Environmental Assessment

Determinations and Compliance Findings for HUD-assisted Projects

24 CFR Part 58

Part A. General Project Information

1. **Project Name:** Hatillo Solar Farm (ER2-00034)

2. **Responsible Entity:** Puerto Rico Department of Housing (PRDOH)

3. **Grant Recipient Name:** (if different than Responsible Entity): Xzerta Tec Solar I, LLC

4. **State/Local Identifier:** Puerto Rico

5. **Preparer:** Annette M. Fernandez Rosario, PE, PA, IPV, LEED AP, NGBS Green Verifier
   Environmental Consultant

6. **Certifying Officer Name and Title:**
   Aldo A. Rivera Vazquez, PE - Director, Permits and Environmental Compliance Division
   Sally Z. Acevedo-Cosme - Permits and Environmental Compliance Specialist
   Pedro de León Rodriguez - Permits and Environmental Compliance Specialist
   Maria T. Torres-Bregón - Permits and Environmental Compliance Manager
   Angel G. López Guzmán - Deputy Director, Permits and Environmental Compliance Division
   Ivelisse Lorenzo Torres - Permits and Environmental Compliance Specialist
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   Janette I. Cambrelen - Permits and Environmental Compliance Specialist
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   Abdul Feliciano-Plaza - Permits and Environmental Compliance Specialist
   Javier Mercado-Barrera - Permits and Environmental Compliance Specialist
   Priscilla Toro-Rivera - Permits and Environmental Compliance Specialist

7. **Consultant** (if applicable): AVA Environmental Consultants, Inc.

8. Direct Comments to: PRDOH at comentariosambiental@vivienda.pr.gov.

9. Project Location:

18.435182, -66.801484. Table 1 details the cadaster numbers and locations of the parcels that comprise the project. The area where the activities will be taking place includes existing farms and their auxiliary facilities. The staging area will be inside the project area (not located on or near a karst feature or the wetland).

Table 1: Cadaster Numbers and Locations of Project Parcels

Location	Cadaster Number	Parcel Identification[1]	Control/Ownership Status[2]
PR-491, Km 1, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-006-29 and 029-000-006-38	Western Parcels	Gustavo Toledo Elia Torres de Jesús
PR-130 Km 4, Naranjito Ward, Hatillo Puerto Rico 00659	051-000-002-52, 051-000-002-51, and 029-093-328-10	Western Parcels	Efraín García García
PR-130, Km 5, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-007-12	Eastern Parcels	Milk Money, Inc., represented by Luis S. Martínez Rodríguez
PR-130, Km. 6 Interior, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-007-10, 029-084-335-15, 029-000-007-82, and 029-000-007-81	Northeastern parcels	Lucas González; Edgardo González; Milagros de los Ángeles González; Milagros del Carmen González; Emma Rosa; and Ricardo González
PREPA Right of Way (ROW)	029-000-007-17 029-000-007-83 PR-130 (interior) 051-005-110-51 051-005-110-52	Off Site LUMA(PREPA) Substation Connection	Ismael Pérez Soto Nelly E. González PREPA PREPA

[1] For identification purposes, the parcels are grouped and identified as western, eastern, and northeastern, and Off Site LUMA(PREPA) Substation Connection

[2] Parcels will be leased

10. Description of the Proposed Project [24 CFR 50.12 & 58.32]:

The area where the activities will be taking place include existing farms identified in the previous table located in the Naranjito Ward, Hatillo, Puerto Rico 00659 (Figure 1: Location Map and Figure 2: Site Photos). The project will affect a total of approximately 250.88 acres. This area has been divided into two components: (1) the Project Site, which covers 238.3003 acres and includes the parcels designated for the solar farm; and (2) the Off-Site Area, which comprises approximately 6.14 acres and includes the route of the aerial transmission line connecting the Project Site to the LUMA substation. Together, these two components account for the total impacted area of 250.88 acres.

The Project site area will occupy approximately 238.3003 acres or 10,380,361.068 square feet in the ten (10) parcels indicated in the table below.

Location	Cadaster Number	Parcel Identification*	Control/Ownership Status**
PR-491, Km 1, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-006-29 and 029-000-006-38	Western Parcels	Gustavo Toledo Elia Torres de Jesús
PR-130 Km 4, Naranjito Ward, Hatillo Puerto Rico 00659	051-000-002-52, 051-000-002-51 and 029-093-328-10	Western Parcels	Efraín García García
PR-130, Km 5, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-007-12	Eastern Parcels	Milk Money, Inc., represented by Luis S. Martínez Rodríguez
PR-130, Km. 6 Interior, Naranjito Ward, Hatillo Puerto Rico 00659	029-000-007-10, 029-084-335-15, 029-000-007-82 and 029-000-007-81	Northeastern parcels	Lucas González; Edgardo González; Milagros de los Ángeles González; Milagros del Carmen González; Emma Rosa; and Ricardo González

PREPA Right of Way (ROW)	029-000-007-17 029-000-007-83 PR-130 (interior) 051-005-110-51 051-005-110-52	Off Site LUMA(PREPA) Substation Connection	Ismael Pérez Soto Nelly E. González PREPA PREPA

* For identification purposes, the parcels are grouped and identified as western, eastern, and northeastern, and Off Site LUMA(PREPA) Substation Connection

**Parcels will be leased

The project scope includes the construction of a 60 MW AC Renewable Photovoltaic Power Plant (Figure 3: Proposed Project Drawings). The staging area will be located at the project site. Three staging areas are proposed for the project. The first is located on the western property, covering an area of approximately 4,314 m²; the second is on the eastern property with an approximate area of 1,481 m²; and the third is on the northeastern property, with an approximate area of 1,465 m². All three staging areas will be located on existing concrete slabs. The staging area for the eastern parcel, where the non-jurisdictional herbaceous wetland is located, will be established approximately 100 meters away from the wetland. The project will be built at approximate Latitude and Longitude: 18.435182, -66.801484.

The proposed project will consist of the installation of 26 inverters with their respective transformers systems of 3,400 kVA each. Each of these systems will be composed of 4,536 photovoltaic modules of polycrystalline silicon cells, Trina brand or similar, with a unit power of 655 Wp. The modules will be electrically connected in series of 28 units, with a total of 162 "strings" that will then be connected in parallel to the inverter. The peak power of each of the 26 inverters systems, including losses, will be 3,000,000 Wdc. Thus, the total installed peak power will be 78,000,000 Wdc. The ratio between the installed power and the nominal power of the installation is 1.2, representing an optimal sizing factor for the site's latitude.

The 26 inverters systems with their respective transformers systems and PVs will be installed on the ten (10) plots. These 26 inverters will be connected using DC wiring with the photovoltaic strings. The proposed inverter is the Ingeteam brand, Dual SUN 1665TL U B640

model or similar, with a nominal power of 3,244 kVA, designed especially for use in grid-connected photovoltaic installations.

Table 2: Solar PV System Components and Specifications

Description	Qty	Comments
PV Inverters Dual / Single	26 / 52	
BESS Inverters Dual / Single	13 /26	
Distribution Xformer 640V/34.5 kV	26	Step up
Distribution Xformer 578 V/34.5 kV	13	Step up
Main Transformer 34.5 / 115 kV	1	Step up
Main Switchgear	1	
Number of Modules	117936	Each Module
Number of Strings	4536	Strings of 28
Module Area	365736.047	m2
Tilt Degree	15 to 10	degrees
Monopoles for 115 KV TL	8	Unit

To meet the Minimum Technical Requirements (MTR) established by LUMA, the installation will include an energy storage system consisting of thirteen (13) 40-foot battery containers with a unit power of 2 MW, for a total storage power of 27 MWH. Narvada brand batteries or similar will be used. They will be located in a concrete slab of approximately 18,352 square meters near the switchgear facilities on the property with cadaster number 029-000-007-12.

The transformation of the produced electricity from low voltage to medium voltage will be carried out in two steps. First, one (1) transformer of 3 MVA will be installed for every two inverters, with a voltage ratio of 0.6 /34.5 kV. The power generated and transformed will be collected and linked at the medium voltage switchgear. Subsequently, a single transformer with a power of 95 MVA will be installed for the transformation to 115 kV, which is the assigned voltage at the interconnection point, at the substation to be built that will serve as the energy distribution center from where the interconnection line will start to the point

designated by LUMA.

The project will be developed inside the parcel's existing footprint. Connection to LUMA will involve ground disturbance within PREPA's Right of Way, located east of the Xzerta's eastern parcel—an area identified for descriptive purposes as the project's Off-Site area. The interconnection will be an aerial transmission line coming out from Xzerta's yard in parallel with the current 240 KV aerial transmission lines at a separation of 100 ft running until the nearest PREPA substation at Hatillo for a total of 0.6 miles total. The aerial 115 KV transmission line will consist of eight (8) monopoles, five (5) of which will be installed outside Xzerta's existing footprint. Additional rearrangements will be necessary within the Hatillo substation to allow the addition of the new line. The connection route from the project to the LUMA/PREPA Substation will cross over four parcels and a road over an existing LUMA/PREPA easement (identified as Off-Site area in the enclosed exhibits). This Off-Site will be also evaluated during the Environmental Review Process.

The solar park includes accessory facilities required for energy generation such as transmission lines, control and maintenance building, parking area, and a substation, The project will occupy approximately 85% of the five (5) properties (according to the CRIM, the parcels are ten (10)). The remaining 15% of the lots will be maintained in its current use as part of the existing dairy farms. The areas where the PV Pannels will be located will not be impermeabilized. Walkways, corridors or small roads that will be created to access them will be paved with ballast or stones.

An existing maintenance and office building located on the western property of approximately 555 square feet in size, will be renovated to be used as a small storage area (approximate Latitude and Longitude: 18.436644, -66.801889). Two new concrete buildings of approximately 150 square feet each will be constructed to house the SCADA (Supervisory Control and Data Acquisition) systems. One of the SCADA buildings will be located on the western property (approximate Latitude and Longitude: 18.434433º, -66.797841), and the second on the eastern property (approximate Latitude and Longitude: 18.4362250, -66.7931528)

A graveled area for parking and storage measuring approximately 20 feet by 30 feet will be provided in the Eastern Parcel (approximate Latitude and Longitude:

18.436428, -66.793669). In addition, an existing 600 square-foot single-story concrete building, located at the Western Parcel (029-000-006-29; approximate Latitude and Longitude: 18.436642, -66.801883), will be used as an administrative office and storage room. The building is already connected to PRASA for potable water service. Portable toilets will be provided for use during both construction and operational phases, and their contents will be emptied and disposed of by an approved contractor at a PRASA wastewater treatment facility.

The support structure or racks intended to house the photovoltaic modules will be a galvanized steel hippo-steel structure. Helical Driven Piles will be used as an anchoring method, whenever the terrain characteristics allow it. The photovoltaic modules will be fixed to aluminum or hot-dip galvanized steel profiles that will be placed on the previously described steel structure. This type of structure will allow great freedom in positioning the modules, allowing up to five modules horizontally or two vertically. This structure will give the capturing surface an inclination of 15° from the horizontal, which guarantees an increase in energy capture of approximately 14% for the site's latitude, and a module height of between 3 and 9 feet. With regard to construction of seismic and hurricane resistant structures, the design will follow the ASCE (American Society of Civil Engineers) and any other applicable standard.

The project does not include the installation of energy generators, thus there will be no fuel tanks installed or needed for the project. The inverters, Battery Energy Storage System (BESS) and transformers will generate heat, which will be dissipated by air cooling using fans. The heat generated by inverters, BESS and transformers will not be reused. It will produce 100% renewable energy.

In addition, a future expansion, that will not be part of the CDBG-ER2 sponsored project, for a Battery Energy Storage System (BESS) -zinc-based batteries (EOS non-flammable BESS system)- using the same switchgear, aerial interconnection line, and using the same interconnection point (Hatillo substation) to the grid system is proposed in an area of approximately 5 acres on the eastern property (approximate latitude and longitude: 18.436950, -66.793886). This expansion is planned to begin construction in the second half of 2026. This future expansion is not part of this proposal for the CDBG-ER2 grant. Notwithstanding the above, the future BESS facility will be constructed in an area of

approximately ten (10) acres (40,469 square meters) within the eastern parcel with cadaster number 029-000-007-12, and it is planned to be covered with a concrete slab or asphalt. For this future expansion a BESS Standard Offer Agreement will be signed between LUMA and Xzerta Tec Solar I, LLC. The project will consist of seventy-three (73) 40-foot battery containers with a unit power of 3.6 MW, for a total storage power of 240 MWH to allow a running time of 4 hours at 60MW. Each BESS will require their respective inverters. A total of 23 BESS units can be daisy chain into one feeder of 1,200 A at the switchgear for a total of 4 dedicated feeders. It is recommended to make improvements to the Renewable Photovoltaic Power Plant switchgear to handle the BESS and it needs to be completely synchronized with the main switchgear. The BESS will generate heat, which will be dissipated by air cooling using fans. The heat generated by inverters and the BESS will not be reused. Similar to the Renewable Photovoltaic Power Plant proposed here, this BESS project will produce 100% renewable energy.

As part of the project, two milking parlors (in the northeastern parcel with cadaster number 029-000-007-10 and in the western parcel with cadaster number 029-000-006-29) will be demolished. In addition, an abandoned building in property 051-005-110-51 (off-site) will also be demolished. Asbestos and Lead studies performed indicate the structures are free of these compounds.

During demolition and construction, erosion and sedimentation control measures will be implemented to prevent sediment discharge into the storm sewer system. These measures will include installing hay bales or silt socks on drainage structures, placing silt fences around the project perimeter, and establishing a stabilized entrance with a truck washout station to prevent sediment tracking onto streets. Staging and storage areas for construction materials will be protected as needed. The staging area will be located inside the parcel.

If required, a Maintenance of Traffic Plan (MOT) and temporary control devices will be implemented to control the vehicular traffic and provide a safe route to pedestrians during the construction works. The MOT will be prepared in compliance with the PRHTA and FHWA standards and regulations.

11. Statement of Purpose and Need for the Proposal:

The goal of the Electrical Power Reliability and Resilience Program (ER2) is to enhance electric system reliability, affordability, and resiliency through the development and interconnection of projects that qualify as electric system enhancements or improvements. Efforts are focused on creating decentralized sources of power generation, distribution, and storage to minimize blackouts, furthering the goals defined by the Puerto Rico Energy Public Act, No. 17-2019, which sets the Island on a path to forty percent (40%) and one hundred percent (100%) renewable energy by 2025 and 2050, respectively.

12. Existing Conditions and Trends [24 CFR 58.40(a)]:

The area where the activities will be taking place include existing farms at Road PR-130 km 6.0, Naranjito Ward, Hatillo, Puerto Rico 00659. Currently, the western property (Gustavo Toledo) is used for agricultural purposes for cattle grazing but is underutilized. The eastern property (Milk Money) is used for grazing and milking cows. Lastly, the northeastern property (Sucesión González) is not currently in use. Therefore, most of the land to be utilized has been underused due to the shifts in the milk industry economy on the Island The project will occupy approximately 250.88 acres or 1,006,080 square meters in ten (10) parcels indicated in Table 1, which represent 85% of the properties. The remaining 15% of the lots will be maintained in its current use as part of the existing dairy farms. Milk Money, Inc. will continue operating in the eastern parcel because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. To maintain its milk-production operations, cows will be cared for on nearby farms where they graze and where the heifers are raised. That allows for double use of the land. The areas where the PV Pannels will be located will not be impermeabilized. Walkways, corridors or small roads that will be created to access them will be paved with ballast or stones.

The project will produce and sell green energy exclusively to the Puerto Rico Electric Power Authority for an initial term of 25 years with the option to renew for two additional terms of 5 years. The objective of the project is to maximize the use of the sun as a natural resource aiming to lessen the Island's reliance on burning fossil fuels for energy production. The project will also provide resiliency to the power supply during a Hurricane or other emergency which in turn will provide energy to critical infrastructure, such as the communication, transportation and health industries, as well as to citizens in the region.

Subject to the contingency and emergency plans established by Puerto Rico Power Authority (PREPA) and LUMA, the project is designed to continue producing energy, even if some of the modules or components suffer damage during a major event. Because of its location, the project can provide energy during an emergency to the Hatillo Hospital (Health), as well as to other critical components such as PRASA'S local plants and pumps and the emergency response facilities in the region.

The area where the project will be located was selected because it is located near a LUMA/ PREPA substation which has the capacity to receive the energy generated by the solar panels. The choice of substation site is critical for projects like this, because a longer interconnection route between the solar farm and the LUMA substation can raise costs enough to render the project economically unfeasible. If the project is not carried out, the area is likely to remain unchanged, the eastern and western parcels used for livestock grazing, and the northeastern parcel unused, as its not presently being used for agricultural purposes. Furthermore, the project's anticipated contribution to the electrical grid would not materialize.

The western site is bordered by PR-191 to the north and west, and PR-130 to the east. The eastern site is bordered by PR-130 to the west, part of the northeastern site and undeveloped areas to the north, and undeveloped lands and residential areas to the east. Boths sites have commercial and residential areas, as well as undeveloped plots of land in the south. The northeastern site is bordered by undeveloped lands to the north, the eastern site and undeveloped lands and residential areas to the south, the PR-130 (interior) to the east and undeveloped lands and residential areas to the west. The project Site is mostly open space that serves as dairy farms. The main buildings of the farms have been at the site since at least 1993, according to Google Earth Historical Imagery.

The project Site currently has a land use designation of SREP-A (*Suelo Rustico Común Especialmente Protegido – Agrícola*) according to the PR Land Use Plan, effective date November 30, 2015 and is zoned *A-G (*General Agricultural), according to the Zoning Map of the Municipality of Hatillo, effective date November 17, 2011 (Figure 4: PR Land Use Plan and Figure 4a: Zoning Map of the Municipality of Hatillo). The project will comply with the applicable codes and design parameters. It conforms to the uses available under its

zoning, which allows the type of project presented.[3] The Puerto Rico Joint Regulations for the Evaluation and Issuing Permits Related to the Development, Land Use and Business Operation, Table 6.71, allows the construction and operation of renewable energy projects, including solar renewable projects, on General Agricultural Land. The western parcel group of the project has an approved *Consulta De Ubicacion* to allow for the project's construction parameters. The other two parcel groups (eastern and northeastern) will have to undergo the same process for construction parameter approval.

The site is located within the Special Karst Region, which is divided into three designations: APE-ZC (Área de Planificación Especial – Zona Especial), APE-RC (Área de Planificación Especial Restringida del Carso), and APE-RC-ZA (Área de Planificación Especial Restringida del Carso – Zona de Amortiguamiento). Refer to Figure 4b for the Karst Map. The area of the Karst where the project is located is the APE-ZC (Area de Planificación Especial Zona Cársica. Construction in the APE-ZC is allowed.

There are sinkholes, depressions, caves and mogotes on the premises. Some of the sinkholes will be used as part of the stormwater management system in the Site. In the western parcels, a cavity was observed in the area where the detention basin for Sinkhole #3 will be located. The area where the detention basin for Sinkhole #5 will be located, two cavities were observed.[4] However, the study goes on to state that cavernous areas that could cause a collapse of the detention basin were not observed In either area In the eastern parcels, cavernous areas were observed in Sinkholes #1 and #2, and cave was observed located between sinkholes #1 and #2. There is a non-jurisdictional wetland adjacent to possible Sinkhole #2. The northeastern parcel is undergoing geotechnical evaluation for karstic features and to develop a Hydrologic Hydraulic study to assess stormwater management at the area. The mogotes will not be disturbed and buffer zones will be provided for the other karstic features.

Superficial water bodies (other than the wetland, the two oxidation ponds, and the spill over area present at the Site) were not observed during the Site visit when studies were being

[3] *Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios.* OGPe. June 2023.

[4] Evaluación de Geofísica y Geotecnia a Sumideros y Charcas propuestas Finca Gustavo Toledo y Efraín García Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014

carried out. Because of its distance from surface-water bodies, development in this karst region of Puerto Rico relies on naturally formed depressions that evolve until they connect with the subsurface and allow stormwater runoff to enter. The water that infiltrates eventually continues downward until it reaches the groundwater table, which in the project area may lie at depths exceeding 300 feet. The presence of groundwater in the proposed development area is evident from both Puerto Rico Aqueduct and Sewer Authority (PRASA) wells and private wells installed in the region. Within the project site itself (western parcel), there is a water well approximately 300 feet deep, which is typical of groundwater depths in this area. The presence of a sinkhole that naturally receives runoff does not mean it can accommodate runoff volumes or flow rates greater than those produced within its natural catchment area[5].

According to the USGS Topographical maps, the Site's elevation is approximately between 75 and 125 meters above mean sea level. The Survey plans indicate elevations from approximately 80 to 140 meters above mean sea level (Figure 5: Topographic Map; Figure 5a: Survey Map). The topography in the area is made up of small limestone hills known as mogotes and intervening valleys that occasionally contain ground depressions. The depressions can be seen in various stages, with some showing a surface break that exposes the underlying rock. These features are known as sinkholes[6]. The slope is mostly toward the northeast, although it varies in some areas due to the presence of the mogotes and depressions present at the Site.

Per the USGS U.S. Landslide Inventory and Susceptibility, most of the Site is located at an area with low landslide susceptibility, except for the small area on the eastern parcel, which has a higher probability (Figure 6: Landslide Susceptibility Map). With that being said, this area will not be developed. The Natural Resources Conservation Services (NRCS) indicated that the soils in the area have been identified as According to the Natural Resources Conservation Services (NRCS) the soils in the area have been identified as (Figure 7: USGS Soil Map):

- AlC—Almirante sandy loam, 5 to 12 percent slopes
- BcC –Bayamon sandy loam, 5 to 12 percent slopes
- BsC – Bayamon sandy clay loam, 5 to 12 percent slopes

[5] Evaluación de Geofísica y Geotecnia a Sumideros y Charcas propuestas Finca Gustavo Toledo y Efraín García Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014.

[6] Id.

- GeC – Guerrero sand, 2 to 12 percent slopes
- RlC – Rio Lajas sand, 2 to 12 percent slopes
- RsF – Rock outcrop-San German complex, 20 to 60 percent slopes
- SgD – San German gravelly clay loam, 5 to 20 percent slopes
- SgF – San German gravelly clay loam, 20 to 60 percent slopes
- TaD2 – Tanama clay, 12 to 20 percent slopes

According to the USGS Geologic Map of the Camuy/Hatillo Quadrangle, Puerto Rico the geology of the Site is classified as Blanket San Deposits and Aymamon Limestone (Qbs and Tay), respectively (Figure 8: Geologic Map).

The closest water bodies to the Site are Camuy River located at approximately 7,804 ft (1.48 mi) to the west and Quebrada Seca, located approximately 8,094 ft (1.53 miles) to the north of the Site and at its closest point (Figure 9: Vicinity Map).

According to the 2023 American Community Survey 5-Year Estimates, the Municipality of Hatillo had a population of 38,266 people[7] with a median age of 45.2 and a median household income of $28,001[8]. Between 2022 and 2023 the population of the Municipality declined by approximately 0.167%[9]. The largest ethnic groups in the Municipality of Hatillo are Hispanics (99.4%)[10] (Figure 10).

The Municipality of Hatillo has an employment rate of 41.0%[11]. The largest industries are Educational Services and health care and social assistance, Retail Trade, Arts, entertainment, and recreation, and accommodation and food service, and the highest paying industries are Real Estate and Rental and Leasing, Wholesale Trade and Information. From 2022 to 2023, employment in Hatillo grew at a rate of approximately 1.6%[12] According to the US Census Bureau 2023 American Community Survey 5-Year Estimates,

[7] https://data.census.gov/table/ACSDP5Y2023.DP05?g=050XX00US72065

[8] https://data.census.gov/profile/Hatillo_Municipio,_Puerto_Rico?g=050XX00US72065

[9] https://datausa.io/profile/geo/hatillo-municipio-pr

[10] https://data.census.gov/table/ACSDP5Y2023.DP05?g=050XX00US72065

[11] https://data.census.gov/profile/Hatillo_Municipio,_Puerto_Rico?g=050XX00US72065

[12] https://datausa.io/profile/geo/hatillo-municipio-pr

Municipality of Hatillo has 36.4% percent of the population living under the poverty line. This project will promote the economy in the area and will be beneficial to the community.

According to the 2020 Decennial Census the Barrio Narranjito - where the action will take place - has a population of is 3,765 individuals. The median household income is estimated at $22,480, employment rate at 39.3%, and 45.5% of people live below the poverty rate. Finally, 99% of the population identifies as Hispanic or Latino[13].

13. Funding Information

Grant Number	HUD Program	Funding Amount
B-18-DE-72-0001	Community Development Block Grant – Disaster recovery (CDBG-DR) Energy	**$1,932,347,000**

14. Estimated Total HUD Funded Amount: $88,621,228.98

15. Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]: $147,702,048.30 ($88,621,228.98 -CDBG-DR ER-2 (60%) + $59,080,819.32 -Private (40%)).

16. Part B. Compliance with 24 C.F.R. 50.4, 58.5, and 58.6 Laws and Authorities

COMPLIANCE FACTORS: Statutes, Executive Orders, and Regulations listed at 24 C.F.R. §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance Determinations

[13] https://data.census.gov/profile/Naranjito_barrio,_Hatillo_Municipio,_Puerto_Rico?g=060XX00US7206556086

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
16.1. Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The nearest military airport is Luis Muñoz Marín International Airport located approximately 278,976 feet (53 miles) to the east of the Site, and the nearest civilian airport is Rafael Hernández International Airport located approximately 113,772 feet (21.5 miles) to the west of the Site. That means it is not located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ). The project is in compliance with Airport Hazards 24 CFR Part 51 Subpart D requirements. **Refer to Exhibit 1: Airports Hazards**
16.2. Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	The Project is not located in a CBRS unit. The closest CBRS Unit is PR-80 Punta Maracayo Unit, located 17,212 mi (3.26 miles) north of the Site. Therefore, this project has no potential to impact a CBRS Unit and there are no anticipated adverse effects due to its development. The project is in compliance with the Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] **Refer to Exhibit 2: CBRS**
16.3. Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	The project site is located outside of the Special Flood Hazard Area (SFHA) also known as 100-year floodplain per FEMA Flood Map. According to FEMA Firmette, Panel number 72000C0220H and 72000C0210J, effective date April 19, 2005, and November 18, 2009, respectively, the Site is located in Zone X (defined as an area determined to be outside the 500-year flood by FEMA and outside the SFHA).

		The project is in compliance with the Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] **Floodplan Number:** 72000C0220H and 72000C0210J **Date:** April 19, 2005 (72000C0220H) and November 18, 2009 (72000C0210J) **Refer to Exhibit 3: FEMA FIRMette**
17. STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
17.1. Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No ☐ ☒	The project location is not currently listed as a non-attainment area or maintenance area. The closest non-attainment area or maintenance area is the Lead (2008 Standard) non-attainment area, located approximately 31,011 feet (3.98 mi) east of the Site. To comply with applicable permits and regulations, including the EPA 2022 NPDES Construction General Permit, as well as the Puerto Rico DNER *Permiso Unico Incidental,* which includes the local erosion and sedimentation control permit, the construction dust emission permit and the non-hazardous waste generator permit, as best management practices, during construction, the contractor must implement measures to prevent dust from becoming a nuisance to neighboring areas. These measures can include watering/misting of bare areas, covering and stabilizing stockpiles, stabilizing entrances with Gravel entrances and vehicle washing, establishing speed limits on unpaved routes, covering dumpsters and material piles, establishing concrete washout controls, establishing maintenance protocol for construction vehicles and covering

		transportation vehicles, among others. Dust emitted from the construction site is not expected to affect the attainment status of the area. During construction, the contractor may use an electric generator of approximately 30 kV. The contractor will be responsible for obtaining all required use permits from OGPe. Based on the limited duration and scale of use, no adverse air quality impacts are anticipated. The project scope does not involve the installation or operation of combustion sources or any stationary units that emit regulated air pollutants. Therefore, no adverse impacts to ambient air quality are anticipated. The project is in compliance with the Clean Air Act as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93. **Refer to Exhibit 4: Air Quality, Exhibit 4a: EPA Greenbook - Current Nonattainment Counties for All Criteria Pollutants and Exhibit 4b: Puerto Rico Nonattainment /Maintenance Status for Each County by Year for All Criteria Pollutants**
17.2. Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The project is located outside the area identified as Coastal Zone Line Boundary. The closest Coastal Zone Line Boundary is located approximately 16,104 ft (3.05 miles) north of the project. There are no anticipated adverse effects to said area due to the project's development. The project is in compliance with the Coastal Zone Management Act, sections 307(c) & (d). **Refer to Exhibit 5: Coastal Zone Land Boundary**

17.3. Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☒ No ☐	*Contamination*: The NEPAssist database was reviewed to identify EPA Facilities within 3,000 ft of Site. There was one (1) Hazardous Waste facility identified in the database, as of March 2025 (rev. December 2025). 1. Former Gulf# 419 / Speedway (FRS ID: 110056145700 and RCRA ID: PRR000010082) - The site is also identified as an Active LUST (86-0396) in the PRDNER 2024 Active LUST List According to the available information, the facility does not appear to present an environmental concern for the Site. Additional information was obtained from the PRDNER 2024 LUST lists and EDR Radius Report. Per the PRDNER 2024 LUST list, there were two LUSTs in a 0.5 mi radius of the Site. Although the direction of the plume and the current status of the leaks are unknown, because of LUST topography with respect to the property, past releases at this site are not expected to have had the potential to migrate to affect the subject property. Thus, they do not appear to present an environmental concern for the Site. No mapped sites were found in EDR Radius Report search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the pertaining environmental databases, except for one of the LUSTs identified in the PRDNER lists. Please refer to Exhibit 6a. ***NOTE: The in Exhibit 6, the JP GIS UST Map Image shows the Underground Storage Tanks (UST) mapped within the 0.5 mi Radius from the Site. Out of those, only TWO (2) are identified by the PRDNER as LUSTs in the 2024 LUST List. For purposes of a contamination report, USTs are included in the report if they are located in the Site or adjacent.*** Historic Uses: According to information obtained from the Section 106 NHPA Effect Determination

		prepared by SOI-Qualified Architect/Architectural Historian Javish Muñiz Reyes and SOI Qualified Archaeologist Fernando Alvarado Muñoz, MA on June 5, 2025, indicated that since 1936, the area where the project will be located has been used as farmland. On the 1936 DTOP Aerial Image, the land is shown completely rural segmented in farmlands. Small structures / dwellings can be seen in the proximity of the circumventing roads. On the 1963 DTOP Aerial Image, more development along the circumventing roads can be observed specially outside in the vicinity of El Pajuil community to the southeast. The area is almost completely rural and there is a small development near the center of the Site. The 1971 DTOP Aerial Image, is almost identical to the 1963 image, but more structures are visible along the circumventing roads. Google Earth Historical Imaginary, from 1993 onward, continues to show livestock agricultural operations. According to information provided by project owner, the parcels have been used for livestock for almost 50 years. Although historical agricultural and livestock operations can involve the use of pesticides, herbicides, animal waste management areas, fuel storage, and other practices that may result in localized soil impacts, the presence of such potential contaminants does not prevent or constrain the development of the proposed solar energy project. Agricultural use may raise the possibility of recognized environmental conditions (RECs), particularly where former pesticide mixing/loading areas, livestock corrals, or manure accumulation zones exist, or where extensive earth disturbance is anticipated. However, for this project—an industrial, non-residential solar installation—the land use is compatible with the potential risks identified, and no conditions were observed that would preclude construction.

		Because the project will include land disturbance and significant excavations in certain areas, targeted soil sampling may be warranted to evaluate whether residual pesticides, herbicides, petroleum, or nutrient-related contaminants (e.g., nitrates from manure) are present. This additional evaluation, if required during the design or permitting phase, would ensure that any localized contamination identified is properly managed and would not impede the planned solar development. The Geotechnical Evaluation of Underground Disposal of Runoff Existing Sinkholes[14] (included in Appendix E) prepared for the eastern parcels, indicated that there were man-made ponds that appear to be filled with a mixture of water and cow manure near Sinkholes 2 and 3 of said parcels. These sinkholes are connected via man-made trenches to depressions that collect natural runoff from the area and apparently from the man-made ponds. The pond associated with Sinkhole 2 is located southwest of the sinkhole (outside of the project area), while that associated with Sinkhole 3 is located south of the Sinkhole In the REA, the PRDNER stated that these ponds did not comply with applicable regulations and that all discharges must be halted immediately. They further indicated that wastewater from the dairy operations must be managed through alternative, compliant measures, noting that such discharges could potentially contaminate the area's aquifer. Although the improper wastewater discharges from the dairy operation may constitute REC due to the potential for nutrient loading, pathogens, or chemical contaminants entering the groundwater, this condition does not prevent the feasibility of the proposed solar project. However, given planned earth disturbance activities,

[14] *Geotechnical Evaluation Underground Disposal of Runoff Existing Sinkholes PR-130, Km 7.0, Naranjito Ward, Hatillo, Puerto Rico. GEO-Geotechnical Engineering Construction Material Resting. January 2025*

		targeted soil sampling in areas of former dairy wastewater discharge may be warranted to characterize potential impacts. During the Site visits performed on March 27, 2025, and August 15, 2025, the following observations were made: 1. Oxidation ponds, grazing areas, ranching and livestock areas, livestock, watering areas, among others were observed in the parcel. The parcel to the east has an operating livestock farm. 2. There are sinkholes and mogotes (limestone hills). The site features varied topography with hills and depressions. 3. Electric transformers were observed. It is unknown if they contain PCB, because there was no visible label stating it. Two of them inside the eastern parcel showed signs of corrosion. This could represent a data gap, as there is no information regarding PCB content. However, we were informed by the owner that no changes are proposed, as part of the Xzerta project, to the two transformers located on a pole adjacent to the concrete pad of the milk parlor at the North Farm (Milk Money). The reason for not requesting such modifications is that this electrical installation is not part of the Xzerta project and will remain under the control of Milk Money. Furthermore, it is proposed to subdivide a portion of the property so that it remains under the control of Milk Money for its agricultural activities. 4. Domestic trash, along with metals pieces, corroded paint containers and metal debris, and opened 5-gallon buckets, were observed in the front and back (via drone) of a house on the northeastern parcel. These could represent *a de minimis condition*.

		5. Dead cow corpses were observed in the offsite area, near the boundary of the eastern parcel. These could represent a *de minimis condition.* 6. Pavement stains were observed in some of the areas visited of the livestock farm on the eastern parcel. 7. Chickens were observed in cages made with tires in the eastern parcel farming area. 8. Most of the areas in the project were observed using a drone, as it comprises vast lots, some of which currently have livestock. The farms seemed well kept, and no visibly designated waste collection areas were observed within them. 9. Buildings inside the premises, as well as other structures, parking areas, ranching and livestock areas, and watering structures, among others were not inspected as part of this review 10. Staining was observed in the parking area where farm vehicles are typically parked, suggesting possible fluid leakage. This may reflect inadequate housekeeping or maintenance practices related to equipment management. Additionally, small areas of stressed vegetation were noted and should be further investigated, as they may represent a potential Recognized Environmental Condition (REC). 11. Open containers labeled as White Maxi-Guard alkaline detergent were observed and there was stressed vegetation underneath some. This could be indicative of a release and warrants further evaluation to determine whether or not there is a REC for the Site. 12. Wastebins behind the Al Fuego restaurant containing cardboard boxes and discarded containers along the fence line southwest of the east section

		of the site display poor management of waste. This could represent a *de minimis* condition. 13. On the generator area of the Al Fuego restaurant, there is staining on the floor which could be indicative of a release and warrants further evaluation to determine whether or not there is a REC for the Site. 14. On the Milk Money Ranch (Eastern Parcel) there are debris, opened containers, disassembled equipment parts, among others located around the farming operations. This could represent a *de minimis* condition. 15. There is trash in different areas of the parcels. This could a *de minimis* condition. 16. The generator enclosure at the Milk Money Ranch (Eastern Parcel) shows visible staining and poor housekeeping practices, with various materials and containers stored inside. A drain opening appears to discharge toward the area outside the enclosure. It is unknown whether any materials stored within the enclosure may have migrated to the surrounding site. This warrants further evaluation to determine whether or not there is a REC for the Site. 17. The Western Farm generator has rust on the tank area and there are stains underneath it which could be indicative of a release. This warrants further evaluation to determine whether or not there is a REC for the Site. Information included as part of the Contamination Report should not be construed to be that of a Phase 1 Environmental Assessment. No conclusions regarding Recognized Environmental Conditions (REC) can be made, as all the elements required by the

		ASTM Standard E1527-21 were not analyzed in conjunction. In summary, review of NEPAssist and other available databases did not identify facilities within 3,000ft of the Site that could present environmental concerns. Two LUSTs were identified within 0.5 mi radius of the Site but also do not appear to represent an environmental concern. Site visit revealed several possible REC's at the Site. Most of them are due to poor housekeeping practices. It is recommended to discard or correctly install the elements causing the situations in accordance with applicable regulations and perform targeted soil sampling of the areas where possible releases were observed to assess if contamination is present. Regarding the historical uses of the property, based on the nature of the project, historical pesticide or herbicide use is not anticipated to adversely affect the feasibility of solar installation, but it may warrant further evaluation, like targeted soil testing, if historical pesticide/herbicide application is suspected in areas where soil will be disturbed. With respect to the transformers with signs of corrosion observed at the Milk Money facilities, which will lie outside the project area, additional information is needed to determine whether they contain PCBs. If any evidence of a release is noted, targeted soil sampling would be warranted. Although the PRDNER noted that the former dairy wastewater ponds were not in compliance and that their discharges could have contributed to localized groundwater impacts, these legacy agricultural conditions do not restrict or prevent development of the proposed solar project. However, because the project involves land disturbance, targeted soil sampling may be

		warranted in the areas previously used for wastewater management to document existing conditions and determine whether any localized impacts require management prior to construction. Due to the nature of the proposed projects, these conditions are not expected to adversely affect project development, if the measures indicated are executed. *Asbestos and Lead Assessment* On the Western parcel, asbestos containing building materials (ACBM) were not found on the structures to be demolished. Lead Based Paint (LBP) was identified above the regulatory level of greater than or equal to 1.0 mg/cm2 in ceramics on the walls in buildings to be demolished on the western parcel. On the Northeastern parcel, ACBM were not found on the structures to be demolished. LBP was identified above the regulatory level of greater than or equal to 1.0 mg/cm2 in ceramics on the walls in buildings to be demolished on the western parcel. On the Off-Site Interconnection area parcel, neither ACBM or LBP were found on the structures to be demolished. LBP mitigation measures will be needed to safely remove the materials were applicable. These are detailed in the Mitigation Measures and Conditions [40 CFR 1505.2(c)] section below. *Radon*: Regarding Radon, the Puerto Rico Department of Housing (PRDOH) has determined that testing the property's radon levels is infeasible and impracticable. This conclusion follows

		consultations with several agencies, including the United States Geological Survey (USGS), the Centers for Disease Control and Prevention (CDC), the Puerto Rico Department of Health, and the United States Environmental Protection Agency (EPA). These agencies confirmed the lack of scientific data on radon testing in Puerto Rico and the technical challenges involved. These challenges include a shortage of trained and professionally licensed personnel to collect samples, the unavailability of test kits, the high costs associated with testing, difficulties ensuring quality control of results, and the lengthy process required to purchase, ship, and analyze samples. Furthermore, local authorities in Puerto Rico lack the specialized equipment and trained personnel needed to perform radon testing and ensure proper quality control. Additionally, no certified radiation laboratory in Puerto Rico can conduct radon testing. Based on these factors, the PRDOH memorandum concludes that radon testing is not feasible for this property and that no further consideration of radon is required for environmental review. **Refer to Exhibit 6: NEPAssist Radius Map and JP GIS UST Map; Exhibit 6a: NEPAssist Identified Facilities within 3,000 ft; Exhibit 6b: Asbestos and Lead Survey and Exhibit 6c: Memorandum of Justification for the Infeasibility and Impracticability of Radon Testing**
17.4. Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☒ No ☐	The site is not identified as a critical habitat by the US Fish and Wildlife Services (USFWS). The Critical Habitat closest to the Site is for the Puerto Rican Harlequin butterfly located 37,224 feet (7.05 miles) southeast. The Endangered Species List Report indicated that one specie, the Puerto Rican Boa (*Chilabothrus inornatus*) whose habitat has been designated wherever found

		could be found at the Site. Species in this report will be considered in the analysis and design of the project. Having carefully analyzed the project site and the information available, including the IPaC species list and available Dkey(s), critical habitat data, nature of the project, previous site disturbance, and scope of project activities a 'May Affect, Not Likely to Adversely Affect' (NLAA) determination has been made, as the species is a habitat generalist found throughout the island and the project involves ground disturbing activities. The USFWS concurred with the determination on a letter dated July 10, 2025. The project will comply with the conservation measures established by the Service. It is in compliance with the Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402 **Refer to Exhibit 7: Endangered Species – IPaC, Exhibit 7a: Endangered Species – Critical Habitat Mapper, and Exhibit 7b: USFWS Concurrence Letter and Consultation**
17.5. Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	Not Applicable, as project does not include a hazardous facility or the development, construction, or rehabilitation that will increase residential densities, or conversion. Under 24 C.F.R. Part 51 Subpart C, the Explosive and Flammable Hazards rule applies only to projects involving residential habitation, increases in residential density, or conversion to residential use. The proposed community center does not involve residential or sleeping occupancy and does not increase residential density. Therefore, the rule does not apply, and no additional assessment under Subpart C is required. Notwithstanding, the PRDOH EA guidance indicates that on-site assessment is required if the activity will increase residential,

		institutional, recreational, commercial or industrial densities or conversion Thus, during the Site visit an effort was made to identify tanks with a capacity above 100 gal within the required 1-mile radius, since Puerto Rico does not maintain a list of aboveground tanks. The following categories of containers not covered by 24 CFR Part 51 Subpart C requirements, although they store or handle covered gases or liquids, and thus were not searched nor evaluated: • Stationary aboveground containers that store natural gas and have floating tops • Underground storage containers, mobile conveyances (tank trucks, barges, railroad tank cars), and pipelines, such as high-pressure natural gas transmission pipelines or liquid petroleum pipelines • Aboveground storage tanks that are part of a one to four unit single-family FHA-insured property • Aboveground storage tanks containing liquified petroleum gas ("LPG" or propane) when they are 1,000 gallons or less in volume and comply with the National Fire Protection Association (NFPA) Code 58, version 2017 (NFPA 58 (2017)). Aboveground storage tanks were identified within the project Site boundaries. Exhibit 8 includes information pertaining to these endeavors. The tanks evaluated do not meet the Acceptable Thermal Radiation Separation for People. Two of the three tanks identified lie on the project Site. The tanks have been identified as follows: 1. Tank in the western parcel (inside the project area) – approximately 484

		gallons; ASD for Thermal Radiation for People (ASDPPU) = 204.39 ft. The generator and tank identified on the western parcel will be removed from the premises as part of the project; thus, will not affect the facilities. The removal will follow all applicable environmental regulations. The tank must be properly emptied, cleaned, and removed by a qualified contractor, and all residues and contaminated materials must be handled according to federal and local rules. Soil sampling may be required if visual or olfactory evidence suggests a release, or if large excavations are planned in the tank area. 2. Tank in the eastern parcel (inside project area) – approximately 110 gallons, ASDPPU = 53.83 ft. For the eastern parcel's tank, the distance from the tank to the HUD sponsored project areas' where people could be present (Proposed Administration Building and to the SCADA Building on the Western parcel and to the SCADA building on the eastern parcel) exceeds the ASD. None of these facilities will have sensitive uses. We have been informed that the project will not have permanent employees at the Site. Two to three people will visit the Site once or two times per week, approximately. The tank on the eastern parcel is owned and operated by the Milk Money, Inc. dairy farm. Milk Money, Inc. will continue operating because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. To maintain its

		milk-production operations, cows will be cared for on nearby farms where they graze and where the heifers are raised. Thus, since the farm is not part of the HUD sponsored project, and the distance from the tank to the areas people may visit in the HUD assisted project is greater than the required ASD, the tank should not present a constraint to the HUD sponsored project execution. Exhibit 8 shows figures that include the tanks and required distances radius (ASD) in relation to the Administration and Scada buildings. 3. Tank outside premises, to the north of project area (Casa de Campo)– 354 gallons approximately, ASDPPU = 179.50 ft. Regarding the third tank located to the north of the western parcel, the distance to the Administration and SCADA buildings also exceeds the ASD. Thus, from the information gathered the Project is in compliance with 24 CFR Part 51 Subpart C, with regard to aboveground storage tanks, with volumes of 100 gallons or more (not including the exclusions previously stated). As part of the project, Narvada brand (or equivalent) advanced battery modules—lithium-ion or comparable technology suitable for utility-scale applications—will be installed. While lithium-ion batteries pose potential environmental and safety risks—including thermal runaway, fire, and hazardous material release—the system design will comply with NFPA 855 (Standard for Installation of Stationary

		Energy Storage Systems), and UL 9540/1973 safety standards. Each BESS container will be placed on an impermeable concrete pad of approximately 18,352 square meters. The Battery Energy Storage System (BESS) includes secondary containment as an important safety feature designed to prevent leaks, spills, or fire from spreading beyond the battery units. This secondary containment includes: • Integrated Containment Basins or Trays - Each battery rack or container often sits in a built-in basin designed to hold any leaked electrolytes or other liquids. These trays are usually made of chemical-resistant materials like polyethylene or coated steel. • Impermeable Flooring or Pads - The floor of the battery room or container is sealed with impermeable materials to prevent liquids from seeping into the ground. Common materials include epoxy coatings or polymer liners. • Bund Walls or Dikes - External barriers around battery containers that can hold spills or fires. These are often made of concrete or metal and designed to contain a specific volume, usually calculated based on the total electrolyte capacity. • Drainage and Collection Systems - Channels or sumps that safely direct any leaked liquids to containment tanks or treatment systems. This drainage system is paired with sensors to alert operators if a leak occurs. • Fire-Resistant Enclosures - While primarily for fire protection, fully enclosed battery modules act as secondary containment by preventing flames or chemicals from spreading outside. The proposed BESS system emphasizes modular containment, meaning each unit has its own localized

		containment, reducing the risk of a single point of failure affecting the entire system. The project also includes installation of transformers. The 10,000-gallon Hitachi transformer proposed for the Xzerta project complies with NFPA 850 (Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations). It will be a high-voltage transformer that will use natural-ester dielectric fluid rather than standard mineral oil. The fluid has a much higher flash/fire point and is described as safer, biodegradable, and more environmentally friendly. This natural-ester fluid is non-PCB, because modern insulating fluids for transformers are required to be PCB-free. Hitachi Energy has developed a technology called TXpand for its large, oil-filled power transformers. This design is aimed at improving "rupture resistance" so that, in the unlikely event of a catastrophic internal failure (such as a fault), the tank deformation is controlled and minimizes any oil spilled and predictably channels what little oil escapes for more easy containment. The switchyard of Xzerta, which contains the Hitachi transformer, is located 280 meters in a straight line from the nearest residence. Hitachi transformers designs include features to reduce noise built into design and materials. The 3 MVA transformers will use non-PCB biodegradable dielectric fluid and will comply with all applicable requirements. Neither Lithium BESS nor transformers are listed as regulated under 24 CFR Part 51 Subpart C. The project will not include the installation of any kind of tanks (AST/UST) as part of its scope. A Spill Prevention, Control, and Countermeasure Plan (SPCCP) will be prepared and implemented

		in accordance with EPA and PRDNER regulations to cover the transformers and any other onsite containers that could pose a spill risk. The Project is in compliance with 24 CFR Part 51 Subpart C. **Refer to Exhibit 8: Explosive and Flammable Hazards and Acceptable Separation Distance Reports**
17.6. Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The soil in the area is mostly identified as All Areas are Prime Farmland. There is also an area identified as Farmland of statewide importance and areas not rated farmland. The Site is in a location already committed to urban development, as the United States Census Bureau TigerWeb, identifies the Project Site as Urban Areas. Although, the project area has been zoned as "Agrícola General" (A-G) by the Puerto Rico Planning Board The PR Department of Agriculture on a letter dated May 7, 2025 stated that it "does not oppose the establishment of alternative energy sources, provided that natural resources are protected and the development of dual-use agricultural projects in conjunction with the energy source is supported". Furthermore, pursuant to the Puerto Rico Joint Regulation (2023), adopted by the Puerto Rico Planning Board, Section 6.1.18.2, Table 6.71, the development and operation of renewable energy projects[15] ("proyectos de energía renovable") are expressly permitted within the A-G district. This provision reflects a clear expression of public policy that renewable energy development is considered compatible with agricultural zoning.

15 Puerto Rico Joint Regulation, Tomo XII(III)(F)(34). "Fuentes Renovables de Energía - Fuentes que se renuevan continuamente, entre las que están, sin limitarse a: solar, eólica y geotérmica; combustión de biomasa renovable y de gas y biocombustibles derivados de biomasa renovable; hidroeléctrica calificada; hidrocinética y marina renovable; océano termal; conversión de desperdicios sólidos municipales; combustión de gas derivado de un sistema de relleno sanitario; digestión anaeróbica; y celdas de combustible (fuel cells). Incluye la energía renovable alterna y sostenible, según se definen estos términos en la Ley 82-2010, supra, según enmendada."

		The subject project also has been reviewed and approved by the Adjudicative Board of the Permits Management Office (OGPe) through site consultations 2013-CUB-00020 and 2024-579575-CUB-010919[16] . As required by the program, a Consultation to the NRCS was prepared and the AD1006 Form was completed and submitted to the Program on July 16, 2025. Response from NRCS was received on August 12, 2025, stating that: "*Although the project site is located within a designated "urban area" according to the 2020 Census Bureau Urban Area map, the Puerto Rico Planning Board's official zoning maps classify the majority of the parcels as A-G (General Agriculture). Under 7 C.F.R Part 658.2 (a), land is considered "farmland" if it is classified as prime farmland, unique farmland, or farmland of statewide or local importance by state or local authorities, unless it is already in or committed to urban development. Because the site retains its agricultural zoning and has not been committed to urban development, it meets the definition of "farmland" and is subject to the FPPA evaluation process. Therefore, Part VI of form AD-1006 needs to be completed by the project sponsor for NRCS review and documentation.* A second consultation, which included completion of Part VI of AD-1001, was submitted to the GM on September 29, 2025. PRDOH approved the NCRS Farmland Consultation on October 17, 2025. The date PRDOH submitted said consultation to NRCS, who concurred with the consultation on an email dated December 5, 2025, indicating that the project was not considered to cause significant farmland conversion impact and could move forward without further alternatives sites.

[16] The site consultations approved by the Adjudicative Board were not intended to determine land uses, but rather to establish construction parameters pursuant Rule 9.4.1 of the Puerto Rico Joint Regulation (2023).

		Based on the above information, it is our understanding that the project is in compliance with the Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658. **Refer to Exhibit 9: Farmlands Protection; Exhibit 9a: NRCS Consultation July 16, 2025 and NRCS August 12, 2025, letter; and Exhibit 9b: NRCS Consultation September 23, 2025 and NRCS Concurrence**
17.7. Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	According to the ABFE's Map, Panel number 72000C0220H and 72000C0210J, issued on October 18, 2024, the Site is located in Zone X (defined as an area determined to be outside the 500-year flood by FEMA and outside of the 100-year floodplain). There are no Preliminary Firms for the area. The project is in compliance with Executive Order 11988, particularly section 2(a); 24 CFR Part 55. **Refer to Exhibit 3a: ABFE Map and Exhibit 3b: Preliminary FIRM Map**
17.8. Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	The project was assessed for its potential effects on identified historic properties. This assessment considered direct, indirect, and cumulative impacts on the integrity and significance of the properties. Archaeologist Fernando Alvarado (SOI-qualified Archeologist) and Javish Muñiz Reyes (SOI-qualified Architectural Historian) conducted historical archaeological and architectural evaluations for the property. The evaluation concluded that project actions will not affect the historic properties that compose the Area of Potential Effect (APE). • According to field assessments and studies conducted by relevant agencies such as the State Historic Preservation Office and the Puerto Rican Institute of Culture, there are no historic properties within the Area of Potential Effect.

		• Based on the results of our identification efforts, the Program has determined that there are no historic properties within the indirect effect, APE. The Section NHPA Effect Determination process resulted in a determination that the project will have no adverse effect on historic properties. In a letter dated July 31, 2025, the State Historic Preservation Office (SHPO) executive director Carlos A. Rubio Cancela indicates the following: "Our records support your findings of no *historic properties affected for this undertaking."* Therefore, the project is in compliance with the National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 C.F.R. Part 800." **Refer to Exhibit 10: SHPO Concurrence and 106 NHPA Effect Determination**
17.9. Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	According to 24 CFR Part 51, Subpart B, *"Responsible Entities under 24 CFR part 58 must take into consideration the noise criteria and standards in the environmental review process and consider ameliorative actions when noise sensitive land development is proposed in noise exposed areas* (51.101(a)(2)(i)). It goes on to state in 51.101(a)(3) that: *"HUD support for new construction. HUD assistance for the construction of new noise sensitive uses is prohibited generally for projects with unacceptable noise exposures and is discouraged for projects with normally unacceptable noise exposure. This policy applies to all HUD programs providing assistance, subsidy or insurance for housing, manufactured home parks, nursing homes, hospitals, and all programs providing assistance or insurance for land development, redevelopment or any other provision of facilities and services which are*

		directed to making land available for housing or noise sensitive development." The proposed project does not involve the development of noise-sensitive uses; does not expand the existing building footprint; does not involve new construction for residential use or rehabilitation of an existing residential property. Notwithstanding, as required by PRDOH, Zymmetry Environmental Management Corp., was engaged to perform a HUD Environmental Noise Assessment and Prediction Report**.** In the Report prepared, they indicated that "After a detailed regulatory evaluation to determine the applicability of Title 24 CFR 51.101 and Standard ASA/ANSI S12.9 PART 4 to the subject non-residential, non-habitable renewable power plant project, Zimmetry concludes that it is evident the proposed 60 MW AC Renewable Photovoltaic Power Plant does not conform to any description of a noise-sensitive use. Therefore, the HUD Environmental Noise Assessment and Prediction procedure does not apply to this project. The proposed project may generate temporary noise impacts during construction activities. During construction and operation, the project will adhere to all applicable noise regulations and standards. Thus, after reviewing 24 CFR Part 51 Subpart B, specifically sections 51.101(a)(2)(i)) and 51.101(a)(3) which indicate applicability of the part, engaging Zimmetry Environmental Management, Corp. to perform a HUD Environmental Noise Assessment and Prediction study to further access applicability of the Subpart, it was concluded that due to the nature of the project, this Subpart does not apply to the

		project. Thus, the project complies with the Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B. **Refer to Exhibit 11: Environmental Noise Assessment and Prediction Report**
17.10. Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	Puerto Rico is included in Region II of the USA EPA designated sole-source aquifer regions. The project is not served by designated sole source aquifers nor is it located within a sole source aquifer watershed. The closest SSA is Biscayne Aquifer in the state of Florida, approximately 5,227,200 feet (990 miles) to the northwest. The project is in compliance with the Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149. **Refer to Exhibit 12: Sole Source Aquifers**
17.11. Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes ☒ No ☐	According to the USFWS National Wetland Inventory (NWI) website, there is a Freshwater Emergent Wetland (classified as PEM1A) on the eastern parcel near the southeast boundary of the site and two Freshwater Ponds (classified as PUBH) on the western parcel of the site. For the northeastern parcels, there are no wetlands mapped on the NWI. In compliance with Section 55.9 Identifying Wetlands, a qualified wetlands scientist delineated the wetland boundaries on site (55.9 (b)(3)). For this purpose, a Jurisdictional Determination Report was completed in October 2024 for the parcels that make up the project. Sampling points (SP's) were established to determine the limits of the potential herbaceous wetland located on the southern part of the

		eastern properties and the freshwater ponds identified during the visit. The herbaceous emergent wetland covers an approximate area of 1.28 acres within the study area. The dominant species is *Eriochloa polystachya*. Two oxidation ponds and a spillover pond were also mapped during the site visit (Refer to Exhibit 13a). These oxidation ponds are manmade structures to manage cattle waste from the dairy farm operation, thus not considered wetlands. Finally, sampling points were established within the area the NWI Map shows as two small freshwater ponds in the western parcels. These points were found to be in the uplands since they did not meet any of the three wetland parameters. The herbaceous wetland does not have a continuous connection to a traditional navigable water (TNW), it is located on the bottom of a valley and there is no surface connection to another wetland, channel or creek, thus it was concluded to be a non-jurisdictional wetland. The two oxidation ponds, and the spill over area are manmade waste-water control structures that are routinely cleaned as part of the normal operations of a dairy farm. The two small ponds identified on the NWI map on the western parcels did not meet wetland criteria. Thus, it appears that one of the wetlands identified in the NWI is indeed a wetland, albeit not a jurisdictional one, and the other two are not wetlands upon inspection. The Jurisdictional Determination Report was filed at the US Army Corps of Engineers on October 18, 2024, and was assigned the DA number: SAA-2024-00029. With regards to the Off-Site area, per section 55.9 (b), as a primary screening, it was verified whether the project area was located in proximity to wetlands identified on the National Wetlands Inventory (NWI). The NWI indicates that there is a Freshwater Pond (classified as PUBHx)

		in the area. A visual inspection of the site was conducted on March 27, 2025, as required by the new regulations, to assess for visual indication of the presence of wetlands such as hydrology (water), hydric soils, or wetland vegetation Wetlands were not identified in the Off-Site areas (Refer to the Off-Site Visual Wetland Assessment Report, prepared by biologist Alejandro Cubiña on October 14, 2025, included in Exhibit 13c and Exhibit 13d It is not expected that a permit will be required as per Section 404 of Clean Water, for the project will not require the discharge of dredger or fill material into wetlands. A Wetland Management Evaluation Memorandum dated October 23, 2025, requesting exemption from the 8-Step Process, was presented to PRDOH. Based on §55.10 (*Limitations on HUD assistance in wetlands),* since the project will not have a direct impact on on-site wetlands, as they will not be disturbed as part of the project activities, and indirect impacts will be addressed with best management practices, as stated by the rule, with respect to impacts on wetlands, the 8-step decision-making process does not need to be performed. Mónica Machuca-Rios, a PRDOH Certifying Officer, approved the 8-Step Exempt Process on October 27, 2025. For the eastern parcel, where the wetland is located, the project design includes stormwater management measures to ensure there are no adverse hydrologic impact to adjacent karstic features as well as the wetland. According to the Hydrologic and Hydraulic Study (Appendix A), under both existing and proposed conditions, stormwater runoff is naturally conveyed to karstic sinkholes within the project area. For the project's stormwater management, detention ponds will be constructed near the depressions

		adjacent to the sinkholes. The post-development hydrologic modeling indicates that the detention ponds will regulate flow so that discharge volumes and peak rates remain equal to or below pre-development conditions, thereby preventing any increase in stormwater volume reaching the sinkhole system[17]. The wetland in the eastern parcel is in a depression next to a sinkhole identified as Sinkhole 2. Stormwater generated on-site in the basin that discharges to the wetland will be routed through a detention basin engineered to promote laminar flow and progressive sediment capture prior to discharge. This treatment system will be designed to maintain discharge water quality consistent with current standards, preventing the introduction of suspended solids or contaminants into the receiving wetland[18]. Therefore, currently stormwater on the property infiltrates naturally through the sinkholes, which serve as the primary drainage mechanism. The project's design intent is to preserve this existing discharge pattern, allowing runoff to continue following the natural flow path through the detention basin before infiltration. The inclusion of buffers and detention features between the solar infrastructure and the wetland will further reduce erosion potential and enhance water quality treatment prior to discharge. These measures will safeguard groundwater quality, maintain the existing discharge pattern, preserve wetland function, and ensure regulatory compliance.

[17] Solar Plant Hydrologic and Hydraulic Study Hatillo, PR. CA Engineering, PSC. July 2025

[18] Id.

		The project complies with Executive Order 11990, particularly sections 2 and 5. **Refer to Exhibit 13: National Wetland Inventory, Exhibit 13a: Jurisdictional Determination, Exhibit 13b: USCoE Jurisdictional Determination Filing Evidence, Exhibit 13c: Off Site Wetland Assessments and Exhibit 13d: Wetland Management Evaluation Memorandum**
17.12. Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	Puerto Rico has approximately 5,385 river miles. Only 8.9 miles of three rivers are designated as wild and scenic. There are no surrounding rivers that qualify as wild and scenic rivers. The closest wild and scenic river (Rio De La Mina) is in the Yunque Rainforest, approximately 349,536 feet (66.20 miles) east of the project site. The project poses no harm to this river. The project is in compliance with Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c). **Refer to Exhibit 14 Wild and Scenic Rivers**

18. ENVIRONMENTAL ASSESSMENT FACTORS [24 CFR 58.40]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed, and applicable permits of approval have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

1	2	3	4
Minor beneficial	No impact	Minor Adverse	Significant or

impact	anticipated	Impact – May require mitigation	potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

19. LAND DEVELOPMENT

Environmental Assessment Factor	Impact Code	Impact Evaluation
19.1. Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	3	The western site is bordered by PR-491 to the north and west, and PR-130 to the east. The eastern site is bordered by PR-130 to the west, part of the northeastern site and undeveloped areas to the north, and undeveloped lands and residential areas to the east. Boths sites have commercial and residential areas, as well as undeveloped plots of land in the south. The northeastern site is bordered by undeveloped lands to the north, the eastern site and undeveloped lands and residential areas to the south, the PR-130 (interior) to the east and undeveloped lands and residential areas to the west. The project Site is mostly open space that serves as dairy farms. The main buildings of the farms have been at the site since at least 1993, according to Google Earth Historical Imagery (Figure 1: Location Map; Figure 2: Site Photos; Figure 3: Proposed Project Drawings). *Compatible Land Use and Zoning* The project Site currently has a land use designation of SREP-A (*Suelo Rustico Común Especialmente Protegido – Agrícola*) according to the PR Land Use Plan, effective date November 30, 2015 and is zoned *A-G (*General Agricultural), according to the Zoning Map of the Municipality of Hatillo, effective date November 17, 2011 (Figure 4: PR Land Use Plan and Figure 4a: Zoning Map of the Municipality of Hatillo).

		The Puerto Rico Joint Regulations for the Evaluation and Issuing of Permits Related to the Development, Land Use and Business Operation, Table 6.71, allows the construction and operation of renewable energy projects, including solar renewable projects, on General Agricultural Land[19]. The western parcel and the eastern parcel of the project have approved Site Consultations (*Consulta De Ubicacion)* to allow for the project's construction parameters (Appendix B). The other parcel groups (northeastern) will undergo the same process for construction parameter approval. The site is located within the Special Karst Region, which is divided into three designations: APE-ZC (Área de Planificación Especial – Zona Especial), APE-RC (Área de Planificación Especial Restringida del Carso), and APE-RC-ZA (Área de Planificación Especial Restringida del Carso – Zona de Amortiguamiento) (Refer to Figure 4b: Karst Map). The area of the Karst where the project is located is the APE-ZC (*Area de Planificación Especial Zona Cársica*). Construction in the APE-ZC is allowed. In accordance with the regulations outlined in Section 4.3.3 of the *Plan y Reglamento del Área de Planificación del Carso (PRAPEC) de Puerto Rico*, any proposed project or activity within the *Área de Protección Especial de la Zona Cársica* (APE-ZC) requires notification to the PRDNER by the Office of Permit Management and Permit (OGPe, per its Spanish acronym), authorized professionals, or the Autonomous Municipality, as applicable. This ensures compliance with all relevant state and federal laws, regulations, permits, endorsements, and franchises without undermining the public policy of the aforementioned law Further detailed in Section

[19] OGPe. *Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo, Uso de Terrenos y Operación de Negocios*. Junio 2023.

		2.1.2, the OGPe is responsible for issuing notification to the DRNA for all proposed activities in the APE-ZC. Additionally, any permit issued within the APE-ZC must include notification to the DRNA by the entity granting such permit or authorization. Therefore, the proponent is not required to notify the PRDNER as the OGPe or equivalent holds primary responsibility for initiating and documenting such notifications for projects in the APE-ZC. As noted in the Environmental Recommendation (REA; 2024-579575-REA-300844) issued by OGPe for the overall project on August 13, 2025, the DNER indicated on page 4 that the project is located within the Karst region and highlighted the applicable laws and regulations—specifically the Law for the Protection and Conservation of the Karst Physiography of Puerto Rico (*Ley para la Protección y Conservación de la Fisiografía Cársica de Puerto Rico);* Puerto Rico Karst Planning Area Plan and Regulation *(Plan y Reglamento del Área de Planificación del Carso (PRAPEC) de Puerto Rico)*; and Law for the Protection of Caves, Caverns, and Sinkholes of Puerto Rico *(Ley para la Proteccion de Cuevas, Cavernas o Sumideros) de Puerto Rico*—that must be met for the project to proceed. Thus, notification requirements by the OGPe to the PRDNER were met. There are karstic features such as sinkholes, depressions, caves and mogotes on the premises. Some of the sinkholes serve as stormwater management under the current state of the parcels. The project will continue its use for stormwater management system in the Site. The project will incorporate buffer strips to provide separation and protection of the features. The mogotes will not be disturbed. As required by the PRDNER in the approval of the REA (p.4) and the Environmental Compliance Determination (p.6) (DEA; 2024-579575-DEA-3000947; Appendix J), buffers to be incorporated

		must be 10 meters wide, as required in the Law for the Protection of Caves, Caverns, and Sinkholes of Puerto Rico) The project will produce and sell green energy exclusively to the Puerto Rico Electric Power Authority for an initial term of 25 years with the option to renew for two additional terms of 5 years. The objective of the project is to maximize the use of the sun as a natural resource aiming to lessen the Island's reliance on burning fossil fuels for energy production. The project will also provide resiliency to the power supply during a Hurricane or other emergency which in turn will provide energy to critical infrastructure, such as the communication, transportation, education and health industries, as well as to citizens in the region. Subject to the contingency and emergency plans established by PREPA and LUMA, the project is designed to continue producing energy, even if some of the modules or components suffer damage during a major event. Because of its location, the project can provide energy during an emergency to the Hatillo Hospital (Health), as well as to other critical components such as PRASA'S local plants and pumps, the emergency response facilities in the region, schools and governmental offices. Milk Money, Inc. will continue operating in the eastern parcel because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. To maintain its milk-production operations, cows will be cared for on nearby farms where they graze and where the heifers are raised. That allows for double use of the land, since, according to the information provided, the land to be utilized has been sitting vacant due to the shifts in the milk industry economy on the Island.

		The parcels where the project will be located lie in areas with agricultural zoning, as stated previously, and have been used for livestock agriculture for at least 50 years, according to the project owner. This type of use is allowed under the PRAPEC, as stated in Section 4.4 as long as there is a 25-meter buffer between the cattle, pig, and poultry livestock farm and a spring, cave entrance, or sinkhole. Section 4.4.2 also states that *This Regulation shall not impair the acquired rights within the APE-RC, APE-ZC, and Buffer Zone as long as the activities or uses that provide benefits to the individuals or legal entities holding such rights continue. However, in the APE-RC District, once the activities permitted by the DNER cease, those activities shall thereafter be prohibited. Notwithstanding this, the Secretary of the Department of Natural and Environmental Resources may require corrective actions to current activities and uses, or to any future alterations, improvements, or expansions to physical installations, in order to harmonize those activities and uses with the purposes of the Karst Physiography Law".* Thus, continuance of Milk Money activities, if as indicated by project owner have been the same for over 50 years, would not be against the regulation, as long as it complies with any PRDNER requirement. Consequently, all of the livestock activities previously mentioned would have to comply with the regulation for the use to be acceptable. The areas where the PV Pannels will be located will not be impermeabilized. Walkways, corridors or small roads that will be created to access them will be paved with ballast or stones. *Scale and Urban Design* The project Site is mostly open space that serves as dairy farms. The main buildings of the farms have been at the site since at least 1993, according to Google Earth Historical Imagery. According to DTOP Aerial Imagery, the structure

		on the eastern parcels (milk Money, Inc.) appears to be visible since 1963, while the Toledo Farm structure appears to be visible since 1989. Currently, there are several structures on the parcels which are part of the farm infrastructure. The Site is located at the coordinates: 18.435182, -66.801484. The proposed project will alter the existing landform. As described, it is a large-scale solar panel project that will span across approximately 250.88 acres of land Currently, the western property (Gustavo Toledo) is used for agricultural purposes for cattle grazing but is underutilized. The eastern property (Milk Money) is used for grazing and milking cows. Lastly, the northeastern property (Sucesión González) is not currently in use. Therefore, most of the land to be utilized has been underused due to the shifts in the milk industry economy on the Island. The project will occupy approximately 85% of the area and the remaining 15% of the lots will be maintained in its current use as part of the existing dairy farms. The areas natural and man-made environments in the parcels where it will lay will be altered through tree clearance, topography changes, and changes to the visual character of the area, among others. The project will convert the existing rural/agricultural landscape by replacing the natural open-space patterns and introduce a shift in the site's visual identity and urban design pattern. However, solar panels represent low profile structures that will not fully impermeabilized the area, thus allowing substantial portions of the land to remain as green, pervious areas. Vegetation will be selectively removed where necessary; in other areas, work will occur over existing grass cover. Moreover, the project will use a mounting system designed to follow the existing site topography, thereby minimizing earthwork and reducing alterations to the terrain.

		Two new buildings (both SCADA buildings; the Administration Building will be located in the northwestern parcel's existing building) will be constructed in the Site, which will also entail changes in the visual character. Grading activities for the whole project will cause changes in topography as well as in the stormwater management in the parcels. Studies have been prepared to address these changes and mitigate them accordingly (refer to section 19.2 for details regarding drainage and runoff changes). One of the mitigation measures intended for stormwater management in the western parcel will benefit a community to the southeast (Barriada Colon), by the construction of a berm that will prevent flow from reaching the community. Also, it will lower stormwater volume reaching PR-130. The areas' karstic features will remain unchanged, and buffers will be provided as required by regulation. In compliance with Rule 3.4.2.1(a) of the Joint Regulation 2023, which states that: *"Every construction project or activity must plant a minimum of five (5) trees for each 'cuerda' or fraction thereof that is impacted by the construction project or activity.",* this mitigation requirement is intended to be fulfilled inside the parcels that compose the project, thus increasing the current amount of trees in the area. The project's western and eastern parcels have undergone Site Consultations (*Consulta De Ubicacion)* which have been approved by the Puerto Rico permitting agency. The remaining northeastern parcel will undergo the same process. Therefore, the permitting agency has determined that the proposed use is compatible with the area. The landscape modifications associated with the project will introduce a

			clean, renewable source of electrical energy that will benefit the surrounding region, representing a positive improvement for the site and its community.
19.2.	Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	3	*Slope and Soil Suitability* According to the USGS Topographical maps, the Site's elevation is approximately between 75 and 125 meters above sea level (Figure 5: Topographic Map; Figure 5a: Survey Plans). It is made up of small limestone hills known as mogotes and intervening valleys that occasionally contain ground depressions and sinkholes. The depressions can be seen in various stages, with some showing a surface break that exposes the underlying rock. These features are known as sinkholes[20]. The slope is mostly toward the northeast, although it varies in some areas due to the presence of mogotes and depressions at the Site. On the western parcel, six sinkholes were identified, that manage part of the stormwater on the Site, four of which are functional. According to the Geotechnical and Geophysical Study[21] (included in Appendix D), in the western parcels, a cavity was observed in the area where the detention basin for Sinkhole #3 will be located. In the area where the detention basin for Sinkhole #5 will be located, two cavities were observed.[22] However, the study goes on to state that cavernous areas that could cause a collapse of the detention basins proposed were not observed. It also states that electrical resistivity studies performed did not find cavities that may lead to vertical collapses in Sinkholes 2, 3, 4 and 5. They recommended that a Geotechnical Engineer or a Professional Geologist, or his representative, be present at all

[20] Evaluación de Geofísica y Geotecnia a Sumideros y Charcas propuestas Finca Gustavo Toledo y Efraín García Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014

[21] Id.

[22] Id.

		times during earthworks in the project to observe all activities. In the eastern parcel, a cave was identified, as well as three functional sinkholes and depressions, that currently manage the stormwater from the Site. The northeastern parcel has three (3) Sinkholes according to the Hydrologic and Hydraulic Study prepared for the parcels (Appendix G).[23] Per the USGS U.S. Landslide Inventory and Susceptibility, most of the Site is located at an area which for the most part has low landslide susceptibility, except for the area on the eastern parcel (where the northern mogote lies), which has a moderate and high probability, the area to the south in the western parcel where another mogote lies which has moderate susceptibility and some scattered areas in the north and northeast the western parcel which are classified as having moderate susceptibility (Figure 6: Landslide Susceptibility Map). With that being said, solar panels will not be installed in the mogote areas in either western or eastern parcel, and as will be discussed below, a geotechnical study performed at the Site, indicated site conditions are adequate for the type of project. A Preliminary Geotechnic Study was performed on the western parcel (Appendix C). Based on its results, site conditions are considered adequate to design the proposed structures on conventional type of foundation system. The project site is classified as Seismic Site Class D (stiff soil profile) under IBC 2009/UBC 97. This is a common soil condition that produces somewhat higher ground shaking than rock but is fully addressed by standard seismic design provisions. The building should be designed with the Site D amplification factors prescribed in the code, ensuring adequate performance during

[23] Xzerta Solar Project Hydrologic and Hydraulic Study. CA Engineering, PSC. November 2025.

		the design earthquake. The geotechnical study indicates during ground disturbances, exposed subsoil shall be compacted until a firm surface is achieved and fill material shall consist of AASHTO Classification A-4, A-2-4, A-2-6. There was no evidence of the presence of ground water level within the depth drilled during the preparation of the Geotechnical Study for the western parcel[24]. The Geophysics and Geotechnical Evaluation of the Western Parcels (Appendix D) indicates that the project (western parcels) is located in an area where, under current conditions, stormwater runoff is disposed of through sinkholes[25]. Most of the runoff originating both inside and outside the western property boundaries drains exclusively into the sinkholes located on the site. In the northern portion of the western property, surface runoff flows toward and discharges onto sections of highways PR-491 and PR-130[26]. For the eastern parcel, the Geotechnical and Sinkhole Assessment Report for the Hatillo Solar Project (Appendix E) concludes that the site's natural drainage occurs through existing sinkholes within the Aymamón Limestone formation, which are functioning as active discharge points for surface runoff. The subsurface characterization confirms that infiltration through these sinkholes is hydraulically feasible and consistent with the natural behavior of the karst system.[27] The report recommends preserving the existing drainage pattern while incorporating sedimentation and erosion control measures to protect water quality and prevent clogging or instability

[24] Report on the Preliminary Geotechnical Exploration Performed at the Site of the Solar Photovoltaic Array, Hatillo, Puerto Rico. Jaca & Sierra. July 2012

25 Estudio Hidrológico – Hidráulico Proyecto Hatillo Solar Farm – Finca Solar De 20MW Hatillo, Puerto Rico. SG CONSULTANT. November 2013

[26] Estudio Hidrológico – Hidráulico Proyecto Hatillo Solar Farm – Finca Solar De 20mw Hatillo, Puerto Rico. SG Consultant. November 2013.

[27] Geotechnical Evaluation Underground Disposal of Runoff Existing Sinkholes PR-130, Km 7.0, Naranjito Ward, Hatillo, Puerto Rico. GEO-Geotechnical Engineering Construction Material Resting. January 2025

		around the sinkholes. The study also provides general geotechnical observations based on borings, resistivity tests, and visual inspections; however, specific design parameters for structural foundations, bearing capacity, and settlement analysis were not included in the scope of this report. A separate geotechnical investigation will be required prior to construction to determine soil bearing capacity, pile or footing design parameters, and site-specific recommendations for the solar panel support structures and access roads. For the northeastern parcel, geotechnical studies have been commissioned to develop site-specific design parameters for construction, verify karstic features in the area, and refine the hydrologic and hydraulic analysis that was performed on the Site. The findings will be incorporated into the final design documentation once available. The Natural Resources Conservation Services (NRCS) indicated that the soils in the area have been identified as: • AlC—Almirante sandy loam, Slope: 5 to 12 percent. Depth to restrictive feature: More than 80 inches Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water supply, 0 to 60 inches: Moderate (about 7.8 inches) • BcC –Bayamon sandy loam, Slope: 5 to 12 percent. Depth to restrictive feature: More than 80 inches Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches Frequency of flooding:

		None Frequency of ponding: None Available water supply, 0 to 60 inches: Moderate (about 7.1 inches) • BsC – Bayamon sandy clay loam, Slope: 5 to 12 percent. Depth to restrictive feature: More than 80 inches Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water supply, 0 to 60 inches: Moderate (about 7.8 inches) • GeC – Guerrero sand, Slope: 2 to 12 percent. Depth to restrictive feature: More than 80 inches Drainage class: Excessively drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water supply, 0 to 60 inches: Low (about 5.9 inches) • RlC – Rio Lajas sand, Slope: 2 to 12 percent. Depth to restrictive feature: More than 80 inches Drainage class: Excessively drained Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None. Available water supply, 0 to 60 inches: Low (about 5.1 inches) • RsF – Rock outcrop-San German complex, 20 to 60 percent. Depth to restrictive feature: 5 to 14 inches to lithic bedrock Drainage class: Well drained. Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches

		Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 80 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 2.0 Available water supply, 0 to 60 inches: Very low (about 0.8 inches) • SgD – San German gravelly clay loam, Slope: 5 to 20 percent. Depth to restrictive feature: 5 to 14 inches to lithic bedrock Drainage class: Well drained. Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 80 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 2.0 Available water supply, 0 to 60 inches: Very low (about 0.8 inches) • SgF – San German gravelly clay loam, Slope: 20 to 60 percent. Depth to restrictive feature: 5 to 14 inches to lithic bedrock Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Calcium carbonate, maximum content: 80 percent Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 2.0 Available water supply, 0 to 60 inches: Very low (about 0.8 inches) • TaD2 – Tanama clay, Slope: 12 to 20 percent. Depth to restrictive feature: 12 to 20 inches to lithic bedrock Drainage class: Well drained Capacity of the most limiting layer to transmit water (Ksat):

		Moderately low (0.01 to 0.14 in/hr) Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Available water supply, 0 to 60 inches: Very low (about 2.8 inches) According to the USGS Geologic Map of the Camuy/Hatillo Quadrangle, Puerto Rico (Figure 8), the geology of the Site is classified as Blanket San Deposits and Aymamon Limestone (Qbs and Tay), respectively. *Erosion* The project layout and structural design have been developed in consideration of the site's topography. The photovoltaic modules will employ a mounting system that conforms to the natural contours of the land, minimizing grading and earth disturbance. Vegetation clearing will be limited to access roads and designated work areas; the project does not intend to leave the entire site bare or free of vegetation. This approach applies across all farms within the project area. Given the project's scale, construction will proceed in phased segments: beginning at the eastern farm (Eastern Parcels) and advancing westward (Western Parcels) and northeast (Northeastern Parcels). Initial activities will focus on clearing access roads. Vegetation will be selectively removed where necessary; in other areas, work will occur over existing grass cover. Panel foundations will utilize a racking system installed by driving H-beams into the ground; panel leveling is achieved by the racking system rather than through ground modification. With an estimated 117,000 panels to be installed, the phased sequence allows orderly progression, stabilization of completed areas, and minimization of exposed soils before advancing

		to subsequent phases. This method is intended to reduce temporary disturbance and support ongoing site stabilization and erosion control. Excavations and topography alterations will be required for the construction of the detention ponds that will serve to improve the water quality of the runoff reaching the sinkholes. On the western parcel, works will also be performed to alter the existing basins to redirect stormwater to the working sinkholes. Also, construction of the foundation for the two new buildings in the project (both SCADA buildings; the Administration Building will be located in the northwestern parcel's existing building) will require excavations and grading. Thus, with any construction project, changes in the topography would result. The activity will affect the current patterns of stormwater flow inside the project area. Earthwork (including detention ponds) in all parcels is estimated to be 128,709 cubic meters. The surplus material from the earthworks will be transported by a PRDNER authorized transporter to be disposed of at an authorized receiving property (*finca receptora*) that complies with Section 3.5.5.1 of the Joint Regulation 2023. Construction activities have some potential to affect on-site erosion. An erosion control plan will be implemented at the Site. The EPA 2022 NPDES Construction General Permit will be procured, as well as the Puerto Rico DNER *Permiso Unico Incidental,* which includes the local erosion and sedimentation control permit. During construction, the sedimentation and erosion control measures established in the plan will be implemented at the Site and nearby catch basins to prevent sediments from reaching water bodies. Permit conditions will be followed to minimize effects. Once construction is complete, some areas of the project Site will be impervious, which will reduce the potential for erosion

		compared to pre-project conditions, while most of them will be covered by the photovoltaic modules and will continue to have the existing vegetation underneath them. Areas impacted by the project will be permanently stabilized with the measures indicated in the previously mentioned erosion control plans. Thus, potential impacts due to site erosion after construction will be minimal. Erosion control measures will also be installed to prevent sedimented water from reaching the detention ponds, the karstic features and the wetland. The BMPs identified for this project will be selected and designed to both preserve the existing hydrology of the on-site non-jurisdictional wetland system and karstic features and to minimize potential indirect impacts associated with construction and post-construction activities. *Drainage and Stormwater Runoff* The project is located in an area where, under current conditions, stormwater runoff is disposed of through sinkholes[28]. Most of the runoff originating both inside and outside the western property boundaries drains exclusively into the sinkholes located on the site. In the northern portion of the western property, surface runoff flows toward and discharges onto sections of highways PR-491 and PR-130[29] (Appendix F: H-H Western Parcel). Of the sinkholes identified during the field surveys in the western parcel, six (6) lie within the property limits. Of those, only four (4) are fully functional for conveying stormwater into the subsurface. The remaining two (2) provide little to no

[28] Evaluación de Sumideros Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. Novembrer 2013

[29] Estudio Hidrológico – Hidráulico Proyecto Hatillo Solar Farm – Finca Solar De 20mw Hatillo, Puerto Rico. SG Consultant. November 2013.

		drainage capacity and therefore have limited usefulness[30]. After performing the saturation and infiltration tests on said sinkholes on the western parcel, the locations and design requirements for the detention ponds needed to mitigate the project's stormwater runoff were identified. For the western parcel, since not all mapped sinkholes are functional under the proposed conditions, the drainage plan will redirect runoff to the sinkholes demonstrated to be hydraulically adequate. This approach is supported by: (1) measured hydraulic capacities from field saturation/infiltration testing and geotechnical evaluation; (2) the hydrologic–hydraulic model's intentional routing of additional contributing sub-basins to those receiving sinkholes; and (3) detention storage with outlet flow-control/energy-dissipation features that keep discharges at or below the tested limits. Accordingly, the selected sinkholes can accept redirected basin flows without exceeding design criteria. It was recommended that the outlets of the detention-pond drainage pipes include features that reduce flow velocity to mitigate potential erosion damage to the ground surface. Acceptable energy-dissipation measures include energy dissipators, stilling basins, riprap, erosion-control mats, and gabions. The proposed mitigation measures in the western parcel (detention ponds) achieve a reduction in peak flow. The hydrologic analysis shows that these structures can effectively control the peak runoff from their respective sub-basins[31]. Buffer zones will be provided for sinkholes not used for water management purposes. Furthermore, the

[30] Id.

[31] Estudio Hidrológico – Hidráulico Proyecto Hatillo Solar Farm – Finca Solar De 20mw Hatillo, Puerto Rico. SG Consultant. November 2013.

		measures proposed will aid mitigating flooding problems in the adjacent community to the southeast (Barriada Colon), by the construction of a berm that will prevent flow from reaching the community. Also, it will lower stormwater volume reaching PR-130. Both measures will be achieved by rerouting runoff to Subbasin 2, which discharges on Sinkhole #5. For the eastern parcel, where the wetland is located, the project design includes stormwater management measures to ensure no adverse hydrologic impact to adjacent karstic features as well as the wetland. According to the Hydrologic and Hydraulic Study for the Eastern parcels (Appendix A), under both existing and proposed conditions, stormwater runoff is naturally conveyed to karstic sinkholes within the project area. For the project's stormwater management, detention ponds will be constructed near the depressions adjacent to the sinkholes. The post-development hydrologic modeling indicates that the detention ponds will regulate flow so that discharge volumes and peak rates remain equal to or below pre-development conditions, thereby preventing any increase in stormwater volume reaching the sinkhole system. The wetland in the eastern parcel is in a depression next to a sinkhole identified as Sinkhole #2. Stormwater generated on-site in the basin that discharges to the wetland will be routed through a detention basin engineered to promote laminar flow and progressive sediment capture prior to discharge. This treatment system (detention basin and laminar flow outlet design) will be designed to maintain discharge water quality consistent with current standards, preventing the introduction of suspended solids or contaminants into the receiving wetland. Currently, stormwater on the property infiltrates naturally through the sinkholes, which serve as the primary drainage mechanism. The project's

		design intent is to preserve this existing discharge pattern, allowing runoff to continue following the natural flow path through the detention basin before infiltration. The inclusion of buffers and detention features between the solar infrastructure and the wetland will further reduce erosion potential and enhance water quality treatment prior to discharge. These measures will safeguard groundwater quality, preserve wetland function, and ensure regulatory compliance. The Hydrologic and Hydraulic Study prepared for the northeastern parcel (Appendix G), indicates that it drains to three sinkholes that receive most of the surface runoff from the site, and a large marsh is located immediately north of the project area. The two northern sinkholes (Sinkholes 2 and 3) are located in the neighboring parcel to the north of the Site. To address the increase in runoff generated by the development, six (6) detention ponds are proposed. These ponds will be sized so that peak flows leaving the site under proposed conditions do not exceed those of existing conditions. Because the sinkholes are located on a slope, any runoff that exceeds their infiltration capacity will flow northward. Overflow from Sinkhole 1 drains into J-1, while overflow from Sinkholes 2 and 3 flows north toward the large wetland outside the parcels. To manage the frequent overflow from Sinkhole 1, Pond 4 will be designed with an emergency spillway. Given the expected frequency of flooding, ensuring the structural stability of Pond 4 is a critical design consideration. The geometry of the sinkhole depressions was obtained from topographic plans prepared by Geomatic Solutions and Surveying, PSC. The intake capacity of the sinkholes was assumed to be constant at 5 cfs, based on infiltration studies conducted at similar sinkholes near the project site in Hatillo, PR. The results of the sinkhole loading analysis indicate that the proposed detention ponds will effectively mitigate runoff entering and overflowing the

		sinkholes. Under mitigation conditions, the peak overflow from all three sinkholes is equal to or less than that observed under existing conditions for all analyzed return periods. Thus, the proposed detention system is sufficient to manage runoff without increasing flood risk. However, careful attention must be given to the structural design of the ponds—especially Pond 4—to ensure long-term stability under frequent overflow conditions. Once geotechnical report is completed, the proposed design must be reevaluated to ensure the flooding condition of the area will not worsen. Stormwater outside the project parcels that do not drain towards the sinkholes, on PR-491, is managed via curb and gutter to the area's stormwater system which discharges into Quebrada Seca, located approximately 7,625 ft (1.44 miles) to the north of the Site at its closest point into catch basins. On the PR-30 it flows freely in the streets, grass and gutters. (Figure 9: Vicinity Map). During project operation, in order to discharge stormwater through the sinkholes, as indicated in the DEA (p.6), the project will comply with all applicable directives included in the Puerto Rico Underground Injection Control (UIC) Regulation, Regulation No. 3029 (Resolution R-83-23-1) (Reglamento para el Control de Injeccion Subterranea), regarding stormwater discharge to sinkholes. Stormwater runoff could become contaminated with chemicals typically used during construction through the daily use, transportation, and storage of these materials. Therefore, implementation of industry standard construction BMPs will be required to reduce and eliminate potential contamination of stormwater and non-stormwater discharges from the construction site. These are conditions of both Erosion Control Permits (Federal and Local) that the project must

			follow. When properly controlled, potential contamination of stormwater runoff is minimized, mitigating minor adverse impacts. No impacts from stormwater runoff post-construction are anticipated.
19.3.	Hazards and Nuisances including Site Safety and Noise	3	*Hazards and Nuisances* In the area where the project will be developed nuisances that could affect the project are not identified, as the areas surrounding the Site are mostly agricultural and residential. Hazards resulting from the project operations are addressed in the Site Safety section below, as well as those related to noise. The Geotechnical Evaluation of Underground Disposal of Runoff Existing Sinkholes[32] (included in Appendix E) prepared for the eastern parcels, indicated that there were man-made ponds that appear to be filled with a mixture of water and cow manure near Sinkholes 2 and 3 of said parcels. These sinkholes are connected via man-made trenches to depressions that collect natural runoff from the area and apparently from the man-made ponds. The pond associated with Sinkhole 2 is located southwest of the sinkhole (outside of the project area), while that associated with Sinkhole 3 is located south of the Sinkhole In the REA, the PRDNER stated that these ponds did not comply with applicable regulations and that all discharges must be halted immediately. They further indicated that wastewater from the dairy operations must be managed through alternative, compliant measures, noting that such discharges could potentially contaminate the area's aquifer. These improper wastewater discharges from the dairy operations need to be addressed to comply with the PRAPEC and other pertinent regulations for

[32] *Geotechnical Evaluation Underground Disposal of Runoff Existing Sinkholes PR-130, Km 7.0, Naranjito Ward, Hatillo, Puerto Rico. GEO-Geotechnical Engineering Construction Material Resting. January 2025*

		the use to be acceptable and not become a nuisance or hazard for the project. *Site Safety* The proposed project would not create a risk of release of hazardous substances or other dangers to public health. It is not located near any hazardous operations. Petroleum tanks are not included in this phase of the project. BESS and the transformers included as part of the project will include secondary containment measures and the facility will prepare an SPCCP in accordance with EPA and PRDNER regulations to cover these and any other onsite containers that could pose a spill risk. During the Site Visit, one emergency generator with its tank was observed on the eastern parcel and another one on the western parcel. The generator on the western parcel will be removed from the Site, following all PRDNER applicable Regulations. For the eastern parcel tank, as indicated in the Explosive and Flammable Section, the distance from the tank to the Proposed Administration Building and to the SCADA Building on the Western parcel and to the SCADA building on the eastern parcel exceeds the ASD, and none of these facilities will have sensitive uses. Regarding the third tank located to the north of the western parcel, the distance to the Administration and SCADA building also exceeds the ASD. Furthermore, we have been informed that the project will not have permanent employees at the Site. Two to three people will visit the Site once or two times per week, approximately. Thus, from the information gathered the Project is in compliance with 24 CFR Part 51 Subpart C, with regard to above-ground storage tanks, with volumes of 100 gallons or more, excluding the categories of containers not covered by 24 CFR Part 51 Subpart C

		requirements, which were indicated in the Explosives and Flammable section (Section 17.5). To meet the Minimum Technical Requirements (MTR) established by LUMA, the energy storage system will consist of thirteen (13) prefabricated 40-foot containerized units, each rated at approximately 2 MW, for a total of 27 MWh of storage capacity. Each container will house Narada brand (or equivalent) advanced battery modules—lithium-ion or comparable technology suitable for utility-scale applications—integrated with inverters, control systems, and fire suppression equipment. While lithium-ion batteries pose potential environmental and safety risks—including thermal runaway, fire, and hazardous material release—the system design will comply with NFPA 855 (Standard for Installation of Stationary Energy Storage Systems), and UL 9540/1973 safety standard. Each container will be placed on an impermeable concrete pad of approximately 18,352 square meters with secondary containment to prevent soil or groundwater contamination in the event of a spill or leak. They will be located near the switchgear facilities on the property with cadaster number 029-000-007-12. The transformation of the produced electricity from low voltage to medium voltage will be carried out in two steps. First, one (1) transformer of 3 MVA will be installed for every two inverters, with a voltage ratio of 0.6 /34.5 kV. The power generated and transformed will be collected and linked at the medium voltage switchgear. Subsequently, a single transformer with a power of 95 MVA will be installed for the transformation to 115 kV, which is the assigned voltage at the interconnection point, at the substation to be built that will serve as the energy distribution center from where the interconnection line will start to the point designated by LUMA.

		The 10,000-gallon Hitachi transformer proposed for the Xzerta project complies with NFPA 850 (Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations). It will be a high-voltage transformer that will use natural-ester dielectric fluid rather than standard mineral oil. The fluid has a much higher flash/fire point and is described as safer, biodegradable, and more environmentally friendly. This natural-ester fluid is non-PCB, because modern insulating fluids for transformers are required to be PCB-free. Hitachi Energy has developed a technology called TXpand for its large, oil-filled power transformers. This design is aimed at improving "rupture resistance" so that, in the unlikely event of a catastrophic internal failure (such as a fault), the tank deformation is controlled and minimizes any oil spilled and predictably channels what little oil escapes for more easy containment. The switchyard of Xzerta, which contains the Hitachi transformer, is located 280 meters in a straight line from the nearest residence. Hitachi transformers designs include features to reduce noise built into design and materials. The 3 MVA transformers will use non-PCB biodegradable dielectric fluid and will comply with all applicable requirements. These components do not involve the storage or handling of combustible or explosive fuels and therefore do not constitute a hazardous facility under 24 CFR Part 51 Subpart C. Site safety will be maintained through restricted access, proper grounding, and routine inspections. As will be discussed in Section 2107 Public Safety - Police, Fire and Emergency Medical, Xzerta will implement protocols to manage and mitigate emergencies that could occur at the Site.

		The interconnection will be an aerial transmission line consisting of eight (8) monopoles coming from the solar farm's switchgear which will be located at the north end of the 2nd estate or land in parallel with the current 240 KV aerial transmission lines. The aerial 115 KV transmission line will consist of 8 monopoles to be installed in parallel with the 240 KV transmission towers, using PREPA's easement, and at a separation of 100 ft running until the nearest LUMA substation at Hatillo for a total of 0.6 miles. Additional upgrades, if required, will be performed within the Hatillo substation to allow the new addition of new lines With regard to construction of seismic and hurricane resistant structures, the design will follow the ASCE (American Society of Civil Engineers) and any other applicable standard. The inverters, Battery Energy Storage System (BESS) and transformers will generate heat, which will be dissipated by air cooling using fans. The heat generated by inverters, BESS and transformers will not be reused. Portable toilets will be provided for use during both construction and operational phases, and their contents will be emptied and disposed of by an approved contractor at a PRASA wastewater treatment facility. During operation, residual water resulting from handwashing or other purposes will be stored in an aboveground retention tank to be located near the administrative office on the western property (Gustavo Toledo). For said aboveground tank, its contents will also be emptied and disposed of by an approved contractor at a PRASA wastewater treatment facility. It is possible that during construction of the project, construction traffic, noise and dust could be considered as a nuisance to immediate

		neighbors. Also, the contractor may use an electric generator of approximately 30 kV. The contractor will be responsible for obtaining all required use permits from OGPe. Based on the limited duration and scale of use, no adverse air quality impacts are anticipated. As discussed in the Stormwater Section above, the proposed project would implement industry standard BMPs for erosion and sedimentation control that would prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to water bodies as a result of conditions created by grading operations, see Mitigation Measures and Conditions [40 CFR 1505.2(c)], below. As discussed in the Air Quality section of the Statutory Checklist above, the project will be located in an attainment area for air pollutants. *Noise* The proposed project may result in temporary construction noise. During its operation, the project will comply with all applicable regulations regarding noise, including the PRDNER Regulation for the Control of Noise Pollution (*Reglamento para el Control de la Contaminación por Ruidos*). As stated in Section 17.9 Nose Abatement and Control, according to 24 CFR Part 51, Subpart B, *"Responsible Entities under 24 CFR part 58 must take into consideration the noise criteria and standards in the environmental review process and consider ameliorative actions when noise sensitive land development is proposed in noise exposed areas* (51.101(a)(2)(i)). It goes on to state in 51.101(a)(3) that: *"HUD support for new construction. HUD assistance for the construction of new noise sensitive uses is prohibited generally for projects with unacceptable noise exposures and is discouraged for projects with normally unacceptable noise exposure. This policy applies to all HUD programs providing*

		assistance, subsidy or insurance for housing, manufactured home parks, nursing homes, hospitals, and all programs providing assistance or insurance for land development, redevelopment or any other provision of facilities and services which are directed to making land available for housing or noise sensitive development." The proposed project does not involve the development of noise-sensitive uses; does not expand the existing building footprint; does not involve new construction for residential use or rehabilitation of an existing residential property. Notwithstanding, as required by PRDOH, Zymmetry Environmental Management Corp., was engaged to perform a HUD Environmental Noise Assessment and Prediction Report**.** In the Report prepared, they indicated that "After a detailed regulatory evaluation to determine the applicability of Title 24 CFR 51.101 and Standard ASA/ANSI S12.9 PART 4 to the subject non-residential, non-habitable renewable power plant project, Zimmetry concludes that it is evident the proposed 60 MW AC Renewable Photovoltaic Power Plant does not conform to any description of a noise-sensitive use. Therefore, the HUD Environmental Noise Assessment and Prediction procedure does not apply to this project.
20. SOCIOECONOMIC		
Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
20.1. Employment and Income Patterns	1	During project construction, there would be a temporary and short-term economic benefit. It is expected to have approximately 10 to 20 employees during the construction phase and

		approximately 10 employees during operations. These jobs could be supported by the skill sets available in areas labor pool. Furthermore, these jobs could be available for low-income, unemployed and minority members of the local community. Therefore, no adverse impact related to employment and income patterns would occur. Rather, the proposed project would result in a minor beneficial impact during both construction and operation, in that, it would create additional jobs.
20.2. Demographic Character Changes, Displacement	2	According to the 2023 American Community Survey 5-Year Estimates, the Municipality of Hatillo had a population of 38,266 people[33] with a median age of 45.2 and a median household income of $28,001[34]. Between 2022 and 2023 the population of the Municipality declined by approximately 0.167%[35]. The largest ethnic groups in the Municipality of Hatillo are Hispanics (99.4%)[36] (Figure 10). The Municipality of Hatillo has an employment rate of 41.0%[37]. The largest industries are Educational Services and health care and social assistance, Retail Trade, Arts, entertainment, and recreation, and accommodation and food service, and the highest paying industries are Real Estate and Rental and Leasing, Wholesale Trade and Information. From 2022 to 2023, employment in Hatillo grew at a rate of approximately 1.6%[38] According to the US Census Bureau 2023 American Community Survey 5-Year Estimates, Municipality of Hatillo has 36.4% percent of the population living under the poverty

[33] https://data.census.gov/table/ACSDP5Y2023.DP05?g=050XX00US72065

[34] https://data.census.gov/profile/Hatillo_Municipio,_Puerto_Rico?g=050XX00US72065

[35] https://datausa.io/profile/geo/hatillo-municipio-pr

[36] https://data.census.gov/table/ACSDP5Y2023.DP05?g=050XX00US72065

[37] https://data.census.gov/profile/Hatillo_Municipio,_Puerto_Rico?g=050XX00US72065

[38] https://datausa.io/profile/geo/hatillo-municipio-pr

		line. This project will promote the economy in the area and will be beneficial to the community. According to the 2020 Decennial Census the Barrio Narranjito - where the action will take place - has a population of is 3,765 individuals. The median household income is estimated at $22,480, employment rate at 39.3%, and 45.5% of people live below the poverty rate. Finally, 99% of the population identifies as Hispanic or Latino[39]. The area where the project will be located has been previously manipulated, as it serves as a grazing cattle farm. The realization of the project would not displace the current population, since there is none inside the project parcels, therefore, there would be no displacement of residential uses and a relocation plan would not be required. Regarding commercial facilities on the parcels, the western property (Gustavo Toledo) is used for agricultural purposes for cattle grazing but is underutilized. The eastern property (Milk Money) is used for grazing and milking cows. Lastly, the northeastern property (Sucesión González) is not currently in use. Therefore, most of the land to be utilized has been underused due to the shifts in the milk industry economy on the Island. The eastern parcel (Milk Money, Inc.) will continue operating in the eastern parcel because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. To maintain its milk-production operations, cows will be cared for on nearby farms where they graze and where the heifers are raised.

[39] https://data.census.gov/profile/Naranjito_barrio,_Hatillo_Municipio,_Puerto_Rico?g=060XX00US7206556086

		The project does not involve residential construction or related activities; therefore, it will not influence racial, ethnic, or income patterns within the area's housing market. For the same reason, it will not create concentrations of low-income or disadvantaged populations in a manner inconsistent with HUD site and neighborhood standards. Additionally, the environmental impacts of the proposed project will not disproportionately affect low- or moderate-income or minority individuals or communities. Because the project will be located entirely within the designated parcels, no streets or roadways will be affected in a way that could create physical barriers, restrict access, or isolate any neighborhood or population group from local services, facilities, institutions, or other areas of the municipality. The project is intended to supply clean energy to the LUMA electrical grid. LUMA will subsequently distribute this energy to the areas served by the Hatillo substation. The final allocation and end use of the generated energy will be determined by LUMA. The proposed project is not expected to have an adverse impact on the demographic character of the community.
21. COMMUNITY FACILITIES AND SERVICES		
Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
21.1. Educational and Cultural Facilities	2	The project is situated in a rural area. Notwithstanding it is categorized by the US Census as Urban. In a radius of half a mile from the Site, there are three schools: Timoteo Delgado school approximately 0.38 miles south, Jose Gautier Benitez School approx. 0.43 miles south,

		and B. Creative Academy Hatillo approximately 0.45 miles south. There is a community center (Centro de Actividades Pajuil) and several churches near the Site (Figure 11: Community Facilities and Services). The project's purpose is to supply the area with power generated by solar panels. Therefore, the proposed project's impact on schools would not be considered adverse or substantial. It should be noted that the project is designed to supply clean energy to the LUMA electric grid. LUMA will subsequently distribute this energy to the areas served by the Hatillo substation. The final allocation and end use of the generated energy will be determined by LUMA. As a result, the specific facilities or communities that will benefit from this energy cannot be determined at this time. However, it is expected that the project will also provide resiliency to the power supply during a Hurricane or other emergency which in turn will provide energy to critical infrastructure, such as the communication, transportation and health industries, as well as to citizens in the region. Subject to the contingency and emergency plans established by PREPA and LUMA, the project is designed to continue producing energy, even if some of the modules or components suffer damage during a major event. Because of its location, the project can provide energy during an emergency to the Hatillo Hospital (Health), as well as to other critical components such as PRASA'S local plants and pumps the emergency response facilities, schools and government buildings in the region.
21.2. Commercial Facilities	2	There are several commercial properties adjacent and within one mile of the Site, including restaurants, hardware store, gas stations, landscaping service, cattle farms (vaquerias) and nails and beauty salons (Figure 11: Community Facilities and Services).

			Regarding commercial facilities on the parcels, the western property (Gustavo Toledo) is used for agricultural purposes for cattle grazing but is underutilized. The eastern property (Milk Money) is used for grazing and milking cows. Lastly, the northeastern property (Sucesión González) is not currently in use. Therefore, most of the land to be utilized has been underused due to the shifts in the milk industry economy on the Island. The eastern parcel (Milk Money, Inc.) will continue operating in the eastern parcel because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. To maintain its milk-production operations, cows will be cared for on nearby farms where they graze and where the heifers are raised. The project could provide patrons and customers for these businesses. Thus, the proposed project would not create an adverse impact on commercial facilities.
21.3.	Health Care and Social Services	2	*Health Care* There is a doctor's office (Elite Health Medical - Jose M. Toro MD) located 0.32 miles south of the Site, a Medicaid Office 0.72 miles north of the site, a nursing home north of the site across PR-491 (Figure 11: Community Facilities and Services). The proposed project would not adversely impact the use of these health care services. The nearest Hospital, Hospital/CDT Municipal/ Emergency Room of Hatillo is HATIMEDIK, which is located 3.51 miles northwest of the site. Emergency services availability is discussed in Section 21.7. Public Safety - Police, Fire and Emergency Medical. *Social Services*

			The proposed project would not have an adverse effect on social services. Three churches are located near the project. The closest one is 0.15 miles west, the second is 0.42 miles north, and the third is 0.70 miles west of the project. A Communal Center is located 0.41 miles west of the project site. (Figure 11: Community Facilities and Services).
21.4.	Solid Waste Disposal / Recycling	2	Lead Based Paint containing materials (LBP) was identified in ceramics on walls on the buildings of the western and northeastern parcels. Before project commencement and prior to the demolishing of a structure containing LBP must be abated or removed. They should be managed following the work practices and procedures by a licensed LBP contractor and dispose of as contaminated waste in an approved LBP landfill site. The contractor must submit to the DRNA the abatement work plan for its approval. The generator and tank identified on the western parcel will be removed from the premises as part of the project. The removal will follow all applicable environmental regulations. The tank must be properly emptied, cleaned, and removed by a qualified contractor, and all residues and contaminated materials must be handled according to federal and local rules. Soil sampling may be required if visual or olfactory evidence suggests a release, or if large excavations are planned in the tank area. During construction, the project's contractor will be required to file a Recycling Plan to the DNER, which mut be followed. During construction, approximately 40 cubic yards of non-hazardous waste will be generated weekly. This includes domestic waste -generated by contractor's personnel- and construction waste streams which will be divided into recyclables and general waste (landfill waste).

			The contractor will engage a licensed waste management provider with current permits issued by DNER. This provider will be responsible for disposing of the project's waste at facilities authorized to receive the waste in the terms of their DNER permit. The surplus material from the earthworks, totaling 128,709 cubic meters, will be transported by a PRDNER authorized transporter to be disposed of at an authorized receiving property (*finca receptora*) that complies with Section 3.5.5.1 of the Joint Regulation 2023. During operation, recycling will be encouraged by providing the appropriate containers at the Site. As during construction, during project operation, a carrier authorized by the PR DNER will collect waste and recycling materials to dispose of them in the appropriate location authorized by the DNER to receive the waste in their permits. The PV and Battery Energy Storage System (BESS) project will generate minimal hazardous waste during normal operation. Any waste materials, such as used oils, filters, batteries, or electronic components, will be managed in compliance with the EPA's RCRA and Universal Waste Rule (40 CFR Part 273) and Puerto Rico DNER's Hazardous Waste Regulation (Regl. 6049). End-of-life batteries and PV modules will be sent to authorized recycling or disposal facilities, and spill prevention measures under the facility's SPCC Plan will be maintained to prevent environmental contamination.
21.5.	Waste Water / Sanitary Sewers	2	There is no Puerto Rico Power Authority (PRASA) aqueduct service station near the project. The closest station is the Planta de Filtros AAA Hatillo-Camuy Station 3.45 miles northwest of the site. The project is expected to generate 300 gallons per month of wastewater. Portable toilets will be

			provided for use, during construction and operation, and their contents will be emptied and disposed of by an approved contractor at a PRASA wastewater treatment facility. During operation, residual water resulting from handwashing or other purposes will be stored in an aboveground retention tank to be located near the administrative office on the western property (Gustavo Toledo). For said aboveground tank, its contents will also be emptied and disposed of by an approved contractor at a PRASA wastewater treatment facility. OSHA requirements for sanitation facilities will be followed to ensure adequate, clean, and accessible units are provided during construction and operation. The project should not have an impact due to generation and treatment of wastewater.
21.6.	Water Supply	2	Water supply lines to the project would connect to PRASA service lines. The project is expected to consume 300 gallons per month. PRASA provided their comments indicating point of connection for potable water on a letter dated August 9, 2013 (AAA-RN-13-34-0014; 2013-177363-REC-80384) (Appendix J). The project should not have an impact due to demand on the community's available water supply.
21.7.	Public Safety - Police, Fire and Emergency Medical	3	*Police* The closest Police station is located approximately 3.80 miles northwest of the project. The proposed project would not result in an adverse effect related to police services. *Fire*

		The closest fire station is located 3.40 miles northwest of the Site. The proposed project would not result in any anticipated impact related to fire services. *Emergency Medical* The nearest Hospital, Hospital/CDT Municipal/Emergency Room of Hatillo is HATIMEDIK, which is located 3.51 miles northwest of the site. The proposed is not expected to cause an adverse effect related to emergency medical services. Emergency Situations Protocols: The Xzerta project is considering the use of lithium-based batteries for the management of the MTRs. In the event of a fire, the following protocols are proposed for its management and mitigation: 1. The lithium battery supplier, in conjunction with Xzerta, will provide training for the Hatillo Fire Department based on the following standards: • NFPA 855 – Standard for the Installation of Stationary Energy Storage Systems • NFPA 69 – Explosion Prevention Systems • NFPA 70 – National Electrical Code • UL 9540A – Thermal Runaway Propagation Test Method • Manufacturer's Emergency Response Guides (ERGs) 2. Xzerta will prepare and maintain a Site Emergency Response Plan (SERP), which will serve as an authoritative protocol for emergency responders. This protocol will include: • Life Safety First: Evacuation of personnel; Establishment of exclusion zones; Continuous monitoring for toxic gases

		(HF, CO, etc.); Measures to prevent thermal propagation • Use of Fixed Fire Suppression Systems. Utility-scale ESS enclosures may include: Clean-agent suppression systems, water-based suppression systems, Aerosol-based suppression systems, • Extended Cool-Down and Re-Ignition Monitoring. Lithium-ion ESS fire events may require prolonged monitoring, over many hours or days, including: Remote temperature monitoring, Gas monitoring, Visual inspections once conditions are deemed safe, Recognition that the risk of re-ignition may persist long after visible flames have been extinguished. • Environmental Containment. High-level measures include: Preventing contaminated runoff, deploying containment systems in accordance with environmental regulations, coordinating with local environmental authorities, as applicable Additionally, Xzerta will have on-site fire control equipment for lithium batteries, pre-positioned with easy access for firefighters and rescue teams within the facilities. Finally, in addition to training for the Hatillo firefighters, Xzerta will acquire certain fire control equipment to be provided to the Hatillo firefighters. During construction activities, if required, a Maintenance of Traffic Plan (MOT) and temporary control devices will be implemented to control the vehicular traffic and provide a safe route to pedestrians during the construction works. The MOT will be prepared in compliance with the PRHTA and FHWA standards and regulations.
21.8. Parks, Open Space and Recreation	2	There are a baseball park and a basketball court 0.35 miles southwest of the project and another baseball park 0.50 miles southeast

21.9. Transportation and Accessibility	3	The Municipality's Public Car Terminal is located 3.65 miles northwest of the project. During the construction phase, traffic in the area could be affected by the increment in equipment and vehicles accessing the area. A Maintenance of Traffic Plan (MOT) and temporary control devices will be implemented to control the vehicular traffic and provide a safe route to pedestrians during the construction works. The MOT will be prepared in compliance with the PRHTA and FHWA standards and regulations. Due to the nature of the project, a minimal increase in traffic is expected during operation. Therefore, the proposed project should not have an impact on transportation and accessibility.
22. NATURAL FEATURES		
Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
22.1. Unique Natural Features, Water Resources, Surface Water	3	*Unique Natural Features* According to Google Earth, the site appears to have been a dairy farm, with supporting structures on the Site visible since at least since 1993. Per DTOP Aerial Imagery, the structure on the eastern parcels (milk Money, Inc.) appears to be visible since 1963, while the Toledo Farm structure appears to be visible since 1989. Currently, there are several structures on the parcels which are part of the farm infrastructure. The site is located within the Special Karst Region, which is divided into three designations: APE-ZC (*Área de Planificación Especial – Zona Especial*), APE-RC (Área de Planificación Especial Restringida del Carso), and APE-RC-ZA (Área de Planificación Especial Restringida del Carso – Zona de Amortiguamiento). Refer to Exhibit 4b for the Karst Map. The area of the Karst where the project is located is the APE-ZC (*Area de*

		Planificación Especial Zona Cársica). Construction in the APE-ZC is allowed. In accordance with the regulations outlined in Section 4.3.3 of the *Plan y Reglamento del Área de Planificación del Carso (PRAPEC) de Puerto Rico*, any proposed project or activity within the *Área de Protección Especial de la Zona Cársica* (APE-ZC) requires notification to the PRDNER by the Office of Permit Management and Permit (OGPe, per its Spanish acronym), authorized professionals, or the Autonomous Municipality, as applicable. This ensures compliance with all relevant state and federal laws, regulations, permits, endorsements, and franchises without undermining the public policy of the aforementioned law Further detailed in Section 2.1.2, the OGPe is responsible for issuing notification to the DRNA for all proposed activities in the APE-ZC. Additionally, any permit issued within the APE-ZC must include notification to the DRNA by the entity granting such permit or authorization. Therefore, the proponent is not required to notify the PRDNER as the OGPe or equivalent holds primary responsibility for initiating and documenting such notifications for projects in the APE-ZC. As noted in the Environmental Recommendation (REA; 2024-579575-REA-300844) issued by OGPe for the overall project on August 13, 2025, the DNER indicated on page 4 that the project is located within the Karst region and highlighted the applicable laws and regulations—specifically the Law for the Protection and Conservation of the Karst Physiography of Puerto Rico (*Ley para la Protección y Conservación de la Fisiografía Cársica de Puerto Rico);* Puerto Rico Karst Planning Area Plan and Regulation *(Plan y Reglamento del Área de Planificación del Carso (PRAPEC) de Puerto Rico)*; and Law for the Protection of Caves, Caverns, and Sinkholes of

		Puerto Rico *(Ley para la Proteccion de Cuevas, Cavernas o Sumideros) de Puerto Rico*—that must be met for the project to proceed. Thus, notification requirements by the OGPe to the PRDNER were met. There are karstic features such as sinkholes, depressions, caves and mogotes in the premises. Studies performed indicate that the depressions and sinkholes currently serve as stormwater management units in the area. The project design intends to continue this use and to maintain discharges at pre-development discharge volumes. Measures to assure water quality entering the aquifer and buffers to prevent damage to the features will be installed. According to the Geotechnical and Geophysical Study[40], in the western parcels, a cavity was observed in the area where the detention basin for Sinkhole #3 will be located. The area where the detention basin for Sinkhole #5 will be located, two cavities were observed.[41] However, the study goes on to state that cavernous areas that could cause a collapse of the detention basin were not observed in either area. On the eastern parcel, cave was identified which will not be included in the stormwater management design, and a buffer will be provided for its protection. The same applies to the mogotes and other features (wetlands, sinkholes) on the Site. For the eastern parcels geotechnical construction parameters need to be determined. On the northeastern parcel, an H-H Study was performed which only indicated the presence of sinkholes at the Site. Geotechnical studies will be performed on this parcel to determine geotechnical parameters to be used during construction, detect if there are additional karstic

[40] Id

[41] Evaluación de Geofísica y Geotecnia a Sumideros y Charcas propuestas Finca Gustavo Toledo y Efraín García Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014

		features such as caves and to fine tune the H-H study findings. Final design parameters will be decided once all studies are completed. As required by regulations, karstic features will not be affected by the project. If necessary, impact areas will be modified to circumvent those protected areas, as required by the PRAPEC and any other applicable regulation. Protective measures (such as fencing, sediment control, and buffer maintenance) to prevent direct disturbance or contamination of these karstic features during construction will be implemented. The study recommends monitoring and avoiding heavy loading or construction over zones that may contain subsurface cavities. Geotechnical engineers or geologists are recommended to be present at the Site during construction. Should additional studies be required during construction, they will be performed. Superficial water bodies (other than the wetlands and depression present at the Site) were not observed during the Site visit when studies were being performed. Because of its distance from surface-water bodies, development in this karst region of Puerto Rico relies on naturally formed depressions that evolve until they connect with the subsurface and allow stormwater runoff to enter. The water that infiltrates eventually continues downward until it reaches the groundwater table, which in the project area may lie at depths exceeding 300 feet. The presence of groundwater in the proposed development area is evident from both Puerto Rico Aqueduct and Sewer Authority (AAA) wells and private wells installed in the region. Within the project site itself, there is a water well located at approximate latitude and longitude: 18.4360639°, -66.8015472°), approximately 300 feet deep, which

		is typical of groundwater depths in this area42. The well is authorized under PRDNER Well Number #R-FA-FAAG1-AR-0023418442023, which expires on May 15, 2028. Water from the well is used to bathe the cows and to clean the milking areas and stables. The well will not be used by Xzerta. *Water Resources* The closest water bodies to the Site are Camuy River located at approximately 7,804 ft (1.48 mi) to the west and Quebrada Seca, located approximately 8,094 ft (1.53 miles) to the north of the Site and at its closest point (Figure 9: Vicinity Map). Environmental and geotechnical investigations confirm that both the eastern and western parcels of the Hatillo Solar Project contain karst features hydrologically connected to the Aymamón Limestone aquifer, which forms part of Puerto Rico's Northern Karst Aquifer System. The features include non-jurisdictional wetlands, natural depressions, active sinkholes, and subsurface cavernous zones, which together control surface and subsurface drainage within the project area. For the western parcel, since not all mapped sinkholes are functional under the proposed conditions, the drainage plan will redirect runoff to the sinkholes demonstrated to be hydraulically adequate. This approach is supported by: (1) measured hydraulic capacities from field saturation/infiltration testing and geotechnical evaluation; (2) the hydrologic–hydraulic model's intentional routing of additional contributing sub-basins to those receiving sinkholes; and (3) detention storage with outlet flow-control/energy-dissipation features that keep discharges at or below the tested limits.

[42] Evaluación de Geofísica y Geotecnia a Sumideros y Charcas Propuestas Finca Gustavo Toledo y Efraín García Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014.

		Accordingly, the selected sinkholes can accept redirected basin flows without exceeding design criteria. Basins and outlets will need to be designed to prevent sedimentation and contamination of the subsurface flow system. For the eastern parcel, the terrain includes functional sinkholes (Sinkholes 1, 2, and 3) that serve as the primary infiltration and stormwater discharge points. These features exhibit cavernous limestone openings and are part of an active subsurface conduit network that facilitates direct percolation into the underlying Aymamón Limestone. A cave located between these sinkholes also drains the same way. A non-jurisdictional wetland depression is also present within the natural drainage path. Modeling results demonstrate that the post-development discharge volumes and velocities will match pre-development conditions, protecting both surface and groundwater quality. Both site areas demonstrate direct hydrologic and geologic connection between the surface karst features and the Aymamón Limestone aquifer. These features collectively function as natural groundwater recharge points. The proposed project design preserves this natural drainage behavior through the inclusion of detention basins, vegetated buffers, and erosion-control measures, ensuring compliance with the PRDNER Plan and Regulation of the Special Planning Area of the Karst and any other pertinent regulation. During project operation, in order to discharge stormwater through the sinkholes, as indicated in the DEA (p.6), the project will comply with all applicable directives included in the Puerto Rico Underground Injection Control (UIC) Regulation, Regulation No. 3029 (Resolution R-83-23-1) (Reglamento para el Control de Injeccion

			Subterranea), regarding stormwater discharge to sinkholes. As stated previously, on the northeastern parcel, an H-H Study was performed which only indicated the presence of sinkholes at the Site. Geotechnical studies will be performed on this parcel to determine geotechnical parameters to be used during construction, detect if there are additional karstic features such as caves and to fine tune the H-H study findings.
22.2.	Vegetation, Wildlife	3	The project site is located in a previously disturbed area used for farming. There are no critical habitats at the site (Figure 12: Critical Habitat Mapper); the closest Critical Habitat is for the Harlequin butterfly 7.05 miles (37,224 feet) southeast of the site. The Endangered Species List Report and IPaC identified that the Puerto Rican Boa (*Chilabothrus inornatus*) could be present, since it has designated that this specie's habitat is wherever found, and that it has no specific habitat (Figure 13: US Fish and Wildlife Services – IpaC). Based on the conditions on the area (developed area), and the available Dkey(s) (Figure 14: Determination Keys (Dkey(s), it was determined that the project 'May Affect, Not Likely to Adversely Affect' (NLAA). This determination has been made, as the species is a habitat generalist found throughout the island and the project involves ground disturbing activities. The USFWS concurred with the determination on a letter dated July 10, 2025. Conservation measures as indicated by the USFWS for the Puerto Rican Boa will be implemented. *Vegetation* According to the Flora and Fauna Study (Appendix H), prepared for the whole project in November 2024, the Flora and Fauna in the parcels are typical of anthropized areas. According to the determination of the Flora and Fauna Study, the property where the proposed action is planned could be classified as Category 5 or "Natural habitat with great potential to

		become an essential habitat, of high ecological value, or of ecological value." This classification was based on the fact that no threatened or endangered species were found in the area or its surroundings, and the degree of disturbance on the property is high. Therefore, it was concluded that this project will not have a significant impact on the flora and fauna elements in the area. The PRDNER issued a Certification of Habitat Categorization on March 31, 2025. The areas of the parcels where mogotes, sinkholes and wetlands are located were classified as Category 4, Natural Habitats with Ecologic Valued. The rest of the parcels are classified as Category 5 (This information was obtained from the Environmental Recommendation for the whole project, 2024-579575-REA-300844, dated August 13, 2025, included in Appendix I). Previously, for the western parcel, where the PRDNR had issued a Certification of Habitat Categorization on December 4, 2020, most areas of the project were classified by the Agency as "Natural habitat with low potential to develop into critical habitat or habitat of high or moderate ecological value (Category 6). The mogotes and sinkhole area was categorized as Natural Habitat with Ecologic Value (Category 4) (Appendix K). There is a non-jurisdictional wetland adjacent to possible Sinkhole #2, on the eastern parcel. The project design includes stormwater management measures to ensure there are no adverse hydrologic impacts to the wetland. Stormwater generated on-site in the basin that discharges to the wetland will be routed through a detention basin engineered to promote laminar flow and progressive sediment capture prior to discharge. This treatment system will be designed to maintain discharge water quality consistent with current standards, preventing the introduction of suspended solids or contaminants into the receiving wetland.

		A landscaping Plan will be prepared and implemented at the Site. According to the Flora and Fauna Study of November 2024, 64 species of trees were identified at the Stie. The trees identified in the study are limited to fence lines and road edges. Over the years, farm management has promoted the growth of forage to feed livestock. As part of the project, approximately 453 trees will be removed. Among the permits the project would have to obtain to comply with local regulations, is an Authorization for the Cutting, Pruning, Transplanting, and Planting of Tree, which requires the proponent to prepare a tree inventory with a description table and site plan showing their locations at the Site, a tree restitution plan and an arborist's report. In compliance with Rule 3.4.2.1(a) of the Joint Regulation 2023, "a minimum of five (5) trees for each 'cuerda' or fraction thereof that is impacted by the construction project or activity." will be planted. This mitigation requirement is intended to be fulfilled inside the parcels that compose the project, thus increasing the current amount of trees in the area. This permit had been previously obtained for the western parcel (Appendix B-1) but will be procured again to include the whole project site. Since vegetation at the Site does not include protected species and mitigations would be performed for the trees removed, the project would not cause adverse impacts to protected vegetation.
22.3. Other Factors	1	The objective of the project is to maximize the use of the sun as a natural resource aiming to lessen the Island's reliance on burning fossil fuels for energy production. The projected energy production, should result in an approximate CO2 equivalent reduction of 80,000 metric tons, which corresponds to the carbon sequestered by

		approximately 84,229 acres of U.S. forests in one year[43]. The project will also provide resiliency to the power supply during a Hurricane or other emergency which in turn will provide energy to critical infrastructure, such as the communication, transportation and health industries, as well as to citizens in the region. Subject to the contingency and emergency plans established by PREPA and LUMA, the project is designed to continue producing energy, even if some of the modules or components suffer damage during a major event. Because of its location, the project can provide energy during an emergency to the Hatillo Hospital (Health), as well as to other critical components such as PRASA'S local plants and pumps, the emergency response facilities in the region, schools and governmental offices.
23. ENERGY		
Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
23.1.1. Energy Efficiency	1	The objective of the project is to maximize the use of the sun as a natural resource aiming to lessen the Island's reliance on burning fossil fuels for energy production. The project will also provide resiliency to the power supply during a Hurricane or other emergency which in turn will provide energy to critical infrastructure, such as the communication, transportation and health industries, as well as to citizens in the region. Subject to the contingency and emergency plans established by Puerto Rico Power Authority (PREPA) and LUMA, the project is designed to continue producing energy, even if some of the modules or components suffer damage during a major event. Because of its location, the project can provide energy during an

[43] EPA Greenhouse Equivalent Calculator. https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

		emergency to the Hatillo Hospital (Health), as well as to other critical components such as PRASA'S local plants and pumps, the emergency response facilities in the region, schools and governmental offices.. The project has an Amended and Restated Renewable Power Purchase and operating Agreement with PREPA dated June 4, 2021, which outlines the contractual terms and conditions between the solar energy developer and the Puerto Rico Electric Power Authority (PREPA) (or its successor) for the sale of renewable electric energy generated by a proposed solar photovoltaic project in Hatillo, Puerto Rico. The project will produce and sell green energy exclusively to the Puerto Rico Electric Power Authority for an initial term of 25 years with the option to renew for two additional terms of 5 years. In an April 2024 report, LUMA includes system impact studies showing facility studies detailing required infrastructure, and confirmation that the project meets Minimum Technical Requirements (MTRs) for voltage/frequency ride-through, reactive power capabilities, and system regulation. On January 20, 2025, President Donald Trump issued the Executive Order 14148 titled "Initial Rescissions of Harmful Executive Orders and Actions", which revoked Executive Order 14008 and eliminated federal mandates requiring agencies to assess climate change impacts. Consequently, there is no longer a federal requirement to address climate change concerns in the environmental compliance review process

		The project is not expected to need energy as its purpose is to provide energy to the Hatillo area near the Site.

- **Additional Studies Performed:**
  - Appendix A: Hydrologic and Hydraulic Study for the Eastern parcels *(*Solar Plant Hydrologic and Hydraulic Study Hatillo, PR. CA Engineering, PSC. July 2025*)*
  - Appendix B-1: Permits Obtained - Authorization for the Cutting, Pruning, Transplanting, and Planting of Trees 2015-043082-ACP-057052 (Western Parcels)
  - Appendix B-2: Permits Obtained - Incidental Extraction Permit for a Project Authorized by OGPe 2015-0383129-PCT-071068 (Western Parcels)
  - Appendix C: Preliminary Geotechnic Study (*Report on the Preliminary Geotechnical Exploration Performed at the Site of the Solar Photovoltaic Array, Hatillo, Puerto Rico. Jaca & Sierra. July 2012)*
  - Appendix D: Geophysics and Geotechnical Evaluation of the Western Parcels *(Evaluación de Geofísica y Geotecnia a Sumideros y Charcas propuestas Finca Gustavo Toledo y Efraín García Desarrollo Propuesto Hatillo Solar Farm Finca Solar 20 MW Carretera Estatal PR-491 Int. PR-130 Barrio Naranjito, Hatillo, PR. OC Engineering Group, PSC. February 2014.)*
  - Appendix E: Geotechnical and Sinkhole Assessment Report of the Eastern Parcels – (*Geotechnical Evaluation Underground Disposal of Runoff Existing Sinkholes PR-130, Km 7.0, Naranjito Ward, Hatillo, Puerto Rico. GEO-Geotechnical Engineering Construction Material Resting. January 2025)*
  - Appendix F: H-H Study Western Parcels *(Estudio Hidrológico – Hidráulico Proyecto Hatillo Solar Farm – Finca Solar De 20MW Hatillo, Puerto Rico. SG CONSULTANT. November 2013).*
  - *Appendix G*: H-H Northeastern Parcels (*Xzerta Solar Project Hydrologic and Hydraulic Study. CA Engineering, PSC. November 2025).*
  - Appendix H: Flora and Fauna Study November 2024
  - Appendix I: REA with PRDNER issued Certification of Habitat Categorization Information
  - Appendix J: Approved DEA
  - Appendix K: Certification of Habitat Categorization for Wildlife Western Parcels

24. Field Inspection (Date and completed by):

Field inspections and data collection were completed on March 27, 2025, by AVA Environmental Personnel.

25. List of Sources, Agencies and Persons Consulted:

The local service providing Agencies, namely, LUMA Energy, Puerto Rico Aqueduct and Sewer Authority (PRASA), Puerto Rico Highway Authority (ACP, the Department of Transportation and Public Works (DTOP, by its Spanish acronym) and NETPR, have been contacted in order for them to provide

information regarding availability of services and requirements. At the time of preparation of this document, recommendation requests for the project had been filed with:

- Power Purchase and Operating Agreement Between Puerto Rico Electric Power Authority and Xzerta Tec Solar I, LLC, dated June 4, 2021
- LUMA Interconnection Studies Report, dated April 2024
- For the Western Parcels:
  - PRASA on a letter dated August 9, 2013, indicated that the project can connect to an existing 2-inch potable water line along PR-130 and request to PRASA's Camuy (or applicable) office the ½-inch service connection. If a larger connection is needed, re-evaluation by PRASA would be required. Since no sanitary sewer system exists nearby, the wastewater disposal plan must be coordinated with the PR Department of Natural and Environmental Resources (DNER) and the Permits Management Office (OGPe, by its Spanish acronym).
  - The ACT indicated in a letter dated August 5, 2025, that the Programming Office of the Area of Programming and Special Studies of the ACT evaluated the location indicated in the submitted plan and reported that the project mentioned in the subject does not affect highway projects included in this Authority's current Five-Year Permanent Improvement Construction Program. They also indicated that the requirements, recommendations, and comments included in Annex A of the letter must be complied with. In a subsequent letter dated February 14, 2014, they indicated that it has no objection to the proposed project, according to the submitted plans.
  - The DTOP, in a letter dated November 27, 2013, indicated that the street access through PR-130 requested had been approved.
  - The PR Telecommunications Bureau (NETPR, by its Spanish acronym) in a letter dated August 7, 2013, indicated the connection point for the project in a project and additional requirements for connection.

Note: Additional Infrastructure Recommendation Requests (SRI's, per its Spanish acronym) have not been requested to the above-mentioned Agencies. In the Environmental Recommendation (REA, per its Spanish acronym) prepared for the whole project, Agencies provided their recommendations with regard to the environmental impacts of the project. The REA is included in Appendix I.

Additional Agencies consulted and their comments are indicated below:

- Municipality of Hatillo – In a letter dated September 23, 2013, the Municipality favorably recommended the project. In a letter dated October 11, 2024, the indicated they had no objection to the Site Consultation for the increase in energy production (from 20MW to 60MW) the project is proposing.
- The Puerto Rico Department of Agriculture indicated in a letter dated May 7, 2025, that they did not oppose the project if the recommendations included in the letter – coexistence of the project with the cattle industries on site- were followed
- The Puerto Rican Institute of Culture (ICP, by its Spanish acronym) Archaeology and Ethnohistory Program and Built Historic Heritage Program indicated they had no objection to the Western parcels project, in letters dated November 12, 2013, and November 21, 2013, respectively.

- The Department of Natural and Environmental Resources (DNER) on a letter dated June 14, 2013, endorsed the Western parcels project and included their requirements for project construction.
- The DNER on a letter dated July 10, 2014, indicated they had no objection to the H-H Study performed for the western parcels.
- The DNER on a letter dated June 13, 2014, indicated their endorsement of the project and indicated the proponent had comply with the requirements for Geotechnical Subsoil Studies for the western parcels.
- The western parcels have an approved Environmental Assessment Determination (DEA) with the OGPE (2013-DEA-00040) dated July 16, 2013.
- The eastern parcels have an approved Environmental Assessment Determination (DEA with the OGPE (2020-319481-DEA-004792) dated February 12, 2021.
- The whole project has an approved Environmental Recommendation (REA) with the OGPE (2024-579575-REA-300844) dated August 13, 2025. This document includes information regarding the Certification of Habitat Categorization for Wildlife for the whole project.
- The whole project has an approved DEA with the OGPe (2024-5795-DEA-300947) dated September 5, 2025.

Studies and other requests to Agencies filed:

- Jurisdictional Determination of Wetlands and Delineation Report. Reforesta, Inc. October 2024 (Exhibit 13a)

Agencies Responses included in Appendix J.

- **List of Permits Obtained:**

The western parcels have an approved Site Consultation (2013-CUB-00020) dated September 20, 2013, and an amendment (2014-CUB-00005) dated May 20, 2014. This Site consultation was amended to include the eastern parcels (2024-579575-CUB-010919) and was approved on February 11, 2025.

The western parcel has the following approved permits, extensions and

- Approved Construction Permit Notification (2013-177363-PCU-37962) dated July 7, 2015
- Approved 1-year permit extension (2015-038312-PRR-000905) dated August 10, 2016
- Approved 1-year permit extension dated November 6, 2017, case number 2015-038312-PRR-001895 (not available to be included)
- Permit Reactivation case number 2020-329686-PRR-005031, dated February 26, 2021
- Permit Reactivation case number 2020-329686-PRR-008398, dated April 11, 2022
- Approved 1 -year permit extension (2022-438835-PRR-011664) dated June 13, 2023
- Approved 1 -year permit extension (2022-438835-PRR-300506) dated September 16, 2024
- A permit extension was requested on September 15, 2025, and given the following number: 2025-638867-PRR-301766
- For the western parcels, there was an approved Incidental Extraction Permit for a Project Authorized by OGPe 2015-038312-PCT-071068; and an Authorization for the Cutting, Pruning, Transplanting, and Planting of Trees 2015-043082-ACP-057052 dated July 30, 2015.

No other permits have been obtained.

Permits obtained included in Appendix B.

26. Public Outreach [24 CFR 50.23 & 58.43]:

The project is at the design phase. Originally, only the western parcel was going to be developed. For that project, public outreach meetings were required for the approval of the Site Consultation (2013-CUB-00020) dated September 20, 2013, and an amendment (2014-CUB-00005) dated May 20, 2014. When the eastern parcel was included, this Site consultation was amended to include the eastern parcels (2024-579575-CUB-010919) and was approved on February 11, 2025.

27. Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project has approved Site consultations which indicate the OGPe understands it is consistent with the type and density of development established under land use regulations for zoning for the area. The intent of the project is to produce renewable energy through solar panels, improving energy resilience and contributing to long-term, beneficial cumulative greenhouse gases (GHG) reductions. There are no critical habitats in the area (Figure 11: Critical Habitat Mapper). The USFWS IPaC database identified that the endangered species Puerto Rican Boa could be present, since it has designated that this species' habitat is wherever found, and that it has no specific habitat (Figure 12: US Fish and Wildlife Services – IpaC). It was concluded that the project 'May Affect, Not Likely to Adversely Affect' (NLAA) the will listed species. SHPO concurred with the determination that no historic properties would be affected by the project. The area has been disturbed since at least 1993, and it was previously used as farms. Furthermore, Milk Money, Inc. will continue operating in the eastern parcel because the milking facilities and certain grazing areas will remain unaffected. This means that the agricultural activity of milk production will continue throughout the entire duration of the Project. Stormwater measures will maintain recharge to the Northern Aquifer and include detention basins with quality controls. The Site's natural resources—karst and wetlands—will be protected with appropriate buffers. Vegetation clearing will be limited to access roads and designated work areas, including the detention basins for stormwater management; the project does not intend to leave the entire site bare or free of vegetation. Vegetation will be selectively removed where necessary; in other areas, work will occur over existing grass cover. Panel bases will be installed using terrain-adaptive methods that minimize disturbance to the site's topography. This approach applies across all farms within the project area. Excavations and topography alterations will be required for the construction of the detention ponds that will serve to improve the water quality of the runoff reaching the sinkholes. On the western parcel, works will also be performed to alter the existing basins to redirect stormwater to the working sinkholes. Thus, with any construction project, changes in the topography will result. The activity will affect the current patterns of stormwater flow inside the project area. Notwithstanding, as previously stated, they will serve to improve the water quality of runoff entering the aquifer and prevent the manure-

laden water ponding in surface depressions which discharges to the sinkhole documented in the site reports. Moreover, it will direct water toward functioning sinkholes and help prevent flooding in the community to the southeast and eliminate Site discharges to the PR-130 in the southeastern area of the Site. With the mitigation measures adopted as enforceable conditions of approval, the cumulative impact of the project is not significant and overall positive for the community, particularly benefiting middle- and low-income residents through improved energy reliability.

28. Alternatives [24 CFR 58.40(e)]:

29. No Action Alternative [24 CFR 58.40(e)]:

No Action Alternative [24 CFR 58.40(e)]

No change to the project site would occur and it would continue in its current state for the foreseeable future. Currently, the western property (Gustavo Toledo) is used for agricultural purposes for cattle grazing but is underutilized. The eastern property (Milk Money) is used for grazing and milking cows. Lastly, the northeastern property (Sucesión González) is not currently in use. Therefore, most of the land to be utilized has been underused due to the shifts in the milk industry economy on the Island. The impacts discussed in this document would not occur. No benefits would take place such as providing reliable and clean energy. It is unknown at this time if or when another development for the parcels would be forthcoming. It is unlikely, however, that this project site will remain in its current state.

Off-site Alternative

An off-site alternative was not feasible for the execution of the project. The area where the project will be located was selected because it is located near a LUMA/ PREPA substation which has the capacity to receive the energy generated by the solar panels. The choice of substation site is critical for projects like this, because a longer interconnection route between the solar farm and the LUMA substation can raise costs enough to render the project economically unfeasible. Relocating the project to another area would not serve its purpose.

Reduced Project Alternative

While a reduced footprint could modestly lessen construction and site-disturbance effects, analysis indicates that many project costs (e.g., interconnection, switchgear/inverters, mobilization, engineering/permitting, access, and fixed O&M) do not scale down proportionally with capacity. As installed capacity declines, levelized cost of energy increases above expected compensation, causing the project to fail financing thresholds. Accordingly, the reduced-size alternative is not practicable.

30. Summary of Findings and Conclusions:

The proposed project involves the construction of a solar energy farm in the Naranjito Ward in Hatillo, Puerto Rico. The project complies with the statutes, executive orders, and regulations evaluated as part of this assessment, except for the following:

- Contamination and Toxic Substances –Lead based paint was found in some ceramics present in the structures in the western and northeastern parcels of project. Applicable regulations and mitigation required will be followed prior to demolishing the area to remove them. As part of the contamination review, during the Site visit conditions were identified that could represent a Recognized Environmental Condition (REC) or significant data gaps for the Site and should be evaluated further.
- Endangered species- a NLAA determinations has been made for the Puerto Rican Boa. An informal consultation was conducted with the USFWS, who concurred with the determination on a letter dated July 10, 2025. With mitigation, identified in the mitigation section of this review, the project will be in compliance with the Endangered Species Act.
- Farmlands Protection – NRCS concurred with the consultation on an email dated December 5, 2025, indicating that the project was not considered to cause significant farmland conversion impact and could move forward without further alternatives sites.
- Wetlands –The wetland in the eastern parcel is in a depression next to a sinkhole identified as Sinkhole 2. Stormwater generated on-site in the basin that discharges to the wetland will be routed through a detention basin engineered to promote laminar flow and progressive sediment capture prior to discharge. The design intent is to preserve this existing discharge pattern, allowing runoff to continue following the natural flow path through the detention basin before infiltration and aid in aquifer recharge. The inclusion of the detention basin will aid in maintaining discharge water quality consistent with current standards, preventing the introduction of suspended solids or contaminants into the receiving wetland[44]. A Wetland Management Evaluation Memorandum dated October 23, 2025, requesting exemption from the 8-Step Process, was presented to PRDOH. Based on §55.10 (*Limitations on HUD assistance in wetlands),* since the project will not have a direct impact on on-site wetlands, as they will not be disturbed as part of the project activities, and indirect impacts will be addressed with best management practices, as stated by the rule, with respect to impacts on wetlands, the 8-step decision-making process does not need to be performed. Mónica Machuca-Rios, a PRDOH Certifying Officer, approved the 8-Step Exempt Process on October 27, 2025.
- Erosion Control and Sedimentation - Stormwater pollution prevention measures shall be implemented throughout the construction period, until final stabilization of the Site is achieved. These measures include best management practices from the following categories: · Material storage and spill cleanup, · Earth-moving activities and erosion control, · Roadwork and pavement construction, · Vehicle and equipment maintenance, · Paints, solvents, and adhesives, · Concrete, cement and mortars, and · Waste disposal. Federal and Local regulations will be followed, permits will be obtained, and the required compliance inspections will be performed.

[44] Id.

The project is located in Zone X (defined as an area determined to be outside the 500-year flood by FEMA). The project will provide services to the community.

The proposed project is not expected to negatively impact the area, as it is being undertaken in a previously manipulated area and identified impacts can be mitigated.

31. Mitigation Measures and Conditions

Law, Authority, or Factor	Mitigation Measure
PR DRNA Asbestos Regulation	*Prior to the demolishing of a structure containing LBP, the contaminated surfaces or substrates must be abated or removed. They should be managed following the work practices and procedures by a licensed lead abatement contractor and disposed of as contaminated waste in an approved LBP landfill site. The contractor must submit to the DRNA the abatement work plan for its approval.*
Contamination and Toxic Substances	*Further investigation is warranted for conditions observed at the Site, to assess the presence of REC's or data gaps. Elements causing the situations should be removed in accordance with applicable regulations and targeted soil sampling of the areas where possible releases were observed could be performed to assess if contamination is present.* *Should hazardous materials, contamination, toxic chemicals or gases, or radioactive substances be discovered at any point during project implementation, and where such hazards may affect the health and safety of occupants or conflict with the intended utilization of the property, immediate notification shall be provided to PRDOH as the Responsible Entity.*
Endangered Species	*USFWS Puerto Rican Boa Conservation Measures guidelines will be followed*

Wetlands	*Best Management Practices will be implemented to prevent wetland degradation.*
Land Use and Zoning	*A Site Consultation (Consulta De Ubicacion) to allow for the project's construction parameters for the whole project will have to be obtained. Conditions stipulated in the PRAPEC and other applicable regulations will have to be followed. Buffers will need to be incorporated between these features and construction activities, as indicated in said regulations.*
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	*The parameters established in the Geotechnical Studies will be included in the final design and specifications prepared for the project. Measures indicated in the studies will be implemented during construction.* *Runoff will be maintained at or below pre-construction levels.* *Detention basins and outlet mechanisms will be designed to maintain discharge water quality consistent with current standards, preventing the introduction of suspended solids or contaminants into the receiving wetland* *Best management practices will be implemented during construction and operation. Stormwater pollution prevention measures shall be implemented throughout the construction period, until final stabilization of the Site is achieved. These measures include best management practices from the following categories: • Material storage and spill cleanup, • Earth-moving activities and erosion control, • Roadwork and pavement construction, • Vehicle and equipment maintenance, • Paints, solvents and adhesives, • Concrete, cement and mortars, and • Waste disposal. Federal and Local regulations will be followed, permits will be obtained, and the required compliance inspections will be performed.*

	In addition, mitigation measures regarding tree removal will be implemented, as per applicable regulation (5 trees per acre disturbed).
Hazards and Nuisances including Site Safety and Noise	*The generator on the western parcel will be removed from the Site, following all PRDNER applicable Regulations.* *BESS and the transformers included as part of the project will include secondary containment measures and the facility will prepare an SPCCP in accordance with EPA and PRDNER regulations to cover these and any other onsite containers that could pose a spill risk.* *Xzerta will implement protocols to manage and mitigate emergencies that could occur at the Site, including training of the* Hatillo Fire Department with regard to applicable standards, preparation and maintenance of a Site Emergency Response Plan (SERP). Provide *within the facilities fire control equipment for lithium batteries, pre-positioned with easy access for firefighters and rescue teams. Provide Hatillo firefighters with certain fire control equipment.* *The project will comply with all applicable regulations regarding noise, including the PRDNER Regulation for the Control of Noise Pollution (Reglamento para el Control de la Contaminación por Ruidos).*
Unique Natural Features, Water Resources	*If any additional cave, sinkhole, surface water body, or groundwater feature (perennial or intermittent) is discovered during construction on the development site, it will be immediately reported to DRNA and other relevant agencies. Work will halt until clearance is obtained, supervised by a license geologist/geotechnical engineer.*

	The project will comply with all required buffers and applicable provisions established under the PRAPEC and Law for Protection of Caves, Caverns, and Sinkholes of Puerto Rico and any other applicable regulation.
Vegetation, Wildlife	*USFWS Puerto Rican Boa Conservation Measures guidelines will be followed*
Compliance with applicable local Regulations and Permitting	*The project will comply with PR DNER, OGPe, Infrastructure Agencies and any other applicable regulations regarding but not limited to, solid waste management, public safety, tree cutting and pruning, demolitions, land clearing and site grading, noise, air emissions, and others as applicable.* *Among these are the following:* ***Tree Removal-*** *An Authorization for the Cutting, Pruning, Transplanting in compliance with Rule 3.4.2.1(a) of the Joint Regulation 2023, will be obtained, and trees removed will be mitigated accordingly (5 for every cuerda impacted)* ***Air Emissions****- As best management practice, and to comply with applicable permits and regulations, during construction, the contractor must implement measures to prevent dust from becoming a nuisance to neighboring areas. Dust emitted from the construction site is not expected to affect the attainment status of the area. A Stormwater Pollution Prevention Plan and a local Permiso Unico Incidental will have to be filed (Both include air emissions permit sections). A permit for the operation of a temporary electric generator to be used during construction will be filed in the OGPe.* ***Noise:*** *The proposed project may result in temporary construction noise. The contractor will comply with the Puerto Rico Noise Regulation during the construction period. During its*

	operation, the project will comply with all applicable regulations regarding noise, including the PRDNER Regulation for the Control of Noise Pollution (Reglamento para el Control de la Contaminación por Ruidos). ***Water:*** *An erosion control plan will be implemented at the Site. The EPA 2022 NPDES Construction General Permit will be procured, as well as the Puerto Rico DNER Permiso Unico Incidental, which includes the local erosion and sedimentation control permit. During construction, the sedimentation and erosion control measures established in the plan will be implemented at the Site and nearby catch basins will be protected to prevent sediments from reaching water bodies. BMPs will also be required to reduce and eliminate potential contamination of stormwater and non-stormwater discharges from the construction site. Permit conditions will be followed to minimize effects.* *During operations, permanent erosion and sedimentation control measures will have to be implemented to protect the wetland and pertinent karstic features located at the Site.* *A Spill Prevention and Countermeasure Plan (SPCCP) in accordance with EPA and PRDNER Regulations will be prepared and implemented at the Site.* *The project will obtain and comply with all applicable directives included in the Puerto Rico Underground Injection Control (UIC) Regulation, Regulation No. 3029 (Resolution R-83-23-1) (Reglamento para el Control de Injeccion Subterranea), regarding stormwater discharge to sinkholes.*

	Waste: *During construction, the project will be required to file a Recycling Plan to the DNER, which mut be followed.* *The contractor will engage a licensed waste management provider with current permits issued by the DNER. This provider will be responsible for disposing of the project's waste at facilities authorized to receive the waste in the terms of their DNER permit.* *During operation, recycling will be encouraged by providing the appropriate containers at the Site. As during construction, during project operation, a carrier authorized by the PR DNER will collect waste and recycling materials to dispose of them in the appropriate location authorized by the DNER to receive the waste in their permits.* ***Traffic:*** *During the construction phase, traffic in the area could be affected by the increment in equipment and vehicles accessing the area. A Maintenance of Traffic Plan and temporary control devices will be implemented to control the vehicular traffic and provide a safe route to pedestrians during the construction works. The maintenance of traffic plan will be prepared in compliance with the PRHTA and FHWA standards and regulations* .

32. Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1)]

(The project will not result in a significant impact on the quality of the human environment.)

☐ **Findings of Significant Impact** [24 CFR 58.40(g)(2)]

(The project may significantly affect the quality of the human environment.)

Preparer Signature: Annette M. Fernandez Rosario — Digitally signed by Annette M. Fernandez Rosario Date: 2025.12.08 19:37:35 -04'00'

Date: 12/ 08 /2025

Name/Title/Organization: *Annette M. Fernandez Rosario, PE, PA, IPV, LEED AP, NGBS Green Verifier / AVA Environmental Consultants, Inc.*

Certifying Officer Signature:

Date: 12 / 8 / 2025

Name/Title: Aldo A. Rivera Vázquez, PE - Director | Permits and Environmental Compliance Division

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

List of Exhibits:

List of Figures:

List of Appendices: