirement for using IEEE 1547 as a technical standard.

#### 1.8 Capitalized Terms

Capitalized terms used herein shall have the meanings specified in the definitions section of the MDGIR.

### **Article 2. Inspection, Testing, Authorization, and Right of Access**

#### **2.1 Equipment Testing and Inspection**

The Interconnection Customer shall test and inspect its DGF including the Interconnection Equipment prior to interconnection in accordance with IEEE Std 1547, IEEE Std 1547.1, and the technical and procedural requirements in the MDGIR. The Interconnection Customer shall not operate its DGF in Parallel with EDC's EDS without prior written authorization by the EDC as provided for in 2.1.1 – 2.1.3.

- 2.1.1 The EDC shall have the option of performing a Witness Test after construction of the DGF is completed. The Interconnection Customer shall provide the EDC at least 20 days notice of the planned Commissioning Test for the DGF. If the EDC elects to perform a Witness Test, it shall contact the Interconnection Customer to schedule the Witness Test at a mutually agreeable time within 10 business days of the scheduled commissioning test. If the EDC does not perform the Witness Test within 10 business days of the commissioning test, the Witness Test is deemed waived unless the parties mutually agree to extend the date for scheduling the Witness Test. If the Witness Test is not acceptable to the EDC, the Interconnection Customer will be granted a period of 30 calendar days to address and resolve any deficiencies. The time period for addressing and resolving any deficiencies may be extended upon the mutual agreement of the EDC and the Interconnection Customer. If the Interconnection Customer fails to address and resolve the deficiencies to the satisfaction of the EDC, the applicable termination provisions of 3.3.7 shall apply. If a Witness Test is not performed by the EDC or an entity approved by the EDC, the Interconnection Customer must still satisfy the interconnection test specifications and requirements set forth in IEEE Standard 1547 Section 5. The Interconnection Customer shall, if requested by the EDC, provide a copy of all documentation in its possession regarding testing conducted pursuant to IEEE Std 1547.1.
- 2.1.2 To the extent that the Interconnection Customer decides to conduct interim testing of the DGF prior to the Witness Test, it may request that the EDC observe these tests and that these tests be deleted from the final Witness Test. The EDC may, at its own expense, send qualified personnel to the DGF to observe such interim testing. Nothing in this Section 2.1.2 shall require the EDC to observe such interim testing or preclude the EDC from performing these tests at the final Witness Test. Regardless of whether the EDC observes the interim testing, the Interconnection Customer shall obtain permission in advance of each occurrence of operating the DGF in parallel with the EDC's system.
- 2.1.3 Upon successful completion of the Witness Test, the EDC shall affix an authorized signature to the Certificate of Completion (Attachment 5) and return it to the Interconnection Customer approving the interconnection and authorizing Parallel Operation. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

## 2.2 **Commercial Operation**

The Interconnection Customer shall not operate the DGF in Parallel, except for interim testing as provided in 2.1, until such time as the Certificate of Completion is signed by all Parties.

## 2.3 **Right of Access**

The EDC shall have access to the isolation device and metering equipment of the DGF at all times. The EDC shall provide reasonable notice to the customer when possible prior to using its right of access.

**Article 3.      Effective Date, Term, Termination, and Disconnection**

**3.1      Effective Date**

This Agreement shall become effective upon execution by the Parties.

**3.2      Term of Agreement**

This Agreement shall become effective on the Effective Date and shall remain in effect in perpetuity unless terminated earlier in accordance with Article 3.3 of this Agreement.

**3.3      Termination**

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

3.3.1    The Interconnection Customer may terminate this Agreement at any time by giving the EDC 30 calendar days prior written notice.

3.3.2    Either Party may terminate this Agreement after default pursuant to Article 6.5.

3.3.3    The EDC may terminate upon 60 calendar days' prior written notice for failure of the Interconnection Customer to complete construction of the DGF within 12 months of the in-service date as specified by the Parties in Attachment 1, which may be extended by mutual agreement of the Parties which shall not be unreasonably withheld.

3.3.4    The EDC may terminate this Agreement upon 60 calendar days' prior written notice if the Interconnection Customer fails to operate the DGF in parallel with EDC's EDS for three consecutive years.

3.3.5    Upon termination of this Agreement, the DGF will be disconnected from the EDC's EDS. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

3.3.6    The provisions of this Article shall survive termination or expiration of this Agreement.

3.3.7    The EDC may terminate this Agreement if the Interconnection Customer fails to comply with the Witness Test requirement in 2.2.1.

**3.4      Temporary Disconnection**

Either party may temporarily disconnect the DGF from the EDS in the event of an Emergency Condition (see definition below) for so long as the Party determines it is reasonably necessary in the event one or more of the following conditions or events occurs.

3.4.1    Emergency Conditions—shall mean any condition or situation: (1) that in the judgment of the Party making the claim is reasonably likely to endanger life or property; or (2) that, in the case of the EDC, is reasonably likely to cause an Adverse System Impact; or (3) that, in the case of the Interconnection Customer, is reasonably likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the DGF or the

Interconnection Equipment. Under Emergency Conditions, the EDC or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the DGF. The EDC shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the DGF. The Interconnection Customer shall notify the EDC promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the EDC's EDS. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

- 3.4.2 Scheduled Maintenance, Construction, or Repair – the EDC may interrupt interconnection service or curtail the output of the DGF and temporarily disconnect the DGF from the EDC's EDS when necessary for scheduled maintenance, construction, or repairs on EDC's EDS. The EDC shall provide the Interconnection Customer with five business days notice prior to such interruption. The EDC shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.
- 3.4.3 Forced Outages - During any forced outage, the EDC may suspend interconnection service to effect immediate repairs on the EDC's EDS. The EDC shall use reasonable efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the EDC shall, upon written request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 Adverse Operating Effects – the EDC shall provide the Interconnection Customer with a written notice of its intention to disconnect the DGF if, based on the operating requirements specified in Attachment 3, the EDC determines that operation of the DGF will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the DGF could cause damage to the EDC's EDS. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon written request. The EDC may disconnect the DGF if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time unless Emergency Conditions exist in which case the provisions of 3.4.1 apply.
- 3.4.5 Modification of the DGF - The Interconnection Customer must receive written authorization from the EDC prior to making any change to the DGF, other than a Minor Equipment Modification, that could cause an Adverse System Impact. If the Interconnection Customer makes such modification without the EDC's prior written authorization, the EDC shall have the right to temporarily disconnect the DGF until such time as the EDC reasonably concludes the modification poses no threat to the safety or reliability of its EDS.



- 3.4.6 Reconnection - The Parties shall cooperate with each other to restore the DGF, Interconnection Facilities, and EDC's EDS to their normal operating state as soon as reasonably practicable following any disconnection pursuant to this section; provided, however, if such disconnection is done pursuant to Section 3.4.5 due to the Interconnection Customer's failure to obtain prior written authorization from the EDC for Minor Equipment Modifications, the EDC shall reconnect the Interconnection Customer only after determining the modifications do not impact the safety or reliability of its EDS.

**Article 4. Cost Responsibility for Interconnection Facilities and Distribution System Upgrades**

**4.1 Interconnection Facilities**

- 4.1.1 The Interconnection Customer shall pay for the cost of the Interconnection Facilities identified in the Facilities Study or the Level 2 additional review for initial modifications itemized in Attachment 2 of this Agreement. The EDC shall identify the Interconnection Facilities necessary to safely interconnect the DGF with the EDC's EDS, the cost of those facilities, and the time required to build and install those facilities.
- 4.1.2 The Interconnection Customer shall be responsible for its expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its Interconnection Equipment, and (2) its reasonable share of operating, maintaining, repairing, and replacing any Interconnection Facilities owned by the EDC as set forth in Attachment 2.

**4.2 Distribution System Upgrades**

The EDC shall design, procure, construct, install, and own any Distribution System Upgrades. The actual cost of the Distribution System Upgrades, including overheads, shall be directly assigned to the Interconnection Customer. The Interconnection Customer may be entitled to financial contribution from any other EDC customers who may in the future utilize the upgrades paid for by the Interconnection Customer. Such contributions shall be governed by the rules, regulations and decisions of the MDGIR.

**Article 5. Billing, Payment, Milestones, and Financial Security**

**5.1 Billing and Payment Procedures and Final Accounting**

- 5.1.1 The EDC shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of EDC provided Interconnection Facilities and Distribution System Upgrades contemplated by this Agreement as set forth in Appendix 3, on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within 30 calendar days of receipt, or as otherwise agreed to by the Parties.
- 5.1.2 Within ninety (90) calendar days of completing the construction and installation of the EDC's Interconnection Facilities and Distribution System Upgrades described in the Attachments 2 to this Agreement, the EDC shall provide the Interconnection



Customer with a final accounting report of any difference between (1) the actual cost incurred to complete the construction and installation and the budget estimate provided to the Interconnection Customer and a written explanation for any significant variation; and (2) the Interconnection Customer's previous deposit and aggregate payments to the EDC for such Interconnection Facilities and Distribution System Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous deposit and aggregate payments, the EDC shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the EDC within thirty (30) calendar days. If the Interconnection Customer's previous deposit and aggregate payments exceed its cost responsibility under this Agreement, the EDC shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

- 5.1.3 If a Party in good faith disputes any portion of its payment obligation pursuant to this Article 5, such Party shall pay in a timely manner all non-disputed portions of its invoice, and such disputed amount shall be resolved pursuant to the dispute resolution provisions contained in Article 8. Provided such Party's dispute is in good faith, the disputing Party shall not be considered to be in default of its obligations pursuant to this Article.

## **5.2 Interconnection Customer Deposit**

When a Level 3 Interconnection Feasibility Study, Interconnection System Impact Study, or Interconnection Facility Study or a Level 2 review of minimal modifications is required under the MDGIRs, the EDC may require the Interconnection Customer to pay a deposit equal to 50% of the estimated cost to perform the study or review. At least twenty (20) business days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the EDC's Interconnection Facilities and Distribution System Upgrades, the Interconnection Customer shall provide the EDC with a deposit equal to 50% of the estimated costs prior to its beginning design of such facilities, provided the total cost is in excess of \$1,000.

## **Article 6. Assignment, Limitation on Damages, Indemnity, Force Majeure, and Default**

### **6.1 Assignment**

This Agreement may be assigned by either Party upon fifteen (15) Business Days prior written notice, and with the opportunity to object by the other Party. Should the Interconnection Customer assign this agreement, the EDC has the right to request the assignee agree to the assignment and the terms of this Agreement in writing. When required, consent to assignment shall not be unreasonably withheld; provided that:

- 6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate (which shall include a merger of the Party with another entity), of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;

- 6.1.2 The Interconnection Customer shall have the right to assign this Agreement, without the consent of the EDC, for collateral security purposes to aid in providing financing for the DGF. For DGFs that are integrated into a building facility, the sale of the building or property will result in an automatic transfer of this agreement to the new owner who shall be responsible for complying with the terms and conditions of this Agreement.
- 6.1.3 Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same obligations as the Interconnection Customer.

## **6.2 Limitation on Damages**

Except for cases of gross negligence or willful misconduct, the liability of any Party to this Agreement shall be limited to direct actual damages, and all other damages at law are waived. Under no circumstances, except for cases of gross negligence or willful misconduct, shall any Party or its directors, officers, employees and agents, or any of them, be liable to another Party, whether in tort, contract or other basis in law or equity for any special, indirect, punitive, exemplary or consequential damages, including lost profits, lost revenues, replacement power, cost of capital or replacement equipment. This limitation on damages shall not affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement. The provisions of this Section 6.2 shall survive the termination or expiration of the Agreement.

## **6.3 Indemnity**

- 6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.
- 6.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.
- 6.3.3 Promptly after receipt by an indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.
- 6.3.4 If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, and the indemnifying Party fails, after notice and

reasonable opportunity to proceed under this Article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

- 6.3.5 If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this Article, the amount owing to the indemnified person shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.

## **6.4 Force Majeure**

- 6.4.1 As used in this Article, a Force Majeure Event shall mean any act of God, labor disturbance, act of the public enemy, war, acts of terrorism, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment through no direct, indirect, or contributory act of a Party, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of gross negligence or intentional wrongdoing.
- 6.4.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking and will take to mitigate the effects of the event on its performance, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party shall be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

## **6.5 Default**

- 6.5.1 No default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.
- 6.5.2 Upon a default of this Agreement, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 6.5.3 the defaulting Party shall have 60 calendar days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such

cure within six months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.

6.5.3 If a Party has made an assignment of this Agreement not specifically authorized by Article 6.1, fails to provide reasonable access pursuant to Article 2.3, is in default of its obligations pursuant to Article 7, or if a Party is in default of its payment obligations pursuant to Article 5 of this Agreement, the defaulting Party shall have 30 days from receipt of the default notice within which to cure such default.

6.5.4 If a default is not cured as provided for in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

#### **Article 7. Insurance**

For DGFs with a Nameplate Capacity of 2 MW or above, the Interconnection Customer shall carry adequate insurance coverage that shall be acceptable to the EDC; provided, that the maximum comprehensive/general liability coverage that shall be continuously maintained by the Interconnection Customer during the term shall be not less than \$2,000,000 for each occurrence, and an aggregate, if any, of at least \$4,000,000. The EDC, its officers, employees and agents will be added as an additional insured on this policy.

#### **Article 8. Dispute Resolution**

- 8.1 A party shall attempt to resolve all disputes regarding interconnection as provided in this Agreement and the MDGIR promptly, equitably, and in a good faith manner.
- 8.2 When a dispute arises, a party may seek immediate resolution through complaint procedures available through the Commission, or an alternative dispute resolution process approved by the Commission, by providing written notice to the Commission and the other party stating the issues in dispute. Dispute resolution will be conducted in an informal, expeditious manner to reach resolution with minimal costs and delay. When available, dispute resolution may be conducted by phone.
- 8.4 When disputes relate to the technical application of this Agreement and the MDGIR, the Commission may designate a technical consultant to resolve the dispute. Upon Commission designation, the parties shall use the technical consultant to resolve disputes related to interconnection. Costs for a dispute resolution conducted by the technical consultant shall be established by the technical consultant, subject to review by the Commission.
- 8.4 Pursuit of dispute resolution may not affect an Interconnection Customer with regard to consideration of an Interconnection Request or an Interconnection Customer's queue position.

- 8.5 If the Parties fail to resolve their dispute under the dispute resolution provisions of this Article, nothing in this Article shall affect any Party's rights to obtain equitable relief, including specific performance, as otherwise provided in this Agreement.

**Article 9.      Miscellaneous**

**9.1      Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of Mississippi, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations.

**9.2      Amendment**

Modification of this Agreement shall be only by a written instrument duly executed by both Parties.

**9.3      No Third-Party Beneficiaries**

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

**9.4      Waiver**

9.4.1 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement shall not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

9.4.2 Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from EDC. Any waiver of this Agreement shall, if requested, be provided in writing.

**9.5      Entire Agreement**

This Agreement, including all attachments, constitutes the entire Agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants that constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

**9.6      Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**9.7      No Partnership**



This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

#### **9.8 Severability**

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other governmental authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

#### **9.9 Environmental Releases**

Each Party shall notify the other Party, first orally and then in writing, of the release any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the DGF or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

#### **9.10 Subcontractors**

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

9.10.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

9.10.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

### **Article 10. Notices**

#### **10.1 General**

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if

delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

**If to Interconnection Customer:**

Interconnection Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail \_\_\_\_\_

**If to EDC:**

EDC: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail \_\_\_\_\_

**10.2 Billing and Payment**

Billings and payments shall be sent to the addresses set out below:

**If to Interconnection Customer**

Interconnection Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**If to EDC**

EDC: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**10.3 Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

**Interconnection Customer's Operating Representative:** \_\_\_\_\_

Attention: \_\_\_\_\_

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



City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

**EDC's Operating Representative:** \_\_\_\_\_

Attention: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

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

#### **10.4 Changes to the Notice Information**

Either Party may change this notice information by giving five business days written notice prior to the effective date of the change.

#### **Article 11. Signatures**

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

**For the Interconnection Customer:**

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

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

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

**For EDC:**

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

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

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

## **Attachment 1**

### **Construction Schedule, Proposed Equipment and Settings**

This attachment shall include the following:

1. The construction schedule for the DGF
2. A one-line diagram indicating the DGF, Interconnection Equipment, Interconnection Facilities, metering equipment, and Distribution System Upgrades
3. Component specifications for equipment identified in the one-line diagram
4. Component settings
5. Proposed sequence of operations

**Attachment 2****Description, Costs and Time Required to Build and Install EDC's  
Interconnection Facilities and Distribution System Upgrades**

This attachment shall include the following:

EDC's Interconnection Facilities and Distribution System Upgrades including any required new metering shall be itemized and a best estimate of itemized costs, including overheads, shall be provided based on the Facilities Study or Level 2 additional review for minimal modifications of the EDS.

Also, a best estimate for the time required to build and install EDC's Interconnection Facilities and Distribution System Upgrades will be provided based on the Facilities Study or Level 2 additional review for minimal modifications of the EDS.

### **Attachment 3**

#### **Operating Requirements for DGFs Operating in Parallel**

This attachment shall include the following:

Applicable sections of EDC's operating manuals applying to the DGF interconnection shall be listed and Internet links shall be provided. Any special operating requirements not contained in EDC's existing operating manuals shall be clearly identified. These operating requirements shall not impose additional technical or procedural requirements on the DGF beyond those found the MDGIR, except those required for safety.

#### **Attachment 4**

##### **Metering Requirements**

This attachment shall include the following:

Metering requirements for the DGF shall be clearly indicated along with an identification of the appropriate tariffs that establish these requirements and an internet link to these tariffs.

## Attachment 5

### Certificate of Completion

To be completed and returned to the EDC when the installation is complete and final electrical inspector approval has been obtained.

#### **Interconnection Customer Contact Information**

Name \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
 Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
 Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

#### **Distributed Generator Facility (DGF) Equipment or Electrical Contractor**

Name: \_\_\_\_\_  
 Mailing address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_  
 Telephone (Daytime): \_\_\_\_\_ (Mobile): \_\_\_\_\_  
 Facsimile number: \_\_\_\_\_ E-mail address: \_\_\_\_\_

#### **Final Electric Inspection and Interconnection Customer Signature**

The DGF is complete and has been approved by the local electric inspector having jurisdiction. A signed copy of the electric inspector's form indicating final approval is attached. The Interconnection Customer acknowledges that it shall not operate the DGF until receipt of the final acceptance and approval by the EDC as provided below.

Signed \_\_\_\_\_ Date \_\_\_\_\_  
 (Signature of interconnection customer)

Printed name: \_\_\_\_\_

Attached signed electric inspection form to this document and return to the EDC.

#### **Acceptance and Final Approval for Interconnection (for EDC use only)**

The Interconnection Agreement is approved and the DGF is approved for interconnected operation upon the signing and return of this Certificate of Completion by EDC:

Electric Distribution Company waives Witness Test? (Initial) Yes (\_\_\_\_\_) No (\_\_\_\_\_) \_\_\_\_\_



If not waived, date of successful Witness Test: \_\_\_\_\_ Passed: (Initial) (\_\_\_\_\_)

EDC signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed name: \_\_\_\_\_ Title: \_\_\_\_\_

## **Economic Impact Statement: Interconnection and Net Metering Joint Rules**

Christopher Garbacz, Ph.D.

Director, Economics and Planning Division

Mississippi Public Utilities Staff

### **Summary**

Two new rules are proposed by the Mississippi Public Service Commission (MPSC). The first proposed rule is the Mississippi Distributed Generator Interconnection Rule which sets forth standards to establish the technical and procedural requirements for Distributed Generator Facilities to be interconnected and operated in parallel with the Electric Distribution System owned or operated by Electric Distribution Companies in Mississippi under the jurisdiction of the Mississippi Public Service Commission. The second proposed rule is the Mississippi Renewable Energy Net Metering Rule which sets forth technical and procedural requirements for Net Metering on qualified Distributed Generator Facilities. The two proposed rules are inherently interdependent. Without interconnection, net metering is not possible. Without net metering, interconnection is unnecessary. Net metering and interconnection rules (“joint rules”) allow a ratepayer with behind the meter solar electricity generation, for example, to “sell” excess electricity to its electric utility company. Under the joint rules, the utility company would stand ready to make such “purchases” up to some ceiling amount at a rate approved by the Commission that reflects the avoided cost of the utility.

There may be several benefits and costs of the joint rules that can be estimated as well as certain qualitative benefits that may be considered. A report by Synapse Energy Economics, Inc. has estimated that generally the benefits of the rules outweigh the costs (Synapse Energy Economics, Inc., “Net Metering in Mississippi: Costs, Benefits, and Policy Considerations”, Prepared for the Public Service Commission of Mississippi, September 19, 2014; “Synapse Report”). They cite four different methods of estimating benefits/costs (B/C) and argue that the Total Resource Cost Test is preferred. They find benefits of \$170 per Mwh and costs of \$143 per Mwh resulting in a B/C of 1.19 for their mid-range estimates. Several sensitivity tests are employed that indicate that the estimates are stable in the mid-range. Of the fifteen sensitivities across the low, mid and high range cases, only one has a B/C that is less than one. One case has a B/C of 1.01 or essentially a breakeven result.

B/C estimates before implementation of the proposed joint rules are not the same as B/C estimates after the fact. B/C estimates after the fact have the advantage of using data related to actual experiences in Mississippi with the joint rules. In the event that the joint rules are

Exhibit F

approved and net metering takes place, actual after the fact B/C measurements can and should be calculated periodically to assess effectiveness of the joint rules. MPSC plans to carry out such effectiveness assessments.

This economic impact statement was prepared (December 17, 2014) at the request of the MPSC. Mississippi Statutes require the following eleven areas to be addressed in preparing an economic impact statement.

**1. Specific legal authority authorizing the promulgation of the joint rules:**

The legal authority is provided for in Miss. Code Ann. 77-3-45.

**2. Description of the need for the proposed action:**

The joint rules establish the framework required to provide utility technical support and to aid in reducing the cost of solar generation (primarily) for ratepayers who wish to self-supply electricity in Mississippi.

**3. Description of the benefits which will likely accrue as the result of the proposed action:**

The joint rules may provide ratepayers the option to self-supply electricity at a lower cost and may avoid some generation costs of utilities. The Synapse Report found that under the Total Resource Cost Test the joint rules may provide \$170 per Mwh of benefits against costs of \$143 per Mwh, resulting in a B/C of 1.19. Additionally, solar generation on a larger scale in Mississippi, given the current very low presence, may provide environmental enhancements and greater fuel diversity for electricity generation.

**4. Description of the effect the proposed action will have on the public health, safety and welfare:**

The joint rules may provide for public health, safety and welfare of ratepayers who implement solar electric generation and may provide benefits to other ratepayers as well. It is possible that business activity and employment may be increased, which would increase the general welfare. Additionally, the joint rules may promote generation that avoids emissions that federal agencies deem detrimental to public health, potentially reducing the cost of compliance with federal regulations.

**5. An estimate of the cost to the agency and to any other state or local government entities of implementing and enforcing the proposed action, including the estimated amount of paperwork, and any anticipated effect on state or local revenues:**

The cost to the MPSC, and other governmental agencies, would be very small and can be handled within the current budget. Present employees of the MPSC could handle any additional work. Paperwork cost would be minimal. Essentially someone would be responsible for answering any inquiries about the program and annually checking the filings of utilities to verify compliance with the rules and to assess the effects of the joint rules. State and/or local revenues might be enhanced by potential additional business activity associated with the joint rules.

**6. An estimate of the cost or economic benefit to all persons directly affected by the proposed action:**

The Synapse Report estimates that benefits outweigh costs, with a stable B/C of about 1.19 in the mid- range (taking account of sensitivities of the model). Stated differently, the joint rules may provide \$170 per Mwh of benefits against costs of \$143 per Mwh.

**7. An analysis of the proposed joint rules on small business:**

Small businesses that engage in solar electric generation apparatus sales and installation may benefit. Additionally, small businesses may choose to take advantage of the joint rules and self-supply electricity. Such small businesses, like ratepayers who choose to participate, may benefit if the B/C, as indicated in the Synapse Report, are realized.

**8. A comparison of the costs and benefits of the proposed joint rules to the probable costs and benefits of not adopting the proposed rules or significantly amending an existing rule:**

There is no alternative to the proposed joint rules to address this particular issue. Since B/C is estimated to be positive for the proposed joint rules, it may be reasonable to assume that not acting may have implicit negative effects.

**9. A determination of whether less costly methods or less intrusive methods exist for achieving the purpose of the proposed joint rules where reasonable alternative methods exist which are not precluded by law:**

There are no reasonable alternative methods to achieve the purpose of the proposed joint rules.

**10. A description of reasonable alternative methods, where applicable, for achieving the purpose of the proposed action which were considered by the agency and a statement of reasons for rejecting those alternatives in favor of the proposed joint rules:**

There are no reasonable alternative methods to achieve the purpose of the proposed joint rules.

**11. A detailed statement of the data and methodology used in making estimates required by this subsection:**

Data and methodology discussions are included in the Synapse Report available from the MPSC. A review of a variety of such rules in forty-six states suggests that generally the associated benefits may outweigh costs. There is no indication of substantive continuing complaints or problems in those states. Complaints or problems are not expected in Mississippi, other than those associated with the standard necessary adjustments inherent with new programs.