

**Texas Commission on Environmental Quality  
New Technology Implementation Grant (NTIG) Program  
Quarterly Project Status Report**

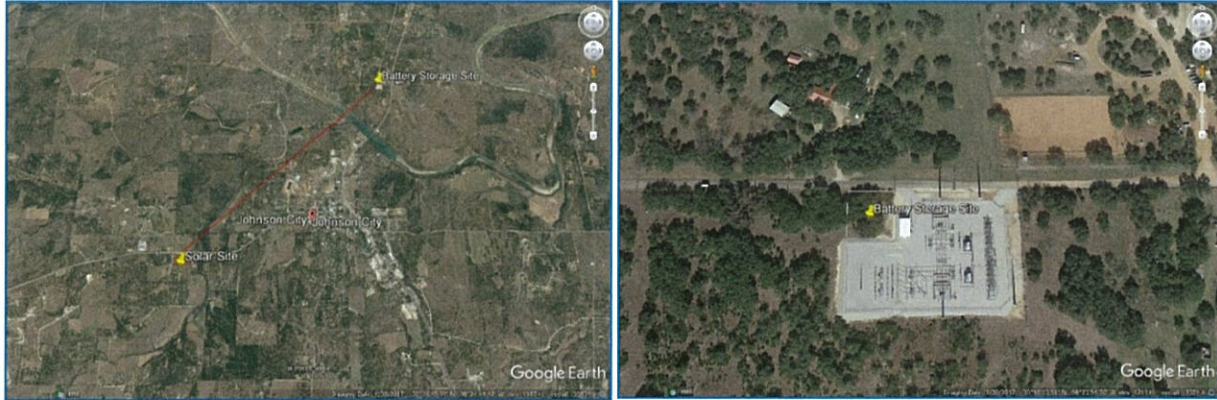
<b>Contract Number:</b>	582-17-72096-2569		
<b>Grantee:</b>	Pedernales Electric Cooperative, Inc.		
<b>Report for the Monthly Period:</b>	Q3 2017 (Jul-Sep 2017)	<b>Date Submitted:</b>	October 2, 2017

### **Section I. Accomplishments**

*Provide a bulleted list of project accomplishments as well as a description of their importance to the project.*

- **Final Site Selection** - Additional technical analysis and coordination with ERCOT was completed to identify the optimal location for the battery energy storage system (BESS) project. The project will be installed at the Johnson City Substation (Figure 1), and interconnected at 12.5 kV. The location was selected for the following reasons:
  - **Emission Reduction.** The site is in an affected area per TCEQ definitions and it is in close proximity to the Solar PV site. The location will satisfy NTIG requirements by shifting solar to peak times and displacing traditional fossil fuel generation and associated emissions.
  - **Accessibility.** The site is owned by PEC and easily accessed by Encino Road. This provides ease of implementation for construction, installation and service of the BESS. PEC anticipates the project will enable education and training opportunities for other cooperatives and neighboring utilities.
  - **High Visibility.** The site is highly visible and short driving distance from PEC corporate headquarters in Johnson City providing convenient visitation opportunities. The project will additionally provide PEC the ability to showcase their commitment to clean, renewable energy and peak load reduction efforts.
  - **Reduced Interconnection Costs.** The BESS is next to a substation and will utilize an existing high voltage transformer with spare capacity. The existing infrastructure and reduced line distance reduced interconnection-related expenses for the project.
  - **Improved System Efficiency.** Siting the BESS next to the substation eliminates unnecessary line losses and improved overall system round-trip efficiency that:
    - Increases system performance, emission reduction potential and cost-effectiveness
    - Decreases charging-related costs and cost per lifetime energy

Figure 1 - Johnson City Substation



- **Preliminary Engineering Scope of Work** - PEC evaluated and determined the optimal interconnection strategy for the BESS based on:
  - Available transformer capacity, breaker and local feeder conditions
  - Asset size and dispatch model (frequency, magnitude and duration of charging and discharging)
  - Technical studies that modeled impact of solar and BESS to local distribution operations
  
- **Responsibilities** - PEC assessed the scope of work related to interconnection of the BESS and determined the optimal delineation of responsibilities related to:
  - Metering, SCADA and communications
  - Site clearing and surfacing
  - Provision of switchgear, medium voltage transformer, conduit, wire pulling
  - Station service
  - Modification of relay settings
  - Site control, security and accessibility
  
- **Interconnection layout** - Figure 2 highlights the planned BESS.
  - The communications and 120/240 single phase station service interconnections will be located in the orange area.
  - The metering cabinet, meters and station service will be located in the yellow area.
  - The BESS will be located inside the perimeter fence shown in red with gate highlighted in green.

Figure 2 - PEC BESS Site Layout Requirements



- **Continued Coordination with ERCOT** - Close coordination with the Electric Reliability Council of Texas (ERCOT) was continued to include:
  - System mapping and planning for the project’s participation in the Fast Responding Regulation Service (FRRS).
  - Metering and reporting requirements
  - Registration requirements, costs and timelines
  - Scheduling and settlement information
  
- **Preparation and Issue of RFP** - PEC issued a Request for Proposal (RFP) # 2017-033 on August 28, 2017. Table 1 shows the tasks performed during Q3/2017.

Table 1 - PEC Q3/2017 Project Procurement Tasks

Task	Status
RFP Release	Completed August 28, 2017
Web Conference	Completed September 6, 2017
Pre-Proposal Meeting and Site Visit	Completed September 20, 2017
Q&A	Completed September 27, 2017

*Indicate which part of the Grant Activities as defined in the grant agreement, the above accomplishments are related to:*

The Final Site Selection activities relate to Task 1: Secure Rights to Location.

The following activities relate to Task 3: Conduct RFP Process for BESS:

- Preliminary Engineering Scope of Work Identification
- Continued Coordination with ERCOT
- Preparation and Issue of RFP

The finalization of specifications and scope of work were necessary for drafting the BESS specifications and requirements, prior to release.

## **Section II. Problems / Solutions**

*Problem(s) Identified: Report anticipated or unanticipated problem(s) encountered and effect(s) on the progress of the project*

Current Task 3 deliverable schedule did not align with the project schedule due to administrative changes at PEC.

*Proposed Solution(s): Report any possible solution(s) to the problem(s) that were considered / encountered.*

PEC requested an Amendment to facilitate changes to the Approved Scope of Work.

*Action(s) Conducted and Results: Describe the action(s) taken to resolve the problem(s) and effect(s) had*

The Amendment was submitted and approved to accommodate necessary project revisions.

## **Section III. Goals and Issues for Succeeding Period:**

*Provide a brief description of the goal(s) you hope to realize in the coming period and identify any notable challenges that can be foreseen.*

- **Procurement Process** - PEC will continue with the competitive procurement process tasks shown in Table 2.

*Table 2 - PEC Q4/2017 Project Procurement Tasks*

<b>Task</b>	<b>Scheduled for Completion</b>
Proposal Due Date	October 4, 2017
Board and executive approval to enter contract negotiations with Selected Team	November 1, 2017
Board and executive approval of Agreement	November 29, 2017
Contract Execution and NTP	December 20, 2017



Authorized Project Representative's Signature

Date: 02 Oct 2017

**NOTE:** Please attach any additional information that you feel should be a part of your report of that may be required to meet the deliverable requirements for tasks completed during this reporting period.