



CERTIFICATION AND FINANCING PROPOSAL

ARROYO ENERGY STORAGE PORTFOLIO IN CAMERON COUNTY, TEXAS

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EXECUTIVE SUMMARY

ARROYO ENERGY STORAGE PORTFOLIO IN CAMERON COUNTY, TEXAS

Project Summary

Project Name:	Arroyo Energy Storage Portfolio.
Project Sector (Type):	Sustainable energy (energy storage).
Project Description:	The project consists of the design and construction of a portfolio of seven 25.7-MW _{AC} standalone battery energy storage systems (BESS), for a total of 180 MW _{AC} , along with a project substation and a 200-foot gen-tie line (the “Project”). The seven BESS and substation will all be built on the same site.
Objective:	The purpose of the Project is to increase the energy storage capacity of the Texas grid, which will allow the system operator to manage the grid more efficiently and reduce the use of ramp-up/ramp-down fossil-fuel power generating plants. The Project will also help integrate electricity generated by intermittent renewable energy sources, such as solar and wind, and will support a more reliable power grid by minimizing power disruptions and reducing energy losses resulting from mismatches in supply and demand.
Expected Outcomes:	<p>The installation of an energy storage facility with a capacity of 180 megawatts of alternating current (MW_{AC}) is expected to produce the following results.</p> <ul style="list-style-type: none"> ▪ Avoid the emission of approximately:¹ <ul style="list-style-type: none"> ○ 28,154 metric tons/year of carbon dioxide (CO₂). ○ 16 metric tons/year of nitrogen oxides (NO_x). ○ 22 metric tons/year of sulfur dioxide (SO₂). ▪ Store and deliver up to 69,367 megawatt-hours (MWh) of energy per year.²
Population to Benefit:	116,142 residents (36,754 households).

¹ CO₂, NO_x and SO₂ calculations are based on the potential emissions avoided as a result of charging and discharging 69,367 MWh/year of electricity from the seven BESS and on the Texas energy matrix. The related emission factors are: 0.405876 metric tons/megawatt-hours (MWh) for CO₂; 0.000227 metric tons/MWh for NO_x and 0.0003178 metric tons/MWh for SO₂ (source: <https://www.eia.gov/electricity/state/texas/>).

² Estimation based on information provided by the Sponsor. The Project is expected to complete 355, one-hour charge/discharge cycles per year.

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CERTIFICATION AND FINANCING PROPOSAL
ARROYO ENERGY STORAGE PORTFOLIO

NADBank Additionality:	NADBank participation in the Project is important given its experience in the sector and its ability to improve the financial structure. Its participation will also help continue laying the foundation for more commercial lenders to finance energy storage projects, as there is currently more demand for debt financing than institutions willing to lend. More information is provided in Section 3.3.1.
Sponsor:	Goshe Energy Storage, LLC.
Borrowers:	Arroyo ProjectCo 1 LLC, Arroyo ProjectCo 2 LLC, Arroyo ProjectCo 3 LLC, Arroyo ProjectCo 4 LLC, Arroyo ProjectCo 5 LLC, Arroyo ProjectCo 6 LLC, and Arroyo ProjectCo 7 LLC (each a "Project Company" and, together, the "Project Companies").
Lender:	North American Development Bank (NADBank).
NADBank Loan Amount:	Up to US\$85.0 million.

CERTIFICATION AND FINANCING PROPOSAL

ARROYO ENERGY STORAGE PORTFOLIO IN CAMERON COUNTY, TEXAS

1. PROJECT OVERVIEW AND EXPECTED OUTCOMES

The proposed project consists of the design and construction of a portfolio of seven 25.7-MW_{AC} standalone one-hour duration battery energy storage systems (BESS), totaling 180-MW_{AC} of BESS capacity, along with a project substation and a 200-foot gen-tie line (the “Project”).³ The seven BESS and substation will all be constructed on the same site in Cameron County, Texas, and will be interconnected to the Gulch Substation located west of the Project site.⁴ The electricity and products generated or enabled by the BESS (ancillary services) will be sold in the wholesale electricity market operated by the Electric Reliability Council of Texas (ERCOT).⁵

The purpose of the Project is to increase the energy storage capacity of the Texas grid, which will allow the system operator to manage the grid more efficiently and reduce the use of ramp-up/ramp-down fossil-fuel power generating plants. The Project will also help integrate electricity generated by intermittent renewable energy sources, such as solar and wind, and will support a more reliable power grid by minimizing power disruptions and reducing energy losses resulting from mismatches in supply and demand. The Project is expected to store up to 69,367 MWh of energy a year. As a result, the Project will displace the emission of an estimated 28,154 metric tons/year of CO₂, 16 metric tons/year of NO_x and 22 metric tons/year of SO₂.⁶

2. ELIGIBILITY

2.1. Project Type

The Project falls within the eligible category of energy storage under the sector for sustainable energy.

³ A gen-tie line is a transmission line built for the purpose of interconnecting a new facility into the power grid.

⁴ The Gulch Substation is being constructed by American Electric Power (AEP) under a separate project.

⁵ Ancillary services are those required to support the reliability of the electricity grid. For ERCOT these services include regulation up, regulation down, responsive reserves and non-spinning reserves.

⁶ CO₂, NO_x and SO₂ calculations are based on the potential emissions avoided as a result of charging and discharging 69,367 MWh/year of electricity from the seven BESS and on the Texas energy matrix. The related emission factors are: 0.405876 metric tons/ MWh for CO₂; 0.000227 metric tons/MWh for NO_x and 0.0003178 metric tons/MWh for SO₂.

2.2. Project Location

The Project will be developed on 16.9 acres of private land in Cameron County, Texas, located approximately 16 miles north of the U.S.-Mexico border and seven miles northeast of the city of Harlingen. The Project will be constructed at the following coordinates: latitude: 26°15'50.2"N and longitude: 97°36'27.9"W. Figure 1 illustrates the geographic location of the Project.

Figure 1
PROJECT LOCATION MAP



2.3. Project Sponsor and Legal Authority

The private-sector project sponsor is Goshe Energy Storage, LLC (the “Sponsor”), which will use seven special-purpose vehicles—Arroyo ProjectCo 1 LLC, Arroyo ProjectCo 2 LLC, Arroyo ProjectCo 3 LLC, Arroyo ProjectCo 4 LLC, Arroyo ProjectCo 5 LLC, Arroyo ProjectCo 6 LLC, and Arroyo ProjectCo 7 LLC (each a “Project Company” and together the “Project Companies”)—to implement the Project. Goshe Energy Storage, LLC, is a Delaware-based, limited-liability company established in October 2022.

3. CERTIFICATION CRITERIA

3.1. Technical Criteria

3.1.1. General Community Profile

According to the U.S. Census Bureau, as of July 2022, Cameron County had an estimated population of 425,208 inhabitants, representing 1.4% of the Texas population. The poverty

rate in Cameron County was 22.6% in 2021, considerably higher than the state average of 14%. Median household income (MHI) for the same year was estimated at US\$47,435, compared to the state average of US\$73,035.⁷

The electricity stored and delivered annually by the BESS will be equivalent to serving up to 116,142 residents (36,754 households). Additionally, the Project is expected to benefit nearby communities through the creation of approximately 150 jobs during construction, as well as three full-time site positions and three to five remote positions during operation.

3.1.2. Energy Storage in the U.S.

The transition to a low-carbon, and eventually zero-carbon grid, provides challenges and opportunities as increasing amounts of renewable energy are incorporated into the electric system. One of the main challenges is the intermittent nature of renewable energy sources, such as wind and solar. Grid operators must have the capability to regulate and maximize the efficient use of electricity in the grid from both baseload and intermittent sources. One of the simplest and most efficient solutions is the implementation of energy storage systems.

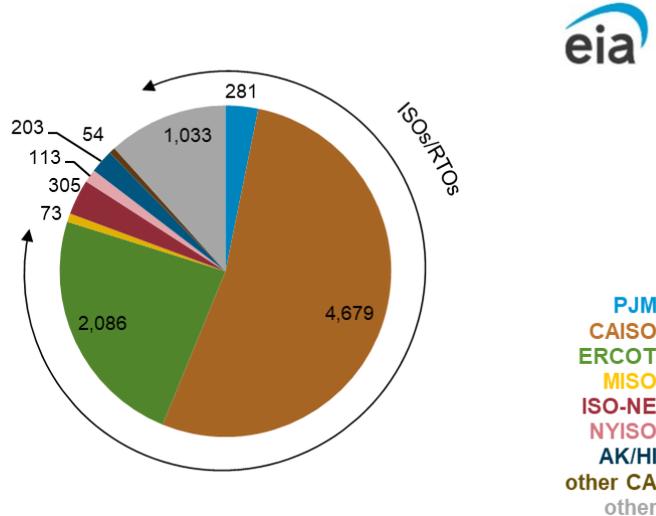
Energy storage is a key tool for providing more flexibility to power grids in the United States. In July 2023, the U.S. Energy Information Administration (EIA) released the latest figures on the capacity of large-scale battery storage systems.⁸ According to the EIA, at the end of 2022, the total installed capacity of large-scale BESS in the U.S. was 8,827 MW, a 79% increase over the amount reported in 2021.⁹ Figure 2 shows the capacity of large-scale BESS in the U.S. in 2022.

⁷ Source: U.S. Census Quick Facts, (<https://www.census.gov/quickfacts/fact/table/TX.hidalgocountytexas/PST045222>)

⁸ Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, July 2023, (<https://www.eia.gov/analysis/studies/electricity/batterystorage/>).

⁹ Large-scale refers to systems that are grid connected and have a nameplate power capacity greater than 1 MW.

Figure 2
U.S. LARGE-SCALE BATTERY STORAGE ENERGY CAPACITY
BY REGION IN 2022 (MW)



Source: EIA, 2022. Form EIA-860 Early Release, Annual Electric Generator Report
 Note: ISO=independent system operator; RTO=regional transmission organization

As shown in Figure 2, about 77% of large-scale battery storage capacity in the U.S. is installed in the regions covered by the California Independent System Operator (CAISO) and ERCOT. The Project will be constructed within the ERCOT service area, adding to the 2,086 MW of existing capacity serving Texas.¹⁰

The market for installing BESS in the U.S. is steadily growing, and its legal framework has evolved. In February 2018, the U.S. Federal Energy Regulatory Commission (FERC) issued FERC Order 841, which requires ISOs and RTOs to remove barriers to the participation of electric storage resources in the capacity, energy and ancillary service markets.¹¹ Each ISO/RTO under FERC jurisdiction was required to revise its tariff to include market rules that recognize the physical and operational characteristics of battery storage resources and to implement the revisions upon approval of tariff compliance by FERC.¹²

Project developers have reported to EIA their plans to install large-scale BESS in the United States, with approximately 9.3 GW expected to be in operation by 2024.¹³ Figure 3 shows the trend as reported in June 2023.

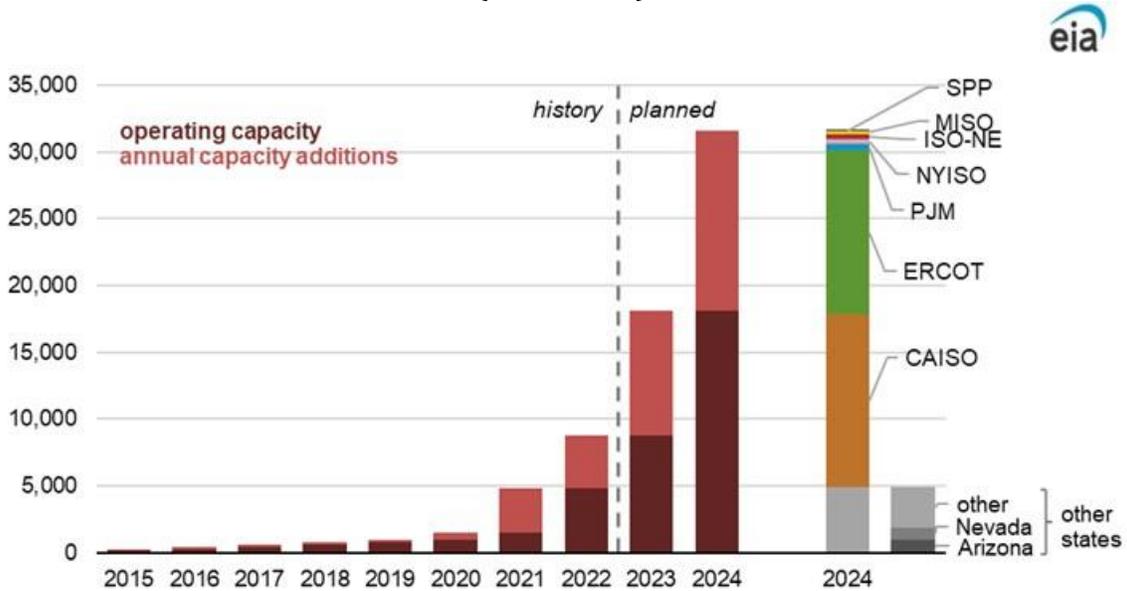
¹⁰ Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, July 2023, (<https://www.eia.gov/analysis/studies/electricity/batterystorage/>).

¹¹ Independent system operators (ISOs) and regional transmission organizations (RTOs) are independent, federally regulated non-profit organizations that ensure reliability and optimize supply and demand bids for wholesale electric power.

¹² Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, August 2021, (https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage_2021.pdf).

¹³ Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, July 2023, (<https://www.eia.gov/analysis/studies/electricity/batterystorage/>).

Figure 3
LARGE-SCALE BATTERY STORAGE CUMULATIVE POWER CAPACITY (GW)
(2015-2024)



Source: EIA 2022 Form EIA-860 Early Release, Annual Electric Generator Report.

The strongest growth in large-scale battery storage over the past few years has been in Texas, Arizona, Nevada, New Mexico, Florida, Hawaii, Colorado and Montana.¹⁴ Even though several states do not have policy requirements related to storage, many states, including all four border states, are expected to continue showing strong growth in large-scale battery storage in the coming years.¹⁵

Texas Energy Profile

As reported by EIA in November 2023, power generation in Texas relied on the mix of energy technologies shown in Table 1.

¹⁴ Source: EIA, *Battery Storage in the United States: An Update on Market Trends*, August 2021, (https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage_2021.pdf).

¹⁵ Ibid.

Table 1
TEXAS POWER INDUSTRY CAPACITY BY SOURCE IN 2021 AND 2022

Source	Capacity (MW) 2021	Capacity (MW) 2022
Natural gas	70,901.6	71,025.8
Wind	34,370.3	39,265.7
Coal	18,141.6	18,141.6
Solar	8,838.0	11,356.5
Nuclear	4,980.0	4,980.0
Battery storage	791.9	2,077.3
Hydroelectric	706.1	715.2
Wood	162.7	162.7
Petroleum	243.1	640.1
Other	224.0	224.0
Other gas	179.8	23.8
Other biomass	65.7	53.5

Table developed by NADBank based on data from the EIA, Texas Electricity Profile 2022 (Full data tables 1–17)
<https://www.eia.gov/electricity/state/texas/index.php>.

As indicated in Table 1, over the past two years renewable generation capacity has been on the rise in Texas, with the most significant growth in BESS capacity, which increased nearly 162% from 792 MW in 2021 to 2,077 MW in 2022.

The proposed Project will contribute to the growth of energy storage capacity in the Texas grid, which will allow the system operator to manage the grid more efficiently by reducing the use of ramp-up/ramp-down fossil-fuel power generating plants, as well as energy losses resulting from mismatches in supply and demand. Likewise, it will support the transition to a greener, more sustainable grid by helping integrate electricity generated by intermittent renewable energy sources, such as solar and wind.

3.1.3. Project Scope

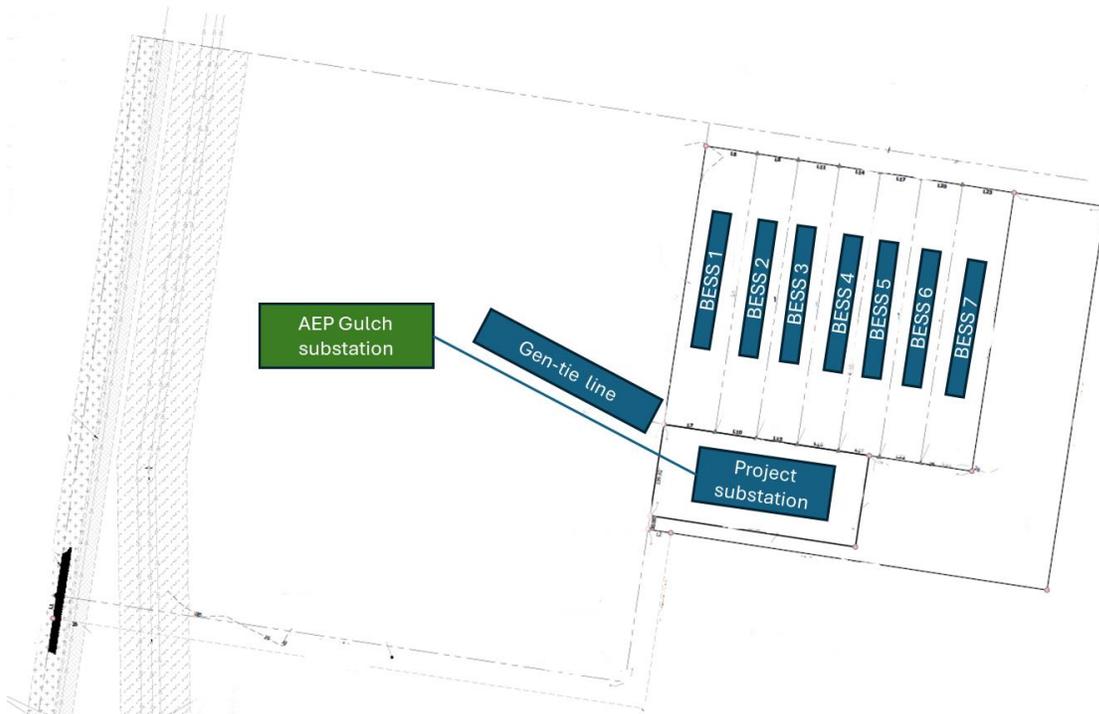
The Project consists of the design and construction of a portfolio of seven 25.7-MW_{AC} standalone BESS, for a total capacity of 180 MW_{AC}. The preliminary configuration of the Project includes the following components:

- ***BESS***: The Project will use a total of 616 racks of a manufacturer-integrated liquid cooling energy storage system. Liquid cooling ensures higher efficiency and a longer battery cycle. The system includes battery cells with a capacity of 285 ampere-hours.
- ***Power conversion system (PCS)***. This system is responsible for converting and conditioning power to and from the battery system. The Project will have 1,232 inverters or PCS with integrated transformers for battery charge/discharge management.
- ***Energy Management System***: This system will monitor, operate and track the BESS remotely, as well as document the performance of the system.

- Project substation. The electrical substation will receive and store power delivered from the grid. When needed, the substation will send the electricity from the BESS to the interconnection point at the Gulch substation with a capacity of 345 kilovolts of alternating current (kV_{AC}) to be built by AEP.
- Gen-tie line. The Project substation will be connected through a 200-foot, 345- kV_{AC} interconnection line to the Gulch Substation.

Figure 4 shows the general layout of the project components.

Figure 4
PROJECT LAYOUT



3.1.4. Technical Feasibility

The Sponsor originally planned to build a solar energy generation facility. During the technical feasibility phase, the Project scope was modified to include both solar and battery facilities and later became exclusively energy storage. The final design considers the construction of a portfolio of BESS facilities totaling 180- MW_{AC} of storage capacity.

The Sponsor evaluated options for the purchase of the BESS components from various top-tier suppliers in order to select the equipment best suited to the characteristics of the Project site. The evaluation included an analysis of the characteristics, reliability and performance of the main system components, as well as a power conversion analysis and a review of product certifications, supplier warranties, etc.

The batteries selected are based on lithium-iron phosphate (LiFePO₄) technology, which is considered one of the safest, most easily understood and most efficient methods of energy storage on the market. The technology is commonly used for this application given its high-cycle efficiency and fast-response time. It is also less expensive and has a longer duration compared to equivalent systems. The performance of the battery represents a favorable balance between cost, energy density, degradation and cycle life, making it an optimal choice for stationary grid-tied energy storage solutions. Even more importantly, LiFePO₄ is safer than other commonly used lithium-ion alternatives (i.e., cobalt-based alternatives), ensuring safe and worry-free operations. At the end of 2019, over 90% of energy storage capacity was provided by lithium-ion-based batteries.

The BESS units and the inverters will be provided by Contemporary Amperex Technology Co., Limited (CATL), and Sineng Electric Co., Ltd. (Sineng), respectively. All other major equipment components will be procured by the engineering, procurement & construction (EPC) Subcontractor under the EPC Subcontract, which includes standard requirements for mechanical, substantial and final completion.

Once the batteries reach the end of their useful life, the Sponsor will utilize programs available to recycle the battery materials in accordance with applicable regulations.

AEP carried out the required interconnection studies to determine the potential impacts of the transmission system and any transmission system improvements that might be necessary to interconnect the Project to the AEP Gulch Substation. The study concluded that a wholesale storage load (WSL) metering system will need to be installed for the interconnection to the Gulch Substation, which is already contemplated in the design. The substation is under construction and scheduled to be in-service in November 2024.

As part of the necessary interconnection activities, a standard generation interconnection agreement (SGIA) between the Sponsor and AEP was signed in September 2021 for the solar generation project and first amended in March 2022 to clarify details within the agreement. A second amendment was executed in August 2022, which modified the scope to include both solar and battery storage. A third amendment to the SGIA, which includes BESS facilities only, is expected to be signed on the loan closing date.

Since the Sponsor will request financial support from the U.S. Department of Agriculture – Rural Development (USDA-RD) for long-term financing of the Project, a series of technical and environmental studies were conducted. To support the technical evaluation process, the Sponsor retained the services of a consultant to carry out technical feasibility studies for each BESS in the portfolio. The results indicate that all seven systems are technically and financially feasible, and the Sponsor meets the criteria covered under USDA regulations. The results of the environmental studies submitted to USDA-RD are described in section 3.2.2.

3.1.5. Land Acquisition and Right-of-Way Requirements

According to the Cameron County Appraisal District, the 16.9 acres Project site is zoned as “A-R: Agricultural, Residential,” which will not require a modification for Project implementation. The Sponsor secured the land through a leasing agreement in April 2018, with the latest amendments signed in November 2023.

An adjacent property, west of the Project site, was acquired by AEP for the construction of the Gulch Substation.

3.1.6. Project Milestones

The NADBank loan will be used only for the construction of the Project, which is expected to start during the first quarter of 2024, with commercial operations beginning no later than the first quarter of 2025. Table 2 presents the status of key milestones for Project implementation.

Table 2
SUMMARY OF PROJECT MILESTONES

Key Milestones	Status
Engineering, procurement & construction (EPC) contract	Expected during 1 st quarter of 2024
Generation/interconnection agreement (second amendment)	Executed (August 2022)
Generation/interconnection agreement (third amendment)	Expected by 1 st quarter of 2024, at loan closing
Project site lease agreement (latest amendment)	Executed (November 2023)
Phase I Environmental site assessment	Completed (November 2023)
USDA Environmental Clearance Requirements	
Environmental Assessment – USDA-RD	Completed (November 2023)
USDA-RD Notice of Availability (NOA)	Expected 1 st quarter of 2024
Finding of No Significant Impact (FONSI)	Expected 1 st quarter of 2024
Commercial operation date (COD)	Expected 1 st quarter of 2025

3.1.7. Management and Operation

The Sponsor is a developer of BESS projects and recently secured construction financing on its first 100-MW BESS portfolio located in Bexar County, Texas. The Sponsor’s development pipeline for storage projects within the ERCOT market currently exceeds 2 GW.

The BESS units and inverters will be provided by CATL and Sineng, respectively. CATL is a global leader in the manufacture of BESS components. Incorporated in 2011, CATL provides innovative technology and advanced solutions and services for energy storage systems worldwide. CATL has five research & development centers, as well as 13 production plants.¹⁶ It has participated in projects in the U.S., including a 220-MWh liquid-cooling energy storage project in Texas and a 70-MWh project in California.

Incorporated in 2012, Sineng Electric Co., Ltd., is a global supplier of photovoltaic inverters, PCS inverters and power quality control systems for utility-scale, commercial, industrial, and residential purposes. In 2021, Sineng was among the top 10 storage inverter suppliers

¹⁶ Source: CATL, https://www.catl.com/en/uploads/1/file/public/202303/20230315092000_ahw9vpn63j.pdf

worldwide. Sineng has four research and development centers, as well as three production plants for its inverters. Although Sineng does not yet have project experience in the U.S., it will provide a 24/7 service hotline and a 48-hour onsite service response for issues affecting energy loss (60-hour response time for non-critical issues) for projects in the United States. Sineng is also planning to set up two warehouses and a repair workshop for string inverters in the U.S. in order to provide a rapid response to after-sale demand.

The Sponsor will secure maintenance services from a technical services provider through a contract to be signed with the Sponsor on the loan closing date. The maintenance activities to be performed include:

- Check if the device enclosure or any internal component is over-heating;
- Using an IR scanner, take images of the system to check for any hot spots;
- Clean or replace filters;
- Check the running status of the fans;
- Check whether there is any damage or deformation of the battery cluster and internal devices;
- Check all the breakers are in good condition and are able to open and close normally;
- Check the cable connections and switches;
- Regularly check whether the metal components are corroded;
- Check that the power cable connections are secure;
- Check the humidity and for dust inside the Turnkey station; and
- Check the fan blades for broken.

Since the loan is for construction purposes only, the requirement for operational reporting will be limited to the first year of operation for purposes of verifying the anticipated environmental outcomes of the Project.

3.2. Environmental Criteria

3.2.1. Environmental and Health Effects/Impacts

A. Existing Conditions

Historically, the United States has relied to a great extent on fossil fuels for the generation of electricity. These conventional sources of energy adversely affect the environment due to the harmful emissions produced by their processes, including greenhouse gases (GHG) and other pollutants, such as SO₂ and NO_x. Consequently, there is a need for affordable and environmentally friendly alternatives to conventional fossil-fuel-based power generation.

On February 19, 2021, the U.S. officially reentered the Paris Agreement, a legally binding international treaty on climate change that entered into force on November 4, 2016. Its goal is to limit global warming to well below 2 degrees Celsius and preferably to 1.5 degrees Celsius, compared to preindustrial levels. To achieve this long-term temperature goal,

countries aim to reach a global peak of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.

According to the EIA, in 2022, the main sources of power generation in Texas was natural gas (48.7%), followed by wind (21.8%) and coal (16.2%).¹⁷ That same year, Texas generated nearly 525,563 GWh of electricity, resulting in the emission of approximately 213 million metric tons of CO₂, 157,025 metric tons of NO_x and 126,396 metric tons of SO₂.¹⁸

B. Project Impacts

Battery storage systems help smooth out the delivery of intermittent resources, such as wind and solar, by storing energy and delivering it when demand increases. They also help prevent emissions by reducing the need for fossil-fuel power plants to regulate constant changes in energy supply and demand. As the energy supply mix becomes cleaner with low- and no-carbon resources, energy storage will help integrate that supply mix into the grid more easily and reliably.

The Project will reduce the demand for electricity generated by fossil fuel-based power plants, thus reducing emissions. The anticipated environmental outcomes from the installation of a 180-MW_{AC} battery storage system (or approximately 69,367 MWh per year) include the displacement of an estimated 28,154 metric tons/year of CO₂, 16 metric tons/year of NO_x and 22 metric tons/year of SO₂.

C. Transboundary Impacts

No negative transboundary impacts are anticipated as a result of the development of the Project; on the contrary, a beneficial effect is anticipated on regional air quality due to the decreased demand on fossil-fuel-fired electrical plants in the region.

3.2.2. Compliance with Applicable Environmental Laws and Regulations

A. Environmental Clearance

USDA-RD is a U.S. federal agency that manages more than 50 programs that provide financial, technical and educational assistance to eligible communities, individuals, cooperatives and other entities with a goal of improving the quality of life, sustainability, infrastructure, economic opportunity, development and security in the rural United States. Financial assistance can include direct loans, loan guarantees and grants in order to achieve program objectives. To access funding from USDA-RD, an environmental impact determination under the National Environmental Policy Act (NEPA) is required.

Since the Sponsor plans to request financial assistance from USDA-RD under its Business and Industry Loan Guarantee Program, pursuant to NEPA, the National Historic Preservation Act of 1966 as amended, and 7 CFR 1970 Rural Development Policy and Procedures, an Environmental Assessment (EA) was submitted to USDA-RD for the review of potential

¹⁷ Source: EIA, Texas Electricity Profiles, (<https://www.eia.gov/electricity/state/texas/index.php>).

¹⁸ Source: Ibid.

environmental impacts related to the construction and operation of the Project. The results of the analyses and studies performed by the Sponsor’s consultants and documented in the EA are summarized below.

Table 3
SUMMARY OF FINDINGS OF ANALYSIS AND STUDIES

Resource	Finding
General land use	The development of the Project will not conflict with any applicable land use plan, policy or regulation.
Farmland conversion	The Project site is identified as prime farmland for Cameron County. The Project will convert approximately 16.9 acres of farmland to an energy storage facility. However, the Project is not expected to significantly impact agricultural loss given its small footprint and because the land is currently vacant and uncultivated. Mitigation measures will be included in the Stormwater Pollution Prevention Plan (SWPPP) and best management practices will be implemented to reduce erosion and loss of topsoil during construction. Additionally, once the Project has reached its operational end, the site will be returned to its pre-construction state following the guidelines of a SWPPP. A public notice of the proposed farmland conversion will be included in the Notice of Availability (NOA) pertaining to the EA.
Formally classified lands	No formally classified lands were identified within or near the Project site. ¹⁹
Floodplains	The Project would not result in any increase to the 100-year or 500-year flood elevation.
Wetlands	No wetlands are located within the Project site.
Water resources	No waterbodies were identified within 1,000 feet of the Project site.
Biological resources	The Sponsor's consultant conducted an in-depth analysis to identify sensitive fish, wildlife and vegetation; threatened and endangered species; migratory birds; Bald and Golden eagles; and invasive species. While no critical habitat was found within the Project area, several avian species were observed during the survey and could potentially nest within the site. Additionally, state-listed threatened species occurring within the Project site include Texas horned lizard, white-lipped frog, black-striped snake, speckled racer, northern cat-eyed snake and nesting migratory birds. Mitigation measures and recommended best management practices were provided to the Sponsor and are included, below, in section <i>B. Required Mitigation Measures</i> .
Cultural resources	No cultural materials or features were identified within the Project area.
Air quality	The Project will not generate air emissions from a stationary source.

¹⁹ Formally classified lands refer to properties administered by federal, state or local agencies or have been given special protection through formal legislative designation, such as national parks, forests, grasslands, monuments, historic landmarks, lakeshores, etc.

Resource	Finding
Socioeconomics and environmental justice	The Project will not adversely affect low-income or minority populations. The Project will not influence environmental justice factors in the surrounding area.
Coastal zones and barriers	The Project site is not located within or directly adjacent to protected coastal areas.
Noise	The site is located in an agricultural area, and no noise-sensitive receptors are located within 500 feet of it. Temporary noise related to construction activities will be managed with mitigation measures, as noted below.
Traffic and transportation	Current roads are not expected to be significantly impacted.
Visual resources	The Project site will not change the overall aesthetic of the area.
Phase I Environmental Site Assessment (ESA)	This environmental review is conducted to identify any recognized environmental conditions on the Project site. While the analysis found evidence of the historic placement of dredge material in an area adjacent to the 700-acre property studied, based on its topographic position, most of the dredge material runoff is expected to discharge to the east, and away from the Project site. The assessment did not reveal any controlled recognized environmental conditions in connection with the Project site.

Mitigation measures to be implemented, as necessary, are described below, in section *B. Required Mitigation Measures*.

As part of the USDA-RD review, a NOA will be issued and published in the local newspaper with a 14-day public comment period. The FONSI should be issued at the end of that period, which is expected for the first quarter of 2024.

Permitting

The Project will be covered under the National Pollutant Discharge Elimination System (NPDES), as implemented by the Texas Commission on Environmental Quality (TCEQ). A Texas Pollutant Discharge Elimination System (TPDES) Stormwater Construction General Permit (CGP) TXR150000 will be obtained, which includes the preparation of a SWPPP and best management practices to minimize potential impacts during construction. The SWPPP will be completed by April 2024.

Additionally, Cameron County officials have advised the Sponsor that it will be necessary to obtain a flood plain permit, site development permit and a building permit for the Project. These permits will be obtained prior to construction.

B. Required Mitigation Measures

As part of the EA, the Project Sponsor has committed to implementing the following mitigation measures:

- Soil:
 - With the implementation of the SWPPP and the best management practices, erosion, siltation and loss of topsoil during construction will be reduced.
 - If disposing of soil or other construction materials in public or private property, the contractor shall not fill in or otherwise convert any special flood hazard area (SFHA) delineated on FEMA maps.

- Flora:
 - In compliance with Executive Order 13112 on Invasive Species, disturbed areas will be seeded with a mixture of native herbaceous vegetation after construction which will discourage the establishment of nonnative species and promote the restoration of native species.
 - Vegetation will be maintained wherever possible throughout the operational life of the Project.

- Fauna:
 - Any evidence of the presence of endangered and/or threatened species or their critical habitat be immediately reported to the Sponsor and a U.S. Fish and Wildlife Service (USFWS) representative. Construction shall be temporarily halted pending the notification process and further directions issued by the USFWS.
 - Silt fencing will be implemented to ensure no indirect impacts to any species that may visit areas adjacent to the Project site.
 - The Sponsor will implement the Texas Parks & Wildlife Department Best Management Practices (TPWD) for Texas Tortoise, which are applicable for other species with potential to occur in the site.
 - If a limited notice to proceed to clear vegetation is not possible, the Project will prioritize vegetation clearing as soon as possible after notice to proceed to mitigate the number of species potentially present at the Project site. The nesting occurrence is low until May and June. A qualified biologist will be accessible to the Project to address any requirement.
 - All posted speed limits should be strictly followed to avoid vehicle collisions with state-listed species and migratory birds.

- Cultural resources:
 - If historic properties are discovered or unanticipated effects on historic properties are found, work should cease immediately. Work can continue where no historic properties are found. The Texas Historical Commission

(THC) should be consulted regarding further actions to protect historic properties.

- Tribes previously informed about the Project must be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of the Project.
- Noise:
 - Construction activities will be conducted during business hours.
 - Best management practices will be implemented to comply with the Harlingen Noise Ordinance.
- Solid waste: Solid waste will be managed in accordance with applicable regulations. Procedures included in an Emergency Response Plan will include management efforts, a Hazardous Operations Manual, and Spill Control and Countermeasures. This plan is expected to be completed prior to COD.

C. Pending Environmental Tasks and Authorizations

While the NEPA process is not typically required for this type of project, it applies in this case because the overall financial structure for the Project includes a USDA Business and Industry Loan Guarantee; therefore, the USDA environmental clearance ruling is necessary before the Project initiates construction. Publication of the NOA will be required prior to financial closing of the NADBank loan, and the FONSI will be required prior to disbursing funds for any site work or construction activities. The USDA FONSI is expected to be issued during the first quarter of 2024.

3.3. Financial Criteria

Project construction will be financed with equity from the Sponsor and a minority investor, along with a loan from NADBank and another lender (the “Construction Loan”). The Construction Loan will be repaid with funds from a long-term loan extended by one or more lenders and funds generated through the sale of the investment tax credits (ITCs). The proposed payment mechanism for the Construction Loan aligns with standard practices for similar transactions in the United States. Both the long-term loan and the proceeds from the sale of the ITCs are anticipated to be secured before maturity of the Construction Loan, and it is expected that these funds will be more than sufficient to fully cover the repayment obligations associated with the Construction Loan.

Considering the Project’s characteristics and based on the financial and risk analyses performed, the proposed Project is considered to be financially feasible and presents an acceptable level of risk. Therefore, NADBank proposes to provide a market-rate loan for up to US\$85.0 million to the Project Companies for construction of the Project.

4. PUBLIC ACCESS TO INFORMATION

4.1. Public Consultation

On February 28, 2024, NADBank published the draft certification and financing proposal for a 30-day public comment period. The following Project documentation is available upon request:

- USDA-Rural Development Environmental Assessment., dated November 2023

4.2. Outreach Activities

As part of the environmental clearance process for USDA-RD funding, a NOA will be published for a 14-day public comment period in the first quarter of 2024.

NADBank also conducted a media search to identify potential public opinion about the Project. No specific articles or references to the Project were found. No public opposition to the Project has been detected.

The Sponsor has followed all public consultation requirements in order to comply with applicable environmental clearance and permitting processes.