



***GEORGIA ENVIRONMENTAL  
FINANCE AUTHORITY***

---

*Solar and Battery Resiliency  
RFP Template*

*January 20, 2022*

## TABLE OF CONTENTS

<b>1 INTRODUCTION AND BACKGROUND.....</b>	<b>1</b>
1.1 Description of [Name] .....	1
1.2 Project Background and Purpose of RFP .....	1
1.3 Key Dates and Project Timeline .....	1
1.4 RFP Communications .....	1
<b>1.4.1 Administration of RFP.....</b>	<b>1</b>
<b>1.4.2 Submittal Instructions.....</b>	<b>2</b>
<b>1.4.3 RFP Attachments and Addenda.....</b>	<b>2</b>
<b>2 PROJECT DETAILS .....</b>	<b>3</b>
2.1 Site Information.....	3
<b>2.1.1 Building and Site Details .....</b>	<b>3</b>
<b>2.1.2 Site Placement and Space Availability .....</b>	<b>3</b>
<b>2.1.3 Critical Load Information.....</b>	<b>3</b>
2.2 Scope of Work .....	3
<b>2.2.1 Contractor Scope .....</b>	<b>3</b>
<b>2.2.2 Buyer Scope .....</b>	<b>4</b>
<b>2.2.3 Technical Specifications.....</b>	<b>4</b>
<b>2.2.4 Codes, Regulations and Standards.....</b>	<b>5</b>
<b>2.2.5 Parking Canopy Array.....</b>	<b>6</b>
<b>2.2.6 Roof Array .....</b>	<b>6</b>
<b>2.2.7 Energy Storage .....</b>	<b>6</b>
<b>3 PROPOSAL CONTENT .....</b>	<b>7</b>
<b>4 PROPOSAL EVALUATION DETAILS.....</b>	<b>9</b>
4.1 Evaluation Criteria.....	9
4.2 Confidentiality and Reserved Rights.....	9
4.3 Incurred Costs .....	10
4.4 Contract Incorporation .....	10
4.5 Rejection of Proposals .....	10
4.6 Supplemental Information .....	10

# 1 Introduction and Background

This Request for Proposal (RFP) is to solicit proposals to provide a solar photovoltaic (PV) and lithium-ion battery storage system (“Resiliency System”) capable of providing 36 hours of electric supply for critical electric infrastructure during a community emergency event over a 36-hour period, assuming utility grid power outage.

## 1.1 DESCRIPTION OF [NAME]

*In this section, provide a brief introductory description of the entity/city/county that is requesting proposals for this project.*

## 1.2 PROJECT BACKGROUND AND PURPOSE OF RFP

*In this section, provide a brief description of the facility, and an explanation of why the entity is seeking proposals for a solar and battery resiliency system.*

## 1.3 KEY DATES AND PROJECT TIMELINE

*In this section, describe the desired timeline for the RFP process and for the implementation of the solar and battery resiliency project itself. Recommended example text is below.*

The proposal process begins with the issuance of this RFP on *[Date]* and will continue until *[Time]* on *[Date]*, (the “Proposal Due Date”). Responses to this RFP received after the Proposal Due Date may, in the sole discretion of *[Name]*, be deemed non-responsive and given no further consideration in this RFP process. *[Name]* reserves the right to modify this timeline as necessary.

An RFP pre-proposal meeting will be held *on [Date] at [Time]*. Interested Contractors email *[email address]* if intending to participate in the pre-proposal meeting. In order to participate, interested Contractors will need to provide Attachment A (Intent to Respond Form) to *[Name]* via the RFP email address provided in Section 1.4. Supplemental information will be provided during the pre-proposal meeting and there will be a Q&A session. Any and all questions submitted by potential Contractors during the pre-proposal meeting or afterwards, up until *[Date]*, along with *[Name]’s* responses, will be made available through the email contact list that Contractors provide on their Intent to Respond Form.

*[Name]* anticipates a Commercial Operation Date (COD) of *[Date]*, approximately 18 months after completion of contract negotiations. COD may be refined during contract negotiations to reflect specific project timelines. If an alternative COD is expected, please state the expected project timeline.

## 1.4 RFP COMMUNICATIONS

*In this section, provide administrative details for the RFP, as well as instructions for respondents to submit their proposals. Recommended example text is below.*

### 1.4.1 Administration of RFP

All communications regarding this RFP must be directed to *[email address]*. Questions related to this RFP shall also be directed to this email address no later than *[Time, Date]*.

### 1.4.2 Submittal Instructions

One electronic copy of the proposal must be emailed to *[email address]* and must be delivered no later than *the Proposal Due Date*. All proposal submissions must include a completed Technical Proposal Form (Attachment B) and a narrative per the format in Section 3.

Each Contractor is expected to carefully review the information provided in this RFP as it contains important instructions which should be followed in preparing the proposal(s).

### 1.4.3 RFP Attachments and Addenda

Should any addenda to the RFP be necessary, such addenda will be issued via email. Potential Contractors are expected to submit an Intent to Respond Form in order to receive updates.

Attachments to this RFP at the time of release:

- A. Attachment A – Notice of Intent to Respond
- B. Attachment B – Technical Proposal Form

*Recommended example forms for Attachments A and B have been provided alongside this template document.*

## 2 Project Details

### 2.1 SITE INFORMATION

#### 2.1.1 Building and Site Details

*In this section, provide details about the facility/building itself and the surrounding owned property/site. Pictures, aerial views, site boundary map and site coordinates should be included.*

#### 2.1.2 Site Placement and Space Availability

*In this section, describe the potential space for solar and battery equipment, such as rooftop space, open land, parking lot space, utility closets, and basement or storage spaces.*

#### 2.1.3 Critical Load Information

*In this section, provide details critical electric loads needed to maintaining operations during community emergency event and an outage. Information should include:*

1. *Description of critical equipment and operating conditions,*
2. *Estimated kW demand of critical loads,*
3. *Estimated electric consumption (kWh) over a 24-hour period,*
4. *Provide information on existing emergency generators and grid isolation devices, and*
5. *Hourly electric load profile if available.*

### 2.2 SCOPE OF WORK

*In this section, describe the scope of work. Recommended example text is below.*

#### 2.2.1 Contractor Scope

- A. The Contractors shall furnish a solar PV plus energy storage system according to the specifications derived during the resiliency study, operate and maintain that system, and be responsible for removal and disposal of equipment at the end of a [XX]-year term.
- B. The Contractor shall furnish energy production estimate metrics in the Proposal Form.
- C. The Contractor shall furnish energy storage available energy capacity annually to comply with an energy capacity guaranty pricing.
- D. The Contractor shall furnish expected availability metrics in the Proposal Form which shall be tied to damages.
- E. The Project shall be capable of operating in accordance with the Availability and Energy Capacity Guaranties of this RFP as well as agreements entered into between Contractor and Buyer.
- F. The Contractor shall specify and furnish the equipment and materials which shall include, but not be limited to, perimeter fences, PV modules, structural systems, wiring harnesses, combiner boxes, inverters, pad-mount transformers, network and controls, and ancillary hardware required to connect and operate specified equipment.
- G. Engineering firm and Engineer of Record must be licensed in the State of Georgia.
- H. The Contractor shall be responsible for all construction and installation including all site/civil work, structural, electrical, mechanical and monitoring/control systems, construction management, site safety, material control and management of all subcontractors.
- I. The Contractor shall provide Project commissioning and testing in accordance with Section [XX].

- J. The Contractor shall be responsible for obtaining and providing to Buyer, all permits necessary to support construction and installation.
- K. The Contractor shall be responsible for connection of the Project to electrical interface provided by Buyer.
- L. The Contractor shall provide all temporary facilities necessary for the construction of the project including sanitary facilities, dumpsters, auxiliary power, parking for Contractor's employees, traffic control measures, site security, and water.
- M. The Contractor shall, if applicable, conduct a Geotechnical Study suitable for the design work including bearing capacities, soil characteristics and infiltration requirements.
- N. Survey sites, design and prepare the construction plans, final design reports and specifications for the civil site work, including the storm water drainage, grading, roads, temporary construction facilities, etc. All must meet the approvals of Buyer and jurisdictional government agencies.
- O. Obtain all necessary permitting associated with civil site work construction such as grading permits, haul permits, dust permits, storm water pollution prevention plans, etc., in compliance with local jurisdictional requirements and other jurisdictional government agencies as may pertain.
- P. Contractor shall ensure an Occupational Safety and Health Administration (OSHA) trained person be responsible for maintaining an OSHA compliant worksite over the term of the project.
- Q. The commissioning process shall be designed by the Contractor to provide a quality-oriented methodology for verifying and documenting the design, construction, functionality and performance of the Project.

### 2.2.2 Buyer Scope

- A. The Buyer will provide electrical panels as designated to accommodate Point of Interconnection (POI).
- B. The Buyer will provide, if applicable, the Protective Device Coordination Study, Load Flow Study, Short Circuit Analysis and Grounding System study at the POI.
- C. The Buyer will provide access to building as required.
- D. The Buyer will provide access to temporary electrical power where possible; Contractor shall be responsible for providing power to any construction location where Buyer is unable.

### 2.2.3 Technical Specifications

- A. Project and individual components shall have a minimum design life of 25 years.
- B. Project shall be designed for fully autonomous operation.
- C. Project electrical design will be in compliance with applicable codes and standards, including those listed under Section [XX], as applicable.
- D. Project shall be so designed as to meet annual and seasonal capacity factors as stated in Proposal Form.
- E. During engineering design, Contractor shall work with the Buyer when determining all signage, labeling and nomenclature.
- F. Receive, inspect, store, unload, maintain, erect, clean, align and prepare all equipment in accordance with equipment manufacturer's instructions before initial operation.
- G. Design the facility consistent with good utility practices for solar generation and energy storage facilities.
- H. Alternating current (AC) grid voltage or Distribution Panel Voltage: (determined by site POI requirements as defined by the Buyer).
- I. All pertinent equipment suppliers, subject to the approval of the Buyer, shall be provided in the Proposal Form including PV Modules Combiner Boxes, Inverters, Racking, Batteries, Fire Suppression, and the Energy Management System.
- J. Buyer will review and approve all 30% concept design documents, 90% design documents, and issued for Construction design documents; and be provided with as-built drawings.

- K. Contractor shall specify and install a fully functional, web-based monitoring software.
- L. Contractor shall also supply, install and commission the system hardware necessary for all monitoring activities.
- M. Contractor shall install industry standard network and controls equipment, e.g.) - Schweitzer Engineering Laboratories (SEL) Real-Time Automation Controller (RTAC) Remote Terminal Units (RTU), as applicable to the subsystem configurations.
- N. Contractor is responsible for providing communication data connection for each Project at POI. Communications shall be transmitted via a fiber optic at the Buyer provided connection.
- O. System shall display data in real time and record and log performance data at regular intervals. The data shall be directed through Buyer's interface and then to the internet for remote access, monitoring and data collection.
- P. Contractor shall prepare as-built drawings as may be necessary to meet the standards of the jurisdictional government agencies. At minimum, Contractor shall prepare as-built drawings for Buyer's record, which contain as-built elevations, dimensions, etc. and any variation from the design drawings, sealed by an engineer or surveyor licensed in Georgia. The as-built drawing set shall also contain technical data sheets for major components.
- Q. The commissioning tests shall ensure that all system components perform interactively to meet the systems' resiliency objective and criteria of Buyer.
- R. The commissioning agent to be used by Contractor must be proposed to Buyer as part of commissioning plan and agreed upon by Buyer before start of work.

#### 2.2.4 Codes, Regulations and Standards

- A. In the event that any applicable law or industry standard does not govern specific features of any item of equipment and materials, temporary work or system, Contractor or Original Equipment Manufacturer standards shall be applied, with Buyer's approval.
- B. Where local codes or ordinances will have an impact on the design, Buyer and Contractor shall jointly address these with the local authorities having jurisdiction.
- C. Listed herein are the principal codes and standards applicable in the design, fabrication and installation of the Project; these are not intended to be all encompassing. Where local codes or ordinances will have an impact on the construction, Contractor shall be responsible for meeting the codes or obtaining variances from local authorities having jurisdiction.
- D. Contractor shall design and construct the Project in accordance with the following standards, as applicable:
  - 1. Institute of Electrical and Electronics Engineers (IEEE 1547 - Standard for Interconnecting Distributed Resources with Electric Power Systems, IEEE 519 - Harmonics)
  - 2. International Electric Code (IEC 62215 – mono or poly crystalline modules, IEC 61646 – Thin film modules, IEC 6130)
  - 3. American Society for Testing and Materials (Class F ASTM D3161 – Solar Shingles)
  - 4. American Society of Civil Engineers (ACSE - Guide for the Design of Steel Transmission Towers, Manual No. 52)
  - 5. American Institute of Steel Construction (AISC) "Manual of Steel Construction
  - 6. American Concrete Institute (ACI) (ACI 318 – Building Code, ACI 347 - Concrete Formwork)
  - 7. American National Standards Institute (ANSI 62.41 – Surge suppression, ANSI C12.1 – AC Electric Metering, ANSI - Design of Cold Formed Steel Structural Members)
  - 8. National Electrical Manufacturers Association (NEMA 4 – Exterior Enclosures and Combiner Boxes, NEMA "SG6" and "TT1" - Design of structural and miscellaneous steel)

9. National Fire Protection Association (NFPA 855 - Standard for the Installation of Stationary Energy Storage Systems, NFPA 70E – Electrical Safety, NFPA 780 - Installation of Lightning Protection Systems, NFPA 241 – Fire Safety During Construction)
10. Communications (MODBUS, DNP3.0, SCADA, FCC Part 15A)
11. Cyber Security Framework (NIST 800-171, ISO 27001)
12. International Code Council “International Building Code”, latest version
13. National Electric Code, latest version
14. Underwriters Laboratories (UL1741 – Inverter safety, UL 62109 – Inverter safety, UL1973 – Stationary Batteries, UL9540a – Thermal Runaway and Flame Propagation, UL 1642 Standard for Lithium Batteries, UL 790 – Solar Shingles, UL1703)
15. Georgia Building Code, latest version
16. Local Building and Safety Codes, latest version
17. Local Fire Marshal, or local authority, inspection and approval of system

### 2.2.5 Parking Canopy Array

- A. The Contractor shall install, operate, maintain, and remove at the end of the contract term, a covered parking area by utilizing installed PV panels as cover, and to provide power and energy for facility requirements and be available for resiliency events.
- B. The structure may be of any style deemed structurally suitable; however, the canopy should cover the entire span of parking spaces without reduction or material change to any parking space or adjoining sidewalk.
- C. The structure shall have no impact to ingress and egress around parking lot.
- D. Consideration will be given for aesthetic value and level of architectural fit to existing facilities.
- E. The array shall be connected to a common energy management system.

### 2.2.6 Roof Array

- A. The Contractor shall install, operate, maintain, and remove at the end of the contract term, a standard PV array found on commercial buildings to provide power and energy for facility requirements and be available for resiliency events.
- B. The array shall be constructed using infrastructure components that would typically be found on commercial installations unless otherwise identified in this RFP.
- C. Please note that the roof for mounting is on a Facility that does not yet exist but will be designed and built by Buyer to best meet the design submitted in the successful Contractor’s proposal.
- D. The array shall be connected to a common energy management system.

### 2.2.7 Energy Storage

- A. The Contractor shall install, operate, maintain, and remove at the end of the contract term and lithium-ion energy storage system to provide energy storage for resiliency activities and daily load management.
- B. The energy storage site shall be constructed using subcomponents that are serviceable in order to comply with Energy Capacity Guaranties.
- C. The Project shall be constructed with public safety in mind and shall have all componentry protected from free and open access.
- D. Annual throughput will be limited to the equivalent of 365 full discharges of the battery at the rated power and energy capacity.
- E. This subsystem shall be connected to a common energy management system.



## 3 Proposal Content

*In this section, list the content that Contractors should provide in their responses to the RFP. This will ensure that all respondents provide the same information, allowing for better comparison and evaluation of proposals. Recommended example text is below.*

*[Name]* will review and utilize information submitted by a Contractor and reserves the right to request additional information from Contractor during the proposal evaluation process. The following outline describes how the Contractor should prepare and organize their respective Solar and Battery Resiliency proposal. Proposal content must include, organized according to the outline, the following information:

### **SECTION 1. EXECUTIVE SUMMARY**

1. Short description of proposed Solar and Battery Resiliency project.
2. Pricing summary table.
3. Primary contact information.

### **SECTION 2. FIRM BACKGROUND AND RELEVANT EXPERIENCE**

1. Key team members for the Contractor, relevant project management experience and capability, and related project experience.
2. Contractor's history of providing similar projects over the past three (3) years.
3. Three (3) Solar and Battery Resiliency project client references including contact name, title, and email address.
4. Possible conflicts of interest and any legal claims.

### **SECTION 3. PROJECT DESCRIPTION**

1. Description of Resiliency System.
2. Modeling data of Resiliency System performance. This should include spreadsheets with hourly performance data of the project.
3. Identification of Resiliency System equipment, including model numbers.
4. Proposed project schedule.
5. Description of required operating and maintenance. Include estimate of annual operating and maintenance costs.
6. Description of Contractor's battery energy capacity management approach.
7. Discussion of any non-conforming technical requirements, commercial terms, etc.

### **SECTION 4. COMMERCIAL TERMS (AS APPLICABLE)**

1. Proposed ownership structure.
2. Project Cost, referring to Appendix B.
3. Identification of commercial terms.
4. Financing Options.
5. Contract or proposed revisions to contract supplied with RFP.

### **APPENDICES**

- A. *Appendix A.* Supplier Data Sheets for PV Modules, batteries, inverters, fire detection/suppression, containers, auxiliary transformer, pad-mount transformer, combiner boxes, canopy structure, roof attachments, etc.
- B. *Appendix B.* Proposal Cost Form

C. *Appendix C.* Representative project layouts (including dimensions) and electrical diagrams

## 4 Proposal Evaluation Details

### 4.1 EVALUATION CRITERIA

*In this section, list the criteria that will be used to evaluate proposals. Recommended example text is below.*

Prospective Contractors are advised that total project price is only one criteria used in the proposal evaluation. The proposal should include enough detail to enable [Name] to evaluate all fixed and variable operating costs over the 20 year project life cycle associated with the proposal. Contractor must have successfully completed other solar and battery storage projects of similar size and scope to the project included in their proposal.

The criteria to be used in evaluating Proposals are as follows (*consider inserting a scoring matrix*):

1. Total installed project cost,
2. Total lifecycle ownership cost,
3. Previous project experience and corresponding references,
4. Cost effectiveness and performance of battery lifecycle management strategy,
5. Reputation and safety record of equipment selected,
6. Long Term Service Agreement costs,
7. Viability of equipment warranties and Energy Capacity guaranty,
8. Conformance to technical requirements and commercial terms,
9. Financial viability of the Contractor, including its parent or any other guarantor of services under the Contractor's proposal,
10. Key team members for the Contractor, relevant project management experience and capability, and related project experience,
11. Possible conflicts of interest and any legal claims.

[Name] reserves the right to consider any other factors deemed to be relevant to the successful integration and operation of the Solar and Battery Resiliency system ([these need to be identified](#)). Proposals will be evaluated based on their ability to reliably and economically provide [Name]'s the project requirements identified in Section 2.0.

### 4.2 CONFIDENTIALITY AND RESERVED RIGHTS

*This section and the following sections through the end of the document contain details regarding the proposal responses and other supplemental information for respondents. Recommended example text is provided below for Sections 4.2 through 4.6.*

All proposals shall become the property of [Name] and are subject to the Georgia Open Records Act. [Name] will not disclose to third parties (including competing proposers) any information contained in a proposal that is clearly labeled "CONFIDENTIAL" unless such disclosures are required by law or by order of a court or government agency having appropriate jurisdiction, or to secure the approval of lenders. [Name] reserves the right to disclose proposals to legal or engineering consultants for the purpose of assistance in evaluating proposals but will require the consultants to maintain the confidentiality of the document. This RFP is solely an invitation to submit proposals.

[Name] reserves the right to:

- Reject any and all proposals received in response to this RFP for any reason.
- Waive any requirement in this RFP.

- Terminate negotiations.
- Not select the proposal with the lowest price or any proposal.
- Request clarifications from Contractor at any time.

#### 4.3 INCURRED COSTS

All costs directly or indirectly related to the preparation of a proposal in response to this RFP shall be the sole responsibility of, and shall be borne by, the Contractor(s) incurring such costs. *[Name]* shall not reimburse any Contractor for any costs incurred in the preparation or submission of a proposal and/or in negotiating an agreement as a result of a proposal.

#### 4.4 CONTRACT INCORPORATION

Contractor should be aware that the contents of a selected proposal might become a part of any subsequent contractual agreements. If *[Name]* decides to move forward with a Contractor, they will negotiate a contract with such Contractor that may embody the general principles and concepts established in the Contractor's proposal. In the event negotiations with a Contractor do not, within a reasonable period of time, produce satisfactory contracts to *[Name]*, *[Name]* reserves the right to terminate those negotiations and pursue other options available to it including, without limitation, entering into negotiations with another party.

Any winning proposal that results from the proposal evaluation and negotiation processes will be subject to approval by *[Name]*.

#### 4.5 REJECTION OF PROPOSALS

*[Name]* reserves the right to accept any proposal, or to reject all proposals and to re-issue this RFP if all proposals are rejected, or if they deem it otherwise necessary. *[Name]* reserves the right to revise this RFP, including the desired power and energy specifications, at any time. Additionally, *[Name]* reserves the right to accept proposals other than the lowest cost proposal. Factors other than cost, as described above, will be considered in the proposal evaluation process.

#### 4.6 SUPPLEMENTAL INFORMATION

*[Name]* reserves the right to request additional information from Proposers or to request Proposers to submit additional information to clarify proposal items.



*Solar and Battery Resiliency  
RFP Template*

*January 20, 2022*