Cleco Power LLC

SPECIFICATION COG-2007

FOR

PARALLEL OPERATION OF CUSTOMER-OWNED GENERATION ON CLECO'S ELECTRICAL SYSTEM

Revised: January 16, 2026

CONTENTS

1.0 SCOPE

1.1 This technical specification states the minimum requirements and procedures for safe and effective connection and operation of Customer-owned generation with the Cleco electrical system.

1.2 It is emphasized that the requirements outlined in this specification are general and may not cover all details in specific cases.

1.3 The term "Customer" will be used in this specification to refer to the entity requesting parallel operation of generation as described in section 1.1.

1.4 Generators rated below 5MW (gross nameplate rating) may be connected directly to the 34.5kV distribution system. Generators rated below 2MW (gross nameplate rating) may be connected directly to the 13.2kV or 12.47kV distribution system. Both cases require system impact studies for approval. Generators are not allowed to be connected directly to systems rated less than 12.47kV.

1.5 Generators rated above 5MW (gross nameplate rating) must be connected directly to the transmission system. A separate process must be followed to connect directly to the transmission system as administered by Midcontinent Independent System Operator (MISO) and/or any North American Electric Reliability Corporation (NERC) regional entity.

2.0 POLICY ON CUSTOMER GENERATION

2.1 It is the policy of Cleco to permit any Customer to operate his generating equipment in parallel with the electric system provided the Customer's generating equipment has been reviewed and approved by Cleco and all associated technical, operational, and regulatory issues have been appropriately addressed.

2.1.1 Any Customer desiring to operate his generating facility in parallel with the Cleco system must do so without adversely affecting other Customers, utilities, or Cleco equipment or personnel.

2.1.2 Certain protective devices (circuit breakers, relays, etc.) shall be installed by the Customer in accordance with prudent electrical practices at the location where a Customer desires to operate generating equipment in parallel with the Cleco system.

2.1.3 Generators meeting the rating requirements of section 1.4 above may be connected to the distribution system if no technical exceptions are determined in the system impact study. For generators connected in parallel to the distribution system, the Customer must adhere to this specification and the provisions in IEEE 1547 series of standards as amended and updated from time to time. Customer is responsible for the costs of any system upgrades required from the system impact study or as otherwise determined by Cleco. Upgrades could include but not limited to Electronic

Recloser at the PCC, Fiber Optic DTT Schemes, RTU communications, & Automation and Coordination updates.

2.2 Three-phase and single-phase Customer generators may be connected in parallel with the Cleco system if the requirements of this specification are met and the appropriate approvals are obtained as outlined under "Approval" (Article 3.0) of this specification.

2.2.1 Customer generation greater than 25 KW (gross nameplate) shall be three-phase unless specifically approved in writing by Cleco. Where multiple generators are connected to the Cleco system through a single primary meter point or service transformer, the sum of the rating of the generators will be used.

2.2.2 Any unapproved generating equipment found operating in parallel with the Cleco system or with required protective devices disconnected or bypassed may be immediately disconnected by Cleco and not allowed to reconnect until the appropriate review and approval from Cleco has been obtained.

2.3 Cleco will not assume any responsibility for the protection of the Customer's electrical system. The Customer is fully responsible for protecting his equipment in such a manner that faults or other disturbances on the Cleco system do not cause damage to the Customer's equipment.

2.4 All costs to Cleco, including costs incurred after the interconnection has been made, resulting from the installation, maintenance and/or rearrangement of equipment that is required to permit parallel operation of Customer generation shall be borne by the Customer.

2.5 The Customer shall indemnify and hold Cleco harmless for all damages and injuries to Cleco or others arising out of the Customer's use, ownership, or operation of the Customer's facilities.

2.6 Any Customer desiring to sell power to Cleco shall sign a contract with Cleco, prior to parallel operation, specifying the terms and conditions under which the interconnection shall take place.

3.0 APPROVAL

3.1 The Standard Interconnection Evaluation Form located in Appendix 1 of this document shall be completed by the Customer to begin the interconnection process. This form will be used to determine the correct interconnection process to be followed.

3.1.1 As part of the interconnection evaluation for generators over 300kW, Cleco will verify no other generators over 300KW exist on the circuit the customer is requesting to connect parallel operation. Only one generation connection point per circuit is allowed.

3.2 The Customer shall complete and verify all requested documentation. Cleco will use this data to simulate (via System Impact Study) the impact of the Customer generating equipment on the Cleco system during normal operating conditions and in the event of a disturbance on the Cleco system.

3.3 For single-phase inverter based system up to 25 kW and Commercial/Agricultural generation up to 300 kW, Customer must have "Type Tests" conducted by the manufacturer of the generating equipment or a third party test facility per IEEE standard 1547.1 and "Production Tests" conducted by the manufacturer of the generating equipment or a third party test facility per IEEE standard 1547.1.

3.3.1 As part of the approval process, Commercial/Agricultural generation between 150kW and 300kW requires an internal system study to verify the system effects in case there are other DER's in the area connected to the same system.

3.3.2 As part of the approval process, the Customer must submit reports from the "Type Test" and "Production Test" per IEEE standard 1547.1, in addition to submittal of manufacturing documentation certifying compliance with UL 1741.

3.3.3 To be approved, a single-phase inverter based system must adhere to the following requirements:

- All IEEE 1547 series of standards,
- All applicable safety laws,
- Must not feedback or backfeed to non-energized lines,
- All applicable national safety codes,
- All municipal/parish permitting requirements.

3.4 All Customers not fitting criteria 3.3 shall submit to Cleco for review of the protective functions the following:

3.4.1 A legible electronic copy of detailed site electrical system one-line diagram showing the configuration of all Generating Facility equipment, such as generators, transformers, circuit breakers, disconnect switches, and protective relays; current and potential circuits, and protection and control schemes. The one-line diagram shall be signed and stamped by a licensed Professional Engineer registered in the State of Louisiana and in compliance with IEEE 1547 series of standards.

3.4.2 A copy of any site documentation that indicates the precise physical location of the proposed Generating Facility (for example, USGS topographic map or other diagram or documentation).

3.4.3 Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address).

3.4.4 A copy of any site documentation that describes and details the operation of the protection and control schemes.

3.4.5 A copy of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).

3.4.6 Customer will be required to put all proposed generators behind a single primary meter connection. Multiple 300kW or larger generator connection points will not be allowed on a Cleco circuit.

3.5 Upon installation, the generation facilities shall be commission tested per IEEE 1547.1 by a qualified person and witnessed by Cleco personnel. The results of these tests shall be submitted to Cleco for review and approval prior to the generation equipment being placed in service.

3.6 Any modifications made by the Customer to his facility that may affect the Cleco system require review by Cleco prior to implementation.

3.7 Prior to service being made available to the Customer's generating equipment, Cleco may inspect the Customer's facility and witness testing of any protective equipment or devices associated with the interconnection.

3.8 The Customer may not commence parallel operation of his generators with the Cleco system until final written approval has been given by Cleco.

4.0 GENERAL OPERATING REQUIREMENTS

4.1 Cleco primary distribution voltages vary depending on the geographic location. The Customer should contact Cleco for information on the specific circuit that will serve his generating facility.

4.1.1 If Cleco changes the primary distribution voltage in the future, i.e., from a lower voltage to a higher voltage, for example, from 13.2 kV to 34.5 kV, the Customer will be responsible for all costs (transformers, breakers, etc.) required to re-interconnect to the Cleco system. If Cleco changes the nominal primary voltage in the future for example from 13.2KV to 34.5KV, the Customer will be responsible for all costs (transformers, breakers, etc) required to re-interconnect to the Cleco system.

4.2 The interconnection of the Customer’s generating equipment with the Cleco system shall not cause any reduction in the quality of service being provided to other Customers. In order to minimize service abnormalities due to the Customer’s parallel generation with the Cleco system, the following criteria shall be met by the Customer's generating equipment.

4.2.1 The Customer shall operate his generation equipment in such a manner that the maintained voltage levels are in the same range as if his generating equipment were not connected to the Cleco system. The Customer shall provide an automatic method of disconnecting his generating equipment from the Cleco system according to Section 6.4 of IEEE 1547.

4.2.2 Voltage flicker on the distribution system caused by the Customer's generating facilities must be limited to the "Borderline of Irritation" curve shown in flicker tolerance curve from IEEE standard 141-1993/IEEE standard 519-1992. Failure to meet these limits will result in immediate disconnection by the Company until such time that all problems are corrected.

4.2.3 Total harmonic current distortion measured at the Customer's meter shall not exceed 5% of the fundamental 60Hz frequency and shall not exceed the values in Table 26 of IEEE 1547.

4.2.4 The operating frequency of the Customer's generating equipment shall not deviate more than +0.5 hertz or -0.7 hertz from a 60 hertz base. The Customer shall automatically disconnect his generating equipment from the Cleco system within 10 cycles if this frequency tolerance cannot be maintained.

4.2.5 The power factor of the Customer's generator(s) shall be from 0.90 lagging to 0.90 leading at the generator terminals at all times. The power factor at the PCC (Point of Common Coupling) shall be from 0.95 lagging to 0.95 leading. Customer's responsibility to correct the generator power factor to meet this criterion.

4.2.6 The Customer shall be responsible for disconnecting his generating equipment from Cleco facilities within 10 cycles of an outage caused by short circuits or grounds on the Cleco circuit serving the Customer's generating facilities.

4.2.7 The Customer shall have the sole responsibility for protecting his generating equipment from excessive negative and zero sequence currents.

4.2.8 The Customer shall provide the necessary protective devices to prevent parallel operation of his generating equipment with the Cleco system unless the Cleco system voltage is of normal magnitude and phase sequence.

4.2.9 Cleco reserves the right to specify the installation of shunt capacitors, at Customer's expense, for correction of Customer's power factor.

4.3 It shall be the sole responsibility of the Customer to properly synchronize his generator(s) with the Cleco system. The Customer shall provide an automatic or semi-automatic synchronizing scheme to prevent closing of its circuit breaker when the two electrical systems are out of synchronism. The synchronizing system of the Customer must allow the generator to be operated in parallel only when Cleco's electrical circuit is energized from the Cleco system at the point of common coupling.

4.4 Control devices shall be installed by the Customer in accordance with prudent electrical practices to prevent the energization of a de-energized Cleco circuit.

4.5 Cleco reserves the right to open the interconnecting breaker for any of the following reasons:

4.5.1 During system emergencies.

4.5.2 To facilitate maintenance, test, or repair of Cleco facilities.

4.5.3 The Customer's generating equipment interferes with other Customers or with the operation of the Cleco system.

4.5.4 Inspection of the Customer's generating and/or protective equipment reveals a hazardous condition.

4.5.5 A lack of scheduled maintenance and/or maintenance records for Customer protective equipment.

4.5.6 The Customer's protective devices do not comply with this specification.

4.6 All costs resulting from future additional protective relaying requirements shall be borne by the Customer.

5.0 SPECIFIC REQUIREMENTS - THREE-PHASE GENERATORS

5.1 Customers who desire to install and operate three-phase generators in parallel with the Cleco system are required to install certain protective devices (relays, circuit breakers, etc.). The purpose of these devices is to promptly remove the Customer's generating equipment from the Cleco system whenever a fault or abnormal event occurs.

5.2 Protective equipment at the Customer's location shall be owned, operated, and maintained by the Customer.

5.2.1 All interconnection relays shall be “utility grade” and shall be powered by a DC battery storage system.

5.2.2 All protective devices installed to protect the Cleco system from Customer in-feed shall conform to prudent electrical practices.

5.2.3 The installation of these devices shall be subject to the inspection of Cleco.

5.2.4 All relay settings on the interconnecting breaker shall be reviewed by Cleco.

5.2.5 The Customer has the sole responsibility for the routine maintenance and testing of customer owned protective and generating equipment. Cleco reserves the right to verify on demand the settings, calibration, and operation of all Customer protective equipment. Verification may include injection of currents and voltages to the protective circuits via a relay test set to simulate faulted or other conditions to verify settings, calibration, and operation up to the and including tripping of the circuit breaker(s) by the

protective relays. Testing and maintenance of protective equipment is to be performed at least annually or as required by Cleco to ensure safe and reliable operation when operating in parallel with the Cleco system. Complete testing and maintenance records shall be maintained by the Customer and a copy of each test sent to Cleco for review. Failure of the Customer to provide proper routine maintenance and/or maintenance records shall result in the Customer being disconnected as specified in sub-division 4.5.5 of this specification.

5.3 Customer generators shall not be connected in parallel with the Cleco system through power transformers protected by high side fuses unless approved in writing by Cleco. The use of a three-phase automatic disconnecting device is intended to significantly reduce the possibility of damaging the Customer's generator(s) due to negative-sequence currents.

5.4 Because most short circuits on overhead lines are of a temporary nature, it is Cleco's practice to automatically reclose the substation circuit breakers on such lines 2 - 10 seconds after they have automatically tripped. Reclosing of three-phase line reclosers located between the Cleco substation and Customer generator is also practiced. [These three-phase line reclosers will automatically reclose within 1.5 - 10.0 seconds after they have automatically tripped.] It shall be the Customer's responsibility to automatically disconnect his generator(s) from the Cleco system prior to the Cleco substation breaker or line recloser automatic reclosure.

5.4.1 Customer breakers or reclosers shall not automatically or manually reclose after tripping until a minimum of 120 seconds after the Cleco service voltage of normal magnitude and phase sequence has returned.

5.4.2 Under no condition will the Customer be permitted to energize a non-energized Cleco circuit. Equipment to effectively block the Customer from energizing a non-energized Cleco circuit shall be installed.

5.5 The Customer's main interconnecting circuit breaker/recloser shall be a three-phase device with an electronic or electromechanical control. Hydraulically controlled breakers/reclosers shall not be used.

5.5.1 The symmetrical current interrupting capability shall be greater than the maximum available system fault duty (assume infinite bus).

5.5.2 The breaker/recloser and its control shall be located so as to be accessible at all times to Cleco personnel.

5.6 All Customer generators shall be separable from the Cleco system by a visible break disconnecting device.

5.6.1 A three-phase, manual load break disconnecting device shall be installed to separate the Customer's generating facilities from the Cleco system. If the switch is located in the Customer's system, Customer shall install in accordance with prudent electrical practices.

5.6.2 Customer owned visible break disconnecting devices shall be accessible to

and allow padlocking in the open position by Cleco personnel.

5.7 The Customer shall normally be connected to the Cleco system through a dedicated distribution transformer to ensure that the generator cannot become isolated with a small amount of other Customer load and confine any voltage fluctuations or harmonics produced by the generator to the Customer's own system. In instances where it is impractical to provide a dedicated transformer, the Customer may be required to install over and under voltage and over and under frequency relays arranged to disconnect the generator(s) from the Cleco system or pay to install a dedicated transformer. All systems over 150KW will be required to have dedicated transformer.

6.0 SPECIFIC REQUIREMENTS - SINGLE-PHASE GENERATORS

6.1 Customers desiring to install and operate single-phase generators in parallel with the Cleco system, 25 KW (gross nameplate capacity) or less, will be allowed at most locations on the radial distribution system if they meet the requirements of this specification. Depending on the point of interconnection to the Cleco system, single-phase generators larger than 25 KW may be allowed.

6.2 It is the responsibility of each Customer to install, operate, protect, and maintain all facilities required for the safe and effective operation of his generating equipment in parallel with the Cleco system.

6.3 To prevent a Distributed Generation Customer from back feeding a de-energized line, the Customer shall install a manual disconnect switch with lockout capability. The manual disconnect shall be placed adjacent to the metering facilities on the same exterior wall and shall be accessible to Utility personnel at all hours. The manual disconnect shall be labeled “Generator Disconnect” in a permanent manner.

6.4 In addition to the manual disconnect switch, the Customer shall ensure that the generator is automatically disconnected from the Utility supply for loss of Utility service as per IEEE Standard 1547. This may be accomplished by a separate automatic disconnect switch or by the generation package if the following three design requirements are met: 1) The inverter equipment must be designed to shut down or disconnect and cannot be manually overridden by the customer upon loss of Utility service; 2) The inverter must be warranted by the manufacturer to shut down or disconnect upon loss of Utility service; and 3) The inverter must be properly installed and operated, and inspected and/or tested by Utility personnel. The decision to grant a waiver for the above-mentioned separate automatic disconnect switch will be at the Utility’s discretion, however, any decision will be subject to review by the Commission.

6.5 Because of the transient nature of most faults on the overhead electrical system, it is Cleco’s practice to automatically reclose the substation breakers 2 - 10 seconds after they have tripped. [Reclosing of single-phase reclosers located between the Cleco substation and Customer generator is also practiced. These single phase reclosers will automatically reclose within 1.0 - 2.0 seconds after they have

automatically tripped]. It shall be the Customer's responsibility to automatically disconnect his generator(s) from the Cleco system prior to the Cleco substation breaker or line recloser automatic reclosure.

6.6 Customer generator controls shall be equipped with a line voltage sensing relay or contactor which will prevent the generator from being connected to a de-energized Cleco circuit.

6.7 The Customer shall normally be connected to the Cleco system through a dedicated distribution transformer to ensure that the generator cannot become isolated with a small amount of other Customer load and confine any voltage fluctuations or harmonics produced by the generator to the Customer's own system. In instances where it is impractical to provide a dedicated transformer, the Customer may be required to install over and under voltage and over and under frequency relays arranged to disconnect the generator(s) from the Cleco system or pay to install a dedicated transformer.

7.0 INDUCTION GENERATORS AND INVERTER SYSTEMS

7.1 Due to the possibility of self-excited operation, all installations of power factor correction devices for induction generators or power inverters shall be reviewed by Cleco.

7.2 The starting of induction generators shall be permitted only where the inrush will not exceed allowable limits. In cases where starting or load changing on induction generators will have an adverse impact on the Cleco system voltage, the Customer may be required to install step-switched capacitors or other techniques to bring voltage fluctuations to acceptable levels.

7.3 Inverter system installations shall be designed such that an interruption on the Cleco system shall result in the removal of the inverter infeed to the Cleco system. If a Customer using an inverter for parallel generation causes any reduction in the quality of service provided to other utility Customers, the generating Customer will be required to install filtering to bring the harmonic output of his inverter to an acceptable level.

8.0 COMMUNICATION REQUIREMENTS THAT MAY BE INCLUDED IN FINAL STANDARD GENERATOR INTERCONNECTION FOR 300KW AND LARGER SYSTEMS

8.1 Operator Communications

Customer facilities connected to the Cleco system shall maintain operating communications between Cleco's system operator or the designated representative and Customer operations personnel via standard voice and facsimile capabilities using the public telephone network, provided at the Customer's expense. The operational communications shall include, but not be limited to, system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances and hourly and daily load schedules and reports.

8.2 General RTU Data and Communications

The data required shall be collected by Cleco using a multi-ported RTU or Cleco approved equivalent data collection and transfer equipment. Unless otherwise specified by Cleco, the data shall be communicated via dedicated multipair fiber optic cable from customer equipment to Cleco PCC. Cleco approved telecommunications equipment shall be installed and maintained at the Customer's expense in order to communicate with the host computer systems at Cleco's DOC.

An alarm shall be provided indicating a DNP communications link failure between the RTU, protection relays, and all meter(s). This alarm shall be programmed as a digital indication point. If metering data is communicated between RTU's or other data collection and transfer equipment, then a digital alarm shall be provided indicating a DNP communications link failure between devices.

This data will be input into the Cleco's host computer systems to assist in the performance of various system operational functions, such as billing, load forecasting, generation scheduling and maintenance.

8.3 Data Communications for Cleco RTU
Data collection and transfer equipment, such as an RTU, required to collect the necessary data on the Cleco side of the PCC shall be installed, owned, and maintained by Cleco. The Customer shall be responsible for Cleco's costs associated with RTU installation and/or modification(s) for generator interconnection requirements.

8.4 Data Communications for Customer RTU
Data collection and transfer equipment required to collect the necessary data on the Customer's side of the PCC shall be installed, owned, and maintained by the Customer, at the Customer's expense. The communication protocol for the data links between Cleco and the Customer data collection equipment shall be specified by Cleco.

8.5 Quantities to be Telemetered
The following quantities shall be telemetered directly to Cleco from the RTU:

8.5.1 Status of Customer generator breaker(s) (open/closed).

8.5.2 Status of first interrupting device(s) on Customer side of POI (open/closed).

8.5.3 Status of first visible disconnecting device(s) on Customer side of POI, when applicable (open/closed).

8.5.4 AVC status

8.5.5 Kilowatt & Kilovar of Generation

APPENDIX 1
CLECO POWER LLC
STANDARD INTERCONNECTION EVALUATION FORM

SECTION 1: CUSTOMER INFORMATION

Company Name:_____

Contact Name:_____

Mailing Address:_____

City:_____ State:_____ Zip Code:_____

Facility Location (if different from above):_____

Daytime Phone: _____ Mobile Phone:_____

Utility Customer Account (from electric bill, if customer):_____

SECTION 2: GENERATION FACILITY INFORMATION

Please Select Applicable Generator Type:

Solar_____ Wind_____ Hydro_____ Geothermal_____ Biomass_____

Fuel Cell_____ Micro Turbine_____ Gas_____ Oil_____ Solid Fuel__

Inverter-based system_____ Other: _____

Generator Rating **(kW):** _____ AC or DC (circle one)

Requested Voltage Connection to Cleco System:_____Phases:_____

SECTION 3: USE OF FACILITY – INTENT TO SELL EXCESS ENERGY TO THIRD PARTY

This facility intends to sell excess energy to third party? Yes_____ No_____

If planning to sell excess to CLECO, what is the expected daily export?_____

***This form must be fully completed and returned to Cleco before any interconnection requests will be considered.**

***You represent and warrant to Cleco that all of the information submitted during this process will be accurate, current and complete. You further agree that you will immediately inform Cleco if any of the requested information changes.**

Please Mail This Form To:
Cleco Power, LLC
Attn: Generation Interconnections
2030 Donahue Ferry Rd
Pineville, LA 71360

Or Email To:
Matthew.Felger@cleco.com with subject line: Standard Interconnection Evaluation Form