

## Request for a Utility Scale Turn-Key Battery Energy Storage System

Please find attached a request for proposals (RFP) to construct a turn-key Li-Ion BESS. Suppliers are encouraged to propose cost effective solutions using standard or common size designs.

Golden Valley Electric Association (GVEA) is considering several different sizes of BESS systems which could support a range of renewable energy project sizes, provide a range of coverage for transmission or generation system trips, while also providing voltage and frequency support.

On June 27, 2022, GVEA's Board of Directors adopted the framework of a strategic generation plan which, amongst other components, included the provision that GVEA expeditiously move forward within 90 days for the purchase and installation of a new Battery Energy Storage System.

Depending on terms and affordability, the analysis indicates GVEA would benefit from a range of BESS sizes. Accordingly, the RFP requests optional pricing for the following alternatives:

Option A – 46 MW / 92 MWh (with ability for future expansion to Option B)

Option B – 46 MW / 184 MWh

Option C - 75 MW / 150 MWh

Option D – 100 MW / 200 MWh (maximum)

Option E – specified by supplier to align with standard offering

To meet GVEA's goals and support its strategic generation plan, GVEA is requesting a fast-track project with a condensed procurement process and a desired construction schedule to allow completion sometime in late 2024. However, recognizing current market conditions and supply/demand challenges GVEA realizes that a 2024 completion date may not be achievable. Therefore, while a 2024 completion date is desired, the date is not fixed and GVEA is willing to entertain proposals for projects which have an operational date later than 2024.

Suppliers who are interested in responding to this RFP are asked to reply to this letter

with an email stating your intent to respond. Suppliers should carefully review the main RFP document, refer to the folder of Exhibits for more detail and then provide the best proposal possible utilizing the fill-in-the-blank detailed pricing and services forms found in the Attachments folder and the consolidated pricing sheet attached to this letter.

GVEA will provide an opportunity for interested suppliers to submit questions to GVEA in the format of a Q/A board. All questions and answers will be published as an addendum for the benefit of all bidders.

Suppliers that previously submitted proposals in 2020 should consider resubmitting proposals with updated pricing for the requested sizes. The content of this RFP is substantially the same as issued in 2020.

The preferred scope of work and supply is an engineering, procurement and construction (EPC) type contract for a turn-key project. However, if a Supplier is unable to deliver a turn-key proposal, GVEA will consider a partial EPC arrangement with a reduced scope.

**System Ownership:** GVEA will need to control the output of the BESS and, historically, has financed, developed and owned generation projects. Nonetheless, GVEA is open to alternative ownership arrangements, such as extended contracting for battery energy storage as a service. Suppliers responding with this service shall propose a long-term contract (10 to 20 years) to construct, maintain and operate the system in a manner that meets or exceeds the objectives and requirements listed in this RFP.

GVEA thanks you for your interest in responding to the GVEA BESS RFP and in supporting our goal to improve transmission system reliability and increase options for cost effective integration of variable renewable energy. We look forward to receiving your intent to respond and await your offers.

Sincerely,

John Burns, President and CEO

### Attachments:

- Consolidated Pricing Submittal
- Proposal Checklist
- 2022 GVEA RFP Turnkey BESS

## Consolidated Pricing and Proposal Information

## **GVEA 2022 Battery Energy Storage System RFP**

| List total cost for a turn-key delivered project                   |   |
|--|---|
| Option A – 46 MVA / 92 MWh \$ (USD)                                |   |
| Option B – 46 MVA / 184 MWh \$ (USD)                               |   |
| Option C – 75 MVA / 150 MWh \$ (USD)                               |   |
| Option D – 100 MVA / 200 MWh \$ (USD)                              |   |
| Option E – Supplier Specified MVA / Supplier Specified MWh \$ (US) | _ |

If the proposal is less than a complete turn-key system, state below what general categories of parts and services are being offered and what has been omitted.

# **Proposal Checklist**

## **GVEA 2022 Battery Energy Storage System RFP**

Use this checklist to ensure that all required documents have been included in the proposal and appear in the correct order.

| Section  | Checkmark |
|--|-----------|
| 1. Cover Letter                                      |           |
| 2. Table of Contents                                 |           |
| 3. Executive Summary                                 |           |
| 4. Design Package                                    |           |
| 5. Lifecycle Assessment                              |           |
| 6. Project Schedule                                  |           |
| 7. Subcontractor Plan                                |           |
| 8. Statement of Knowledge, Experience and References |           |
| 9. Financial Statement                               |           |
| 10. Conflicts of Interest                            |           |
| 11. Legal Claims and Business Ethics                 |           |
| Attachment I – Supplier Qualifications               |           |
| Attachment II – Terms and Conditions                 |           |
| Attachment III – Technical Requirements              |           |
| Attachment IV - Scope of Work                        |           |
| Attachment V – Responsibility Matrix                 |           |
| Attachment VI – Pricing Schedule                     |           |
| Attachment VII – Acceptance Testing Procedures       |           |
| Attachment V – Responsibility Matrix                 |           |
| Attachment VI – Pricing Schedule                     |           |
| Attachment VII – Acceptance Testing Procedures       |           |
| Attachment VIII: Training Plan                       |           |
| Attachment IX: Warranty                              |           |
| Attachment X: Bonds                                  |           |
| Attachment XI: Cybersecurity Questions               |           |
| Attachment XII: Signed RUS Forms                     |           |
| Attachment XIII: Proposal Checklist                  |           |



## Request for Proposal – EPC Project to Construct Battery Energy Storage System

**Bid Package: 2022 – 160** 

#### I. Overview

Golden Valley Electric Association (GVEA) is soliciting proposals (RFP) from a qualified firm to provide a new Li-lon BESS to provide transmission system stability, renewable energy support and capable of black start operation, with grid-forming / load forming functionality.

Please see Section V for the Procurement Timeline. Electronic documents are considered to be received upon entering the GVEA mail server; timeliness will be governed by the time stamp recorded by GVEA's mail server.

If a prospective firm requests by September 6, 2022, GVEA will offer a tour of the Project site to become familiar and satisfied with the general, local, and site conditions that may affect the cost, progress, performance, or furnishing of the work. In-person tours will be conducted the week of September 12. Alternatively, upon request, GVEA can provide a virtual site tour if travel is not practical.

Please submit your interest to bid by sending an email to EPSchachle@gvea.com with the firm's name and primary contact for the RFP. At that time the firm will be added to the ShareFile site for this project

The Proposal shall be uploaded to the project ShareFile site and notification that the Proposal has been uploaded sent to Ehren Schachle no later than September 30 at 2 P.M. Alaska Time.

All questions and responses to this RFQ must be submitted to:

Finance & Purchasing
Attn: Ehren Schachle
Administrative Operations Manager
EPSchachle@gvea.com

#### II. **Background and Purpose**

Background - Golden Valley Electric Association (GVEA) is the vertically integrated (generation, transmission, distribution) RUS electric cooperative serving 48,500 electrical meters in sub-arctic Interior Alaska. The utility headquarters are in Fairbanks.

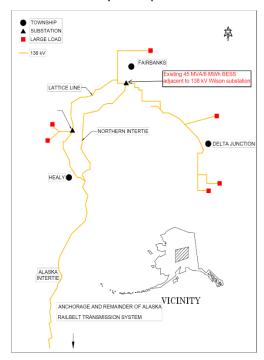


Figure 1 – GVEA Service Territory and Location of Existing BESS

The Alaska transmission system, known as the Alaska Railbelt, is a relatively small electrical island – isolated from the North American grid – and is sensitive to rapid large load swings or single contingencies such as a loss of a generating station or trip of a transmission line breaker. To recover from these contingencies and minimize the prohibitive cost of operating combustion turbines for spinning reserve, together with providing end-of-the-line reactive power support (Figure 1 - Northern Intertie), GVEA has, since 2003, relied on a 46 MVA / 6 MWh (24 M.W. for 15-minute capability - time required to start and ramp up backup generation) BESS to provide transmission services and rapid responding reserve energy. The unmanned legacy facility exceeds 99% availability and prevents, on average, 50 transmission outages per year. This legacy BESS is at the end of its life.

### b. Purpose -

i. To maintain the transmission system stability and integrate variable energy resources, GVEA has an immediate need for a new Li-Ion BESS sized at one of five alternate power output and energy storage capacities:

1. Option A 46 MVA / 92 MWh (minimum requirement)

2. Option B 46 MVA / 184 MWh

3. Option C 75 MVA / 150 MWh

4. Option D 100 MVA / 200 MWh 5. Option E Supplier Provides Tailored / Innovative Solution to achieve GVEA's Transmission Services and Renewable Integration **Objectives** 

#### III. **Specifications and Requirements**

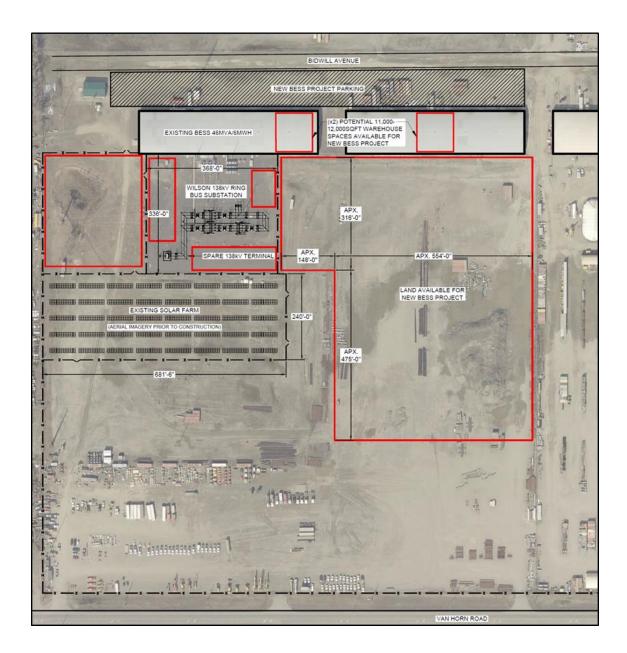
### a. Specifications

- i. The selected Supplier shall engineer, design, procure, construct and commission a turn-key BESS. GVEA encourages optimizing between a purpose-built building, containerized or modular solutions, or using existing spare warehouse space, as determined by the Supplier.
- ii. The BESS shall comply with the mandatory performance and interconnection requirements in IEEE 2800 – 2022. These are denoted in the standard with the word "shall." In situations where there could be more than one technical interpretation or definition of a technical specification, for instance, the BESS power rating, the terminology, and technical definitions in IEEE 2800 – 2022 shall govern.
- iii. System to integrate with GVEA's existing enterprise software applications listed below;

| # | Existing System                                | Vendor/model        |
|---|--|---------------------|
| 1 | Corporate Industrial Data Historian            | OSIsoft P.I. System |
| 2 | Transmission and Generation Management / SCADA | OSI Monarch         |

### iv. Description of Proposed Site

- 1. The approximately 12-acre site is cleared and graded. The undeveloped portions, used as a GVEA parts storage yard, have a pit-run gravel surface of unknown thickness, and the sub-surface geotechnical aspects are unknown. Other areas have been developed as a solar farm (2018), 138 kV Wilson substation (2000), existing battery energy storage system (2003), and industrial warehouse space (1970s). A geotechnical report was prepared during the construction of the adjacent Wilson transmission substation and is available upon request.
- 2. The access road has a gravel surface suitable for transporting trailers with heavy equipment of at least 60 tons, except during spring thaw. DOT weight restrictions are typically in place during May. There is ample parking for construction vehicles outside of the proposed construction site. GVEA also has an approximately 12,000 sq. ft. vacant heated warehouse, including office space and a bathroom inside the eastern warehouse building along the north side of the proposed construction site.
- 3. Below is the aerial view of the existing 46 MVA NiCad BESS (commissioned 2003) with the Wilson 138 kV substation. Red boxes delineate available spaces and dimensions for siting a new BESS. The east warehouse space includes an office area and bathroom, which could be used during construction. Location coordinates 64.816131, -147.722175 degrees.



- v. The table below is a partial listing of key requirements. Refer to Attachment III: Technical Requirements for the detailed list.
  - 1. The reference point of applicability (RPA) for all minimum technical requirements for the interconnection, capability, and performance requirements shall be the point of measurement (POM), which is the 138 kV side (high side) of the main transformer.

Partial List of Requirements

| General Specifications Option A                        |   |
|--|---|
| Continuous Power/Energy at the POM (138 kV connection) | 46 MVA / 92 MWh (minimum useable)               |
| Batteries  | 92 MWh (minimum usable energy at the POI meter) |

| Inverter/Converter | 46 MVA approximate four quadrant (usable power at the POI meter) +   |
|--------------------|--|
| Capacity Retention | The overall BESS shall have an operational life of at least ten years, preferably up to 20 years, with one complete discharge/recharge cycle per day.  |
|                    | With one complete discharge cycle per day, at a minimum, the BESS shall have an average degradation of energy storage of no more than 3% of the initial design capacity per year, with a usable capacity of no less than 70% of the original design at the end of ten years of life (20 years preferred).                                      |
|                    | The Supplier should include optional pricing to provide no less than 90% of rated capacity over a 10, 15, or preferred 20-year service life. This can be accomplished by oversizing the initial system or replacing battery modules, as necessary. Capacity testing shall be done on an annual basis using the full rated power of the system. |

| General Specifications Option C                        |  |
|--|--|
| Continuous Power/Energy at the POM (138 kV connection) | 75 MVA / 150MWh (minimum useable)  |
| Batteries  | 150 MWh (min. usable energy at the POI meter)  |
| Inverter/Converter                                     | 75 MVA four quadrant (usable power at the POI meter)   |
| Capacity Retention                                     | The overall BESS shall have an operational life of at least ten years, preferably up to 20 years, with one complete discharge/recharge cycle per day.  |
|  | With one complete discharge cycle per day, at a minimum, the BESS shall have an average degradation of energy storage of no more than 3% of the initial design capacity per year, with a usable capacity of no less than 70% of the original design at the end of ten years of life (20 years preferred).                                      |
|  | The Supplier should include optional pricing to provide no less than 90% of rated capacity over a 10, 15, or preferred 20-year service life. This can be accomplished by oversizing the initial system or replacing battery modules, as necessary. Capacity testing shall be done on an annual basis using the full rated power of the system. |

| General Specifications Option D                        |  |
|--|--|
| Continuous Power/Energy at the POM (138 kV connection) | 100 MVA / 200 MWh (minimum useable)  |
| Batteries  | 200 MWh (min. usable energy at the POI meter)  |
| Inverter/Converter                                     | 100 MVA four quadrant (usable power at the POI meter)  |
| Capacity Retention                                     | The overall BESS shall have an operational life of at least ten years, preferably up to 20 years, with one complete discharge/recharge cycle per day.  |
|  | With one complete discharge cycle per day, at a minimum, the BESS shall have an average degradation of energy storage of no more than 3% of the initial design capacity per year, with a usable capacity of no less than 70% of the original design at the end of ten years of life (20 years preferred).                                      |
|  | The Supplier should include optional pricing to provide no less than 90% of rated capacity over a 10, 15, or preferred 20-year service life. This can be accomplished by oversizing the initial system or replacing battery modules, as necessary. Capacity testing shall be done on an annual basis using the full rated power of the system. |

| Options A, B, C, D               |   |  |
|----------------------------------|---|--|
| Chemistry                        | Lithium-ion   |  |
| Nominal DC Voltage               | Specified by Supplier   |  |
| Point of Interconnection Voltage | 138 kV  |  |
| System Frequency                 | 60 Hz   |  |
| Communications                   | OPC, DNP3   |  |
| THD                              | < 3% and IEEE 519   |  |
| Response Time                    | Maximum 100 millisecond response time from rest to 100% discharge output after receipt of turn ON command from GVEA SCADA system or relay output.           |  |
| Enclosure                        | Modular, container or prefab, purpose-built   |  |
| Use Case                         | Resource Adequacy (spinning reserve) + volt/var support + transmission system stability + frequency regulation + renewable energy integration               |  |
| Reactive Power Requirements      | A combination of real and reactive power up to 46 MVA. Supplier to provide a graph showing available reactive power at various transmission system voltages |  |

| Options A, B, C, D | <b>Duty Cycle</b> |   |
|--------------------|-------------------|---|
|                    |                   | 365 equivalent discharge cycles to rated capacity per |
|                    |                   | year.   |

| Options A, B, C, D Major Equipment |  |
|------------------------------------|--|
| MV Transformer  H.V. Transformer   | A.C. side of inverter to 34.5 kV (other voltages acceptable) 34.5 kV to 138 kV   |
| n.v. Italisiotillei                | 54.5 KV tO 156 KV  |
| Battery Enclosure(s)               | Modular containers or buildings, including all necessary internal D.C. and A.C. systems, thermal management, and fire suppression.   |
| Energy Management Software         | During normal operation, the GVEA central EMS / SCADA (Monarch OSI) will remotely monitor and send supervisory set points to the BESS. The local BESS energy management system shall provide local control for BMS, maintenance, testing, or emergency backup. |
| Utility Metering                   | Provide revenue grade metering   |

| Options A, B, C, D Codes and Standards |  |
|--|--|
| Cells                                  | UL 1642, UN 38.3   |
| Modules                                | U.L. 1973, UN 38.3   |
| Bays / Packs / Racks                   | UL 1973, NFPA 70EUN 38.3, IEC 61508, EN 50272  FCC 47 CFR Part 15 Subpart B Class A, IEC 61000-6-2, 5 and 7, IEEE 519, ICES-003, EN 55011/CISPR 11, IEEE 693 |
| Enclosures                             | UL 9450, IFC 1206, NFPA-855, IFC 1206, 2015 IBC Ch. 16, NEMA 3R or greater, IEEE standard for Fairbanks seismic zone, Fairbanks local building codes.        |
| Power Conversion System                | UL 1741(S.A.), IEEE 1547, IEEE 2800-2022   |

#### **Overall System**

IEEE 2800-2022

NFPA 70 / 70E most current version, UN 38.3, UL 9540, EN 50272, IEEE 693, IEEE C-2 National

Electrical Safety Code, FCC 47 CFR Part 15 Subpart B Class A, IEEE 519, ICES-003, EN 55011 / CISPR 11, IEEE 693, IEC 60529, American Bureau of Shipping Certificate of Cargo

Containers

## All Options - Overall System Uptime and Performance Guarantee

The Supplier shall separately price (Attachment VI) a monthly uptime and performance guarantee (i.e., performance assurance) = Minimum of 98% per month for 20 years

Uptime (%) = [(Hours per month) - (Scheduled maintenance) - (Unscheduled maintenance)] /

[(Hours per month)]

Supplier to identify what is included in the optional cost for the uptime and performance guarantee -

e.g. – redundancy of critical components, Supplier's maintenance program

## b. Requirements

- i. GVEA is requesting vendors submit proposals for any or all the alternatives, which at a minimum, meet these two general categories of Objectives and an option for the third category:
  - 1. Transmission system stability modes for oscillation damping (refer to Exhibit E Railbelt Oscillation Mitigation Studies) and standby, high power, instantaneous four quadrant response (fast frequency and voltage support) to unplanned contingencies - loss of a line or source of supply. This would include receiving supervisory M.W. discharge dynamic set points to store and use for possible contingencies. A discharge would be triggered by receipt of a high-speed status change input signal from a remote transmission or generator circuit breaker.
  - 2. Renewable energy support for integration of current and future variable renewable energy sources and support for cyclical large loads. This would include load following with continuous regulation of transmission system frequency (primary frequency response) and voltage, continuous daily cycling at partial states of charge, and high round trip efficiency.
  - 3. Optional In addition to the two general categories above, the preferred system shall be capable of black start operation, with grid-forming / load forming functionality (islanded mode).
- ii. The successful Supplier, at the time of contract execution, shall
  - 1. Furnish separate Performance and Payment Security in the form of standby Letters of Credit, Bank Guarantees, or Insurance Bonds acceptable to GVEA, in amounts equal to 100 percent of the Contract Price.

- 2. This Performance and Payment Security shall remain in effect until one (1) year after the Final Acceptance of the Project by GVEA.
- 3. Sign and return RUS forms:
  - a. Equal Opportunity Addendum
  - b. Certification regarding debarment, suspension, and other responsibility matters-primary covered transactions
  - c. Lobbying Certification
- iii. GVEA is a signatory to various union agreements governing work performed on GVEA's construction sites. Accordingly, the successful Supplier shall abide by the provisions of these union agreements during the performance of on-site work. Example agreements are available on the ShareFile Site for this RFP.
- iv. Suppliers must comply with all federal, state, and local laws, rules, and regulations applicable to their performance.
- v. Review RUS Buy American Requirements and Exceptions

#### IV. **Additional Info**

- a. GVEA will consider a system delivered with the lower 92 MWh capacity only if the project includes spare rack space, HVAC capacity, and optional pricing to allow future capacity increases.
- b. Suppliers are encouraged to propose cost-effective solutions using standard or common size BESS system designs to match as close as possible the GVEA requirements and separately quote, as options, the extra equipment, and effort that exactly comply with the remaining requirements. GVEA will evaluate the supplied configurations/options and select the project plan that reliably and costeffectively aligns as close as practical to the specifications and objectives (Attachment IV – Technical Requirements).
- c. The preferred form of contract is an engineering, procurement, and construction (EPC) contract that includes furnishing all designs, studies, equipment, and materials; providing all labor, supervision, administration, and management; and supplying all construction equipment, materials, and services necessary to perform the turn-key installation and 138 kV integration of a Battery Energy Storage System.
  - i. Alternatively, GVEA will consider a partial EPC arrangement with a reduced scope to supply only the batteries, BMS, enclosures, and power conversion and control systems, along with DNP3 integration with GVEA's central dispatch SCADA system. When completing the Attachments, enter "N.A." for parts that do not apply to the reduced scope of the Proposal.
- d. System Ownership: GVEA shall control the output of the BESS. However, GVEA is open to alternative ownership arrangements, such as extended contracting for battery storage as a service. Suppliers who propose selling storage services will retain ownership and enter into a long-term contract (10 to 20 years) to maintain a system that meets or exceeds the objectives and requirements. Those Suppliers who propose to sell storage services must provide a proposed service level agreement, and commercial terms and complete and return all portions of the RFP. Indicate "N.A." in areas that do not apply to a non-GVEA-owned project.
- e. The successful Supplier should provide renewable integration modeling and system design services to maximize value for these applications and optimize the life of the batteries. The project scope shall include an electromagnetic transient (EMT) study of the proposed BESS system modeled in GVEA's and the Alaska Railbelt electrical system to guide GVEA and Supplier in determining proper operational

- setpoints and parameters. The project deliverable shall also include a PSS/E model of the BESS system to be incorporated into GVEA's PSS/E system model.
- f. Award of a contract will be made at the discretion of the GVEA Board of Directors, depending on successful financing, and may require approval by the U.S. Rural Utility Service and/or an Alaska Electric Reliability Organization.

#### ٧. **Procurement Schedule**

- a. Additional events may be scheduled after the RFP is distributed. Should the Schedule of Events change, GVEA will notify the Suppliers. However, it is the Supplier's sole responsibility to keep informed of the Schedule.
- b. Procurement Schedule of Events

| Milestone                         | Date   |
|-----------------------------------|--|
| RFP Issuance                      | August 30, 2022                                  |
| Intent to Respond Due             | September 06, 2022                               |
| Deadline for Supplier's Questions | By 2:00 P.M. (Alaska Time) September 19, 2022    |
| Responses to Supplier's Questions | By 3:00 P.M. (Alaska Time) September 21, 2022    |
| Supplier Proposals Due            | By 2:00 P.M. (Alaska Time) on September 30, 2022 |

- c. Questions All questions must be received in writing via email no later than the date shown in the Procurement Schedule above. All questions shall be directed in writing via email to:
  - i. Address to Ehren Schachle EPSchachle@gvea.com
  - ii. CC: Nathan Minnema NJMinnema@gvea.com and Dan Bishop DRBishop@gvea.com

#### VI. **Response Requirements**

- a. The response shall consist of a single printable .pdf file containing the complete Proposal and a copy of each attachment document in its native format.
- b. Cover Letter
  - i. The Supplier's Proposal shall be concise, well organized, and demonstrate the Supplier's understanding of the scope of work.
  - ii. Includes a commitment by the Supplier, if selected, to enter into good faith negotiations with GVEA.
  - iii. Names of the person(s) authorized to represent the Supplier (title, address, email address, and telephone numbers).
- c. Table of Contents The Supplier shall include a table of contents in the Proposal, itemizing the sections and subsections of the Proposal.
- d. Statement of Knowledge, Experience, and References Use this section to supplement Attachment I. Describe experience on similar scale BESS projects, understanding of utility interconnection and infrastructure design, and understanding/experience of requirements specific to constructing BESS facilities in a sub-arctic environment.
- e. Executive Summary (maximum two (2) pages)
  - i. A clear and concise overview of the information contained in the Proposal.
  - ii. Significant facts or features of the Proposal, including any conclusions, assumptions, and recommendations the Supplier desires to communicate.

### f. Design Package

- i. A detailed description of capabilities
- ii. Provide 2D and 3D site plans and general arrangement drawings showing the conceptual layout of all significant equipment and electrical interconnections up through the 138 kV connection to the Wilson substation.
- iii. One-line electrical drawings of all major components
- iv. Electrical switching diagram showing how sub-systems are safely isolated for maintenance
- v. Specification sheets from manufacturers of all major components (may submit in appendices)
- vi. Example maintenance and operation manuals for all significant equipment (may submit in appendices)
- vii. List of Major Equipment Suppliers
- viii. Explain the equipment supply chain process, including how the Supplier tracks and documents the source country/factory of origin of project components. Can the Supplier comply with the Buy American requirement of the RUS procurement process? How will the Supplier comply with NERC CIP-013 Cyber Security - Supply Chain Risk Management?
- g. Life Cycle Assessment Provide a description of how the Supplier manages product lifecycle and obsolescence. Given the rapid changes in technology, how does the Supplier ensure GVEA, and Supplier can maintain the system for up to 20 years (preferred) or other duration that aligns with the Supplier's system? What is the life cycle/replacement cycle and strategy for the control system, batteries and battery management system, and any other significant computer hardware/software sub-systems?
- h. Project Schedule
  - i. The Supplier shall provide a proposed schedule (Gantt chart) that shows the major activities necessary to commission the project in 2024 or, with an alternative delayed start, commission in 2025.
  - ii. The schedules shall include but are not limited to:
    - 1. design,
    - 2. development,
    - 3. testing,
    - 4. installation,
    - 5. commissioning,
    - 6. training,
    - 7. on-site support,
  - iii. Distinct milestones for meeting contract obligations and receiving payment.
    - 1. The Schedule of payments shall be tied to the completion of milestones and not timebased.
  - iv. Detailed Gantt Chart showing General Project Schedule Milestones including 30% design, 60% design, 90% design, Site Mobilization, Factory Acceptance Tests, Major Equipment Delivery, Substantial Completion, Acceptance Testing, Training, and Commercial Operation.
  - v. The Project schedule must be provided as a PDF and may also be included as a Microsoft Project MPP file.
- i. Subcontracting Plan Provide information about the extended project team e.g. Other EPC firms, developers, integrators, or construction contractors.
- j. Project Management Indicate measures the Supplier will undertake to manage costs and Schedule, Schedule, and cost performance indices, earned value, milestone verification, and any GVEA requirements for the use of project management software.

- k. Financial Statement Provide information from the years 2019, 2020, and 2021 to demonstrate the Supplier's secure financial status:
  - i. If publicly traded, provide 10 K
  - ii. If privately held, provide Audited Financial Statements.
  - iii. As this contract will span several years, the selected Supplier shall provide those documents as they become available for 2022, 2023, and 2024.
- I. Conflicts of Interest Identify any potential conflicts of interest for the project, contract award, and future execution.
- m. Legal Claims and Business Ethics Statement
  - i. Identify any pending legal claims, liens, or liabilities.
  - ii. Describe the Supplier's business ethics.
- n. In addition to the above, complete and include the following attachments found in the ShareFile Site in the Response Folder:
  - i. Attachment I: Supplier Qualifications, Safety Record and Project Team. Complete the table as provided in the Word document.
  - ii. Attachment II: Contract Terms and Conditions with Supplier's List of Exclusions and Exceptions (in its native Microsoft Word format); Use Track Changes to show any exceptions or alternatives.
  - iii. Attachment III: Technical Requirements (in its native Microsoft Excel format). Provide responses as indicated on each column header.
  - iv. Attachment IV: Scope of Work and Supply (in its native Microsoft Word format) Use Track Changes to show any exceptions or alternatives.
  - v. Attachment V: Responsibility Matrix (in its native Microsoft Excel format). Provide responses as indicated on the column header.
  - vi. Attachment VI: Pricing Schedule (in its native Microsoft Excel format). Provide responses as indicated on column headers. Each project Option is on a separate tab. Complete all tabs for all Options. If the Supplier declines to bid on some Options, indicate N.A. due to no bid supplied.
  - vii. Attachment VII: Acceptance and Transmission System Interconnection Testing Procedure
    - 1. Review ESIC EPRI document: Energy Storage Integration Council (ESIC) Energy Storage Test Manual. EPRI, Palo Alto, CA: 2019. 3002013530.
    - 2. The Supplier shall review the Test Manual and indicate any objections or propose alternatives within the document. Submit a description of the Supplier's standard Factory Witness Test (FWT), Operational Acceptance Test (OAT), Functional Acceptance Test (FAT), and Commissioning Plan that conforms to the processes described in the Test Manual.
    - 3. GVEA may modify these tests prior to contracting.
    - 4. In addition to the ESIC EPRI test manual above, the new facility shall adhere to the interconnection requirements in IEEE 2800 - 2022.
  - viii. Attachment VIII: Training Plan The Supplier shall provide a detailed description of a training plan for GVEA grid operators, maintenance personnel, and management, including a sample schedule, topics, and course materials.
  - ix. Attachment IX: Warranty
    - 1. The Supplier shall submit a detailed description of the Supplier's BESS warranty (length and provisions) and/or individual component warranties for:
      - a. Batteries
      - b. Inverters

- c. Enclosures
- d. Transformers and Switchgear
- e. HVAC
- f. Wiring and 138 kV Substation Integration
- g. Overall System
- h. Workmanship
- i. The warranty(s) shall align with the pricing descriptions in Attachment VI.
- x. Attachment X: Bonds Examples of the performance and payment bonds are included for comment.
- xi. Attachment XI: Cybersecurity Plan Answer the questions and explain compliance with cyber security requirements.

#### VII. **Evaluation of Response**

- a. GVEA shall first review proposals for initial decisions on responsiveness and responsibility. Based on this initial review, those found responsive and responsible shall advance for further evaluation.
- b. The GVEA's Project Team reviews and evaluates all accepted proposals based on the criteria outlined in the Scope of Work and Response sections of this RFP and any other relevant terms of the proposals received.

### c. Points awarded per the Schedule below

| Evaluation Criteria  | Ranking Weight |
|--|----------------|
| Technical Feasibility  | 25%            |
| An assessment of the Supplier's ability to deliver the indicated               |                |
| products/services in accordance with the specifications set out in this RFP.   |                |
| Points will be awarded by examining the technical and operational feasibility. |                |
| The level of maturity, functionality, and robustness offered by the ESS        |                |
| solution and the ability for the ESS to interface and be operated by the       |                |
| existing remote dispatch center EMS/SCADA system. There should be              |                |
| adequate and appropriate data to describe the technology and its intended      |                |
| operation, including the technology's physical size, operational and           |                |
| maintenance needs, and warranties. This information should be presented in a   |                |
| clear and orderly fashion.   |                |
| Previous Project Experience & Financial Stability                              | 25%            |
| Points will be awarded based on the amount of project experience that is of    |                |
| comparable size and technology. Feedback from past customers shall be taken    |                |
| into consideration. GVEA may reach out to references provided by Suppliers.    |                |
| Supplier and major equipment vendors must also be financially stable           |                |
| companies capable of providing long-term service of the BESS, uptime           |                |
| guarantees, and warrantee obligations. Points will also be awarded based on    |                |
| the Supplier's ability to provide emergency response repair service in a short |                |
| amount of time.  |                |

| Project Management, Plan, and Schedule  As applicable, the experience of the project manager, project team, and subcontractors will be factored into the evaluation. Points will be awarded based on the completeness of a well-thought-out and well-presented project plan tailored to the project objectives and the Supplier's ability to meet the proposed Schedule.   | 15% |
|--|-----|
| Overall Value  The value of the BESS will be assessed using the total cost of ownership and present value methodologies based on a 20-year life. The cost of energy, maintenance, roundtrip efficiency, spare parts, warranties, uptime guarantee, and performance degradation (among others) will be considered in the evaluation process. In addition, points will be awarded for minimizing and optimizing the size dimensions of the required land, keeping the project compact. | 35% |

#### VIII. **Terms and Conditions of RFP**

- a. By submitting a Proposal, the Supplier shall be deemed to have made a careful examination of specifications, conditions, and forms within this Request for Proposal and shall have reviewed the location and nature of the proposed construction, the transportation facilities, the kind and character of potential soil and terrain to be encountered, the kind of facilities required before and during the construction of the project, general local conditions, environmental and historic preservation considerations, and all other matters that may affect the cost and time of completion of the project.
- b. GVEA reserves the right to accept or reject any or all proposals, waive any formality, technicality, requirement, or irregularity in the proposals received, and request further information about any proposal.
- c. GVEA makes no representation or warranty, expressed or implied, as to the accuracy or completeness of any information contained herein or otherwise provided to any Supplier by or on behalf of GVEA.
- d. All bids become the property of GVEA.
- e. Suppliers are encouraged to conduct their own investigation and analysis of any and all information contained herein or otherwise provided by or on behalf of GVEA. No Supplier will have any claim whatsoever against GVEA, its employees, officers, or consultants arising from, in connection with, or in any way relating to this RFP.
- f. Supplier must hold the proposed price firm for one hundred and eighty (180) days after the submission deadline.
- g. The decision to award a contract is the right of GVEA in its sole discretion.
- h. Participation in this RFP is voluntary. Suppliers are solely responsible for their costs of submitting a proposal and any participation in GVEA requested clarifications or presentation of the Proposal.
- i. Acceptance of a proposal and commencement of negotiations does not constitute a contract between GVEA and the Supplier, nor does acceptance of a proposal obligate GVEA to consummate an agreement with Supplier.
- j. In its sole discretion and without notice to Suppliers, GVEA reserves the right to; (1) modify, change, supplement or withdraw the RFP; (2) extend the submission date/time and/or to supplement, amend, substitute, or otherwise modify the RFP at any time prior to the submission date/time; (3) require, permit or reject amendments (including, without limitation, submitting information omitted),

- modifications, clarifying information, or corrections to responses by some or all Suppliers at any time before or after the submission date/time; (4) require, request, or permit, in discussions with any Supplier, any information relating to the subject matter of this RFP that GVEA deems appropriate, whether or not it was described in the response or this RFP; (5) decline to consider any response to this RFP; and, (6) elect to proceed or not to proceed with discussions or presentations regarding the subject matter of this RFP with any Supplier.
- k. At any time prior to the RFP due date and time, a Supplier may withdraw its response by submitting a request in writing and signed by a duly authorized representative. Electronic mail withdrawals are acceptable.
- I. GVEA and Supplier agree to keep confidential the response to the RFP as well as information and documents exchanged between GVEA and Supplier during the preparation of the response to the RFP and the response evaluation process (Confidential Information). GVEA and Supplier may disclose the Confidential Information only to those within their organizations with a need to know. In addition, such Confidential Information shall be used by the Supplier only to respond to the RFP or by the GVEA to evaluate the response. GVEA and Supplier each agree that it shall not disclose Confidential Information to agents or consultants unless the agent or consultant has: (1) a need to know such information; (2) agrees to use the Confidential Information only to respond to the RFP or evaluate the bid; and (3) is contractually bound to disclosure standards and policies at least as restrictive as those set forth in this paragraph. Regardless of the confidentiality, all such Confidential Information may be subject to review by: (a) any other governmental authority or judicial body with jurisdiction relating to these matters; and (b) legal and regulatory discovery. Under such circumstances, GVEA and Supplier shall make all reasonable efforts to preserve the confidentiality of the Confidential Information, including requesting that it be filed under seal, but acknowledge that such treatment is neither automatic nor guaranteed.
- m. GVEA will, in its sole discretion and without limitation, evaluate proposals and proceed in the manner the Company deems appropriate, which may include deviation from the Company's expected evaluation process, the waiver of any requirements, and the request for additional information. Suppliers that submit proposals agree to do so without legal recourse against GVEA, its affiliates, or their respective employees, directors, officers, customers, agents, or consultants for rejection of their proposals or for failure to execute an agreement for any reason. The Company and its affiliates shall not be liable to any Supplier or other party in law or equity for any reason whatsoever for any acts or omissions arising out of or in connection with this RFP. By submitting its Proposal, each Supplier waives any right to challenge any valuation by the Company of its Proposal or any determination of the Company to select or reject its Proposal.
- n. The Supplier in submitting its Proposal agrees and acknowledges that it is making its Proposal subject to and in agreement with the terms of this RFP. By submitting a proposal, the Supplier shall represent and warrant that the information submitted by Supplier in connection with the RFP and all information submitted as part of any proposal is true and accurate as of the date of Supplier's submission. Supplier also covenants that it will promptly update such information upon any material change thereto.
- o. By submitting a proposal, Supplier acknowledges and agrees that: (1) GVEA may rely on any or all of Supplier's representations, warranties, and covenants in the RFP (including any offer submitted by Supplier); and (2) in GVEA's evaluation of proposals pursuant to the RFP, GVEA may disqualify a Supplier that is unwilling or unable to meet any requirement of the RFP, as determined by GVEA in its sole discretion.
- p. BY SUBMITTING A PROPOSAL, THE SUPPLIER ACKNOWLEDGES AND AGREES THAT ANY BREACH BY THE SUPPLIER OF ANY OF THE REPRESENTATIONS. WARRANTIES. AND COVENANTS IN THESE RFP.

INSTRUCTIONS SHALL CONSTITUTE GROUNDS FOR IMMEDIATE DISQUALIFICATION OF SUCH SUPPLIER. IN ADDITION TO ANY OTHER REMEDIES THAT MAY BE AVAILABLE TO GVEA UNDER APPLICABLE LAW, AND DEPENDING ON THE NATURE OF THE BREACH, MAY ALSO BE GROUNDS FOR TERMINATING THE RFP IN ITS ENTIRETY.