



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

**Implementation Quarterly Report Form**

<b>Contract Number:</b> <p style="text-align: center;">582-21-23793-NG</p>	<b>Grantee Name:</b> <p style="text-align: center;">Nelson Gardens Energy, LLC</p>
<b>Report for Quarterly Period:</b> <p style="text-align: center;">2022 Q1</p>	<b>Physical Project Address:</b> <p style="text-align: center;">8963 Nelson Road Building #5 San Antonio, TX 78252</p>
<b>Date Submitted:</b> <p style="text-align: center;">4/10/2022</p>	<b>Project Representative Name:</b> <p style="text-align: center;">W. Gary Craig</p>
<b>Project Representative E-Mail:</b> <p style="text-align: center;">gcraig@edgewater.net</p>	<b>Project Representative Phone Number:</b> <p style="text-align: center;">(315) 415-3349</p>
<b>Project Summary (150 words or less):</b> <p>The, project located at 8963 Nelson Road, San Antonio, Texas involves the design and installation of a hybrid system of landfill gas-to-energy, solar energy, and flow battery storage on a closed (1993) Nelson Gardens Landfill through integration of approximately 5.81 MW gross of DC solar generation together with 13 Vanadium flow batteries totaling approximately 1.014 MW without exceeding the Energy Reliability Council of Texas (“ERCOT”) and CPS Energy Power Purchase Agreement (“PPA”) requirements for the Nelson Gardens Landfill on which 4.236 MW AC of landfill gas fueled generation exists on a 13.2 kV interconnect.</p> <p>Only solar energy generated on-site will charge the batteries. Stored solar energy will be sold to CPS Energy through the 13.2 kV interconnect for their use in time-of-day shifting of the renewable energy as well as for frequency modulation when, and, if required.</p>	

## Section I. Project Progress

A. Indicate which Tasks, as defined in the Grant Contract Scope of Work, are currently in progress. Describe any challenges encountered during the completion of these Tasks. Discuss plans or actions taken to resolve them.

1. Grantee and the City of San Antonio through its Solid Waste Management Department (SWMD) will continue to revise both the site control documents and the TCEQ Subchapter T application for modification of the City's Permit #1237. The latter is needed due to the Nelson Gardens Landfill still being in its Post-closure Care Period. Approval of the Subchapter T modification will allow the installation of solar infrastructure on the closed landfill surface.

2. The revised Lease notice (see Section I, B 1 below) seems to have broken an impasse regarding the scope of site control. The revised Lease notice and the prospect of installing Vanadium redox flow storage batteries at the Nelson Gardens Landfill were favorably received by the SWMD Director and senior staff members.

3. As a result of our joint discussions with SWMD, the design of solar foundations, power wiring and vegetation/erosion related to SWMD's Post-closure Care responsibilities is not seen as a major obstacle. With some more discussion, Grantee's consultants should be able to revise the much larger former TCEQ Subchapter T application to one focused solely on Hill C.

4. As a result of the SWMD renovation work (see Section I, B 3 below), Grantee's consultants should be able to reduce the number of close approaches and crossing points due to being able to reduce the length of the solar arrays as a result of solar panels now being sold that produce 15-18% more energy per solar panel than those used for the grant application.

B. Indicate which Tasks have been completed, and any associated accomplishments, this quarter. Describe any challenges encountered during the completion of these Tasks. Discuss actions taken to resolve them.

1. Resolution actions included the Grantee and the City of San Antonio participating in a mediation process that clarified the City's interpretation of the existing Lease with respect to solar projects on the surface of the Nelson Gardens Landfill. While the City's clarification is less than the Grantee's interpretation of its Lease rights, the City's clarifications exceed the size and scale of the solar project that is the subject of Grant 582-21-23793-NG. The report for Q2 2022 will provide a fuller description of the favorable discussion with the SWMD Director, SWMD senior staff and the City attorneys.

2. Another resolution action involved the Grantee revising its Lease notice previously submitted to the City of San Antonio's SWMD Director. The revised Lease notice matched the grant 582-21-23793-NG size and location as opposed to being part of a much larger solar undertaking on the Nelson Gardens Landfill site that did not include energy storage.

3. SWMD has completed their renovation of the landfill gas collection mains on the Hill C project site. The renovation work consisted of removing sags in the on-surface landfill gas collection mains so that condensate would flow better toward the collections points. Due to the equipment and methods used, completion of this work was a beneficial prerequisite to installing nearby solar facilities.

4. Grantee's insurance program was revised so that obtaining insurance coverage should be less costly.

## Section II. Goals for Upcoming Period

A. Provide a brief description of the Tasks and/or other project goals you hope to realize in the coming period and identify any notable challenges that can be foreseen.

1. Grantee expects to complete site control documents with SWMD which will need San Antonio City Council approval. However, the Council's agenda may be too full to consider and grant the approval in Q2. The City Council should be to receptive to installing Vanadium flow batteries at the Nelson Gardens Landfill. The Council members should be attracted to the opportunity to study the difference between the Vanadium flow batteries that would be installed under this grant and the Lithium-ion batteries installed as part of 582-17-70806-2569 to CPS Energy, which is owned by the City of San Antonio.
2. The modification of the solar array layouts could be hampered to some degree by the supply chain issues that continue to affect the availability and/or time frame for delivery of the more efficient solar panels. If this occurs, the mitigation measure would be to plan on laying out the arrays for the solar panels that can be obtained.
3. Grantee's accomplishments in Q1 2022 have set the ground work for: 1) modifying or amending the Lease or its successor site control documents, 2) revising solar layout to reflect increased capacities of available solar panels, and 3) reducing the scope of and revising the TCEQ Subchapter T Permit 1237 modification application to allow solar facilities to be installed on only Hill C of the Nelson Gardens Landfill.

***Authorized Official/ Project Representative's Printed name***

W. Gary Craig

***Authorized Official Signature/ Project Representative's name***



***Date***

04/10/2022

Note: Please attach any additional information that you feel should be a part of your report.

This form may be submitted via e-mail to your Grant Manager at [terp@tceq.texas.gov](mailto:terp@tceq.texas.gov).