

# PROPOSAL

for



**Anson II BESS – Jones County, Texas**

## 1. ABOUT BLATTNER ENERGY

For more than a century, the Blattner Family of Companies has powered collaborative construction solutions to industry leaders across North America. Today, Blattner Energy, a Quanta Services company, is a leading, diversified renewable energy service provider delivering expertise and collaborative energy solutions throughout the country. Blattner provides complete engineering, procurement, and construction services for utility-scale wind, solar, energy storage and power delivery projects.



### BESS EXPERIENCE

The Blattner Family of Companies has built 17 BESS projects with over 1.5 Gigawatts contracted for over 6 Gigawatt hours, but that isn't what sets us apart. Others do the same work, but none deliver the same experience and quality.

### COLLABORATIVE CLIENT EXPERIENCE

Blattner parallels our client's values to provide excellence in energy products and service. Our teams exceed expectations by delivering collaborative construction solutions that go beyond a finished project. Our clients deserve exceptional service, and we make sure it's delivered every step of the way.

We are committed to client satisfaction with our collaborative approach. We strive to create long-term, mutually beneficial relationships with our clients, subcontractors, suppliers, and the communities where we live and work. Blattner will carry out this model on this project.

**"The big thing is: they do what they say they will do."**

*Third-party administered project completion survey quote from a client.*

Blattner's collaborative approach will provide quantitative and qualitative value. We work with you and develop win-win scenarios when it comes to adding value throughout the lifecycle of the projects. Blattner provides value throughout all stages of a project lifecycle, such as, schedule certainty by means of our active project management, systematic processes and metrics or finding solutions because our teams adapt and bring solutions to the table. As a result, we experience fewer problems and delays, and you can seize more opportunities along the way.

## 2. PRICING DATA AND SCOPE OF WORK UNDERSTANDING

To provide complete confidence in our pricing, we have highlighted areas of our pricing that Blattner would like to provide additional insight and where we had to make assumptions on the scope of work to best supply an accurate price for the RFP.

To clearly define how we priced this project and provide a comprehensive look at the proposal, below are areas categorized by work type to explain our proposal.

Proposal is valid for 30 days except for materials that are subject to commodity changes.

## 3. BATTERY ENERGY STORAGE FACILITY

The details of this document are related to the May 5, 2023, Anson II BESS Bid. Our 5/5/2023 BESS pricing is based on the Blattner Energy, LLC BESS design included within this package.

### 3.1. SCOPE OF WORK UNDERSTANDING

- Proposal is based on the following two BESS configurations. Where differences exist between the configurations, they will be distinguished in this proposal as the 1-Hour BESS Scenario and the 2-Hour BESS Scenario.
  - (1) 150 MW / 150 MWh<sub>-AC</sub> / 183.35 MWh<sub>-DC</sub> AC Coupled Battery facility.
  - (1) 150 MW / 300 MWh<sub>-AC</sub> / 346.75 MWh<sub>-DC</sub> AC Coupled Battery facility.
- Price adjustments may be required after the battery technology has been finalized and install manuals are made available for review.
- Proposal includes a project collector substation and transmission line with necessary engineering, procurement, and construction costs.
- 1-Hour and 2-Hour BESS Scenarios are bid per the layouts in Blattner's preliminary BESS designs included in this proposal. Additional coordination is needed for BESS yard location and spacing.
- Two add-alternate ROMs are provided for temporary power between the start of container deliveries and HV energization, with each alternate applying to either the 1-Hour or 2-Hour BESS configuration. These alternates are not included in, and would be added to, Blattner's base pricing for each scenario if temporary power is required until permanent backfeed auxiliary power is available. See section 3.4.12. below for details.

### 3.2. BESS GENERAL ITEMS

- Pricing is contingent upon award of the full scope included within this proposal and assumes work to be constructed in a continuous manner without delay. Pricing will need to be reevaluated if project size is changed or any portions of the work are not awarded to Blattner.
- Our proposal assumes concurrent construction between the HV and BESS facilities; no remobilizations or shutdowns are included.

- Pricing is contingent upon building the project per the provided schedule. Pricing may have to be adjusted for changes in the provided schedule.
- **Proposal assumes a 15% down payment of total contract value upon NTP.** NTP down payment shall be NET 5.
- Pricing is based on a project retainage amount of 10%.
- Pricing is based on the project progress payments being NET 30.
- **Builder's Risk Insurance has been excluded from our proposal.** ✓
- All materials, including electrical equipment, are priced on a best value to the project basis. No considerations for country of origin, diversity, small business, Buy America, or other mandates have been made at this time.
- Pricing is based on the Blattner provided LNTP and FNTP dates issued to Blattner on or before the dates provided.
- With respect to the BESS facility, the point of interconnect is the collector substation, we have not included any work at the project POI. We have not included any allowances for energized or "hot" work.
- Pricing is based on the laws in effect as of today and Blattner has excluded the risk of any "change in law" or similar action by a governmental authority that could impact Blattner's pricing such as changes to import fees, tariffs, trade remedies, duties, and taxes. In addition, Blattner's pricing is based on today's market rates for steel, aluminum, and copper and Blattner has excluded the risk of fluctuations in these market rates. Blattner continues to monitor potential governmental actions and market rates. In the event Blattner believes its pricing will be impacted by any change in law or market rates change, Blattner will notify Owner and will work with Owner to provide options to mitigate such increases including verifying pricing from vendors, no additional mark up on increases, expediting design, and LNTPs to expedite purchasing.
- Proposal does not account for any potential pricing or schedule impacts from Russia sanctions or other possible unknown impacts from the current Russia-Ukraine conflict.
- Due to the fluidity of the current pandemic, possible developments associated with the COVID-19 virus, and/or future outbreaks, this proposal is expressly conditioned upon the negotiated and agreed upon language in the contract documents to address the to-be-determined issues related to the pandemic and/or COVID-19 virus. Our goal is to reserve our future rights, which will be developed when sufficient information is available to all parties.
- **The proposed bid includes the applicable federal prevailing wage rates for the locality of the Project as of May 5, 2023.** Contractor reserves its right to increase the bid to account for future changes or clarifications to the prevailing wage rates. Contractor disclaims the ability to comply with: (i) the apprentice to journey worker ratio under Section 45(b)(8)(B) of the internal revenue code (the "IRC"), and other similar provisions of the IRC or the Inflation Reduction Act of 2022 (U.S. Federal Public Law 117-169) (the "IRA"); and (ii) the apprenticeship participation requirements under Section 45(b)(8)(B) of the IRC, or other similar provisions of the IRC or IRA. Contractor further disclaims, and the proposed bid does not assume, compliance with any

domestic content or sourcing requirements, including, but not limited to, the requirements set forth under Section 45(b)(9) of the IRC, or other similar provisions of the IRC or IRA.

### **3.3. BESS ENGINEERING**

- Our proposal is based on the Battery System being dispatched as (1) PPA, (1) cycle/day maximum, (365) cycles/year maximum.
- BESS Proposal is based on a conceptual design for (8) BESS MV circuits and (1) BESS Aux circuit for the Battery system.
- Proposed BESS general arrangement assumes Containers, Enclosures and Batteries will have UL certification for minimum spacing.
- Augmentation strategy assumed to consist of additional future PCS and BESS containers, added at new energy stations within the project area.

### **3.4. BESS PRICING AND SOW INCLUSIONS**

#### **3.4.1. SITEWORK AND ACCESS ROADS**

##### **SCOPE OF WORK UNDERSTANDING**

- Blattner is responsible for SWPPP design and civil engineering.
- Blattner is responsible for erosion control and SWPPP implementation for duration of construction.
- Blattner will need to do a final topo of the site to finalize civil design. We reserve the right to make changes to the grading quantities based on the results of the final survey.
- Our bid assumes all grading materials will be sourced off-site. Value engineering options to reduce cost available if site boundaries are provided.
- Blattner will construct onsite access roads.
- Water application for subgrade compaction, imported fill, dust control and other construction requirements is the responsibility of Blattner.
- Contractor is responsible for furnishing and installation of security fencing. Our bid is based on building a 7' chain-link fence with 1' of 3 strand barbed wire.
- Blattner is responsible for road and site maintenance during construction.
- Item required to finalize civil design:
  - Final TOPO Survey – Boots on the Ground
  - Project Boundaries

##### **PRICING AND SOW INCLUSIONS**

- Costs for civil, grading, and SWPPP design.
- SWPPP measures will consist of perimeter silt fence and stormwater retention basins. The pond is assumed to be left in place after construction.

- Roads will consist of native compacted subgrade with 12" of cement stabilization and 6" of aggregate cap.
- BESS & substation yard to include 6" of aggregate cap as a working pad surface.
- Blatter has assumed procuring water from an offsite source. Water royalty has been included in the bid.
- Disturbed areas will be broadcast, or drill seeded with approved seed mix. Blattner does not guarantee germination or seed growth and has not included watering.
- 7' chain-link with 1' of 3 strand barbed wire perimeter fence and 4- 24' double swing gates have been included.
- Public road upgrades have been included to cover 1,430 LF with 2" of aggregate cap.

**PRICING AND SOW EXCLUSIONS**

- We have not included the cost to cap any existing well or abandon any existing utilities.
- **Clearing and grubbing efforts**
  - Our bid does not include removal or disposal of any items relating to asbestos or bio hazmat materials.
  - **Disposal of debris/garbage from the site.**
  - Our bid excludes any protection or relocation of any existing utilities.
  - Permitting or crossing of jurisdictional waterways.
  - Locating, capping, or removal of oil wells and lines.
  - Any unforeseen underground conditions and the disposal of hazardous and/or contaminated soil.
  - Discovery or handling of karst/gypsum formations.
  - Demolition of above ground infrastructure other than that previously mentioned above.
  - Any underground infrastructure not identified in owner supplied materials is excluded.
  - Demolition of field fencing outside of the project fenced-in area.
- **Clearing & grubbing outside of the project fenced-in area has been excluded.**
  - Upgrades/repairs to public road(s) that are not listed above are not included.
  - Demolition or relocation of overhead distribution and transmission lines has been excluded.
  - Demolition or relocation of water lines is not included.
  - All Easements or land for future expansions not identified in owner provided constraints have been excluded.
- **Watering of Seeding is excluded.**
  - Fence slats have been excluded.
  - Application of herbicides has been excluded.
  - Grading, or allocation of, any drill pad(s) is excluded.

**3.4.2. BESS GROUND GRID**

- Blattner will provide and install a complete grounding system with quantities based on preliminary assumptions for a grounding grid with 35-foot by 35-foot dimensions around the BESS equipment, including equipment connections and fence grounding. We have assumed native backfill for the ground grid trench.
- Ground rods are assumed to be 10 feet in length. No enhanced backfill, drilling of ground rods or ground wells have been included. Ground cable is to be placed 18 to 24 inches below final grade. Compaction of the trench is assumed at 85% of standard D698 density utilizing native soils. Testing to verify compaction methods is included, but no specific testing requirements or frequencies are included.

**3.4.3. BESS YARD LIGHTING**

- Blattner will furnish and install 45'H light poles, located around the perimeter of the BESS yard for perimeter lighting. Each light pole will have two (2) arm-mounted light fixtures. The following quantities will be installed in each scenario, configured for basic road lighting within the BESS yard:
  - 1-Hour Scenario: (8) poles and (16) fixtures
  - 2-Hour Scenario: (12) poles and (24) fixtures
- Lighting power to be supplied by nearest auxiliary power panelboard. Separate metering is not provided for lighting loads.
- Final lighting design will require lighting study to comply with the IEEE C2 and dark-sky compliance requirements noted in Engie-provided document "Chillingham BESS TX\_RFI QA ENGIE Responses 5.1.23". Blattner has included cost for lighting study in the bid. Pricing for BESS yard lighting will need to be updated for final lighting design.

**3.4.4. BESS FOUNDATIONS**

- We have assumed ground conditions with normal excavation methods present. We have not included any boulder removal, predrilling, hard rock drilling, or temporary or permanent casing.
- Blattner will furnish and install driven pile foundations for the BESS containers.
- Blattner will furnish and install driven pile foundations for the BESS PCS Skids.
- Blattner will furnish and install driven pile foundations for BESS Auxiliary Transformers and Switchboards.
- Proposal assumes stable, non-collapsing soil conditions for all excavations.

**3.4.5. BESS DC COLLECTION SYSTEM**

- Blattner will install DC connections between the PCS and Sungrow Containers. DC collection cables will be furnished and installed in buried underground conduit between the Inverters and containers.

- 1-Hour Scenario pricing assumes each Sungrow container will have (6) DC Disconnects, each with a maximum of (1) 450A fuses per pole.
- 2-Hour Scenario pricing assumes each Sungrow container will have (4) DC Disconnects, each with a maximum of (1) 450A fuses per pole.
- Sungrow documentation shows one-per-pole 500/600KCMIL CU cable for each DC connection. Blattner has designed around this specification, but if Sungrow allows parallel sets of aluminum (AL) cable, material procurement costs could be reduced. If Sungrow allows this option, Blattner can offer an alternative price to procure and install (2) sets of 2X600KCMIL AL & #2AWG CU GND in (1) 5" SCHED 40 PVC to replace the copper (CU) collection shown in Blattner's preliminary DC One-Line.

#### 3.4.6. BESS MV COLLECTION SYSTEM

- MV collection cable is assumed to be Aluminum XLPE jacketed with copper concentric neutrals.
- MV collection routing and spacing dependent on future studies. Pricing is based on provided preliminary design included with RFP response.
- Leakage current and ground fault sensors for the PCS are not included in this proposal.

#### 3.4.7. BESS AUXILIARY SYSTEM

- The current BESS Design illustrates the following auxiliary power equipment. Equipment applies to both 1-Hour and 2-Hour Scenarios, with any differences between scenarios specifically noted.
- **(4) 1500KVA Auxiliary Power Transformer**
  - 34.5KV Delta Primary (dead front loop fed)
  - No Load Tap Changer (NLTC) - 5 position
  - 600A Bushings/Elbows Staggered bushing location
  - Bushing Supports
  - 480Y/277V Wye (Grounded) Secondary (live front)
  - FR3
  - On/Off Load Break Switch
  - NEMA 3R
- **(4) 2000A Auxiliary Power Switchboard**
  - 480/277V 3-phase 4-wire
  - (1) 2000A/3PH Main OCPD
  - (3) 800A/3PH breakers (Sub Panels)
  - (1) 800A/3PH breakers (spares)
  - Provisions for generator tie-in for the purposes of temporary auxiliary power to the BESS



- NEMA 3R
- (12) 800A Panelboard
  - 480/277V 3-phase 4-wire
  - Main Lug Only (MLO)
  - 1-Hour Scenario: (8) 100A/3PH breakers (BESS Enclosures) & (2) 100A/3PH breakers (spares)
  - 2-Hour Scenario: (12) 60A/3PH breakers (BESS Enclosures) & (2) 60A/3PH breakers (spares)
  - (4) 15A/3P PCS Breakers
  - (2) 15A/3P Spares
  - (4) 15A/1P Breaker for step-down transformer/Local Controller
  - (2) 20A/1P lighting
  - NEMA 3R
- Control Power Transformer: (41) for 1-Hour Scenario, (42) for 2-Hour Scenario
  - 2.5KVA
  - 277V/1PH input voltage
  - 230V/1PH output voltage
- Auxiliary power switchboards are provided with provisions for generator tie-in for the purposes of temporary auxiliary power to the BESS. Generators and cabling (beyond Blattner's provided ROM add alternates for temporary power) to be provided by others.

#### 3.4.8. BESS OFFLOAD & INSTALL

- Blattner will install the following owner-provided major equipment under the 1-Hour Scenario:
  - (82) – Sungrow BESS Containers; Battery Modules, fire detection, fire suppression, thermal management, and HVAC pre-installed
  - (41) – Sungrow BESS PCS fully integrated skids
  - (41) – Sungrow Local Controllers
- Blattner will install the following owner-provided major equipment under the 2-Hour Scenario:
  - (126) – Sungrow BESS Containers; Battery Modules, fire detection, fire suppression, thermal management, and HVAC pre-installed
  - (42) – Sungrow BESS PCS fully integrated skids
  - (42) – Sungrow Local Controllers
- Blattner will furnish and install the following major equipment under both scenarios:
  - (4) – Aux Transformer
  - (4) – Aux Switchboard
  - (12) – Aux Panelboard

**3.4.9. BESS TECHNOLOGY**

- 1-Hour Scenario proposal is based on an 150MW/150MWh-ac/183.35MWh-dc 1.0 C-rate.
- 2-Hour Scenario proposal is based on an 150MW/300MWh-ac/341.93MWh-dc 0.5 C-rate.
- Blattner will install the following Sungrow BESS containers:
  - 1-Hour Scenario: (82) Sungrow ST2236UX-US
  - 2-Hour Scenario: (126) Sungrow ST2752UX-US
- Each Sungrow container is installed with (2) dedicated grounding tails connected directly to the ground grid.
- Final electrical DC, auxiliary power, and communication terminations only are provided within containers. No work is included for any other materials or installation within Sungrow containers, including but not limited to the following systems: battery module installation or wiring, BMS and communications installation and wiring, HVAC installation, furnishing or installation of liquid coolant, fire detection, thermal management, or fire suppression systems.
- External fire detection, annunciation, mitigation, and suppression systems are not included in this proposal. We would like for this to be priced out.
- External water distribution systems for optional Sungrow container dry pipe sprinkler fire suppression system or for other sitewide fire suppression are not included in this proposal. Engineering/design, materials, installation, and testing/commissioning of such systems are not provided.

**3.4.10. BESS SCADA**

- Blattner's price includes installation of Sungrow-furnished Local Controllers at each PCS Location. Proposal does not include procurement or installation of any other field network equipment.
- Blattner's price includes installation of EMS SCADA rack. Procurement of EMS by Others.
- Blattner will furnish and install single-mode fiber connecting all field networking equipment to the EMS Controller located within the Substation Control House via a fiber loop.
- Blattner will furnish and install the Communication cable connecting each field network equipment to the subsequent Sungrow PCS and BESS Containers within an Energy Station.

**3.4.11. FIRE PROTECTION**

- Proposal includes an allowance for furnishing and installing (1) Fire Annunciation Panel, to be located at BESS yard entrance. Auxiliary power is provided from the nearest auxiliary power panelboard, and fiber is provided to panel from the SCADA system at the project substation. It is assumed that fire annunciation communications will utilize the BESS SCADA communications network. A dedicated site fire communications network is not included in this proposal.
- No allowances are included for fire detection, annunciation, mitigation, or suppression within BESS containers.
- No fire, smoke, heat, or explosive gas detectors are included in this proposal.

- External water distribution systems for optional Sungrow container dry pipe sprinkler fire suppression system, or for other sitewide fire suppression or fire department access, are not included in this proposal. Engineering/design, materials, installation, and testing/commissioning of such systems are not provided.

#### 3.4.12. TEMPORARY GENERATORS & TEMPORARY POWER

- Rough Order of Magnitude add-alternates are listed below for supplying temporary auxiliary power under each BESS scenario, for purposes of providing temperature and humidity maintenance of battery containers via container HVAC. This pricing is not included in the base pricing for the two scenarios.
  - 1-Hour System: **ROM of \$2.1M**
  - 2-Hour System: **ROM of \$3.0M**
  - Cost includes rental, mobilization, fueling, supervision, and demobilization of temporary generator units.
- Temporary power Rough Order of Magnitude alternates are based on the following parameters. Adjustments to these parameters may decrease or increase the expected temporary power costs for both BESS scenarios.
  - Container deliveries beginning 11/29/2024 and ending 1/11/2025
  - HV energization date of 3/3/2025
  - Standby HVAC load of 30KVA for containers of both configurations
  - (4) 1500KVA diesel-fueled temporary generators, tied in (1) at auxiliary power switchboard
  - 24-hour generator runtime
  - \$5.10/gallon anticipated cost for diesel fuel
- Cost is limited to expected 480V HVAC standby loads only of BESS containers. It is assumed that commissioning activities will be performed after Initial Synch milestone and will utilize permanent power.
- Auxiliary power switchboards are provided with provisions to directly connect temporary generators. See section 3.4.7. BESS AUXILIARY SYSTEM above.

#### 3.4.13. BACKUP/SECONDARY AUXILIARY POWER

- Our proposal does not include any allowance for temporary or permanent backup or secondary auxiliary power supply for the BESS facility.

#### 3.4.14. BESS AUGMENTATION – LOCATION, FOUNDATION, & CONDUITS

- Blattner has included the following provisions for future augmentation for each scenario (1-Hour and 2-Hour) as a part of this proposal:
  - Space is reserved in the BESS yard for anticipated future PCS and BESS containers.

- Auxiliary power equipment and dedicated MV circuit for auxiliary power are sized for future auxiliary load
- No offload, installation, or wiring of future PCS or BESS containers is included in this proposal.
- Proposal does not include any allowance for furnishing or installing any foundations, grounding, conduit, or other infrastructure for future augmentation not specifically listed above.

#### 3.4.15. BESS MECHANICAL & SUBSTANTIAL COMPLETION

- Proposal is based on the PV & BESS Collector Substation and BESS facility having (2) separate Mechanical Completion and (2) separate Substantial Completion milestones.

### 3.5. BESS SUBSTATION

#### 3.5.1. SCOPE OF WORK UNDERSTANDING

- Blattner shall be responsible for engineering, furnishing, and installing a 138 kV substation except for the main power transformers.
- Supply of the main power transformers to include the purchase, delivery, installation and testing of the Main Power Transformers shall be by Owner.
- Proposal is based on a conceptual design for an open-air 34.5kV/138kV, ten (5) bay substation collecting sixteen (8) incoming PV circuits and two (1) 25MVAR Cap Banks with two (1) main power transformer.
- Our pricing substation proposal is based on footprint, items and equipment shown on the conceptual drawing package provided with this proposal.

#### 3.5.2. PRICING AND SOW INCLUSIONS

- Substation footprint will be mowed as required, topsoil and vegetation stripped and graded to subgrade. Site will be graded for proper drainage. A sterilant will be applied to protect against future vegetation.
- Proposal includes the installation of six (6) inches for crushed rock surfacing for finish rock, 2,288 CY in total. No specification was provided for the rock therefore, we assumed a typical finish rock with 100% passing the one-inch sieve and 0-5% passing the 3/8" with approximately 70% having at least one fractured face. We have assumed a local source and have not considered the electrical properties of the rock at this time. Final rock surfacing will be provided on the substation site to five (5') feet outside the substation fence. We have not included any compaction for the Yard Rock.
- We have included 1,394 lineal feet of perimeter fencing around the substation. Fencing will be seven (7) foot high chain link fence with one (1) foot of three (3) strand barbed wire and four (4) manual operated swing gates. No card reader access or other security has been included. Allowances have been added for snake/rodent fencing.
- Foundation and excavation assume dry, drillable ground conditions with normal excavation methods. We have not included any boulder removal, temporary or permanent casing, or

major dewatering systems. We have included minor dewatering for the foundations due to slow groundwater influx or precipitation. No use of temporary or permanent casing is included.

- Blattner will supply and install all concrete and reinforcing steel for the foundations.
- Proposal assumes a total of 638 CY of concrete for foundations. 86,611 total pounds of rebar have been included.
- We have not made any allowances for corrosive soils for the substation foundations.
- Proposal assumes stable, non-collapsing soil conditions for all excavations.
- Blattner will provide and install a complete grounding system with quantities based on preliminary assumptions for a 30 x 30-foot grid to include equipment connections and fence grounding. We have assumed native backfill for the ground grid trench. Ground rods are assumed to be 10 feet in length. No enhanced backfill, drilling of ground rods or ground wells have been included. Ground cable is to be placed 18 to 24 inches below final grade. Compaction of the trench is assumed at 85% of standard D698 density utilizing native soils. Testing to verify compaction methods is included, but no specific testing requirements or frequencies are included.
- Blattner will provide and install a complete conduit and cable trench system. We have assumed a combination of sand, native backfill or slurry for conduit runs depending on size and number of conduits. We have included conduits extending ten (10) feet outside the fence for utility service and communication but have not included routing of the services from the utility to the substation. Blattner will assist in the coordination and management of installing required service. We have included coordination and terminations in the substation for a local backup power.
- Design, supply and installation of a prefabricated control house complete with panels and terminations for all control cabling is included. The building will be equipped with HVAC, lighting, and receptacles for a complete operating building. All AC and DC distribution necessary to support the substation equipment will be provided and installed in the building. The DC system will be supported by lead acid batteries and a charging system. All necessary safety equipment including eye wash station, fire extinguisher, detection and alarm are included. Fiber terminations at the control house are also included.
- We have included a full walk-around grating system for the MPT oil containment pit.
- We have included the connection of a local utility power source for backup power. Routing of utility service to the substation by the Owner. Backup will be controlled by an ATS in the control building.
- We have included an allowance to provide, install and terminate all control cabling.
- Substation steel structures will be galvanized finish. Steel static masts will be installed and backfilled with flowable fill. Electrical bus will be SPS aluminum rigid bus with conductor leads and jumpers. All connections for the facility will be made with welded and compression fittings. Bus welding will be completed by certified welders.
- Blattner will provide and install the following major equipment:

- (3) – 230 MCOV Surge Arrestors
  - (3) – 345 kV CCVT
  - (4) – 345 kV Disconnect Switch- Motor Operated
  - (4) – 345 kV SF<sub>6</sub> gas filled Power Circuit Breaker
  - (8) – 34.5 kV 1200A Group Operated Disconnect- Manual Operated
  - (1) – 34.5 kV 4000A Group Operated Disconnect- Manual Operated
  - (3) – 34.5 kV Potential Transformers
  - (4) – 34.5 kV Vacuum Feeder Breakers
  - (1) – 34.5kV Station Service Transformer
  - (15) – 34.5 kV Hook Stick Disconnects
  - (12) – 24.4 kV MCOV Surge Arrestors
  - (1) – 34.5 kV Neutral Grounding Reactors
  - (1) – 34.5 kV 25 MVAR Capacitor Bank w/ Unbalanced VT's, Grounding Switch, Surge Arresters, and Racking
  - (1) – 34.5 kV CapSwitchers
  - (2) – 34.5 kV Vacuum Cap Bank Breaker
  - (1) – 14' x 55' Control House Complete with Relay Panels and ATS
  - Steel Package and Static Masts (190,357 lbs. of steel total)
  - Full MPT pit steel grating
  - Bus Package
  - Yard Lighting
- Our proposal includes testing in accordance with the ANSI/NETA Acceptance Testing Standard and commissioning of the substation and the specifications provided in the RFP.

### 3.5.3. MATERIAL PRICING

- Substation materials are subject to commodity adjustment based on the following:
  - NYMEX/COMEX **copper** spot closing price on May 4, 2023: **\$3.8500**
  - Mid-West U.S. **aluminum** closing transaction price on May 3, 2023: **\$1.0569**

### 3.5.4. SUBSTATION LABOR ASSUMPTIONS

- Basis of the substation proposal is without consideration for Union or Prevailing Wages.

### 3.5.5. SUBSTATION GENERAL ITEMS

- Blattner will not accept individual award of the substation scope without award of the PV Plant. Standalone pricing may be available; however, we reserve the right to adjust pricing based on the reduced scope.

- All materials including electrical equipment are priced on a best value to the project basis. No considerations for country of origin, diversity, small business, or other mandates have been made at this time.
- Client will assume all interconnect and tap fees, expenses and assist in coordination with the interconnecting utilities. We have not included any allowances for energized or “hot” work.
- Project award, LNTP’s and/or releases for engineering need to be made with consideration for material and engineering lead times for the construction schedule and subsequent substation completion date to hold. Other lead times are for key substation materials are 26-55 weeks after receipt of order.
- Proposal assumes a continuous substation construction sequence; no remobilizations or shutdowns are included.

### 3.5.6. SUBSTATION PRICING AND SOW EXCLUSIONS

- No MV current limiting equipment has been included.
- We assume 345kV breakers to be ordered at time of first LNTP based on Chillingham breaker design for HV mechanical completion to be completed prior to energization on 3/3/2025.
- We have not included any cost to clean up or mediate existing hazardous wastes that may be present onsite, nor will we accept any liability for existing hazardous wastes that may be present.
- We have not included any asphalt paving for the yard, entrance road or approaches.
- We have not included any allowances for work at the POI or for any switchyard facilities.
- We have not included hard rock drilling, excavation, or dewatering.
- Use of permanent or temporary casings for excavation stability
- Animal and rodent protections.
- We have not included an allowance for any environmental or altitude specific requirements.
- Routing and supply of Utility power and communication for back-up service.
- No provision for external telephone exchange circuits (POTTS), lease lines, line isolation equipment has been included.
- We have not included any costs to bring the T1 line and POTTS line from the local utility to outside the substation fence.
- We have not included any allowances for utilities, drain tile or pipeline relocations in or around the substation footprint.
- No allowances for reactor banks or related switches and breakers have been included with this proposal.
- We have not included any allowances or provisions for corrective measures for any Harmonic deficiencies that may exist or be found because of future studies.
- No allowances for DVAR, reactor banks, or DSTATCOM have been included with this proposal.

- No spare parts or inventory stocks have been included with this proposal.

### 3.5.7. SUBSTATION SALES TAX

- We have assumed no materials are tax exempt based on the Texas Electric Generating Facility Transformer and Related items exclusion. The non-exempt sales tax is included in the line item that generates the tax.

## 3.6. GEN-TIE

### 3.6.1. SCOPE OF WORK UNDERSTANDING

- This proposal assumes a 0.87 Miles from the BESS substation H-Frame Dead-end structure to a separate dead-end structure furnished and installed by others. Pricing includes Furnish and Install of Conductor, OPGW, and Hardware assemblies between the two structures. Assuming 795 KCMIL “Drake” conductor and 48 Count Fiber.

## 3.7. BESS TESTING AND COMMISSIONING

- Our price includes testing of the collection (MV, DC, Aux and Comm) cable/terminations, Auxiliary Transformers, Inverter Switchgears, and Inverter Skids that Blattner procures and installs. Our pricing is based on the following tests:

#### COLLECTION SYSTEM

- Continuity & Megger
- 3-Point Fall of Potential
- MV Insulation Resistance
- Fiber Optic OTDR
- Offline PD

#### AUXILIARY & INVERTER XFMR

- Transformer Turns Ratio
- Winding & Insulation Resistance
- Insulation Power-Factor
- Dissolved Gas Analysis
- Voltage & Phase Rotation
- MV Surge Arrestor

#### INVERTER SWITCHGEAR

- MV SF6 Switchgear
- MV Vacuum Fault Interrupt
- MV Motor Operator Control
- Switchgear Relay
- Power-Factor

- Our price includes communication verification testing between the Contractor’s Power Plant Controller and EMS Controller to validate proper connection of the Blattner field-installed communication cables.
- Round trip efficiency testing and capacity testing are assumed to be the responsibility of Owner and are not included in this proposal.

## 3.8. BESS MATERIAL PRICING

- BESS materials are subject to commodity adjustment based on changes to the commodity pricing based on the date of proposal submittal. This includes but is not limited to Copper, Aluminum, Steel, and Natural Gas pricing.

## 3.9. BESS SALES TAX

- We have assumed a sales tax rate of 6.25% on all permanent and construction materials. If the project qualifies for an exemption or reduced rate, a certificate will need to be provided for a sales tax adjustment.



**3.10. WARRANTIES AND PERFORMANCE GUARANTEES****3.10.1. WORKMANSHIP WARRANTY**

- Blattner has included a two-year workmanship warranty on all work for the project at no additional cost. During this 2-year window, Blattner will also assist with coordinating equipment warranties.

**3.10.2. EQUIPMENT WARRANTY**

- Blattner has included a two-year warranty on all other equipment provided by Blattner for the project. If OEM warranty is providing coverage at the conclusion of the Blattner 2-year workmanship warranty period, Blattner will assign any remaining equipment warranties to the contract owner.

**3.10.3. PERFORMANCE GUARANTEE**

- Blattner has not included any BESS capacity, availability, or performance guarantees.
- Blattner proposal assumes the use of BESS acceptance testing as a requirement for achieving BESS Substantial Completion, subject to cost and schedule relief for weather issues.

**3.10.4. ONGOING PERFORMANCE**

- Blattner has not included any ongoing operational maintenance.

**3.11. BESS PRICING AND SOW EXCLUSIONS**

- A dedicated site fire communications network is not included in this proposal.
- No allowances are included for fire detection, annunciation, mitigation, or suppression within BESS containers.
- No fire, smoke, heat, or explosive gas detectors are included in this proposal.
- Backup or redundant auxiliary power is not included.
- No lighting protection shield masts or wire are included for the BESS yard. Provided lightning protection is limited to end of line Medium Voltage surge protection.
- Permanent security system for the BESS yard is not included.
- No allowances are included for BESS container HVAC system procurement, installation, or commissioning of the HVAC units. Our price assumes they will arrive on site pre-installed and pre-wired.
- No allowances are included for onsite installation associated with liquid-cooled HVAC Units; including but not limited to procurement of coolant agent, offload of coolant agent, installation of coolant agent, and HVAC pressure checks.
- No allowances are included for third party inspection, installation or commissioning of the BESS container fire detection or fire suppression systems.
- Routing and supply of separate Utility power and/or communication for emergency back-up service are not included.

- Pricing does not include the procurement or installation of any fire suppression system, multi-gallon water tanks, water hydrants, or underground water distribution system for the purpose of flooding BESS Containers or other site fire prevention or control.
- Procurement of BESS EMS is not included.
- Insulating yard rock for the BESS yard is excluded. Electrical properties of surface gravel cap have not been considered at this time.
- We have not included any cost to clean up or mediate existing hazardous wastes that may be present onsite, nor will we accept any liability for existing hazardous wastes that may be present.
- We have not included any asphalt paving for the yard, entrance road or approaches.
- No road upgrades are included to facilitate Enclosure, Container or Battery deliveries.
- BESS Point of Interconnect is assumed to be at the collector substation. We have not included any allowances for work at the overall project POI or for any switchyard facilities.
- Thermal fill is not included.
- We have not included hard rock drilling or excavation, or dewatering.
- Use of permanent or temporary casings for excavation stability.
- We have not included an allowance for any environmental or altitude specific requirements.
- NERC/NERC CIP Requirements, Studies, and Scheduled Maintenance are excluded.
- Routing and supply of separate Utility power and/or communication for emergency back-up service is not included.
- We have not included any allowances for utilities, drain tile or pipeline relocations in or around the BESS footprint.
- No allowances have been included for pipeline crossings.
- No allowances for reactor banks or related switches and breakers have been included at the BESS facility.
- We have not included any allowances or provisions for corrective measures for any Harmonic deficiencies that may exist or be found because of future studies.
- No allowances for DVAR, reactor banks, or DSTATCOM have been included with this proposal.
- No battery modules or racks have been included with this proposal.
- Secondary Oil Containment for BESS equipment is excluded.
- No allowances for 3rd Party inspection of the fire detection or fire suppression system.
- No allowances for fire extinguishers or fire panels.
- No allowances for installation of Future Battery Modules, Battery Containers, BESS Inverters or corresponding foundations and balance of system. Installation of future equipment, cable and terminations is to be provided by Others.