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SME:	Jason Goar	Jan 27, 2025
	Jason Goar, Director of Transmission and Generation Planning	Date
Approved By:		Jan 27, 2025
	Gary Hutson, Senior Vice President/Chief Operating Officer	Date
Concurred By:	Sarah Snow	Jan 27, 2025
	Sarah Snow, Director of Compliance	Date

Revision/Review History

Version	Author	Effective Date	Description of Change
2019	Jason Goar	December 2019	Annual review
2020	Bret Hariel	December 2020	Annual review
2022	Jason Goar	January 2022	Consultant Review
2023	Bret Hariel	February 2023	Annual review
2023*	Bret Hariel	8/15/2023	Added language for additional interconnection requirements in Section 5.3
2024	Bret Hariel	2/1/2024	Annual Review
2025	Bret Hariel	2/3/2025	Annual Review

*Beginning in 2023 the revision table date was changed to effective date, instead of date the document was revised, prior to signature.

NERC Standard Applicability

NERC Standard	Effective Date	Requirement	Section
FAC-001	01-JANUARY –2024	All	All
FAC-002	01-JANUARY -2024	All	All

Note: The NERC Standards Applicability table is non-exhaustive and may not incorporate all of the NERC Reliability Standards for which this document applies.

Table of Contents

1. Interdepartmental Responsibility

Title	Department	Responsibility
Cooperative Energy Personnel	OPC, PG, PD	Apply Facility Connection Requirements

2. References

- NERC Reliability Standards (www.nerc.com)
- SERC Reliability Corporation (www.serc1.org)
- Cooperative Energy Facility Connection Requirements
- Cooperative Energy System Planning Criteria
- IEEE Standards Association (www.ieee.org)
- MISO Planning (www.misoenergy.org)

Standard	Year	Description
IEEE C37.04	2018	IEEE Standard for Ratings and Requirements for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V
IEEE C37.30.1	2022	IEEE Standard Requirements for AC High-Voltage Air Switches Rated Above 1000 V
IEEE C62.11	2020	IEEE Standard for Metal-Oxide Surge Arresters for AC Power Circuits (>1 kV)
IEEE 605	2023	IEEE Guide for Bus Design in Air Insulated Substations
IEEE C57.12.00	2021	IEEE Standard for General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
IEEE C57.13	2016	IEEE Standard Requirements for Instrument Transformers
IEEE C93.3	2017	IEEE Standard Requirements for Power-Line Carrier Line Traps (30 kHz to 500 kHz)
NEMA CC1	2018	Electric Power Connection for Substations
ANSI C119.4	2022	Electric Connectors — Connectors for Use between Aluminum-to-Aluminum and Aluminum-to-Copper Conductors Designed for Normal Operation at or Below 93°C and Copper-to-Copper Conductors Designed for Normal Operation at or Below 100°C
IEEE 80	2013	IEEE Guide for Safety in AC Substation Grounding

3. Distribution

This document is not confidential and is provided on Cooperative Energy's website for any possible customers and Cooperative Energy personnel that may require the Facility Connection Requirements.

4. Purpose and Scope

The purpose of this document is to define the minimum electrical connection requirements for all entities seeking to interconnect to Cooperative Energy's transmission system. By doing so, this document will provide the necessary information to entities seeking to interconnect and thus decreasing the potential of causing adverse impacts on the reliability of the Bulk Electric System (BES).

5. Facility Connection Requirements

5.1 Applicability

All entities seeking to connect generation, transmission, or end-use facilities to the Cooperative Energy transmission system shall meet or exceed the requirements specified in this document. All new interconnections or existing interconnections seeking to make a qualified change shall be confirmed by Cooperative Energy to exist within the Cooperative Energy Local Balancing Area. A qualified change is defined by the Planning Coordinator (PC). MISO (Midcontinent Independent System Operator) is the PC for Cooperative Energy. Please refer to the MISO Planning website for details. The facility connection requirements contained in this document shall be applicable to both Cooperative Energy and other utilities and entities.

All entities seeking to connect generation, transmission, or end-use facilities to the Cooperative Energy transmission system shall contact the following:

Entity	Email
Cooperative Energy System Planning Group	TransmissionPlanning@cooperativeenergy.com
MISO Generation Interconnection Planning Group	ginterconnection@misoenergy.org
MISO Planning Coordinator	PlanningCoordinator@misoenergy.org

5.2 Impact Studies:

Studies shall be performed to evaluate the reliability impact of all new interconnections or existing interconnections seeking to make a qualified change to the Cooperative Energy transmission system. All studies shall be consistent with the Cooperative Energy System Planning Criteria, MISO requirements, and the NERC Reliability Standards.

a. Cooperative Energy or MISO will perform a System Impact Study (SIS), at the expense of the requesting entity, to assess the system impacts, system reliability and capability of the transmission system for the proposed interconnection. Neighboring systems will be monitored for criteria violations to determine if the proposed interconnection results in any criteria violations. The study will be shared with the requesting entity and MISO (if Cooperative Energy performs the study) as soon as feasible. The impact studies that should be considered include but are not limited to: fault duty, stability, grounding, short circuit, power quality, protection coordination, loadflow, and transfer capability.

b. If the SIS determines that the proposed interconnection impacts neighboring systems, the study report will be shared with the affected neighboring system as soon as feasible. The study performing entity will coordinate with the affected neighboring system to perform an Affected System Study (AFS) to determine if the impacts are valid and the mitigations to any valid impacts. The requester will be responsible for the expense of the AFS. The study performing entity will coordinate the results of the AFS with the requesting entity and the requesting entity will be responsible for resolving any valid impacts. The requesting entity has the option to modify its request to avoid impacts.

c. If the requesting entity determines to proceed with the interconnection request, Cooperative Energy will perform a Facilities Study (FS), at the expense of the requesting entity, to determine the detailed facility interconnection requirements for the proposed interconnection. The FS will identify cost estimates of the interconnection facilities needed to physically and electrically interconnect to Cooperative Energy's transmission system. The FS will identify cost estimates of any network upgrades needed because of the proposed interconnection. The study report will be shared with the requesting entity and MISO as soon as feasible.

d. If impacts to neighboring systems exist, Cooperative Energy or MISO will coordinate with the affected neighboring system to perform a FS to identify cost estimates of any network upgrades needed because of the proposed interconnection. The requesting entity will be responsible for the expense of the FS. The study performing entity will coordinate the affected neighboring system's completed FS with the requesting entity.

5.3 Generator Facility Connection Requirements:

Any generator interconnection request to an existing Cooperative Energy owned radial transmission facility designated for load service or generation connection will require a looped transmission feed configuration (new transmission line). The generation facility connection arrangement required, at a minimum, for BES and preferred for non-BES is a ring bus configuration with circuit breaker elements equal to the number of transmission lines and generator units terminating on the bus. Additionally, each generator terminating on the transmission system bus must have a three-phase, group-operated remotely controlled disconnect switch for isolating the generator system from the transmission system. The generator step-up (GSU) transformer fault isolation shall include at a minimum a circuit breaker on the high voltage side. When GSU transformers are connected to a transmission system ring bus with circuit breakers, the additional high voltage circuit breakers may be omitted. The GSU transformer high voltage (HV) winding must be solidly grounded and must provide a source for ground fault currents. Additional requirements for generation facility connections are as follows:

a. Supervisory control and data acquisition – The GENERATION PROVIDER shall provide and install a Remote Terminal Unit (RTU) that meets Cooperative Energy specifications. Cooperative Energy will provide specifications for an RTU. The GENERATION PROVIDER shall furnish and install the RTU. The GENERATION PROVIDER load and equipment status information will be telemetered to the Cooperative Energy System Operations Center (SOC). Typical data requirements could include the following: status of interrupting devices, MW and MVAR flow, and voltage at the interconnection point.

b. Telemetering and metering – The requirements listed in this section apply to all newly interconnecting facilities. The existing facilities will also have to adhere to these requirements upon any modification, addition, or upgrade to facilities necessary to connect to Cooperative Energy's system. The customer shall furnish, own, and maintain meters, meter panels, and associated wiring and connections. Ownership of meters for billing purposes and maintenance requirements will be addressed in the Operating Agreement. Metering equipment accuracy shall be better than 1%. The GENERATION PROVIDER shall provide and install telemetering equipment capable of reliably providing real time (2 second scan) data to the Cooperative Energy SOC via the RTU. The GENERATION PROVIDER shall provide and install metering (to include meter, CTs, & PTs) capable of accurately measuring all generation quantities, including station service requirements. Typical metering data requirements could include the following: kW, kWh, kVAR (leading and lagging), kVARh, and voltage. The

meters should have the capability to meter instantaneous bi-directional real (kW) and reactive (kVAr) power and energy.

For all the transmission interconnections, the power exchange between the interconnecting facility and Cooperative Energy shall be metered at the point of interconnection. Cooperative Energy reserves the right to specify the type and manufacturer for all metering equipment including the instrument transformers. The GENERATION PROVIDER shall be responsible for any cost related to the changes and/or upgrades to Cooperative Energy specified metering equipment required to meet the metering standards.

c. Communications during normal and emergency conditions – The GENERATION PROVIDER shall establish a point of contact with the Cooperative Energy SOC. This contact person shall have the authority and capability to operate the facility according to the instructions of the Cooperative Energy SOC. The GENERATION PROVIDER must obtain required approval from the Cooperative Energy SOC prior to starting generation and connecting to the transmission system. For voice communications during normal and emergency conditions, the GENERATION PROVIDER shall provide, as a minimum, telephone communications located in the GENERATION PROVIDER's control room accessible by personnel directly responsible for operating the generating unit(s). The GENERATION PROVIDER shall provide a back-up means of communications between the GENERATION PROVIDER's control room and Cooperative Energy's SOC. This may consist of one or more of the following: radio, cellular phone, satellite phone, or an attended phone with which the GENERATION PROVIDER's control room has communication by means of plant intercom, radio or other means. Applicable phone numbers shall be shared between the GENERATION PROVIDER and Cooperative Energy's SOC.

d. Voltage and power factor control – The generation facility shall match or contribute to the performance of the transmission system. The generation facility may be required to supply or receive reactive power, depending on the status of the transmission system as directed by the Cooperative Energy SOC. The voltage at the point of connection shall be regulated per the table below. The generation facility electrical system design (e.g., transformers, tap settings, motors and other loads, generator/exciter, voltage regulator) should not restrict any mode of project operation within these possible voltage ranges. Voltage regulator load compensation may be required to control voltage at a point beyond the generator terminals. Voltage regulator droop compensation may be required for generators whose terminals are directly connected (i.e., cross-compound, hydro). Voltage regulator power system stabilizer may be required to ensure generator stability.

The impact on adjacent areas' voltage and/or reactive compensation devices must be considered. As a guideline to power factor operation, the GENERATION PROVIDER's power factor, as measured at the point of interconnection, should be at a minimum within a power factor bandwidth of 0.95 leading/lagging or must comply with limits stated in the Operating Agreement. The generation facility must be capable of continuous non-interrupted operation during normal and emergency system conditions. All reasonable measures should be taken to avoid tripping of the facility under low or high voltage.

Nominal Voltage (kV)	Emergency Low Voltage (kV)	Normal Low Voltage (kV)	Normal High Voltage (kV)	Emergency High Voltage (kV)
69	90%	95%	105%	105%
115	90%	95%	105%	107%
161	90%	95%	105%	107%
230	90%	95%	105%	107%

The generator facility should meet the transient low and high voltage ride through capability criteria as per the NERC Standard PRC-024-3 – Attachment 2[1]. Any supplemental changes to the criteria shall also be applicable in the future.

e. Equipment Ratings – Electrical equipment provided by GENERATION PROVIDER shall meet the following industry standards: Circuit Breakers, IEEE C37.04; Air Switches, IEEE C37.30.1; Surge Arresters, IEEE C62.11; Bus, IEEE 605; Power Transformers, IEEE C57.12.00; Current Transformers, IEEE C57.13; Wave Traps, IEEE C93.3; Connectors, NEMA CC1 and ANSI C119.4. Cooperative Energy reserves the right to review the facility design and specifications and to refuse to energize any facility that does not meet these standards. Cooperative Energy will specify, provide, install and maintain all necessary new or additional facilities necessary to the Cooperative Energy transmission system. The GENERATION PROVIDER shall be responsible for the cost of these facilities.

f. Reactive power requirements – The generation facility electrical system design (e.g., transformer rating/taps/impedance, cooling systems, generator/exciter rating) should not limit the continuous reactive capability. The GENERATION PROVIDER will be required to adjust the GSU tap settings as necessary to meet reactive support requirements. Commissioning tests on each unit shall include all tests necessary to meet the requirements of NERC Reliability Standards and

[1] PRC-024-3 - Frequency and Voltage Protective Settings for Generating Resources

guidelines for generator testing. Depending on the reactive capability of the generation facility, additional reactive power requirements may be required.

g. Short circuit conditions – All facilities must meet or exceed the fault duty capability necessary to meet short circuit requirements as determined through short circuit analyses. The GENERATION PROVIDER is responsible to pay for all changes required on Cooperative Energy facilities due to increased fault currents.

h. System protection and other controls – The GENERATION PROVIDER shall, at its expense, install, maintain and operate system protection necessary to protect the general public, personnel and equipment. The system protection must provide functions consistent with normal utility practice for transmission connected generation. The system protection installed must consider the following: (1) prevention/minimization of equipment damage, (2) minimization of equipment outage time, (3) minimization of system outage area, (4) minimization of system voltage disturbances, and (5) maintenance of protective system coverage for abnormal conditions. For each generation interconnection request, Cooperative Energy will initiate a stability study to determine minimum acceptable clearing times. The GENERATION PROVIDER shall be responsible for the design, specification and installation of "islanding" protection equipment, if required. Generator connections to the Cooperative Energy transmission system shall be designed such that faults in the generator, generator step-up (GSU) transformer, circuit breakers, bus, or bus connections and mis-operation of any generator protective relaying will not cause interruption of transmission service. The GENERATION PROVIDER is responsible for providing protective devices that will protect its generating equipment against faults and disturbances on Cooperative Energy's and its own system. System protection must have active voltage and frequency relaying and operate in accordance with all applicable NERC PRC standards. Generating facilities, both synchronous and non-synchronous, shall also install, maintain, and operate equipment necessary for providing primary frequency response. Underfrequency relay protection applied on a turbine-generator must coordinate with underfrequency relays applied on the Transmission and Distribution (T&D) system. The turbine-generator relays must be set to allow all T&D underfrequency relays to operate first. Typical T&D underfrequency relays are set at 59.5, 59.2, 58.8, and 58.5 Hz with a 0.5 second time delay. Transfer trip (or other communication assisted) relaying may be required in certain instances, such as generators connected through a tapped transmission line (e.g., islanding), and other relays may be required as transmission conditions and operating guidelines warrant. All protective relays must be coordinated with Cooperative Energy's protective relays including

stability consideration and must be calibrated at least every five years. The GENERATION PROVIDER must provide a test report to Cooperative Energy documenting the current settings as well as the "as found" and "as left" test results.

i. Power System Stabilizers – Power oscillations on the transmission grid are becoming a critical problem for the transmission system in the SERC Region. A Power System Stabilizer (PSS) is an electronic feedback control that is a part of the excitation system control for generating units. The PSS acts to modulate the generator field voltage to dampen power system oscillations. FERC Order 2003 states that *"The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council. Transmission Provider reserves the right to reasonably establish minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the Transmission Provider's system provider, or its designated representative."*

In order to ensure the integrity and reliability of the transmission system, the SERC Region recommends that a PSS be procured, installed, tuned, and activated on all new resources interconnecting with the transmission system. If in-service generators receive excitation system or voltage regulator replacements, then a stabilizer is recommended to be procured and installed. If Cooperative Energy determines the need, or if the generator already had an in-service stabilizer before the excitation system or voltage regulator replacement, these retrofitted stabilizers will be tuned and activated. If the need for a stabilizer is identified by Cooperative Energy for an existing unit, the GENERATION PROVIDER may be requested to then procure, install, tune and activate a stabilizer.

The GENERATION PROVIDER is responsible for the procurement, tuning and testing of the exciter and stabilizer controls for optimum performance and for providing a stabilizer model and data consistent with the requirements of Cooperative Energy.

The stabilizer is expected to be an accelerating power delta-P-omega ($\Delta P\omega$) type. Other types which are functionally equivalent to the delta-P-omega type may be accepted on a case-by-case basis. Special studies and field tests are required to tune a PSS and to establish its settings. These studies and field tests will be the responsibility of the GENERATION PROVIDER prior to commercial operation.

It is anticipated that most of the time, the generator equipment vendor can be retained to perform the studies and tests. Cooperative Energy shall perform other relevant studies and shall coordinate with the GENERATION PROVIDER and the equipment vendor (or consultant) to establish reliable settings for the PSS. SERC recommends that for new generators the PSS tuning test documentation on generator model (which shall include the PSS dynamic model and final settings) and this data shall be provided prior to commercial operation. For the retrofit of a PSS to an existing unit, the documentation shall be provided when the testing of the PSS is complete. If future system conditions change significantly, Cooperative Energy may require the GENERATION PROVIDER to reset the PSS parameters to more appropriate settings to preserve the overall reliability of the grid.

Cooperative Energy may provide criteria to allow the power system stabilizer to be taken out of service. The PSS shall be taken out of service for scheduled maintenance only following consultation between the GENERATION PROVIDER and Cooperative Energy and with the agreement of Cooperative Energy. The GENERATION PROVIDER shall be required to take the PSS out of service if Cooperative Energy identifies transmission system operating conditions during which the operation of the PSS adversely affects the stability of the transmission system or its connected generators. If a power system stabilizer is removed from service or is not capable of automatic operation, the GENERATION PROVIDER shall immediately notify Cooperative Energy. Operating limits may apply in such cases based on system needs identified by Cooperative Energy.

If system studies or field experience do not show need for a PSS, for generators rated less than or equal to 50 MVA or for generators connected at distribution voltage levels, a PSS may not be needed.

j. Generation control – Design of the generation control system must consider the following: (1) load following capability, (2) AGC, and (3) coordination of generation control system settings with Cooperative Energy. Cooperative Energy shall retain the right, but not the obligation, to immediately sever or disconnect with the generation facility if, in the sole judgment of the Cooperative Energy SOC personnel, such action is necessary to protect its facilities, system, customers, employees, or the general public, and shall not be liable for any damage which may result from disconnection.

k. Maintenance coordination – The owner of the generator facility is responsible for all maintenance requirements except those specified in the Operations and

Maintenance section of this report. All maintenance projects that have any effect on the Cooperative Energy transmission system shall be coordinated in advance with the Cooperative Energy SOC. All maintenance notifications should specify both the time and duration of the maintenance outage. Planned outages should take into account unit commitment obligations, replacement power and/or contractual obligations. The Operating Agreement will specify required maintenance intervals and support documentation.

l. Synchronization facilities – The GENERATION PROVIDER will be responsible for synchronizing its facility to Cooperative Energy's electric system. Generator voltage regulation is required to be in service whenever the generator is synchronized to the system. The facility shall not be synchronized unless authorized by the Cooperative Energy SOC.

m. System grounding – The GENERATION PROVIDER must provide a GSU transformer to isolate the zero sequence circuit of the generator from the zero sequence of the transmission system. The GSU transformer's winding configuration will be specified by Cooperative Energy. Cooperative Energy may require a current limiting reactor in the GSU and/or generator neutral. If required, the GENERATION PROVIDER will be responsible for the design, specification and installation of these neutral reactors. Interconnection substation grounding must follow guidelines in IEEE Standard 80. Analysis of the proposed grid resistance is required by methods described in IEEE Standard 80. Ground potential rise, step, and touch potentials must be consistent with any adjacent Cooperative Energy facility. Resistance measurement of the installed ground grid prior to energization is required. At least annually, the GENERATION PROVIDER must manually inspect above ground connections. If the GENERATION PROVIDER facility is adjacent to a Cooperative Energy facility, the ground grid of the GENERATION PROVIDER must connect to the existing Cooperative Energy ground grid as approved by Cooperative Energy. Typically, interconnecting grids approximately every forty feet (40') is sufficient provided ground rods are also installed along the interconnected grid.

In summary, "a safe grounding design has two objectives: (1) to provide means to carry electric currents into the earth under normal and fault conditions without exceeding any operating and equipment limits or adversely affecting continuity of service [and] (2) to assure that a person in the vicinity of grounded facilities is not exposed to the danger of critical electric shock …" [IEEE STD 80-2013].

Surge arrestors and insulators shall have the ratings as shown in the following table: (other ratings require approval by Cooperative Energy)

Nominal Line-Line System Voltage (kV)	Insulation Voltage Class for Equipment (kV BIL)	Apparatus Insulator Ratings (kV BIL)	Surge Arrester Ratings (kV MCOV)
12.47	110	110	7.65
13.2	110	110	8.4
13.8	110	110	8.4
23	150	150	15.3
69	350	350	48
115	450	550	76
161	650	750	106
230	750	900	140

n. Responsibilities during emergency conditions – The GENERATION PROVIDER shall communicate with and shall cooperate with Cooperative Energy SOC personnel in such a manner to support Cooperative Energy's recovery efforts during emergency conditions. This may include, but may not be limited to: switching operations, var support, changes in generation output, increases or decreases of the GENERATION PROVIDER's internal plant load, tripping of generating unit(s) or starting of generating unit(s).

o. Power Quality Impacts – The voltage at the point of connection shall be regulated per the table below. The frequency of the power system shall be 60 Hz nominal and shall be maintained within the limits of 59.8 and 60.2 Hz under normal steady-state operation.

Nominal Voltage (kV)	Emergency Low Voltage (kV)	Normal Low Voltage (kV)	Normal High Voltage (kV)	Emergency High Voltage (kV)
69	90%	95%	105%	105%
115	90%	95%	105%	107%
161	90%	95%	105%	107%
230	90%	95%	105%	107%

p. Operations and Testing – The GENERATOR PROVIDER shall at minimum

- Perform generator real and reactive capability verification testing as requested by the Balancing Authority (BA) or Transmission Operator (TOP)
- Notify the BA or TOP of changes in capabilities and characteristics of the generator
- Provide a forecast of expected real power output to the BA or TOP upon request (e.g., a seven day real power output forecast)
- Provide planned next day outage information to the TOP for generators greater that 50MW in accordance with TOP reporting requirements
- Inform its Host BA and TOP of generation resource availability.

5.4 Transmission Facility Connection Requirements:

Transmission facility connection requirements will vary according to the voltage level, location on the Cooperative Energy system, and the number of lines terminating. Transmission facility connections to the Cooperative Energy 69 kV and 115 kV transmission systems shall require, as a minimum, a three-phase, three-way, group-operated, phase-over-phase, remotely-controlled switch or three (3) separate three-phase, group-operated, remotely-controlled switches. Switches shall be arranged as to provide isolation of each transmission line terminating at the connection point. Switches shall have operational ratings to interrupt loop flow and line charging current. Terminations of two or more transmission lines at a point on the Cooperative Energy transmission system shall require a switching station. Switching stations shall have one main bus and a number of bays equivalent to the number of lines terminating at the connection point. Each bay shall have a minimum of one (1), three-phase, group-operated, remotely controlled switch. Each bay shall have provisions for a future circuit breaker with associated breaker disconnect switches and line relaying. Additionally, transmission facility connections in a corridor with four existing substations shall require circuit breakers, and relay protection.

Transmission facility connections to the Cooperative Energy 161 kV and 230 kV transmission systems shall require a similar bus arrangement, circuit breakers, and relay protection to that required for generator connections. Remote controlled devices must provide indication and supervisory control to Cooperative Energy's SOC. Additional requirements for transmission facility connections are as follows:

a. Supervisory control and data acquisition – For all remote control and indication applications, the TRANSMISSION FACILITY OWNER shall provide and install

a Remote Terminal Unit (RTU) that meets Cooperative Energy specifications. Cooperative Energy will provide specifications for an RTU. The TRANSMISSION FACILITY OWNER shall furnish and install the RTU. The TRANSMISSION FACILITY OWNER load and equipment status information will be telemetered to the Cooperative Energy SOC. Typical data requirements could include the following: status of interrupting devices, MW and MVAR flow, and voltage at the interconnection point.

b. Telemetering and metering – The requirements listed in this section apply to all newly interconnecting facilities. The existing facilities will also have to adhere to these requirements upon any modification, addition, or upgrade to facilities necessary to connect to Cooperative Energy's system. The customer shall furnish, own, and maintain meters, meter panels, and associated wiring and connections. Ownership of meters for billing purposes and maintenance requirements will be addressed in the Operating Agreement. Metering equipment accuracy shall be better than 1%. The TRANSMISSION FACILITY OWNER shall furnish telemetering equipment capable of reliably providing real time (2 second scan) data to the Cooperative Energy SOC via the RTU. The owner of the transmission facility shall furnish metering (to include meter, CTs, & PTs) capable of accurately measuring bi-directional quantities. Typical metering data requirements could include the following: kW, kWh, kVAR (leading and lagging), kVARh and voltage.

   For all the transmission facility interconnections, the power exchange between the interconnecting facility and Cooperative Energy shall be metered at the point of interconnection. The TRANSMISSION FACILITY OWNER will work with Cooperative Energy to determine the type, cost, and responsibility related to the changes and/or upgrades to Cooperative Energy specified metering equipment required to meet the metering standards.

c. Communications during normal and emergency conditions – The TRANSMISSION FACILITY OWNER shall establish a point of contact with the Cooperative Energy SOC. This contact person shall have the authority and capability to operate the facility according to the instructions of the Cooperative Energy SOC. The TRANSMISSION FACILITY OWNER must obtain proper clearances from the Cooperative Energy SOC before commencing any work on the transmission facilities. For voice communications during normal and emergency conditions, the TRANSMISSION FACILITY OWNER shall provide, as a minimum, telephone communications located in the TRANSMISSION FACILITY OWNER's control room accessible by personnel directly responsible for operating the transmission facilities. Phone number(s) shall be shared between the

TRANSMISSION FACILITY OWNER and Cooperative Energy's SOC. The TRANSMISSION FACILITY OWNER shall provide a back-up means of communications between the TRANSMISSION FACILITY OWNER's control room and Cooperative Energy's SOC. This may consist of one or more of the following: radio, cellular phone, satellite phone, or an attended phone with which the TRANSMISSION FACILITY OWNER's control room has communication by means of plant intercom, radio or other means.

d. Voltage and power factor control – If the transmission facility is capable of voltage and/or power factor control, its operation must be consistent with the following. The facility may be required to supply or receive reactive power, depending on the status of the transmission system as directed by the Cooperative Energy SOC. The voltage at the point of connection shall be regulated per the table below. The transmission facility equipment should have tap ranges and self-regulation to operate within these possible voltage ranges. The impact on adjacent areas' voltage and/or reactive compensation devices must be considered. As a guideline to power factor operation, the TRANSMISSION FACILITY OWNER's power factor, as measured at the point of interconnection, must comply with limits stated in the Operating Agreement.

Nominal Voltage (kV)	Emergency Low Voltage (kV)	Normal Low Voltage (kV)	Normal High Voltage (kV)	Emergency High Voltage (kV)
69	90%	95%	105%	105%
115	90%	95%	105%	107%
161	90%	95%	105%	107%
230	90%	95%	105%	107%

e. Equipment Ratings – Electrical equipment provided by the TRANSMISSION FACILTIY OWNER shall meet the following industry standards: Circuit Breakers, IEEE C37.04; Air Switches, IEEE C37.30.1; Surge Arresters, IEEE C62.11; Bus, IEEE 605; Power Transformers, IEEE C57.12.00; Current Transformers, IEEE C57.13; Wave Traps, IEEE C93.3; Connectors, NEMA CC1 and ANSI C119.4. Cooperative Energy reserves the right to review the facility design and specifications and refuse to energize any facility that does not meet these standards. Cooperative Energy will specify, provide, install and maintain all necessary new or additional facilities necessary to the Cooperative Energy transmission system. The TRANSMISSION FACILITY OWNER shall be responsible for the cost of these facilities.

f. Reactive power requirements – The transmission facility equipment should have the tap ranges and self-regulation necessary to accommodate the transmission system's reactive power flow requirements. The amount of reactive power that must be supplied will be based on the reactive power support necessary to maintain transmission voltages within the limits specified in the Cooperative Energy transmission planning criteria.

g. Short circuit conditions – All facilities shall meet or exceed the fault duty capability necessary to meet short circuit requirements as determined through short circuit analyses. The TRANSMISSION FACILITY OWNER is responsible to pay for all changes required on Cooperative Energy facilities due to increased fault currents.

h. System protection and other controls – The TRANSMISSION FACILITY OWNER shall, at its expense, install, maintain and operate system protection necessary to protect the general public, personnel and equipment. The system protection must provide functions consistent with normal utility practice for transmission systems. The system protection installed must consider the following: (1) prevention/minimization of equipment damage, (2) minimization of equipment outage time, (3) minimization of system outage area, (4) minimization of system voltage disturbances, and (5) maintenance of protective system coverage for abnormal conditions. The TRANSMISSION FACILITY OWNER is responsible for providing protective devices that will protect its equipment against faults and disturbances on Cooperative Energy's and its own system. Line protective relaying shall include, as a minimum, phase distance, ground directional overcurrent (with instantaneous and time delay elements), and breaker failure. Three zones of ground distance may be substituted for the ground directional overcurrent. Transfer trip (or other communication-assisted) relaying may be required in certain instances and other relays may be required as transmission conditions or operating guidelines warrant. All protective relays must be coordinated with Cooperative Energy's protective relays including stability consideration and must be calibrated at least every three years. The TRANSMISSION FACILITY OWNER must provide a test report to Cooperative Energy documenting the current settings as well as the "as found" and "as left" test results.

i. Generation Control – N/A.

j. Maintenance coordination – The TRANSMISSION FACILITY OWNER is responsible for all maintenance requirements except those specified in the Operations and Maintenance section of this report. All maintenance projects that

have any effect on the Cooperative Energy transmission system shall be coordinated in advance with the SOC. The Operating Agreement will specify required maintenance intervals and support documentation.

k. Synchronization facilities – The TRANSMISSION FACILITY OWNER will be responsible for synchronizing its facility to Cooperative Energy's electric system. The facility shall not be synchronized unless authorized by the Cooperative Energy SOC, unless automatic reclose and synchronization is part of the installed system protection scheme approved by Cooperative Energy.

l. System grounding – Interconnection substation grounding will follow guidelines in IEEE Standard 80. Analysis of the proposed grid resistance is required by methods described in IEEE Standard 80. Ground potential rise, step, and touch potentials must be consistent with any adjacent Cooperative Energy facility. Resistance measurement of the installed ground grid prior to energization is required. At least annually, the TRANSMISSION FACILITY OWNER must manually inspect above ground connections. If the transmission facility is adjacent to a Cooperative Energy facility, the ground grid of the TRANSMISSION FACILITY OWNER must connect to the existing Cooperative Energy ground grid as approved by Cooperative Energy. Typically, interconnecting grids approximately every forty feet (40') is sufficient provided ground rods are also installed along the interconnected grid.

In summary, "a safe grounding design has two objectives: (1) to provide means to carry electric currents into the earth under normal and fault conditions without exceeding any operating and equipment limits or adversely affecting continuity of service [and] (2) to assure that a person in the vicinity of grounded facilities is not exposed to the danger of critical electric shock …" [IEEE STD 80-2013].

Surge arrestors and insulators shall have the ratings as shown in the following table: (other ratings require approval by Cooperative Energy)

Nominal Line-Line System Voltage (kV)	Insulation Voltage Class for Equipment (kV BIL)	Apparatus Insulator Ratings (kV BIL)	Surge Arrester Ratings (kV MCOV)
12.47	110	110	7.65
13.2	110	110	8.4
13.8	110	110	8.4
23	150	150	15.3
69	350	350	48
115	450	550	76
161	650	750	106
230	750	900	140

m. Responsibilities during emergency conditions – The TRANSMISSION FACILITY OWNER shall communicate with and shall cooperate with Cooperative Energy SOC personnel in such a manner to support Cooperative Energy's recovery efforts during emergency conditions. This may include, but may not be limited to: switching operations, changes in transmission schedules, or interruption of transmission schedules.

n. Power Quality Impacts – The voltage at the point of connection shall be per the table below. The frequency of the power system shall be 60 Hz nominal and shall be maintained within the limits of 59.8 and 60.2 Hz under normal steady-state operation.

Nominal Voltage (kV)	Emergency Low Voltage (kV)	Normal Low Voltage (kV)	Normal High Voltage (kV)	Emergency High Voltage (kV)
69	90%	95%	105%	105%
115	90%	95%	105%	107%
161	90%	95%	105%	107%
230	90%	95%	105%	107%

5.5 End User Facility Connection Requirements:

End-user facility connection requirements will vary according to the voltage level, location on the Cooperative Energy system, and the number of facilities

terminating. End-user facility connections to the Cooperative Energy transmission system shall be designed such that faults in the end-user transformer(s), circuit breaker(s), bus, or bus connections and misoperation of any end-user protective relaying will not cause interruption of transmission service. End-user facility connections to the Cooperative Energy 69 kV and 115 kV transmission systems shall require, as a minimum, a three-phase, three-way, group-operated, phase-over-phase, remotely-controlled, switch or three (3), three-phase, group-operated, remotely-controlled switches. Switches shall be arranged as to provide isolation of each transmission line and the end-user facility terminating at the connection point. Each end-user facility terminating on the transmission system bus must have a three-phase, group-operated disconnect switch for isolating the end-user system from the transmission system. End-user facility connections to the Cooperative Energy 161 kV and 230 kV transmission systems shall require a similar bus arrangement, circuit breakers, and relay protection to that required for generator connections. Remote controlled devices must provide indication and supervisory control to Cooperative Energy's SOC. Additional requirements for end-user facilities are as follows:

a. Supervisory control and data acquisition – If required, end-user facilities shall provide and install a Remote Terminal Unit (RTU) meeting Cooperative Energy specifications. For all remote control and indication applications, the end user shall provide and install a Remote Terminal Unit (RTU) that meets Cooperative Energy specifications. Cooperative Energy will provide specifications for an RTU. The END USER FACILITY OWNER shall furnish and install the RTU. The end user load and equipment status information will be telemetered to the Cooperative Energy SOC. Typical data requirements could include the following: status of interrupting devices, MW and MVAR flow, and voltage at the interconnection point.

b. Telemetering and metering – End user facilities shall include provisions for Cooperative Energy to install three element revenue meter equipment. The provisions shall include adequate spacing required to install metering equipment and by-pass switches to allow maintenance of metering equipment. All Cooperative Energy revenue meter equipment will be calibrated on an annual basis and the END USER FACILITY OWNER will be given the opportunity to witness calibration tests. Cooperative Energy will install telemetering equipment at off-system substations when necessary to properly estimate off-system loads. All revenue metering shall be calibrated to meet or exceed the following tolerances specified in ANSI C12 metering standards:

    1. +/- 0.20 % for a series full load test

2. +/- 0.20 % for a series light load test
3. +/- 0.30 % for a series power factor test
4. +/- 0.30 % for a series per element full load test
5. +/- 0.30 % for a series per element light load test
6. +/- 0.40 % for a series per element power factor test

Typical metering data requirements could include the following: kW, kWh, kVAR (leading and lagging), kVARh and voltage.

c. Communications during normal and emergency conditions – The END USER FACILITY OWNER shall establish a point of contact with the Cooperative Energy SOC. This contact person shall have the authority and capability to operate the facility according to the instructions of the Cooperative Energy SOC. For voice communications during normal and emergency conditions, the END USER FACILITY OWNER shall provide, as a minimum, telephone communications located in the END USER FACILITY OWNER's control room accessible by personnel directly responsible for operating the end user's facilities. Phone number(s) shall be shared between the END USER FACILITY OWNER and Cooperative Energy's SOC. The END USER FACILITY OWNER shall provide a back-up means of communications between the END USER FACILITY OWNER's control room and Cooperative Energy's SOC. This may consist of one or more of the following: radio, cellular phone, satellite phone, or an attended phone with which the END USER FACILITY OWNER's control room has communication by means of plant intercom, radio or other means.

d. Voltage and power factor control – The load power factor at all end use facilities should be maintained as close to unity as reasonably possible. Cooperative Energy applies penalties when the ratio of KVAR to KW exceeds 40% to 60% (Depending on billing rate applied).

e. Equipment Ratings – Electrical equipment provided by the END USER FACILITY OWNER shall meet the following industry standards: Circuit Breakers, IEEE C37.04; Air Switches, IEEE C37.30.1; Surge Arresters, IEEE C62.11; Bus, IEEE 605; Power Transformers, IEEE C57.12.00; Current Transformers, IEEE C57.13; Wave Traps, IEEE C93.3; Connectors, NEMA CC1 and ANSI C119.4. Cooperative Energy reserves the right to review the facility design and specifications and refuse to energize any facility that does not meet these standards. Cooperative Energy will specify, provide, install and maintain all necessary new or additional facilities necessary to the Cooperative Energy transmission system. The END USER FACILITY OWNER shall be responsible for the cost of these facilities.

f. Reactive power requirements – No additional requirements are necessary for end-user facilities.

g. Short circuit conditions – All facilities must meet or exceed the fault duty capability necessary to meet short circuit requirements as determined through short circuit analyses.

h. System protection and other controls –The END USER FACILITY OWNER shall, at its expense, install, maintain and operate system protection necessary to protect the general public, personnel and equipment. The system protection must provide functions consistent with normal utility practice for end user facilities. The system protection installed must consider the following: (1) prevention/minimization of equipment damage, (2) minimization of equipment outage time, (3) minimization of system outage area, (4) minimization of system voltage disturbances, and (5) maintenance of protective system coverage for abnormal conditions. END USER FACILITY OWNER transformer fault isolation shall include circuit breakers on both the high and low voltage sides. END USER FACILITY OWNER transformer relaying shall include, as minimum, differential, phase and ground overcurrent, and sudden pressure. For transformers connected to transmission systems 115 kV and below and rated 10 MVA or less, a power fuse may serve as the high side fault protection and fault interrupting device instead of the aforementioned high voltage circuit breaker and transformer relays. Other relays (including underfrequency or undervoltage relaying) may be required as transmission conditions or operating guidelines warrant. Underfrequency relays must be applied to disconnect at least 30% of connected load. These settings must coordinate with other Cooperative Energy Control Area underfrequency relays. Typical settings are 59.5, 59.2, 58.8, and 58.5 Hz with a 0.5 second time delay. The END USER FACILITY OWNER is responsible for providing protective devices that will protect its equipment against faults and disturbances on Cooperative Energy's and its own system. All protective relays must be coordinated with Cooperative Energy's protective relays including stability consideration and must be calibrated at least every five years. The END USER FACILITY OWNER must provide a test report to Cooperative Energy documenting the current settings as well as the "as found" and "as left" test results.

i. Generation Control – N/A.

j. Maintenance coordination – The END USER FACILITY OWNER is responsible for all maintenance requirements except those specified in the Operations and

Maintenance section of this report. All maintenance projects that have any effect on the Cooperative Energy transmission system shall be coordinated in advance with the Cooperative Energy SOC and should include notification even when clearances are not required. The maintenance practices of the end-user on their transmission-connected equipment should be performed at a level that ensures the reliability of the interconnected transmission systems. The Operating Agreement will specify maintenance intervals and support documentation when required.

k. Synchronizing facilities – N/A.

l. System grounding – Interconnection substation grounding will follow guidelines in IEEE Standard 80. Analysis of the proposed grid resistance is required by methods described in IEEE Standard 80. Ground potential rise, step, and touch potentials must be consistent with any adjacent Cooperative Energy facility. Resistance measurement of the installed ground grid prior to energization is required. At least annually, the END USER FACILITY OWNER must manually inspect above ground ground connections. If the END USER FACILITY is adjacent to a Cooperative Energy facility, the ground grid of the END USER FACILITY OWNER must connect to the existing Cooperative Energy ground grid as approved by Cooperative Energy. Typically, interconnecting grids approximately every forty feet (40') is sufficient provided ground rods are also installed along the interconnected grid.

In summary, "a safe grounding design has two objectives: (1) to provide means to carry electric currents into the earth under normal and fault conditions without exceeding any operating and equipment limits or adversely affecting continuity of service [and] (2) to assure that a person in the vicinity of grounded facilities is not exposed to the danger of critical electric shock …" [IEEE STD 80-2013].

Surge arrestors and insulators shall have the ratings as shown in the following table: (other ratings require approval by Cooperative Energy)

Nominal Line-Line System Voltage (kV)	Insulation Voltage Class for Equipment (kV BIL)	Apparatus Insulator Ratings (kV BIL)	Surge Arrester Ratings (kV MCOV)
12.47	110	110	7.65
13.2	110	110	8.4
13.8	110	110	8.4
23	150	150	15.3
69	350	350	48
115	450	550	76
161	650	750	106
230	750	900	140

m. Responsibilities during emergency conditions – The END USER FACILITY OWNER shall communicate with and shall cooperate with Cooperative Energy SOC personnel in such a manner to support Cooperative Energy's recovery efforts during emergency conditions. This may include, but may not be limited to: an interruption of the END USER FACILITY OWNER's load, a change in the END USER FACILITY OWNER's load, switching operations, or changes in scheduled energy deliveries.

n. Power Quality Impacts – The voltage at the point of connection shall be regulated per the table below. The frequency of the power system shall be 60 Hz nominal and shall be maintained within the limits of 59.8 and 60.2 Hz under normal steady-state operation.

Nominal Voltage (kV)	Emergency Low Voltage (kV)	Normal Low Voltage (kV)	Normal High Voltage (kV)	Emergency High Voltage (kV)
69	90%	95%	105%	105%
115	90%	95%	105%	107%
161	90%	95%	105%	107%
230	90%	95%	105%	107%

5.6 Operations and Maintenance:

Cooperative Energy will operate, maintain, and own all components that are an integral (networked) part of the Cooperative Energy transmission system including all buses, circuit breakers, relays, and switches on the transmission side of the generator, transmission facility, or end-user facility isolating switch(es).

All interconnection facilities shall be under the direct operation authority and supervision of the System Operator in the SOC.

- The System Operator shall have the sole authority to permit the connection and energizing of any interconnecting facility to the transmission system.
- The System Operator shall have the sole authority to disconnect any interconnection facility that adversely affects the system.
- The System Operator shall have the sole authority to issue and hold clearances on all interconnected facilities.
- The System Operator shall be provided with the facilities to monitor and / or control all interconnected facilities.
- The System Operator shall provide all voltage schedules and provide for system security.
- Each generation facility shall provide a point of contact to the System Operator. This contact person shall have the authority and capability to operate the facility according to the instructions of the System Operator to ensure that the reliability of the transmission system is properly maintained at all times.

Cooperative Energy shall be provided with maintenance and operational test reports as necessary to ensure that all performance requirements are being met. These reports may include: maintenance of voltage schedules, response to altered reactive dispatch, periodic testing of critical devices, analysis and verification of mis-operations, coordination of maintenance schedules, and compliance with NERC Planning Standards. Cooperative Energy shall have the authority to observe the performance of electrical, mechanical, and operational tests at any reasonable time to ensure that the performance requirements continue to be met.

5.7 Power Quality Requirements:

Transient voltage fluctuations at a point of common coupling (PCC) with a fluctuating load directly connected to the system shall not exceed the following:

1. At 161kV and above, transient voltage fluctuations consisting of step changes (including motor starts) shall not exceed a 1.0 percent voltage excursion at the PCC.

2. At 69kV, transient voltage fluctuations consisting of step changes (including motor starts) shall not exceed a 2.0 percent voltage excursion at the PCC.

3. A measure of visual severity of flicker shall be determined from measurements conducted at a consumer's premise who has complained of flicker or equivalent over a 10 minute period. The measured results shall be compared against Figure 10.3 of IEEE Standard 519-1992 to determine whether the measurements exceed the "Border Lines of Irritation" on the figure.

The maximum total level of harmonic distortion on the system from all sources (under both planned outages and fault outage conditions) shall not exceed the following:

1. At 230 kV and 161 kV, a total harmonic distortion of 1.5 percent with no individual harmonic greater than 1.0 percent.
2. At 115kV and below, a total harmonic distortion of 2.5 percent with no individual harmonic greater than 1.5 percent.

Note that, if service is taken in the Entergy Mississippi, LLC (EML) or Mississippi Power Company (MPCo) control areas, standards for the above and other power quality issues will be controlled by standards of EML or MPCo.

The connection of a generator, transmission facility, or end-user load to the Cooperative Energy transmission system should not unacceptably compromise or degrade the power quality of existing customers.

The installation of power quality monitoring equipment may be required to verify facility owner/operator compliance with power quality performance requirements. If required, this power quality monitoring equipment shall be provided by the facility owner.

Any harmonic mitigation measures implemented to meet the Current Distortion Limits shall be the sole responsibility of the interconnecting facility. Any reactive

power compensation devices utilized to mitigate harmonics should only be installed upon authorization from Cooperative Energy.

5.8 Inspection Requirements:

Existing facility and pre-operational inspection and approval by Cooperative Energy is required. Also included are on-site visits to review operating and maintenance data and the associated documentation as required by NERC Planning Standards and reported by the transmission supplier. Reporting requirements shall be specified as applicable to each connection. Cooperative Energy may impose any additional requirements or testing as necessary following inspections. Final inspection and approval by Cooperative Energy shall be required prior to commercial operation of the new facility.

The facility owner/operator must grant Cooperative Energy the required right of access to the facility for the purposes of conducting inspections, observing tests, and auditing records as required by NERC standards and established reporting procedures.

5.9 Provisions for Future Changes:

The owner of the generator or transmission facility or the end-user shall notify Cooperative Energy in advance of implementing any changes in its facilities that may impact the reliability of the system or of the particular facility. This notification shall be given in a timely manner so that an appropriate review of the reliability impact on the interconnected transmission system and the associated design process can be completed. Cooperative Energy shall notify the owner of the generator or transmission facility or the end-user in advance of implementing any changes in its facilities that may impact the reliability of the system or of the particular facility. Such changes shall include, but are not limited to, changes in the Operating Agreement, Maintenance Coordination, fault duty capabilities, protective relay requirements, transformer tap changes, power factor/reactive corrective measures, equipment change-out or uprating, etc. In order to initiate these change, notice must be mailed to the attention of the President/CEO (or other party as designated in the Operating Agreement), Cooperative Energy, PO Box 15849, Hattiesburg, MS 39404.

Cooperative Energy will notify the customer of changes in Facility Connection Requirements. Notification will be made in writing to the appropriate contact specified in the Operating Agreement.

Operating Agreement Template

As required in the NERC Compliance Document I.C.S1.M1, Cooperative Energy will develop an Operating Agreement with each entity seeking to use Cooperative Energy's transmission. What follows is a template for internal use. Each item addressed may not be used in all Operating Agreements.

Voltage Schedule: The voltage schedule is public information and is located on Cooperative Energy's website. Voltages are maintained within a specified range of the stated voltage and are controlled through operation of tap changers on transformers, operation of capacitor banks and var support from generating units. To provide proper system voltage Cooperative Energy System Operations Center (SOC) personnel adjust transformer load tap changers, switch capacitor banks in and out and dictate verbally to the generating plant operators the var support required of the generating units.

GENERATION PROVIDER will be expected to maintain bus voltage between 95% and 105% of 13.8 KV on the bus on the low side of the transformer at the MEMBER OWNED substation serving the GENERATION PROVIDER. When GENERATION PROVIDER is selling power onto the grid this voltage level must be maintained within the stated range and GENERATION PROVIDER will be required to provide var support as well. The magnitude of the var support will be dictated verbally by Cooperative Energy's SOC personnel. GENERATION PROVIDER may be required to "push out" vars or "take in" vars, depending on conditions on the interconnected transmission system.

To aid Cooperative Energy SOC personnel in knowing the limits of the var support available from the customer generating units, GENERATION PROVIDER must provide capability curves on the units plus any other generator/excitation system design restrictions to the curves.

Power Factor Control is addressed in the above voltage schedule. Other requirements similar to the table below can be incorporated.

69kV System Voltage in per unit of nominal	Allowed power factor in per unit
Between 1.00 and 1.02 pu	Between 0.98 lead and 0.98 lag

Less than 1.00	0.98 lead or less (supply VARS to Cooperative Energy)
More than 1.02	0.98 lag or less (take VARS from Cooperative Energy)

Maintenance Coordination: Cooperative Energy will define required maintenance intervals and reports required on a site-specific basis. Written reports documenting the dates and test results are required. Use the following guidelines:

- Circuit breakers – five year maximum interval between complete internal maintenance/inspection;
- Infra-Red Inspection of customer owned equipment that is located inside of the fence which also contains the interconnection point – Two year maximum interval;
- For customer owned transformers, DGA samples of the transformer oil and detailed analysis by a certified lab is required at least every two years.
- Cooperative Energy reserves the right to inspect customer's electrical interconnection facilities at any time. Transformers/Load Tap Changers - three year maximum interval between complete internal maintenance/inspection.
- Substation Battery Systems - four year maximum interval between load tests and two year maximum interval between cleanings.
- System Protection and Controls - three year maximum interval between calibrations.
- RTU's - one year maximum interval between point-to-point checkout; continuous performance monitoring (excessive no replies, etc.) to be performed.
- SOC Voice Communication - primary system (telephone, etc.) and backup system (satellite phone, cell phone, etc.) to be verified monthly.
- Metering/Telemetering - one year maximum interval between calibrations.

Other Items:

- Access rights and limitations (including hold harmless clause) to premises owned and/or operated by the other party will be defined in the Operating Agreement.
- Governing Law – The validity, interpretation and performance of this Operating Agreement and each of its provisions shall be governed by the laws of the State of Mississippi.
- Notice – Any notice, request, consent or other communication permitted or required by this Operating Agreement shall be in writing and shall be deemed given when deposited in the United States mail, Certified Mail prepaid, and if given to Cooperative Energy shall be addressed to: President/CEO, Cooperative Energy, PO Box 15849, Hattiesburg, MS 39402-5849 unless an officer or address shall have been designated by the respective party by notice in writing.

- Amendments – This Operating Agreement may be amended by and only by a written instrument duly executed by each of the parties hereto.
- Successors and Assigns; Assignment – This Operating Agreement shall inure to the benefit of and be binding upon CUSTOMER and Cooperative Energy and their respective successors and assigns, and insofar as is permitted by law, on any receiver or trustee in bankruptcy, reorganization or receivership of either party. Nothing in this Operating Agreement, expressed or implied, is intended to confer upon any other person any rights or remedies hereunder. Neither party may assign its interest in the Operating Agreement without the express written consent of the other party.
- Force Majeure – Neither party shall be in default in performance of any obligation or duty hereunder if such failure of performance is due to Force Majeure.
- Coordination Committee. The Coordination Committee shall be responsible for the administration of the Agreement in accordance with its terms.
- Responsibility and Indemnification – Each party hereto expressly agrees to indemnify and save harmless and defend the other against all claims, demands, costs, or expense for loss, damage, or injury to persons, or property, in any manner directly or indirectly growing out of the generation, transmission, or use of electric capacity and energy on its own side of the delivery point except where the damage or injury is due solely to the negligence of the other party.
- Regulation – The parties recognize this Agreement is required to be filed with certain regulatory agencies and is subject to their approval. It is understood and agreed by the parties hereto that no part of this Agreement shall become effective without all parts being effective.
- Other items to be included: term, contract year, billings and payments, waivers, and insurance.

6. Definitions and Acronyms

END USER FACILITY OWNER – A facility owner other than Cooperative Energy that requests interconnect to the Cooperative Energy transmission system for the purpose of power consumption.

GENERATION PROVIDER – A generator owner other than Cooperative Energy that is requesting to interconnect a generator of any type and size to the Cooperative Energy's transmission system.

TRANSMISSION FACILITY OWNER – A transmission facility owner other than Cooperative Energy that is requesting to interconnect a transmission facility to Cooperative Energy's transmission system.

7. Appendixes

None