Interconnection Guidebook

A Brazos Electric Cooperative Reference Resource

Publish Date: November 2025
Contact: Communications@brazoselectric.com

TABLE OF CONTENTS

Brazos Electric Interconnection Guidebook

1. SCOPE

This document serves as a guideline for requests to interconnect to Brazos Electric's transmission system in a manner that ensures reliable and efficient integration with the ERCOT grid.

Any proposed interconnection with Brazos Electric's transmission System will be in compliance with NERC standards, ERCOT protocols, Brazos Electric Transmission Planning Procedures and Brazos Electric Facility Connection Requirements. Copies of these documents will be made available upon request.

Any information contained herein is subject to change at the sole discretion of Brazos Electric. When transmission interconnections have individual characteristics that this document does not address, Brazos Electric shall make decisions on a case-by-case basis in accordance with applicable laws, regulations and good utility practices.

These procedures apply to all entities in ERCOT which are seeking to establish or significantly modify a connection to the ERCOT grid through Brazos Electric's transmission system.

Brazos Electric is a transmission electric cooperative that does **not** provide distribution electric services to retail customers. Brazos Electric is owned by 16 distribution cooperatives. These distribution cooperatives provide electric services to their retail member-consumers.

2. DEFINITIONS

Advanced Procurement Security Agreement for Interconnection Equipment (APSA): An agreement between the Developer and either Brazos Electric or the distribution cooperative, which enables the early procurement of long-lead time transmission equipment (e.g. transformers, capacitors, circuit breakers, switchgear, etc.) before the final interconnection or construction agreement is executed.

Brazos Electric Power Cooperative (Brazos Electric): Brazos Electric serves as the Transmission Service Provider for 16 distribution cooperatives that are its member-owners. Brazos Electric is a transmission electric cooperative that does **not** provide distribution electric services to retail consumers.

Developer: For the purposes of this guidebook, a Developer means the entity responsible for planning, financing, designing, constructing, and owning or operating a Large Load, generators, or associated facilities that require interconnection to the ERCOT

Transmission Grid on Brazos Electric's transmission system. The Developer is the primary point of contact with the Transmission Service Provider (TSP) and ERCOT for all interconnection-related activities, including submission of interconnection requests, studies, design coordination, and compliance with ERCOT Protocols, planning guides, and applicable regulatory requirements

Distributed Generation Resource (DGR): A small-scale electricity generator located near the point of use (such as a home, business, or industrial site) which operates in parallel with the utility's electric grid. For the purposes of this guidebook, it includes generation of 10 MW or less.

Electric Reliability Council of Texas (ERCOT): The independent system operator (ISO) for the ERCOT grid, managing 90% of Texas's electric load and overseeing operation of the wholesale power market and grid reliability.

ERCOT Client Services: The ERCOT Client Services department is the customer-facing arm of ERCOT operations. It ensures participants are registered, educated, supported, and connected with the appropriate ERCOT resources, helping maintain the reliability and efficiency of the Texas electric market.

FAC-001 / FAC-002: NERC standards in the Facilities Design, Connections, and Maintenance (FAC) series. FAC-001 ("Facility Connection Requirements") mandates each TSP document the requirements for connecting new facilities (lines, loads, generators) to its system. FAC-002 ("Facility Interconnection Studies") requires that planners study the reliability impact of new or materially modified interconnections (generation, transmission, or end-use). These standards ensure due diligence on any new connection. In ERCOT, TSPs have FAC-001 documents (which the interconnecting load should obtain and follow) and ERCOT/TSP conduct FAC-002 studies (this includes the FIS).

Final Documents: An aggregate term for the three legally and financially binding documents that must be completed by the Developer after the completion of the FIS and prior to construction of the facilities to be interconnected to Brazos Electric's transmission system. This includes the IA, the NTP, and the APSA or any other required financial surety. The NTP can be submitted in an email.

Full Interconnection Study (FIS): The set of interconnection studies (typically steady-state, short-circuit, stability, facility) required for new interconnection requests in ERCOT. The FIS ensures the new request can connect reliably to the electric grid. Brazos Electric performs these studies and the results will either identify needed upgrades or confirm reliability. The full set of studies must be completed by Brazos Electric and are typically approved by ERCOT before a request is permitted to connect to Brazos Electric's transmission system. At its discretion, Brazos Electric may engage a third party to conduct any or all of these studies. If the connection is made to the system of another TSP, that TSP will conduct the studies.

Initial Energization (or Initial Synchronization): The moment when the new load or DGR is first connected to live grid voltage. Initial Energization implies a testing phase with possibly low load as everything is verified under live conditions. After this, a load is commissioned and ready for service**.**

Interconnection Agreement (IA): A formal contract between Brazos Electric, the distribution cooperative, and an interconnection requestor outlining facility ownership, operational responsibilities, and financial terms for grid connection. Depending on the requirements of the distribution cooperative, there may be an additional agreement required between the Developer and the distribution cooperative.

Large Flexible Load (LFL): A term used to describe large loads that can rapidly modify consumption in response to grid conditions or price signals.

Large Load Customer (LLC): A very high-demand end-use load facility or aggregation of loads at a single site that has, or is requesting, a peak demand at or above 75 MW behind one or more common points of interconnection to the ERCOT system. This definition encompasses both new loads and expansions of existing loads, and is subject to the interconnection process described in Section 9 of the ERCOT Planning Guide.

Network Operations Model Change Request (NOMCR): The formal request to add or change an element in ERCOT's operations network model. For example, adding a new substation and load bus requires a NOMCR. There are lead times – typically the model load is added in a "case" one or two months before the operating season will go into effect. Timely submission of NOMCR (once studies are done) by Brazos Electric is crucial so that the load order appears in the ERCOT State Estimator and other operational systems prior to energization.

Notice to Proceed (NTP): The Notice to Proceed is a formal notice issued by the Developer to Brazos Electric authorizing Brazos Electric to begin engineering, procurement, and/or construction of transmission and interconnection facilities identified in the Facilities Study and Interconnection Agreement.

Transmission Service Provider (TSP): An entity that owns and operates transmission facilities in ERCOT. TSPs are responsible for connecting new loads or generators to their facilities. They fulfill the role of Transmission Owner/Operator and are subject to ERCOT protocols for transmission planning and operation. For the purposes of this guide, Brazos Electric is the relevant TSP for Developers that desire to interconnect to the Brazos Electric transmission system.

3. REQUIREMENTS FOR ALL INTERCONNECTIONS

The following section details the steps and requirements that will be common to Developers for all types of interconnection requests. Requirements specific to different types of interconnections (e.g. Large Load Customers, or Generation Resources, etc.), will be reviewed in subsequent Guidebook sections.

Any proposed interconnection with Brazos Electric's transmission System will be in compliance with NERC standards, ERCOT protocols, Brazos Electric Transmission Planning Procedures and Brazos Electric Facility Connection Requirements. The Developer is expected to comply with all planning guidelines, requirements, and rules of Brazos Electric, and ERCOT.

The Developer is expected to initiate the interconnection process by contacting the relevant load-serving entity, the appropriate distribution cooperative, where the location of the Developer's desired facility is proposed to be connected to the Brazos Electric transmission system.

Brazos Electric is responsible for the design and construction of any associated transmission upgrades. Brazos Electric will build or upgrade the associated facilities itself, or it may engage a third party to provide these services. Brazos Electric will ensure that all equipment meets ERCOT and NERC reliability standards. Brazos Electric will coordinate with neighboring TSPs if the LLC impact extends beyond the Brazos Electric transmission system.

The Developer must adhere to established project timelines (providing data, executing agreements, completing construction on schedule) and comply with all operational and metering requirements upon going live. In coordination with Brazos Electric and with the distribution cooperative, and following established agreements and timelines, the Developer will design and build their electric facilities as required by Brazos Electric.

a. INITIAL DATA REQUIREMENTS

Certain data will be required from the Developer at the time of the initial discussion of a Request for Interconnection to Brazos Electric's system. The information will identify whether the proposed interconnection request meets the transmission system requirements of Brazos Electric, and ERCOT. Examples of the information required by Brazos Electric in the initial discussion phase are as follows:

i. Project name and location (a substation, a segment of transmission line where connection is sought, or geographic coordinates if a new site.)
ii. Requested service date (energization target).
iii. Electrical one-line diagram of the proposed facility showing the interface (transformers, switchgear, etc.).
iv. Project developer's contact info and engineering point-of-contact

- **For Loads:**
  - Peak load demand (MW) and expected monthly/seasonal load profile (to gauge usage patterns)
  - Voltage level of interconnection (e.g. 138 kV), number and size of transformers, any large motor loads (with starting currents), any power electronic loads (like rectifiers, UPS systems, etc.).
  - Initial and future load increments if planning to ramp up in phases.
  - Dynamic load model.

Requested information will not be limited to the above items. Brazos Electric *will request that the Developer complete the Questionnaire in* ***Exhibit 1****.*

The distribution cooperative may also request that the Developer complete a similar questionnaire, which will be available from the distribution cooperative. Furthermore, if the desired transmission service will occur with a TSP different than Brazos Electric, that TSP will have its own questionnaire to be completed.

In order to ensure that compiled data and the Developer's design concepts will satisfy Brazos Electric's facility requirements, the Developer should request Brazos Electric's Facility Connection Requirements from Brazos Electric transmission planning staff. These standards comply with NERC's reliability standards, notably FAC-001.

b. BRAZOS ELECTRIC STUDIES

Using data provided by the Developer, Brazos Electric will conduct an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined. This will allow the Developer to determine if they wish to proceed with the interconnection process.

Depending on the type of interconnection to the Brazos Electric transmission system, Brazos Electric may conduct additional interconnection studies, to be noted in subsequent Guidebook sections.

c. KICKOFF MEETINGS (With ERCOT or Brazos Electric)

For Large Loads > 75 MW, once the initial data requests have been satisfied, the Developer will be required to have a kickoff meeting with ERCOT staff, which will include discussion and review of the proposed interconnection. Brazos Electric planning staff will set up the appropriate initial kickoff meeting with the necessary ERCOT staff to discuss the interconnection request.

The Developer and Brazos Electric planning staff will also meet during this time period to discuss ERCOT feedback as well as review the interconnection request. This meeting may include the distribution cooperative staff. Following these meetings Brazos Electric will update any draft FIS agreements with any new information or requirements necessary and provide a draft for the Developer to review.

For loads < 75MW, a similar kickoff meeting may or may not be conducted at the request and/or discretion of Brazos Electric or the distribution cooperative.

d. ADVANCE PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

Following the initial facility analysis, the Developer, the distribution cooperative, and Brazos Electric will discuss the results. At this time, potential equipment upgrades to the transmission system or requested facilities may be discussed. Given the significant demand and long lead times for electrical facility components, Brazos Electric and Developer may enter into an Advanced Procurement Security Agreement for Interconnection Equipment (APSA). This may be updated as necessary throughout the interconnection process with the distribution cooperative being informed of updates throughout the process. The APSA will be executed between Developer and Brazos Electric along with any required financial commitment.

In some instances, the APSA or financial security may be between the distribution cooperative and Developer.

e. INTERCONNECTION AGREEMENT

Subsequent to 1) the completion of all required Interconnection studies by Brazos Electric, and 2) ERCOT's review of Brazos Electric's interconnection studies to ensure all ERCOT regional criteria and NERC standards are satisfied, Brazos Electric will require that the Developer complete and submit to Brazos Electric the following three items:

i. An Executed Interconnection Agreement

Brazos Electric will provide a draft IA for the Developer to review, edit, and execute. The IA is a formal, legally binding contract between the Developer and Brazos Electric that defines the terms and conditions under which the load will connect to the ERCOT transmission grid. It serves as the governing document that allows the physical and operational integration of the load into the ERCOT system.

In some instances when a project will interconnect on the distribution system of the distribution cooperative, there may be a separate agreement between the distribution cooperative and Developer. This may include, but not be limited to, large loads up to or greater than 10 MW or distributed generation projects less than 10 MW.

The IA ensures that both parties understand their responsibilities for 1) Design, construction, and ownership of interconnection facilities, 2) Cost allocation and payment structure, 3) Operating protocols and technical requirements, and 4) Compliance with ERCOT and PUCT regulations.

ii. **Notice to Proceed**
The Notice to Proceed is a formal, legally binding notice issued by the Developer to Brazos Electric authorizing Brazos Electric to begin engineering, procurement, and/or construction of transmission and interconnection facilities identified in the Facilities Study and Interconnection Agreement.

iii. **Financial Commitment**
The Developer will provide financial security to Brazos Electric and/or the distribution cooperative for the Brazos Electric interconnecting facilities to the Brazos Electric transmission system. This may include a letter of credit or cash, and this will also take into account any provisions from an APSA.

f. TECHNICAL SPECIFICATIONS CHECKLIST (For reference)

The Developer will be responsible for reviewing and completing these technical aspects of the project in accordance with all regulations.

i. **System Protection**
ii. **Metering**
iii. **Supervisory Control and Data Acquisition (SCADA)**
iv. **Telecommunications**
v. **Power Quality**
vi. **Equipment Ratings**
vii. **Operational Issues**

g. ENERGIZATION PROCESS CHECKLIST (For reference)

Before authorization will be given to energize the project, the Developer is responsible for completing each of these tasks.

i. **Account set-up with Distribution Cooperative**
ii. **Kickoff Meeting**
iii. **Design, Procurement & Engineering**
iv. **Site Development, Regulatory, & Permitting**
v. **Project Plan**
vi. **NOMCR Submission**
vii. **Construction of Facilities**
viii. **Pre-Energization Activities**
ix. **Metering & Settlement Setup**
x. **Energization – Plan & Online**

4. REQUIREMENTS FOR LARGE LOAD CUSTOMER INTERCONNECTIONS

The following section details the additional steps and requirements that will be common to Developers for Large Load Customers (LLC) with an expected peak demand > 75 MW.

The Interconnection Request process will include the data requests from Section 3.a. as well as the Questionnaire in **Exhibit 1.** Brazos Electric will also require that the Developer complete the Subsynchronous Oscillation (SSO) Survey included as **Exhibit 3**, and the template data required by ERCOT, which is included as **Exhibit 5**.

Brazos Electric will also run an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined. After this initial review, and after the Kickoff meetings described in 3.c, Brazos Electric will develop a FIS draft agreement for the Developer's initial review. A draft FIS agreement is attached as **Exhibit 2**. Brazos Electric will update the FIS agreements with any new information, ERCOT requests, or new requirements, as necessary, and provide the draft for the Developer to review.

a. ADDITIONAL FULL INTERCONNECTION STUDIES

Before a Developer is allowed to connect an LLC to the Brazos Electric transmission system, Brazos Electric (or a Brazos Electric designated third party) will conduct a set of comprehensive engineering studies to determine the impact of the new load on the grid. The studies are generally expected to be completed at a minimum of 18 months after initiation of the study process.

Prior to the start of the FIS, the Developer will be required to provide a study fee to Brazos Electric as detailed in the study agreement. The Developer will be required to tell ERCOT and Brazos if they are considering multiple sites (also identifying if on the same section of transmission line or if on a differing segment of line), for the specific facility in the interconnection request.

These studies are required by ERCOT, which will review study results at the time of completion of each study and either:

- approve the continuation of the interconnection process or
- recommend changes to the interconnection request before proceeding with the request.

During the time when any Brazos Electric studies are either waiting to be conducted or are in the process of being conducted, the Developer may make inquiries to Brazos Electric planning staff regarding the status of its relevant interconnection studies.

The following are the 4 studies included in the FIS to be completed by Brazos Electric or a designee:

i. **Steady-State Study**
The first study to be completed is the Steady-State Study. This analysis evaluates how the electrical transmission system behaves under various conditions when a large load is added. Its primary objective is to ensure the load's addition does not cause voltage violations, thermal overloads, or other reliability risks in the ERCOT grid.

The results of this study will identify network upgrades needed to serve the requested load within ERCOT. If the Developer adds new requirements or changes to study scope, the study may need to be redone at the Developer's expense.

ii. **Short-Circuit Study**
The Short-Circuit Study will assess the impact on fault currents and circuit breaker duties. The study is designed to ensure transmission system equipment can safely handle fault currents after the new load is added. This analysis examines the proposed load and its effects on fault current levels at substations in the study area. The study results may require additional breaker upgrades.

iii. **Dynamic Stability Study**
The Dynamic Stability Study is designed to determine whether the addition of the new LLC causes or contributes to dynamic instability on the ERCOT transmission grid, particularly during and after system disturbances like faults, line outages, or generator trips.

iv. **Facilities Study**
A Facilities Study is conducted to develop cost-based engineering solutions and timelines for required facilities to serve the LLC. It ensures required infrastructure is defined, budgets are informed, and roles are clear prior to the Developer entering into an Interconnection Agreement with Brazos Electric.

v. **Subsynchronous Oscillation (SSO) Study**
When a potential SSO risk is identified during the planning process, especially for projects involving series-compensated transmission lines or certain large loads near series capacitors, ERCOT *may* require an SSO study. The study must be completed and any necessary mitigation measures implemented before initial energization of the new facility to assess and prevent the risk of Subsynchronous Ferroresonance (SSFR), which can lead to grid instability.

b. FULL INTERCONNECTION STUDIES OUTCOMES

i. List of Required System Upgrades

During the FIS process, studies may indicate the need for improvements to existing infrastructure or the addition of new infrastructure. This may include new transmission lines, transmission line upgrades, new substations, transformer additions, additional capacitor banks for voltage support, protection equipment upgrades, etc.

ii. Operating Constraints or Interim Limits

Studies may show only part of the LLC request can be served until upgrades are in place. The studies will quantify how much load can be served with existing infrastructure.

iii. Confirmation the LLC meets performance requirements

Once all required interconnection studies have been completed and ERCOT has approved study reports, the interconnection process transitions into execution and implementation phases.

c. ADVANCED PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

Following the Facilities study referenced in 4.a.iv., the Developer, the distribution cooperative, and Brazos Electric will determine what changes or upgrades need to be made to the interconnection request with regard to equipment, cost, and timelines. The draft APSA will be edited as necessary.

As part of the requirements for a final interconnection agreement as described in 3.d.iii., the APSA may be executed between Developer and Brazos Electric or between Developer and the distribution cooperative.

d. TECHNICAL SPECIFICATIONS CHECKLIST

i. **Voltage level, MW and MVAR Capacity or Demand at the POI**
ii. **Reactive Power and Power Factor Control**
iii. **System Protection**
iv. **Maintenance Coordination**

e. **ENERGIZATION PROCESS CHECKLIST**
   i. **Account set-up with Distribution Cooperative**
   ii. **Kickoff Meeting**
   iii. **Design, Procurement & Engineering**
   iv. **Site Development, Regulatory, & Permitting**
   v. **Project Plan**
   vi. **NOMCR Submission**
   vii. **Construction of Facilities**
   viii. **Pre-Energization Activities**
   ix. **Metering & Settlement Setup**
   x. **Energization – Plan & Online**

5. REQUIREMENTS FOR DISTRIBUTED GENERATION RESOURCES Greater than or equal to 1 and less than 10 MW.

The following section details the additional steps and requirements that will be common to Developers for an interconnection as a Distributed Generation Resource between 1 and 10 MW. The developer must register with ERCOT. Follow this link for ERCOT Resource Registration and Qualification documents.

The Interconnection Request process will include the data requests from Section 3.a. as well as the Questionnaire in **Exhibit 1.** Brazos Electric will also run an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined.

After this initial review, a kickoff meeting may or may not be conducted at the request and/or discretion of Brazos Electric or the distribution cooperative. Then Brazos Electric will develop a FIS draft agreement for the Developer's initial review. A draft FIS agreement is attached as **Exhibit 2**. Brazos Electric will update the FIS agreements with any new information, ERCOT requests, distribution cooperative requests, or new requirements, as necessary, and provide the draft for the Developer to review.

a. FULL INTERCONNECTION STUDIES AT BRAZOS ELECTRIC'S DISCRETION

Brazos Electric's discretion does not apply to any required distribution engineering studies required by the Distribution Service Provider

b. ADVANCED PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

An agreement which enables the early procurement of long-lead time transmission equipment (e.g. transformers, capacitors, circuit breakers, switchgear, etc.) before the final interconnection or construction agreement is executed.

c. **TECHNICAL SPECIFICATIONS CHECKLIST**
   i. **Metering Facilities**
   ii. **System Protection**
   iii. **Voltage Control and Synchronization**

d. **ENERGIZATION PROCESS CHECKLIST**
   i. **Account set-up with Distribution Cooperative**
   ii. **Kickoff Meeting**
   iii. **Design, Procurement & Engineering**
   iv. **Site Development, Regulatory, & Permitting**
   v. **Project Plan**
   vi. **NOMCR Submission**
   vii. **Construction of Facilities**
   viii. **Pre-Energization Activities**
   ix. **Metering & Settlement Setup**
   x. **Energization – Plan & Online**

6. REQUIREMENTS FOR CUSTOMERS WITH LOAD LESS THAN 75 MW

<u>The following section details the additional steps and requirements that will be common to Developers for loads with peak demand less than 75 MW.</u>

The Interconnection Request process will include the data requests from Section 3.a. as well as the Questionnaire in **<u>Exhibit 1</u>** and any data requests from the distribution cooperative. Brazos Electric will also run an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined.

After this initial review, and after any potential kickoff meetings described in 3.c, Brazos Electric will develop a FIS draft agreement for the Developer's review. A draft FIS agreement is attached as **<u>Exhibit 2</u>**. Brazos Electric will update the FIS agreements with any new information, ERCOT requests, distribution cooperative requests, or new requirements, as necessary, and provide the draft for the Developer to review.

a. FULL INTERCONNECTION STUDIES AT BRAZOS ELECTRIC'S DISCRETION

For a load that is less than 25 MW, there may not need to be any further interconnection studies required by Brazos Electric.

For a load that is between 25 MW and 75 MW, Brazos Electric will conduct an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined. The results of this study may indicate the necessity for any further interconnection studies. If there is a TSP other than Brazos Electric to be impacted by the Developer's interconnection, that entity will run its own contingency analysis.

Based on this analysis, Brazos Electric may also make further requests for information, which may include, but not be limited to, Developer proof of site control, notification of any signed service agreements, and the provisions of appropriate financial security of facilities to interconnect.

b. ADVANCED PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

c. TECHNICAL SPECIFICATIONS

i. Voltage level, MW and MVAR Capacity or Demand at the POI
ii. Reactive Power and Power Factor Control
iii. System Protection
iv. Maintenance Coordination

d. ENERGIZATION PROCESS

i. Account set-up with Distribution Cooperative
ii. Kickoff Meeting
iii. Design, Procurement & Engineering
iv. Site Development, Regulatory, & Permitting
v. Project Plan
vi. NOMCR Submission
vii. Construction of Facilities
viii. Pre-Energization Activities
ix. Metering & Settlement Setup
x. Energization – Plan & Online

7. REQUIREMENTS FOR GENERATION INTERCONNECTIONS

The following section details the additional steps and requirements that will be common to Developers for Generation Resources. Follow this link for ERCOT Resource Registration and Qualification documents.

The Interconnection Request process will include the data requests from Section 3.a. as well as the Questionnaire in **Exhibit 1.** Brazos Electric will also run an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined.

After this initial review, and after the Kickoff meetings described in 3.c, Brazos Electric will develop a FIS draft agreement for the Developer's initial review. A draft FIS agreement is attached as **Exhibit 2**. Brazos Electric will update the FIS agreements with any new information, ERCOT requests, distribution cooperative requests, or new requirements, as necessary, and provide the draft for the Developer to review.

a. FULL INTERCONNECTION STUDIES ARE REQUIRED

Sub-synchronous control interaction study may be required.

b. ADVANCED PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

c. TECHNICAL SPECIFICATIONS

- **i. Reactive Power and Power Factor Control**
- **ii. System Protection**
- **iii. Metering & Telecommunications**
- **iv. Maintenance Coordination**
- **v. Synchronization**
- **vi. Black Start**

d. ENERGIZATION PROCESS

- **i. Kickoff Meeting**
- **ii. Design, Procurement & Engineering**
- **iii. Site Development, Regulatory, & Permitting**
- **iv. Project Plan**
- **v. NOMCR Submission**
- **vi. Construction of Facilities**
- **vii. Pre-Energization Activities**
- **viii. Metering & Settlement Setup**
- **ix. Energization – Plan & Online**

8. REQUIREMENTS FOR BATTERY ENERGY STORAGE SYSTEMS

The following section details the additional steps and requirements that will be common to Developers for Battery Energy Storage Systems (BESS). Follow this link for ERCOT Resource Registration and Qualification documents.

The Interconnection Request process will include the data requests from Section 3.a. as well as the Questionnaire in **Exhibit 1.** Brazos Electric will also run an initial feasibility study to determine available transmission capacity and possibly any notable infrastructure requirements, if this can be determined.

After this initial review, and after the Kickoff meetings described in 3.c, Brazos Electric will develop a FIS draft agreement for the Developer's review. A draft FIS agreement is attached as **Exhibit 2**. Brazos Electric will update the FIS agreements with any new information, ERCOT requests, distribution cooperative requests, or new requirements, as necessary, and provide the draft for the Developer to review.

a. FULL INTERCONNECTION STUDIES ARE REQUIRED

b. ADVANCED PROCUREMENT SECURITY AGREEMENT FOR INTERCONNECTION EQUIPMENT

c. TECHNICAL SPECIFICATIONS

i. **Metering Facilities**
ii. **System Protection**
iii. **Voltage Control and Synchronization**
iv. **Energy Storage Charge and Discharge Limitations**

d. ENERGIZATION PROCESS

i. **Kickoff Meeting**
ii. **Design, Procurement & Engineering**
iii. **Site Development, Regulatory, & Permitting**
iv. **Project Plan**
v. **NOMCR Submission**
vi. **Construction of Facilities**
vii. **Pre-Energization Activities**
viii. **Metering & Settlement Setup**
ix. **Energization – Plan & Online**

Exhibit 1

Brazos Electric Large Load Questionnaire

Date:

Developer Information

- **Developer Business Name:**

- **Respondent (*Include Name, Title, Company, cell, office number, email address):***

- **Contact person with Developer if not Respondent (*Include Name, Title, Company, cell, office number, email address):***

POINT(S) OF INTERCONNECTION REQUEST QUESTIONS

1. Is this request for load to be served from an **existing** point of interconnection (POI) or **new** point of interconnection with Brazos Electric?

2. Desired energize date for the POI or facilities expansion?

3. Desired energization date for the proposed load addition or facilities expansion?

4. For load addition to an existing POI, provide the following:
   a. Service Address (include County and City, if applicable):
      ----------Or----------
      Site coordinates (in Latitude and Longitude):
   b. Voltage at the POI:
   c. Does Developer propose to add a new substation transformer:
   d. Does Developer propose any modification to the existing interconnection facilities between Brazos Electric and Developer? If so, provide one-line diagram.

5. For a <u>new</u> POI request, please provide the following:
    a. Requested Voltage at the POI
    b. If transmission voltage (69 kV or above) service is requested (i.e. Developer building their own distribution substation), please provide the following:
        i. Planned location of Customer Substation (<u>include</u> County and City, if applicable, and Lat/Long):
        ii. Desired POI location (<u>include</u> County and City, if applicable, and Lat/Long):
        iii. Any available maps showing Developer substation location and proposed POI.
    c. If distribution voltage (less than 69 kV), please provide the following:
        i. Request location of POI (<u>include</u> County and City, if applicable, and Lat/Long):

6. Provide initial load <u>and six (6) additional years</u> of load projection, including calculated peak load power factor at the POI. Specify the location where the power factor is calculated, such as high-side or low-side of Developer's transformer. If the load is to be added to an existing POI, show the existing load and load to be added.

7. If Developer requests transformer to be installed, specify the following:
    a. Transformer size (base and maximum MVA ratings):
    b. Winding connection (single or dual voltage primary winding):
    c. Configuration (4 wire Wye, 3 wire Delta- 3 wire Wye, etc.):
    d. Transformer impedance (both positive and zero sequence at base MVA rating):
    e. Specify transformer secondary grounding scheme:

8. Is any of the load being moved from an existing POI to the proposed POI? If so, please provide the following information concerning the existing POI:
    a. Service Address (<u>include</u> County and City, if applicable)
    b. Voltage at the POI:

9. If Developer intends to build a transmission line (69 kV or above) or distribution line (less than 69 kV) from the POI to its substation, specify the following:
    a. Maximum Design and nominal operating Voltages:
    b. Number of circuits, Conductor Size, Conductor Type and Geometry:
    c. Length of the line extension from the POI:
    d. Calculated positive and zero sequence impedance of the line extension from the POI to the substation:
    e. Structure composition (i.e. Single pole, H-Frame, steel, wood, concrete, etc.)

10. List all motors 500 hp or greater associated with the load addition and provide the following data for each motor.
    a. Horsepower rating:
    b. Motor Code:
    c. Rated voltage:
    d. Minimum starting voltage:
    e. Special starting characteristics:
    f. Size, voltage, and impedance of any step-down transformer between the motor and substation transformer:

11. Will there be any on-site generation?
    a. Type of Generation (Solar, Battery, Wind, Gas, etc.)
    b. Maximum Nameplate and Quantity of Generation
    c. Manufacturer Data Sheet (includes sub transient, transient, synchronous, negative sequence and zero sequence impedances)
    d. Type of Operation (exporting, peak shaving, backup, ERS, etc.)

12. List any special service requirements or further description of service request.

Exhibit 2

Brazos Electric Study Agreement (“Agreement”)

Brazos Electric Power Cooperative, Inc. (“Brazos Electric”) and the Requesting Entity identified below hereby agree as follows:

1. The following information is applicable to this Agreement:

Requesting Entity Name:	
Requesting Entity Address:	
Requesting Entity Fax:	
Requesting Entity Email:	
Requesting Entity Contact Name:	
Project Name	
Interconnection Request number:	Example: XXINRXXXXX or LLIXXXX
Type of Facility:	
Interconnection Location:	
County:	
Bus Number(s):	
MW Max Capacity or Demand:	
Expected In-Service Date:	
Study Price: $	

Type of Study (check all that apply, collectively, the “Study”):

____ Steady State Study

____ System Protection (Short Circuit) Study

____ Dynamic and Transient Stability Study

____ Facility Study

All four of these studies are collectively considered a full interconnection study.

2. Study Assumptions and Procedures (as applicable depending on selection(s) above)

a. Steady State Study

(i) The Steady State Study will be performed to estimate system improvements from a voltage and thermal capacity view, which might be needed to accommodate a future request for Transmission Service associated with the proposed facility described above (“Facility”).

(ii) The latest ERCOT High Renewable Minimum Load (HRML) (summer case before July 1) and (summer case farthest out) summer base cases will be modified to create the study cases to be used to conduct this Steady State Study. Summer ratings of transmission facilities will be used as is appropriate. The Steady State Study will consider all NERC TPL contingencies. A table summarizing the result for each NERC contingency category P1 through P7 will be provided. Contingencies not simulated will include an explanation of why analysis was unnecessary. Select N1-1 contingencies will be studied to include the loss of nearby autotransformers with the loss of other system elements. Area specific P1 + P1, P1 + P7 and P7 + P7 contingencies will be included for the HRML case.

(iii) One interconnection scenario will be studied utilizing the base case with the Facility connected to the center of Brazos Electric's Point of Connection and Voltage kV at the Facility capacity / demand listed above. This interconnection scenario will be studied for all studies identified above.

(iv) Future interconnections identified at the commencement of this Steady State Study that will have a material impact on the Steady State Study will be reflected in the study case as directed by ERCOT.

(v) ERCOT generation will be modeled as dispatched as shown in the ERCOT cases.

(vi) The load and generation balance will be obtained by scaling down generation proportionally across the ERCOT transmission system.

(vii) It will be assumed that the proposed Facility will have a reactive capability that meets ERCOT's reactive standard.

(viii) A benchmark summer case will be created with all base case changes, but without the proposed Facility modeled. This case will have nearby generation modeled at 100%. A study case will then be created by adding the proposed Facility to the benchmark case.

(ix) A benchmark off peak sensitivity case (low load, high wind) will also be created utilizing the latest ERCOT cases and studied with and without the proposed Facility at the same capacity levels as in the summer cases. This scenario needs to be reviewed due to the nature of wind output.

(x) The results of this Steady State Study will be used to determine the transmission system requirements needed to accommodate the Requesting Entity proposed Facility to be in commercial operation by the In-Service Date.

(xi) If the Steady State Study results determine that the transmission system modeled in the study case is not adequate to accommodate the full output of the proposed Facility, the Steady State Study will determine the amount of output that could be accommodated by the transmission system without making any transmission system upgrades beyond Brazos Electric's direct interconnection facilities.

(xii) Expected Time Frame: 120 days

b. Short Circuit Study

(i) The Short Circuit Study will be performed to estimate system improvements which might be needed to accommodate a future request for Transmission Service associated with the Facility.

(ii) The Short Circuit Study base case for current system conditions will be modified to reflect the addition of the Facility and associated transmission additions or modifications and committed transmission additions in the local area to create a base case for this Short Circuit Study. Representative buses in the study region will be selected to perform Short Circuit fault studies.

(iii) The study will include the use of the SPWG case.

(iv) The Short Circuit Study will identify the circuit breakers and transmission buses over-dutied as a result of the addition of the Facility and associated transmission facilities.

(v) Expected Time Frame: 60 days

c. Dynamic and Transient Stability Study ("Stability Study")

(i) To initiate the Stability Study, Requesting Entity will submit data requested by Brazos Electric, which is necessary to conduct the Stability Study. Such data will be reviewed and assimilated into the ERCOT stability database. This data is essential for proper modeling of the Facility.

(ii) The most current approved ERCOT Dynamics Working Group (DWG) dynamic dataset modified to include any area transmission upgrades and study scenarios, represented in the Steady State Study will be used. The transmission upgrades added will include those identified for the addition of the Facility. The generation to be studied will be added to the load flow case, and any nearby unspecified resources will be removed from the case. Further adjustments, if necessary, will be made by proportionally scaling ERCOT load or generation as appropriate. The Facility as well as existing generating units in the area will be modeled at or near full net output. Motor load in the study area will be modeled using appropriate dynamic models as contained in the ERCOT database.

(iii) The study will include both the HWLL case as well as a summer peak case.

(iv) The Stability Study will consider all NERC TPL contingencies. A table summarizing the result for each NERC contingency category P1 through P7 will be provided. Engineering judgement will be used to determine the appropriate P6 contingencies or combination of (P1/P7+P7) contingencies. Contingencies not simulated will include an explanation of why analysis was unnecessary. Selected contingencies outlined in the ERCOT Planning Criteria will be analyzed to 1) evaluate the ability of the Facility to maintain stability or remain connected to the system, 2) evaluate the effect of the Facility on the ability of existing generation to maintain stability or remain connected to the system, and 3) evaluate the effect of the Facility on system-wide protection schemes (under-voltage load shed, under-frequency load shed, Load Resources) as well as on special protection systems (SPS) in the study area. Disturbances simulated in the Stability Study will be limited to the facilities of Brazos Electric and other affected TSPs. All system elements will be assumed in service prior to the contingency. If simulation results in a unit or Facility tripping due to its protection system actuation, the contingency will be noted in the report. Where instability is observed, mitigating facility requirements or special protection systems may be identified and simulated.

(v) The Facility will be studied as requested utilizing the appropriate inverter model, or as otherwise indicated by the stability data submittal.

(vi) Requesting Entity is be responsible for: (1) providing the dynamic models (detailed .dyr file [for generators] or CLOD file [for applicable loads] containing the dynamic data of the unit and inverter and the corresponding library/object files along with the documentation) for the Facility in PSS/E (.raw) format as determined by Brazos Electric, and (2) providing a detailed collector system model, an equivalent model for the Facility (i.e. single converter, unit step-up, equivalent collector system and main power transformer), facility one-line and the reactive control envisioned to be incorporated at the Facility.

(vii) If applicable, the Stability Study will determine if the Facility is in compliance with the latest version of the Nodal Operating Guides, Section 2.9, Voltage Ride-Through Requirements for Generation Resources.

(viii) For High Voltage Ride Through ("HVRT") validation a dynamic simulation will be used to drive the POI voltage to each of the points in the HVRT profile: 1.2, 1.175, 1.15, and 1.10 pu. The HVRT analysis will be conducted using the HVRT test script developed by ERCOT. Because the resource must be capable of 0.95 power factor the IE must complete a reactive power study prior to the HVRT analysis in order to determine what if any addition reactive support may be required. The generator will be operated in voltage control mode for the HVRT analysis. HVRT and Low Voltage Ride Through ("LVRT") simulations will have generator protection enabled and will plot real and reactive power.

(ix) The report will describe the study assumptions, dynamic models for the Facility, contingencies simulated with screening process, and the results of each simulation. Plots will be provided, which verify the stability or instability in these simulations.

(x) Expected Time Frame: 180 days

d. Facility Study

(i) The Facility Study will include a description of the Transmission Interconnection Facilities ("TIF") and associated conceptual cost estimate, one-line diagram, and construction schedule. The Facility Study will also include any system improvements that are required beyond the direct interconnection based upon the applicable results of the Steady State Study, Short Circuit Study, and Stability Study. The Facility Study will be based upon assumptions mutually agreed upon by Requesting Entity and Brazos Electric.

(ii) Expected Time Frame: 280 days

3. Additional information and assumptions regarding the Study shall be provided in **Exhibit A**, if applicable. Requesting Entity shall submit all data necessary to complete the Study when requested by Brazos Electric. Brazos Electric will communicate detailed study assumptions to ERCOT and Requesting Entity as appropriate.
4. The Study identified above is requested by Requesting Entity and will be performed or commissioned by Brazos Electric. Such work shall be in accordance with applicable provisions of the ERCOT Planning Guide, which is incorporated herein by reference. Both parties agree to comply with ERCOT Planning Guide and ERCOT Nodal Protocols requirements.

5. Brazos Electric hereby agrees to perform the Study for the Study Price listed above. Prior to starting the Study, Requesting Entity will pay Brazos Electric the entire Study Price.
6. Requesting Entity understands and accepts the risk associated with changes made by Requesting Entity resulting in a restudy of any portion of the Study. Prior to initiation of a restudy Requesting Entity will approve and pay Brazos Electric any additional fees as determined by Brazos Electric for such restudy. Such additional fees shall become part of the Study Price. Issues which may require restudy include, but are not limited to changes in proposed facility, in-service date, maximum MW output or demand, inverter type, model files or unacceptable study results.
7. Requesting Entity recognizes that a number of assumptions are being made in conjunction with the Study and that actual transmission modifications needed to accommodate a valid request for Transmission Service may be significantly different from the conclusions reached in the Study due to changes in system conditions over time. As a result, it may be necessary for Brazos Electric to perform additional studies at an additional charge to determine the adequacy of the transmission system to accommodate a future request for Transmission Service.

8. Brazos Electric agrees to perform or commission the Study to a standard of care and in a manner comparable to that used by Brazos Electric in preparing similar studies for its own or other third parties' uses. BRAZOS ELECTRIC MAKES NO EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE ASSUMPTIONS ON WHICH THE STUDY WILL BE BASED, THE INFORMATION CONTAINED IN THE STUDY, OR THE RESULTS OF THE STUDY.

9. REQUESTING ENTITY WILL INDEMNIFY, PROTECT AND HOLD HARMLESS BRAZOS ELECTRIC, ITS OFFICERS, DIRECTORS, EMPLOYEES AND AGENTS TO THE EXTENT PROVIDED BY APPLICABLE LAW FROM AND AGAINST ANY AND ALL LIABILITY AND LOSSES, DAMAGES, AND EXPENSES, INCLUDING JUDGMENTS, COSTS AND ATTORNEY'S FEES TO ANY PERSON OR ENTITY WHICH RESULT FROM BRAZOS ELECTRIC 'S PERFORMANCE OF, OR FAILURE TO PERFORM, THIS AGREEMENT OR THE STUDY, EXCEPT TO THE EXTENT SUCH LIABILITY, LOSS, DAMAGE, OR EXPENSE WILL OCCUR OR BE CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF BRAZOS ELECTRIC IN WHOLE OR IN PART, ITS OFFICERS, DIRECTORS, EMPLOYEES OR AGENTS.

10. IN ANY CLAIM OR CAUSE OF ACTION RELATING TO THIS AGREEMENT, BRAZOS ELECTRIC AND REQUESTING ENTITY WILL NOT BE LIABLE TO THE OTHER FOR ANY CONSEQUENTIAL, SPECIAL, OR NON-DIRECT DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF BUSINESS REVENUE OR COSTS OF CAPITAL, WHETHER THE CLAIM OR CAUSE OF ACTION IS BASED UPON CONTRACT, TORT, NEGLIGENCE, PRODUCTS LIABILITY, OR ANY OTHER THEORY OF RECOVERY.

11. The Study is estimated to be completed and a preliminary report issued within the time frame specified in the ERCOT Planning Guide only after full payment for the Study is

received by Brazos Electric and all requested Facility data is received by Brazos Electric. This time frame is exclusive of delays in obtaining any additional data that may be required and the timeline will be extended day for day until the additional data is received. If Brazos Electric determines the proposed facility data has changed and warrants restudy, the timeline for completion will reset after payment for such restudy has been received.

12. Requesting Entity may terminate this Agreement upon five (5) days advance written notice to Brazos Electric, but shall be liable for all of Brazos Electric's reasonable costs actually incurred up to and including the day Brazos Electric receives the notice of termination (including such costs associated with non-cancelable commitments made prior to the receipt by Brazos Electric of such notice of termination to the extent the same or such portion is not cancelable), pursuant to the terms hereof, regarding the Study. In the event of such termination, Brazos Electric shall refund to Requesting Entity the difference between the Study Price and the reasonable costs incurred by Brazos Electric in performing the Study within fifteen (15) days of receipt of the notice of termination.

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

14. Requesting Entity shall have the right to assign this Agreement or any of its rights and obligations hereunder at any time without the consent of Brazos Electric to an affiliate; and from the date of such assignment, the term Requesting Entity as used herein shall mean such assignee. The assigns of Requesting Entity shall be bound by the agreements which the original parties hereto have made, including any assumptions on which the Study is based. Requesting Entity shall notify Brazos Electric in writing of any such assignment and the name of the assignee.

15. Confidentiality requirements contained in the ERCOT Nodal Protocols shall govern all communications.

16. Brazos Electric will contact Requesting Entity as needed during the Study to clarify issues. Brazos Electric and Requesting Entity will confer informally from time to time as the Study progresses so that each party is informed about interim study results and possible solutions to potential transmission system concerns either already known or identified in the study process.

17. Results of the Study will be provided to Requesting Entity and ERCOT for the impacted portion of the ERCOT transmission system only. Interim study results may be provided as needed.

18. Capitalized terms that are not otherwise defined in this Agreement shall have the meaning ascribed to such terms as found in the ERCOT Nodal Protocols, the ERCOT Planning Guide, or the PUCT Substantive Rules, as applicable.

19. This Agreement for all purposes shall be construed in accordance with and governed by the laws and regulations of the State of Texas, excluding conflicts of law principles that would refer to the laws of another jurisdiction. The Parties submit to the jurisdiction of the federal and state courts in the State of Texas.

20. Any notices provided pursuant to this Agreement shall be in writing to the parties at the addresses set forth herein and shall be deemed given (i) three (3) days after deposit in the United States mails, postage prepaid, certified mail, return receipt requested, or (ii) upon actual receipt if sent by facsimile or any overnight delivery. Notices to Requesting Entity shall be delivered to the contact information listed above. Notices to Brazos Electric shall be delivered to:

    Brazos Electric Power Cooperative, Inc.
    7616 Bagby Avenue, Waco, Texas 76712
    PO Box 2585, Waco, Texas 76702-2585
    Attention: CEO and General Manager
    Fax: (254) 750-6393

Agreed:

Brazos Electric Power Cooperative, Inc.	**Requesting Entity**
By: ______________________________	**By:** ______________________________
Name: Mark Fagan	**Name:** ______________________________
Title: CEO & General Manager	**Title:** ______________________________
Date: ______________________________	**Date:** ______________________________

Agreement Exhibit A

Exhibit 3

Large Load Subsynchronous Survey

This survey helps ERCOT determine studies required, particularly Subsynchronous Oscillation (SSO) and the level of modeling detail needed. **If your plans change, please contact ERCOT and submit an updated form.**

Please provide answers below using the yellow boxes. Feel free to add comments after the boxes.

1. Load name and/or ID	
2. Specify load location and interconnection voltage	
3. Load customer email contact	
4. Will the load require new transmission transformers (e.g. 345 kV to 34.5 kV) or utilize existing transformers? If existing, specify the station name.	(Select transformer)
5. Provide estimated load percentages	Power Electronic / Computer: Air-Conditioning Compressor: Fans / Pumps / Motor:
6. For datacenter loads, will the data center be fed through an uninterruptible power supply (UPS)? Does the UPS have the ability to condition incoming power (e.g. if the incoming voltage is too high or low, the UPS will condition it rather than switch over to a backup energy source)?	(Select UPS) (Select UPS operation)
7. For datacenter loads, specify the approximate wattage and voltage of an individual unit	E.g. 3000 watts, 240 volts
8. How will your facility correct the power factor at the point of interconnection? (Even if the individual loads are unity power factor, step-down transformers will cause the facility to absorb reactive power.)	(Specify power factor correction)
9. Please provide the following documents. If not currently available, provide an estimate when they may be available. If unable to obtain, please why. Items b – e apply only to data center computer power supplies. a. High level one-line of electrical distribution b. Model/brand of computer power supplies c. Photograph of computer power supply circuit board (an opened computer power supply) d. Schematic of computer power supply e. SPICE electrical model	(Provide as separate attachments.)

Notes

Submit to your TSP contact and largeloadinterconnection@ercot.com.

Exhibit 4

DG Resource (< 10 MW) Interconnection Questionnaire

1. Provide the name of the proposed DG project:___________________________________
2. Provide the Resource Owner Company Name:___________________________________
   a. Will any form of payment come from a parent company? Yes____ No____
   b. If Yes, please provide Name:____
3. Provide primary contact for this DG project:
   a. Name____
   b. Email Address____
   c. Phone Number____
   d. Mailing Address_______________________________________
4. Description of proposed DG project? (Solar, Battery, etc.):________________________
5. Provide proposed project size of DG project in MW:________________
6. Provide proposed interconnection location (GIS coordinates):______________________
   a. Provide a .kmz file if available
7. Is the proposed POI connecting to a Brazos Electric Distribution Member facility? Yes____ NO____
   a. Provide name of the Brazos Electric Distribution Member Cooperative:____
8. Provide the requested distribution voltage for the POI? (DSP Member's voltages are either 14.4/24.9 or 7.2/12.47):____
9. Does Brazos Electric Member Distribution Member Cooperative require an express distribution feeder from the substation to the DG interconnection? Yes____ No____
10. Has the DG Resource (IE) filed any forms with ERCOT? Yes____ NO____
    a. Provide the GINR number:______________________________

Name:____

Date:_____________________

Note:

Cost to complete any required Engineering Studies to evaluate the ERCOT transmission system and/or distribution system must be paid to Brazos Electric and/or the Brazos Electric Member DSP. The requesting DG resource will be placed in the queue based on the date that payment is received.

Exhibit 5

ERCOT Template for Large Load Parameters Data

- **Project Number (skip if initial submission):** LLI-9999
- **Project Name:** Sample Project Load
- **County:** County
- **POI Substation:** Tap the Substation A (Bus #70001) – Substation 2 (Bus #70002) 345 kV Line approximately 3.5 miles East of Substation A (Bus #70001)
- **POI Voltage (kV):** Choose an item.
- **Peak demand (MW):** 900
- **Power factor:** 0.98
- **Desired Initial Energization Date:** Click or tap to enter a date.
- **Net-metering with generation?** Choose an item.
    - **If yes, INR or Existing Generator:** 31INR0001
- **TSP conducting the steady state load impact study:** TSP
- **Type of Load:** Choose an item.
    - **If other:** Other load type

Table i: Originally Requested Energization Schedule

Date	Cumulative Peak Load (MW)	MVAR
5/1/2025	X00	Y0
5/1/2026	X00	Y00
5/1/2027	X00	Y00
5/1/2028	X00	Y00