

DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

FINDING OF NO SIGNIFICANT IMPACT (FONSI) FOR ENVIRONMENTAL
ASSESSMENT (EA) FOR PHOTOVOLTAIC SYSTEMS, COMMANDER, JOINT REGION
MARIANAS, GUAM

Pursuant to the Council on Environmental Quality Regulations (40 Code of Federal Regulations [CFR] Parts 1500-1508) implementing the National Environmental Policy Act (NEPA) (42 USC, 4321 et seq.) and NEPA instructions for the Department of the Navy (32 CFR Part 775), the Commander, Joint Region Marianas gives notice that an EA has been prepared and that an Environmental Impact Statement (EIS) is not required in order to lease Department of the Defense (DoD) land for the installation and operation of photovoltaic (PV) systems in Northern Guam and at Naval Base Guam.

Background: Recent Congressional and DoD mandates require the use of renewable energy to supply electricity to DoD installations. In 2012, the Secretary of the Navy created the 1 Gigawatt (GW) Initiative which set a goal of 1 GW of renewable energy generation capacity to be deployed on or near Department of Navy (DoN) installations in 2015. As defined by the National Energy Policy Act, 42 USC Ch.149, Sec.15852, renewable energy is "electric energy generated from solar, wind, biomass, landfill gas, ocean (including tidal, wave, current, and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project." Because of Guam's location in the tropics, solar energy has been identified as the most readily available renewable energy source available to installations and the electric utility provider.

Proposed Action: The proposed action would lease 192 acres of DoD land to the Guam Power Authority (GPA), who would retain a renewable energy contractor to build and operate PV systems at eight locations on Guam. The PV systems would produce approximately 43.8 megawatts (MW) of power which would be conveyed to GPA's electrical grid for public use. The PV sites would be leased to GPA for up to 37 years at which time the leases would be renewed or the systems could be decommissioned. Four of the PV sites are in Northern Guam and located at South Finegayan (71 acres), the former Tumon Tank Farm (20 acres), the Harmon Booster Station (4 acres), and the Harmon Substation Annex (4 acres). The remaining four PV sites are at Naval Base Guam and located at a Wastewater Treatment Plant (WWTP) site (16 acres), Confined Disposal Facility (CDF) site (21 acres), Commissary site (25 acres), and an expansion area for an existing 250 kilowatt (kW) PV facility (31 acres).

The PV systems would use ground-mounted solar panels to convert sunlight to direct current (DC). Power inverters located throughout the PV array would convert the DC to alternating current (AC) for ultimate end use. A network of transformers and electrical cables would transfer the electricity to an onsite substation. New transmission lines extending from the substation to the nearest point of connection (POC) would transmit the power produced by the PV system to the electrical grid. Each PV system may include a battery energy storage system (BESS). The BESS would provide dispatchable energy to balance fluctuations in power generation caused by weather conditions and nighttime darkness. An 8-foot high security fence

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would be erected around the perimeter of each PV site. Maintenance and access roads constructed of gravel or similar material would also be built. The maintenance road would lie directly inside the perimeter fence, while the access roads would be located between the PV arrays. Besides the nearest electrical POC, the PV systems would also require connections to existing water and telecommunications lines within the roadway right-of-way.

The purpose of the proposed action is to reduce energy costs and fuel oil dependency, and increase the energy security, operational capability, strategic flexibility and resource availability of DoN installations through the development of renewable energy generating assets on Guam. The proposed action is needed to meet the renewable energy standards put forth by the 1 GW Initiative; Energy Policy Act of 2005, 42 USC Ch 149; 10 U.S.C. 2911(e), the Presidential Memorandum – Federal Leadership on Energy, May 2013; and SECNAV’s alternative energy goals, to include the requirement to produce 50 percent of the DoN’s shore-based energy requirements from alternative sources.

Existing Conditions: Joint Region Marianas encompasses approximately 22,537 acres of land and water on the island of Guam and includes significant land holdings at Naval Base Guam, Naval Munitions Site, Nimitz Hill, Transmitter Station Barrigada and Finegayan. There are eight proposed PV sites. The Wastewater Treatment Plant site is relatively flat with vegetation composed of disturbed secondary forest community interspersed with areas of open canopy. The existing 250kW PV site is relatively flat with an uphill slope towards the south end, and is covered with mostly scrub vegetation. The confined disposal facility site contains pockets of relatively flat terrain, but a pronounced ridge runs through much of the site. It is undeveloped and with vegetation composed of disturbed, secondary forest community interspersed with areas of open canopy. The confined disposal site also includes five disturbed archaeological sites that are not eligible for listing in the National Register of Historic Places. The commissary site consists of two parcels that are both relatively flat with vegetation composed of disturbed scrub forest. The Harmon Substation Annex site is relatively flat and includes a GPA electrical substation. The Harmon Booster station site is relatively flat and its vegetation is characterized by a disturbed scrub community. The Tumon Tank farm site consists of an unmaintained access road and terrain adjacent to the road consisting of slight hills and ridges. Vegetation is composed of a disturbed, secondary scrub community interspersed with areas of open grassland. The South Finegayan site consists of relatively flat and gently sloping terrain, and consists of a maintained grassy parkland field. All of the sites are located within Guam’s coastal zone, and all of the sites are located in dry upland areas away from wetlands and other above ground water resources. There is some potential for migratory bird nests being found at any of the PV sites, but it is unlikely. All of the sites have a moderate to high likelihood of encountering unexploded ordnance.

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Alternatives Analyzed: As required by NEPA, reasonable alternatives to the proposed action must be considered. Because of Guam's remote location and its dependence on fossil fuels, it was imperative that DoN find an appropriate, long-term renewable energy source that would be efficient, dependable, and cost-effective. Wind, geothermal, and ocean energy technologies were considered by the DoN but were subsequently dismissed because they were not economically and technically feasible and would not help meet the Secretary of the Navy's goal of attaining 1-GW of renewable energy capacity in 2015. The No-Action Alternative was fully analyzed in the EA.

The PV sites were screened from a larger pool of potential sites identified by the Navy's Renewable Energy Program Office (REPO). With GPA's assistance, REPO identified and evaluated all of the potential sites based on criteria that included: (1) land area; (2) topography, (3) proximity to public access or roadways; (4) proximity to transmission lines or substations; and (5) land use compatibility (including technical feasibility). As a result of the screening process, the DoN determined that the eight sites included in the proposed action represented the most feasible approach to help achieve its goal of 1 GW of renewable energy capacity by 2015.

Environmental Effects: The proposed action is not expected to result in any significant impacts to air quality; noise; topography and soils; water resources; biological resources; cultural resources; visual resources; glint and glare; land use; electrical, water, and telecommunications systems; and socio-economic conditions nor are adverse impacts from hazardous materials and unexploded ordnance anticipated. The proposed action is considered an interim use (i.e., 37-year lease).

Air Quality and Noise: The proposed action, in connection with past, present and reasonably foreseeable future projects in the vicinity of the PV sites, would have minor, short-term adverse cumulative impacts on air quality and ambient noise levels from construction-related vehicles, equipment, and activities. During the operational period, beneficial cumulative effects on air quality would be realized as more renewable energy projects are developed on Guam further reduce dependency on fossil fuels.

Coastal Zone Management: The DoN concluded a Coastal Zone Management Act consultation process with the Guam Bureau of Statistics and Plans (Guam BSP). The DoN notified Guam BSP of its determination that the proposed action would not have reasonably foreseeable direct or indirect effects on any use or resource within Guam's coastal zone and did not receive any response within the 60-day review period. In accordance with federal and Guam regulations, the DoN therefore presumed Guam BSP's concurrence with its determination.

Cultural Resources: The Guam Historic Preservation Office (GHPO) was also consulted as part of the National Historic Preservation Act Section 106 process. The DoN determined a finding of "no historic properties affected." GHPO responded that they concurred with the Navy's determination for the South Finegayan, Harmon Annex, and Tumon Tank Farm but could not concur with DoN's determination of effect on the remaining five sites. DoN and GHPO conducted additional consultations and developed a plan to address GHPO's concerns for the remaining five sites:

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Wastewater Treatment Plant - The Navy will include the location of a Japanese Comfort House on project maps and incorporate it into the brief that is presented at the pre-construction meeting to construction contractors.

Confined Disposal Facility Site - DoN will provide GHPO with shape files from our recent survey and copies of historic aerial photos and maps of this location with the Navy's assessment to help determine if the concrete pads are associated with the Guam Dredging facility.

Existing 250kW PV Site -GHPO noted that Shovel test 014 in the northwestern extent of the project Area of Potential Effect was not reported to exceed the depth of fill to reach bedrock. The SHPO is concerned with a possibility that a cultural deposit may lie below the fill. DoN will review archaeological field notes to verify if bedrock was reached. If this cannot be confirmed, from the field notes, DoN will perform a shovel test in the vicinity of ST014 and a DoN archaeologist will document stratigraphy and provide it with a photograph to GHPO.

Commissary Site – GHPO has the same concern as the 250 kW Site regarding the depositional sequence and excavating to "fill" vs bedrock. DoN will review archaeological field notes to verify if bedrock was reached. If this cannot be confirmed, from the field notes, DoN will perform a shovel test in the vicinity of STP57 and a DoN archaeologist will document stratigraphy and provide it with a photograph to GHPO.

Harmon Booster Station: GHPO asked that a Guam Historic Preservation Inventory form be submitted for site 5 which is ineligible for NRHP. DoN will check existing documentation and prepare a GHPI form.

With the agreed upon way ahead for the five remaining sites, GHPO provided a conditional concurrence of no adverse effect on December 27, 2015. GHPO concurrence is based upon the Navy's plan to conduct limited additional investigations to confirm the absence of historic properties. If historic properties are encountered, the DoN will support additional consultation and consideration to avoid, minimize, and mitigate adverse effects.

Public Involvement: The Draft EA review process was open to the public. The Draft EA public comment period was open from May 8, 2015 to May 25, 2015. The Draft EA was made available for public review at local public libraries and over the Internet. A notice of availability of the Draft EA was published in the Pacific Daily News on May 8, 9, and 10, 2015. The proposed action and Draft EA were also featured in four local news articles, including a Pacific Daily News story during the public comment period on May 11, 2015.

Two comments were received during the Draft EA comment period. The first comment was submitted by a PV contractor to express their interest in responding to a future request for proposals for the proposed action. The second comment was submitted by the Government of Guam's Office of the Special Assistant to the Governor for the Guam Military Buildup, and it requested that at least two of the proposed action sites (South Finegayan and Tumon Tank Farm) be removed from consideration. The comment cited a February 7, 2011 letter from the Under

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Secretary of the Navy to the Governor of Guam that refers to the DoD's initiative to better utilize the lands it currently has and return underutilized land to the Government of Guam (referred to as the "four pillars" letter). After fully considering the comment, DoN determined that the proposed action supported its stated initiatives on Guam, and the eight proposed action sites, including the South Finegayan and Tumon Tank Farm sites would still be considered and analyzed in the EA.

Finding: Based on the information gathered during the preparation of this EA and the analysis presented; and coordination with the Guam Historic Preservation Office, Guam BSP, and completion of a public involvement process, the Commander, Joint Region Marianas has determined that the proposed action will have no significant impacts on the quality of the human environment or generate significant controversy.

Interested parties may obtain a copy of the Final EA and FONSI from Naval Facilities Engineering Command Marianas, Nimitz Hill, Guam 96540, Attention: ENV Planning and Conservation; Telephone (671) 349-1139.

31 DEC 2015
Date



J. D. LUDOVICI
Deputy Commander
Navy Installations Command