



## Filing Receipt

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November 30, 2021

Filing Clerk  
Public Utility Commission of Texas  
1701 N. Congress Avenue  
P.O. Box 13326  
Austin, TX 78711-3326

**RE: Project No. 35077, ERCOT Standard Generation Interconnection Agreement between CenterPoint Energy Houston Electric, LLC and Braes Bayou Generating, LLC**

To whom it may concern:

Enclosed for filing in Project No. 35077 is the November 19, 2021 Amendment One to the ERCOT Standard Generation Interconnection Agreement (SGIA) dated November 18, 2020 between CenterPoint Energy Houston Electric, LLC and Braes Bayou Generating, LLC. This filing is made pursuant to 16 Tex. Admin. Code § 25.195(e).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mickey Moon", written over a horizontal line.

Mickey Moon  
Assistant General Counsel  
CenterPoint Energy Houston Electric, LLC

Enclosures: (1) Executed SGIA Amendment One

Project No. 35077

CenterPoint Energy Contract No. INT-20-315A

**AMENDMENT ONE TO  
ERCOT STANDARD GENERATION INTERCONNECTION AGREEMENT**

This Amendment One ("Amendment") to the Braes Power Plant Project Electric Reliability Council of Texas Standard Generation Interconnection Agreement, (the "SGIA") dated November 18, 2020, is made between **Braes Bayou Generating, LLC** ("Braes Bayou Generating") and **CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC** ("CenterPoint Energy"), (collectively, "the Parties") effective on the 19<sup>th</sup> day of November, 2021. In consideration of the mutual promises and undertakings herein set forth, Braes Bayou Generating and CenterPoint Energy agree to amend the SGIA as follows:

Exhibit "C" dated November 18, 2020 is replaced with the Exhibit "C" dated November 19, 2021, which is attached to this Amendment One.

Exhibit "K" dated November 18, 2020 is replaced with the Exhibit "K" dated November 19, 2021, which is attached to this Amendment One.

Except as otherwise expressly provided for herein, the SGIA will continue in full force and effect in accordance with its terms.

Braes Bayou Generating and CenterPoint Energy have caused this Amendment to be executed in several counterparts, each of which shall be deemed to be an original, but all shall constitute one and the same instrument.

**CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC**

By DocuSigned by:  
*Kevin Sarvis*  
A2859C8857384EF... \_\_\_\_\_  
Name: Kevin Sarvis

Title: Manager, Transmission Accounts and Support

Date: November 22, 2021

**Braes Bayou Generating, LLC**

By DocuSigned by:  
*Cliff Oliver*  
EC14F1F81C9E4D8... \_\_\_\_\_  
Name: Cliff Oliver

Title: VP, Business Development

Date: November 19, 2021

**Exhibit “C”**  
**Interconnection Details**

- 1) Plant Name: Braes Bayou Generating, LLC (“Plant”).
- 2) Point of Interconnection Location
  - A) TSP system side of Plant’s terminating structure(s)/transmission voltage circuit breaker(s)/disconnect switch(es) inside Generator’s GIFSUB, located at Lockwood Gubbles Road, Thompsons, Texas 77467Fort Bend County, Texas.
- 3) Delivery Voltage: 345 kV
- 4) Number and Size of Generating Unit(s)
  - A) Plant will be comprised of eight (8) generators with a total net rating of 408 MW (“Planned Capacity”), which is projected to be the Plant’s Net Dependable Capability, as defined by ERCOT Requirements.
- 5) Type of Generating Unit
  - A) Eight (8) GE LM6000 natural gas fired combustion turbine generators rated at approximately 51.0 MW each. One common generator breaker will connect four 345 kV step-up (main power) transformers with each of the 13.8 kV windings connected to plant auxiliary transformers as well as two electric generating units.

<b>Natural gas combustion turbines</b>				
Description	Manufacturer	Rating (@97°F)	GSU Transformer Voltages	
LM6000	GE	51.0 MW	13.8kV – 345 kV	Natural Gas
LM6000	GE	51.0 MW		Natural Gas
LM6000	GE	51.0 MW	13.8kV – 345 kV	Natural Gas
LM6000	GE	51.0 MW		Natural Gas
LM6000	GE	51.0 MW	13.8kV – 345 kV	Natural Gas
LM6000	GE	51.0 MW		Natural Gas
LM6000	GE	51.0 MW	13.8kV – 345 kV	Natural Gas
LM6000	GE	51.0 MW		Natural Gas
Total nominal gross MW:		408 MW		

- B) Step-up, standby and auxiliary transformers connected at Delivery Voltage will have one common circuit breaker for isolation from the TIF.
  - C) Electrical characteristics of Plant’s generating units shall be in accordance with the most recent version of data that Generator has provided to TSP and shall be consistent with data provided to ERCOT.
- 6) Metering Equipment
  - A) TSP shall provide and install ERCOT Polled Settlement (EPS) primary and check meters, 345 kV instrument transformers and associated wiring required for measuring the output of the Plant’s generation and auxiliary electrical load at TSP’s TIFSUB Substation. The 345 kV metering instrument transformers for the EPS metering shall be procured by TSP and owned, maintained, and replaced by TSP. TSP shall install and maintain the

metering system's components in a manner consistent with ERCOT Requirements and the PUCT Substantive Rules.

7) Generator Interconnection Facilities (GIF)

- A) Generator shall furnish, operate, and maintain a complete generation facility capable of generating the Planned Capacity, including, but not limited to, all generators, power system stabilizers, generator step-up transformers, protective devices, and other transformers and associated foundations, the terminating structures, all relays necessary for the protection, synchronization and coordination of the generators, generator auxiliary equipment and the disconnect switches and foundations at the Point of Interconnection.
- B) The generation unit(s) shall meet all voltage and reactive requirements as outlined in the ERCOT Protocol, ERCOT Operating Guides and other binding documents.
- C) Generator shall furnish, own and maintain the connection from Plant's equipment to Plant's terminating structure at the Point of Interconnection, including phase conductors, static conductors, structure(s), tower fittings, suspension insulators, terminating clamps and line conductor terminal fittings.
- D) TSP shall provide to Generator the TSP's alpha/numeric identifiers for incoming 345 kV transmission lines and shall provide TSP's alpha/numeric identifiers for high voltage circuit breakers, switches, power transformers, generators and certain low side equipment and the TSP's assigned 6-character substation identification for the GIF ("NEWSUB"). The GIF high voltage circuit breakers, switches, transformers, generators and certain low side equipment, shall be identified with TSP's identifiers. TSP will develop a substation basic one-line diagram that includes these identifiers. The Generator shall mark these identifiers on the substation equipment. TSP may stencil identification numbers on substation equipment and mount signs, labels, drawings, telephone numbers, and instructions on the GIF. The Generator shall use TSP's assigned substation name, or Substation ID, and equipment identifiers in discussions with TSP and in RARF submittals.
- E) Generator shall provide the foundations, terminating structures and disconnecting devices at the Point of Interconnection. Generator shall design and install the Plant's terminating structure(s), and disconnecting devices in accordance with TSP's conductor loading requirements.
- F) Generator shall connect its generating Plant ground mat to TSP's transmission tower static wires at the Plant's terminating structures. Static wire(s) shall be bonded directly to the generating plant's ground mat via use of dedicated grounding conductor(s) of adequate ampacity to establish main electrical bond(s).
- G) Electrical characteristics of Plant's Generator Interconnection Facilities shall be in accordance with the most recent version of TSP's "Specification for Customer 138 kV Substation Design" attached as Exhibit "H" and in particular, the section pertaining to "Generation".
- H) Generator shall provide a disconnect switch located on Generator's terminating structure(s) for connection to TSP's System.
- I) Generator shall provide NEMA four-hole pads on Plant's disconnect switch for connection to NEMA four-hole pads on TSP's connecting conductors.
- J) Generator shall grant to TSP all necessary land rights, in a form acceptable to and drafted by TSP.

- K) Generator shall own all protective relays, instrument transformers, instrumentation, and control equipment physically located on Plant side of the Points of Interconnection.
- 8) TSP Interconnection Facilities (TIF)
- A) TSP shall complete its entire scope of work on the TIFSUB Substation (except for Punch List Items) including, but not limited to, bus works, supports, structures, circuit breakers, disconnect switches, relays, and other equipment necessary for protection and coordination, controls, and wiring all as necessary to provide an interconnection between Plant's generation facilities and TSP's System; energize the same, and interconnect with Plant, all as provided herein.
    - 1) Punch List Items are defined as those non-material items of work that remain to be performed in order to ensure full compliance with this Agreement. Punch List Items do not include any items of work, alone or in the aggregate, non-completion of which (i) prevents the TIFSUB Substation from being used for its intended purposes as described in this Agreement or in accordance with applicable laws; (ii) prevents the TIFSUB Substation from being legally, safely, and reliably placed in commercial operation; or (iii) in the exercise of reasonable engineering judgment could have an adverse effect on the operation, efficiency, or reliability of the TIFSUB Substation, or its ability to transmit the Plant's power to the ERCOT grid.
  - B) TSP shall furnish, own, and maintain the connection from TSP's equipment to Plant's terminating structure(s) at the Point of Interconnection, including phase conductors, static conductors, structures, tower fittings, suspension insulators, terminating clamps and line conductor terminal fittings with NEMA standard four-hole flat pads for attachment to the NEMA four-hole pads on Plant's disconnecting device.
  - C) TSP shall furnish, own, and maintain the connection from TIFSUB Substation to TSP's transmission system.
  - D) TSP shall develop and install transmission improvements that it determines, in its sole discretion, are foreseeable and reasonably necessary to safely, reliably, and economically integrate the Plant into the TSP System. TSP MAKES NO PROMISE, REPRESENTATION, OR WARRANTY AS TO WHETHER THE TSP SYSTEM WILL BE FREE OF CONSTRAINTS AT ANY TIME, INCLUDING BUT NOT LIMITED TO TIMES WHEN THE TRANSMISSION IMPROVEMENTS UNDER THIS AGREEMENT ARE BEING MADE OR AFTER THEIR COMPLETION.
  - E) TSP shall expand its existing TIFSUB Substation as shown on the drawing entitled "CenterPoint Energy 345 kV TIFSUB Substation, Substation Development Plan for Braes Bayou Generating, LLC Project Interconnection Agreement – Final Proposed Offer," dated 5-29-2020 ("TIFSUB Substation Development Plan") and any subsequent modifications to such drawing(s) made by TSP and delivered to Generator.
  - F) Generator shall facilitate to TSP all necessary land rights, in a form acceptable to and drafted by TSP.
- 9) Communications Facilities
- A) TSP shall provide and maintain, at TSP's expense, a communication circuit for real-time data transmittal via SCADA equipment from the TIFSUB Substation to TSP's Energy Management System.

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- B) Generator shall provide a fiber optic communication interface device on its end of the fiber and TSP will provide a fiber optic communication interface device on its end of the fiber associated with the RTU inputs between Plant and the TIFSUB Substation.
- C) Generator shall furnish RTU inputs identified in Exhibit "C", Paragraph 11)A) from the Plant to the TIFSUB Substation's communication interface point.
- D) Generator shall provide a voice telephone extension outlet in close proximity to Plant's relay panel that is located within the Plant. Such telephone extension outlet shall be connected to the local exchange carrier's telephone system; however, the telephone extension outlet may be connected to Plant's internal telephone system, provided Plant's internal telephone system is equipped with an uninterruptible power supply system.
- E) TSP shall furnish RTU inputs identified in Exhibit "C", Paragraph 11)B) from TIFSUB Substation to Plant's communication interface termination point.
- F) TSP shall provide fiber optic communication cables of sufficient length to connect between Plant to the TIFSUB Substation relay panel.

#### 10) System Protection Equipment

- A) Generator shall provide two sets of protective relaying accuracy (C800) current transformers on Generator's 345 kV circuit breakers associated with the protective relaying between Plant and the TIFSUB Substation. Each set of current transformers will provide signals to independent sets of primary and backup protective relays for the interconnecting lead between the GIF and the TIFSUB Substation. The current transformer ratio will be approved by the TSP relay protection engineer and reflected on the Generator's drawings.
- B) The fiber optic communication cables will have strands of single mode fiber optic cable to be utilized at 1300 nm wavelength for communication of protection data and telemetry.

#### 11) Telemetry Requirements

- A) TSP shall furnish a substation SCADA RTU at the TIFSUB Substation. The RTU will be multi-port equipped and operate with protocols compatible with TSP. The RTU will be equipped to monitor the TIFSUB Substation as outlined in Paragraph 11 and control circuit breakers in the TIFSUB Substation. TSP shall also furnish the RTU inputs, such as contacts and transducers, in the TIFSUB Substation. Selected real-time data of the TIFSUB Substation will be available at TSP's RTU for Generator's use. TSP's RTU will be equipped with a DNP-3 "Slave" serial communication port for this purpose. TSP shall furnish the fiber optic cable(s) between the TIFSUB Substation and the Plant RTU or DCS "Master" serial communication port for this purpose.
- B) Generator shall furnish Plant data to TSP's RTU communication port at the TIFSUB Substation as referenced below. The Generator's RTU/DCS shall be equipped with a DNP-3 "Slave" serial communication port for this purpose. TSP shall furnish the fiber optic cable between the Plant and the TIFSUB Substation RTU "Master" serial communication port for this purpose.
- C) Generator shall provide Plant data to ERCOT according to ERCOT requirements. TSP is not responsible for providing Plant data to ERCOT.
- D) Generator shall provide to TSP at TSP's TIFSUB Substation the following signals originating at Generator's Plant:
  - 1) Analog Data from Plant
    - (i) Kilovolts for each collector bus (single line-to-line value).

- (ii) Net megawatts for each generator feeder (three phase).
- (iii) Net megavars for each generator feeder (three phase).
- (iv) Net megavars for the reactive support equipment.
- (v) Kilovolts for 345 kV transmission voltage (A phase).
- (vi) Net megawatts and megavars for the 345 kV transmission line (three phase).
- (vii) Frequency at the collector bus
- (viii) Megawatts and megavars for each 345 kV transformer (three phase).
- 2) Status Data from Plant
  - (i) Status of the 345 kV transmission voltage circuit breakers.
  - (ii) Status of all 13.8 kV circuit breakers for feeders and reactive support equipment.
  - (iii) Status of generator automatic voltage regulator (automatic and manual).
- E) TSP will provide to Generator at Generator's GFSUB Substation the following signals originating at TSP's TFSUB Substation:
  - 1) Analog Data from TSP Substation Devices
    - (i) Kilovolts for the Point of Interconnection (A phase).
    - (ii) Megawatts, megavars, and megawatt-hour data.
  - 2) Data from TSP Substation Devices
    - (i) Status of transmission voltage circuit breakers associated with the generator lead(s).
    - (ii) Alarm for failure of Pilot Wire/fiber optic relaying communication channels, if applicable.

## 12) Supplemental Terms and Conditions

- A) The following drawings are attached and made a part of this agreement as Exhibit "F" – Attached Drawings. *(Note: The drawings contain a line of demarcation between TSP provided facilities and Generator provided facilities).*
  - 1) CenterPoint Energy 345 kV Project / TFSUB Substation for Braes Bayou Generating Project Interconnection Agreement – Final Substation Development Plan Basic Offer, dated 05-25-2020.
  - 3) Basic Offer – Braes Bayou Generating Project / TFSUB Substation Interconnection Agreement One-Line Relaying and Metering Diagram dated 5-29-2020, drawing number 1-STD-GEN-, sheets 1 through 1 of 1.
- B) Cost Responsibility:
  - 1) Notwithstanding the provisions of Exhibit "A", Section 8.1, the amount of the contribution in aid of construction, if any, that Generator may be required to make, shall be specified in Exhibit "E", Security Arrangement Details.
  - 2) The Generator does not desire any enhancements to TSP's basic offer interconnection facilities and therefore no contribution in aid of construction ("CIAC") of the Transmission Interconnection Facilities is required.
  - 3) The TIF described herein is designed based on the generating capacity provided by the Generator. It is assumed that the generating facility will be capable of generating the Planned Capacity by the Scheduled Commercial Operation Date specified in Exhibit "B". Within the first 12 months following Commercial Operation, if the highest level of Actual Capacity is less than the Planned Capacity, the Generator shall be responsible for TIF costs, if any, that are determined, solely by the TSP, to have been incurred to accommodate Generator's Planned Capacity, but are then determined to not be necessary to accommodate Generator's Actual Capacity. As



used here, "Actual Capacity" shall mean the Plant's total Net Dependable Capability, as determined or accepted by ERCOT, in accordance with ERCOT Requirements. Generator shall pay such costs determined herein within thirty (30) days following the receipt of TSP's invoice.

C) Authorization to Proceed:

- 1) Generator authorizes TSP to begin work on any required transmission system additions, modifications, and upgrades and the TIFSUB Substation additions, modifications, and upgrades secured by this agreement except that, TSP will not, without prior written approval from Generator, incur any costs and expenses in excess of \$9.15M; and
- 2) (i)) until released to do so by Generator. Such release shall be provided in the form of a Notice to Proceed.

D) Clarifications to Exhibit "A"

- 1) The Parties agree that at the time of executing this Agreement the references to the PUCT Rules contained within certain definitions set forth in Exhibit "A", "Article 1. Definitions" have the meanings ascribed to such terms as established in the current PUCT Rules. The Parties recognize that the PUCT Rules are amended from time to time by the PUCT. The parties also acknowledge that ERCOT issues ERCOT Requirements in which terms are redefined from time to time. When the PUCT Rules or ERCOT Requirements are amended and terms defined in Exhibit "A", "Article 1. Definitions" are affected by such amendments, the Parties agree that such terms shall have the meanings as amended by the PUCT or ERCOT. The term "System Security Study" shall have the same definition as "Security Screening Study" in the ERCOT Requirements.

E) Miscellaneous

- 1) Each Party shall be solely responsible for keeping itself informed of, and understanding its respective responsibilities under, all applicable North American Electric Reliability Corporation ("NERC") Standards and ERCOT Requirements and all valid, applicable laws, rules, regulations and orders of, and tariffs approved by, duly constituted Governmental Authorities.
- 2) CenterPoint Energy has documented data specifications that define the operational data CenterPoint Energy requires to perform real-time monitoring. These specifications are incorporated in Section E above, Exhibit 'J' Outage and Clearance Coordination Procedure, and Exhibit 'I' Telemetry Specification.
- 3)
- 4) Each Party's personnel, contractors, subcontractors, and agents shall abide by and comply with the other Party's reasonable safety requirements and procedures while in areas designated as under that other Party's control.
- 5) In the event that Generator's personnel, contractors, subcontractors, or agents cause delays in the work schedule of TSP, Generator shall reimburse to TSP the additional costs associated with such delays within 30 days of receipt of an invoice for such costs.
- 6) Generator understands and agrees that identification of any, including but not limited to stability, oscillation, harmonic, short circuit, over frequency, under frequency, over voltage, under voltage, phase imbalance, or geomagnetic disturbance conditions that

may affect Generator's Plant and implementation of any associated protective measures, are the sole responsibility of Generator.

7) ERCOT Requirements.

- (i) Unless expressly stated herein, where the ERCOT Requirements are in conflict with TSP's specifications or procedures, the ERCOT Requirements shall prevail.
- (ii) ERCOT requirements currently require installation of power system stabilizers on generators.
- (iii) Prior to commercial operation, ERCOT may verify that the Generator is meeting ERCOT Requirements, including complying with Guide and Protocol requirements on RARF modeling, telemetry and testing, as well as complying with reactive standards, the provision of accurate stability models, and the installation of power system stabilizers, if required. It should be noted that the Generator will not be able to go into commercial operation until after 30 days after the TIF is modeled and energized. Failure to meet these ERCOT Requirements may result in delays to commercial operation.

- 8) All generator data, including data for stability studies (transient and voltage) and subsynchronous resonance data, as required by the ERCOT Requirements, shall be provided to ERCOT and the TSP before commercial operation. This data shall be updated when the Plant begins commercial operation. Any updates to this information will be provided within 60 days to ERCOT and the TSP as changes or upgrades are made during the life of the Plant. This requirement applies to all future owners of the Plant. The Generator and any future owners of the Plant shall comply with these data requirements along with all applicable NERC Standards. Such Standards are subject to change from time to time, and such changes shall automatically become applicable based upon the effective date of the approved change.

13) Special Operating Conditions, if any, attached: None.

14) Cost Estimate Differences, if applicable:

- A) The difference between the estimated cost of the TIF under 4.1.A (\$\_\_N/A\_\_) and the estimated cost of the TIF under 4.1.B (\$\_\_N/A\_\_) is: \_\_N/A\_\_, if applicable.

**Exhibit “K”****Minimum Acceptable Requirements for 345 kV Substation Construction**

**The following CenterPoint Energy minimum acceptable electrical, mechanical, and structural design characteristics pertain to the 345 kV substation facilities owned by Generator for interconnection of the generation facility known as GIFSUB Substation to the CenterPoint Energy 345 kV TIFSUB Substation and the CenterPoint Energy transmission network:**

1. Maximum operating voltage = 362.5 kV.
2. Impulse level (for equipment not listed below, excluding transformer winding BIL) = 1300 kV BIL.
3. Bus and switch insulator impulse level (leakage) = 1300 kV BIL (231 inches).
4. Apparatus bushing (porcelain insulators, circuit breaker bushings transformer bushings, etc.) impulse level (leakage) = 1300 kV BIL (225 Inches).
5. If the 345 kV substation facilities owned by Generator for interconnection of the generation facility known as GIFSUB Substation will be in a contaminated area, as determined by Generator, all porcelain (i.e. insulators, circuit breaker bushings transformer bushings, etc.) shall be coated with a room temperature vulcanizing (RTV) silicone rubber.
6. Phase-to-ground clearance (metal-to-metal) = 105 inches.
7. Phase-to-phase clearance (metal-to-metal) = 119 inches.
8. The CenterPoint Energy 345 kV TIFSUB substation to be constructed for interconnection of GIFSUB substation and CenterPoint Energy transmission network will utilize 5000 A equipment. The 345 kV lines and equipment in the substation facilities owned by Generator for interconnection of the generation facility known as GIFSUB substation are not required to be 5000 A minimum. However, operational scenarios after a scheduled outage of equipment in the CenterPoint Energy 345 kV TIFSUB substation exist that would result in CenterPoint Energy transmission line network load current flowing on the 345 kV transmission lines and substation facilities owned by Generator. Therefore, CenterPoint Energy suggests that 345 kV transmission ‘loop lines’ and substation ‘loop bus’ facilities owned by Generator be 5000 A minimum.
9. Any 345 kV conductor connections shall utilize a minimum bundled 795 kcmil conductors.
10. The CenterPoint Energy 345 kV TIFSUB substation to be constructed for interconnection of GIFSUB substation and CenterPoint Energy transmission network will be designed for a total maximum anticipated fault current, including contribution from the Generator generation facility, of 63 kA rms symmetrical three phase and single phase, X/R of 15 and a duration of 0.25 seconds. The 345 kV substation facilities owned by Generator shall be designed for a total available short circuit current from all sources commensurate with the Generator 345 kV transmission line design, generation facility design and the CenterPoint Energy 345 kV TIFSUB substation design.

11. Normal anticipated wind speed conditions combined with maximum fault current = 15 mph, 63 kA.
12. Maximum anticipated wind speed conditions combined with reduced fault current (80%) = 120 mph, 50 kA.
13. The CenterPoint Energy 345 kV TIFSUB substation bus will not be directly bus connected to the 345 kV substation facilities owned by Generator for interconnection of the generation facility known as GIFSUB substation and therefore the bus height does not need to conform to CenterPoint Energy substation bus elevations.
14. Direct lightning stroke shielding design shall comply with IEEE standard 998.
15. Substation ground mat and fence grounding system shall comply with IEEE standard 80.
16. The CenterPoint Energy 345 kV TIFSUB substation will not be adjacent to 345 kV substation facilities owned by Generator for interconnection of the generation facility known as GIFSUB substation, and therefore the two substation ground mats will not be directly connected together by ground mat connections.
17. The CenterPoint Energy 345 kV TIFSUB substation circuit breaker current transformers (CTs) that connect to the CenterPoint Energy protective relaying schemes will be 4000:5 multi-ratio, two CTs per bushing, with C800 accuracy at the 3000:5 tap and a rating factor (RF) equal to 2.0. The secondary resistance of the CTs shall not exceed 0.0025 ohms per turn. The circuit breaker shall not have a capacitor across the interrupters. The interrupting capability and CT ratings of the 345 kV substation circuit breakers owned by Generator shall be commensurate with the Generator 345 kV transmission line design, generation facility design and the CenterPoint Energy 345 kV TIFSUB substation design. CenterPoint Energy will provide information on the minimum interruptible current rating of the breaker (63 kAIC or potentially higher) and CT ratio required after project commencement and determination of system conditions.
18. Surge arresters shall be station class with a minimum rated MCOV of 220 kV.
19. A key interlock system is not permitted on 345 kV equipment.
20. The use of manually applied grounding devices constructed of conductors and clamps is the norm for protective grounding of all de-energized 345 kV electrical apparatus directly connected to the CenterPoint Energy transmission system. The use of a 'grounding switch' that is motor operator and is electrically interlocked with the 'open' status of appropriate motor operated disconnect switch(es) will be considered acceptable to CenterPoint Energy provided drawings (i.e. the motor operator 'grounding switch' cannot be closed unless the surrounding motor operated disconnect switches are in the open position). This would be verified by CenterPoint Energy's review of substation protection & control drawings of the control for the motor operated 'grounding switch' and motor operated disconnect switches. Generator would be responsible for the periodic preventive maintenance of the motor operated 'grounding switch'. A manually operated 'grounding switch' associated with 345 kV equipment is not acceptable to CenterPoint Energy.