



**Texas Commission on Environmental Quality
New Technology Implementation Grant (NTIG) Program**

Implementation Phase Quarterly Project Status Report

Contract Number: 582-17-72095-2569

Application Number: _____

Grantee: NRG Texas Power LLC

Physical Address of Project: TBD. Tentatively NRG's Langford Wind Farm in Tom Green County, or at NRG's Buckthorn Solar site in Pecos County.

Report for the Quarterly period: January 1, 2018 to March 31, 2018 **Date Submitted:** March 12, 2018

Authorized Official/Project Representative Name: Forrest Forster

Authorized Official/Project Representative Contact Details:

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Project Summary:
(150 word max) Installation of a combined Li-Ion and Flow battery system

Section I. Accomplishments

Provide a bulleted list of project accomplishments since the last report and identify the corresponding task (if applicable).

- Activities continued this quarter in support of "Task 1 - Detailed Design, Engineering, and Internal Project Approvals"

List any invoices being submitted for reimbursement in reference to the project accomplishments listed above: (Add rows as necessary.)

Date of Invoice	Invoice Number	Vendor	Service/Product	Budget Category (Equipment, Supplies & Materials, etc.)

Section II. Problems/Solutions

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

- NRG is committed to successfully implementing the hybrid battery system despite the challenges previously identified which include: (1) higher flow battery costs; (2) NRG's divestiture of its renewable holdings including the Langford Wind Farm; and (3) significantly higher dispatch rates from ERCOT on deployed storage.
- NRG engaged ERCOT to provide feedback on various registration, metering & settlement schemes - ultimately resulting in the next-steps further described below.

Proposed Solution(s): Report any possible solution(s) to the problem(s) identified above.

- Possible solutions involve: (1) reengagement of equipment suppliers; (2) identification of parties that benefit from hosting the battery system and are also willing to have new renewable power.

Action(s) Conducted: Describe the action(s) taken to resolve the problem(s) identified above.

- NRG has identified and initiated preliminary work on alternate implementations that would maintain the size and type of batteries consistent with the original grant, deployed in conjunction with newly developed renewable energy.

Describe results of these actions identified above.

- As a result of the path outlined above, NRG is steadily advancing discussions with two separate parties:
 1. West Texas energy production field: The hybrid battery system along with a large new solar array would be constructed and connected to the grid at Transmission-level voltage at an existing customer-owned host site/load. Current ERCOT rules do not allow for separate ownership, registration, and settlement of a "behind-the-meter" system at Transmission-level which is exactly the configuration that is necessary for the economics to be viable. The parties have initiated the process to tweak ERCOT protocols to allow such the proposed configuration. The protocol revision request has been drafted and is expected to be filed with ERCOT by mid-March.
 2. Dallas-area manufacturing facility: The hybrid battery system along with a new solar array of at least 1MW (sufficient to charge the batteries) would be connected at Distribution-level voltage, at a customer-owned host site/load. While ERCOT protocols allow for separate ownership at Distribution-level connections, the configuration contemplated for this facility would have common ownership. Term sheets have been exchanged and the processes for internal vetting and approvals are underway at both the manufacturer and at NRG.

Section III. Goals and Issues for Upcoming 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:

- Obtain binding agreement with at least one of the host sites noted above and prepare a summary of any resulting changes needed for TCEQ's review using the comparison documentation. At this time, with successful agreement at either of the two host sites, we are optimistic that the schedule for the Grant can be maintained without significant delays.



3/12/2018

Authorized Official/Project Representative's Signature

Date

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

This form may be submitted via e-mail to your Grant Coordinator or a paper copy may be sent to the following address:

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Implementation Grants Section (NTIG), MC-204
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