

APPENDICES

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Appendix A
Environmental Checklist for Solar Photovoltaic Projects

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Appendix A. ENVIRONMENTAL CHECKLIST FOR SOLAR PHOTOVOLTAIC PROJECT(S)

(The following assumes this PEA results in a FNSI and the decision-maker selects all three action alternatives for implementation; however, the following does not pre-suppose the conclusion of this NEPA process.)

To ensure compliance with the President's Council on Environmental Quality (CEQ) guidance (40 C.F.R. Parts 1500-1508) and the Army's National Environmental Policy Act (NEPA) regulation (32 C.F.R. Part 651), the below checklist supports referencing of the *Programmatic Environmental Assessment for Construction and Operation of Solar Photovoltaic Renewable Energy Projects on Army Installations* and the associated Finding of No Significant Impact (FNSI) for site-specific projects on Army installations. This programmatic environmental assessment (PEA) addresses solar photovoltaic (PV) systems, to include associated energy storage, microgrid infrastructure, and infrastructure to connect to the grid. The environmental checklist facilitates the consideration of environmental effects for proposed site-specific projects and provides a framework for identifying site-specific NEPA requirements.

"Installations" include active Army garrisons and installations, U.S. Army Reserve facilities, U.S. Army National Guard sites, and joint bases managed by the Department of the Army.

Use of the PEA assumes that installations are considering alternative renewable energy technologies and will analyze alternative technologies along with solar PV, or have determined that these alternative technologies are not feasible to meet that particular installation's need. Installations must carefully consider all reasonable alternatives, including other renewable energy technologies, to meet their particular needs.

Army installations tiering from the solar PV PEA and associated FNSI shall use this checklist to determine whether reliance on the PEA (and possibly other NEPA analyses and one or more Categorical Exclusions [CXs]) are appropriate, or whether additional NEPA analysis is needed for a specific proposed project.

If the installation can respond "no" to each of the statements in the checklist below, then no further NEPA analysis would appear to be required and the action likely qualifies for a Record of Environmental Consideration (REC).

If the installation checks "yes" for one or more resources, it can reconsider both the sites and layout of the project, or other mitigations, to see if the effect on the resource can be avoided and the answer changed to "no".

When a project qualifies for a REC, the installation REC should cite 32 C.F.R. § 651.12(a)(2) ("action is adequately covered within an existing EA or EIS") and name the solar PV PEA and FNSI. If the REC is also based on other environmental analyses and/or CXs under 32 C.F.R.

Part 651, the REC should name the other applicable analyses and associated FNSI or ROD and cite any applicable CX(s). The completed checklist should be attached to the installation's REC.

If careful application of this checklist to the proposed project at an installation requires a “yes” or “maybe” response to any checklist item, then additional environmental analysis may be required as part of an installation-level, site specific NEPA process. If, upon investigation of each “yes” and “maybe” response on the checklist, the installation determines that no further environmental analysis is required and that a REC is appropriate, documentation of the results of the investigation should be maintained with the REC and completed checklist.

If the installation concludes that additional NEPA analysis is necessary, 32 C.F.R. Part 651 requires it be prepared before any irreversible and irretrievable commitments of resources occur for the Proposed Action. The site-specific NEPA process should be streamlined by tiering off of the solar PV PEA, with the tiered document focused only on those resource areas where site-specific considerations require additional NEPA analysis of potential impacts. Within the tiered analysis (e.g., within an appendix), as it relates to resource areas for which no further analysis was needed, documentation should be included regarding the completed checklist and those “yes” and “maybe” investigations which concluded that a resource area did not need further analysis. as a result of the Proposed Action.

This checklist is to enable the identification of the documentation required to meet NEPA requirements. Requirements to comply with other federal and state environmental and/or energy laws and regulations are to be adhered to, as appropriate and applicable. These may include, for example, those requiring site-specific consultations with other federal, state, and Tribal governments and agencies (such as consultation under the Endangered Species Act or National Historic Preservation Act); completing NEPA-like requirements of the state, if any and if applicable; or complying with certain state requirements for systems proposed to be connected to an off-post power grid.

Environmental Checklist for Solar Photovoltaic Project

The Proposed Action includes the construction and operation of a new approximately 10 MW solar PV panel field on a closed landfill in the southeastern corner of FMMD. The Proposed Action also includes the lease of up to 181.6 acres of land for the construction of the array, a battery energy storage system, and an interconnection pathway to connect the array and its controlling systems to existing facilities. A third-party developer would build, own, and operate the solar PV asset. The exact size and technology will be determined during the lease solicitation process. Construction is expected to last approximately one year, beginning in August 2024.

a. Land Use

Land Use, including viewshed, is analyzed in the FMMD OEI Solar Project EA.

1. Construction of the proposed project, to include associated infrastructure, if any, on the installation is in conflict with the real property master plan and/or range complex master plan. NO / MAYBE / YES

The Proposed Action will not conflict with the real property master plan; however, the installation is experiencing substantial development pressure as existing and prospective tenants identify occupancy needs. Further, the Proposed Action area is in the proximity of a residential area and the solar PV arrays could have a minor adverse effect on the surrounding viewshed.

b. Air Quality

Air quality is analyzed in the FMMD OEI Solar Project EA.

2. Construction activities associated with the proposed project would contribute to a change in the air quality compliance status in the region (e.g., from attainment to nonattainment). NO / MAYBE / YES

System construction will not affect air quality compliance status in the region. FMMD is within the Metropolitan Baltimore Intrastate Air Quality Control Region for Maryland (40 CFR Part 81.28). Anne Arundel County is classified as a nonattainment area for the 8-hour O₃ and for the SO₂ NAAQS, therefore, air quality is fully analyzed in the EA.

c. Noise

Noise is analyzed in the FMMD OEI Solar Project EA.

3. Noise generated during construction of the proposed project would have a significant negative impact on sensitive noise receptors (e.g., residential areas, hospitals, and schools) and/or sensitive wildlife populations, to include threatened and endangered species. NO / MAYBE / YES

Noise generated by system construction is not expected to have a significant adverse effect on sensitive noise receptors. However, a residential area lies within approximately 250 feet of the Proposed Action area. Because the zone of relatively high construction noise typically extends to distances of 400–800 feet from a site of major equipment operations, noise is analyzed in the EA.

d. Geological and Soil Resources

This resource is analyzed in the FMMD OEI Solar Project EA.

4. Construction of the proposed project is anticipated to include construction activities on highly erodible soils. NO / MAYBE / YES
5. Construction of the proposed project is to be done on a closed landfill, Installation Restoration Program (IRP), Military Munitions Response Program (MMRP), or Compliance Cleanup (CC) site and would cause significant soil contamination or violate regulations. NO / MAYBE / YES

The solar arrays would be constructed on closed landfill cells. The Proposed Action is not anticipated to result in significant soil contamination or violate regulations and a discussion of applicable regulations to address potential soil erosion and contamination is included in this section of the EA.

e. Water Resources

This resource is analyzed in the FMMD OEI Solar Project EA.

6. Construction, operation, or maintenance of the proposed project would result in unpermitted direct impacts to waters of the U.S., regulated recharge zones, and/or groundwater aquifers. NO / MAYBE / YES
7. Construction of the proposed project is anticipated to include construction activities on jurisdictional wetlands or require additional surveys to identify and delineate jurisdictional wetlands (same as Q14 below). NO / MAYBE / YES

Once a third-party developer is identified for the project, design of the array will commence and details of the locations and dimensions of project elements will be developed. It is anticipated that any impacts to wetlands would be avoided to the extent practicable. For instance, access roads to facilitate construction and ongoing maintenance would be routed around wetlands and their buffers. If impacts to wetlands are not avoidable, applicable permits would be obtained by the developer.

8. Construction of the proposed project is anticipated to affect a coastal zone regulated by the Coastal Zone Management Act (CZMA), requiring a CZMA consistency evaluation that has not yet been completed. NO / MAYBE / YES

FMMD is within the Maryland Coastal Zone and a CZMA consistency determination has been included as Appendix C to the EA.

9. Construction of the proposed project, to include associated infrastructure, if any, would require substantial modification of the installation's storm water discharge prevention plan. NO / MAYBE / YES
10. Potable water availability at the installation is dependent on groundwater that is currently stretched to or beyond its capacity, and brackish or salt water intrusion is currently a problem. NO / MAYBE / YES
11. Construction is proposed to be done on a closed landfill, IRP, MMRP, or CC site and would cause significant surface water or groundwater contamination or violate

regulations.

NO / MAYBE / YES

Construction would occur on a closed landfill; however, the developer would be required to account for stormwater management of all project elements during construction and operation of the Proposed Action. Adherence to spill management plans would be part of the developer's responsibilities in order to address the potential for accidental releases of hazardous materials, such as fuel and oil associated with construction equipment. The arrays and associated infrastructure, such as the battery energy storage system, would be maintained in good working order to prevent inadvertent releases of materials.

f. Biological Resources (including Threatened and Endangered Species)

This resource is analyzed in the FMMD OEI Solar Project EA.

12. Construction, operation, or maintenance of the proposed project is likely to result in an unauthorized "take" of a protected species (e.g., under the Endangered Species Act, Migratory Bird Treaty Act, Marine Mammal Protection Act, or Bald and Golden Eagle Protection Act) and/or construction activity is anticipated to effect critical habitat, as designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. (Note: All required USFWS or NMFS informal or formal consultation must be completed prior to commencing with the proposed project.) NO / MAYBE / YES
13. Construction, operation, or maintenance of the proposed project is likely to result in an unauthorized "take" of a state-protected species and the installation is required to comply with the associated legal and regulatory requirements of the state. NO / MAYBE / YES
14. Construction of the proposed project is anticipated to include construction activities on jurisdictional wetlands or require additional surveys to identify and delineate jurisdictional wetlands (same as Q7 above). NO / MAYBE / YES
15. Construction of the proposed project is located in whole or in part within a floodplain and must undergo the process outlined in Executive Order 11988, as amended by Executive Order 13690, possibly resulting in a Finding of No Practicable Alternative. NO / MAYBE / YES
16. Construction of the proposed project is anticipated to include construction activities in biological sensitive areas other than those mentioned above. NO / MAYBE / YES
17. All or part of the proposed construction area needs to be surveyed for one or more protected species, such as threatened or endangered species protected under the Endangered Species Act (a YES means that the appropriate biological resource survey does not exist for all or part of the construction area). NO / MAYBE / YES
18. Construction of the proposed project would cause a substantial decrease in the relative percentage of any one vegetation type (native to the region) within the installation, particularly if the vegetation type in the region is already highly fragmented as a result of human activity. NO / MAYBE / YES

g. Cultural Resources

This resource is analyzed in the FMMD OEI Solar Project EA.

19. All or part of the proposed construction area needs to be surveyed for cultural resources (a YES means that a cultural resources survey does not exist for all or part of the construction area). NO / MAYBE / YES
20. Construction of the proposed project is anticipated to have adverse effects on National Historic Preservation Act (NRHP)-listed and/or -eligible historic properties and those effects are unlikely to be able to be avoided or mitigated. (Note: All required NHPA Section 106 consultation with SHPO, ACHP, Tribes, and other interested parties must be completed prior to commencing with the proposed project.) NO / MAYBE / YES
21. Construction, operation, or maintenance of the proposed project will prevent the traditional use of sacred or ceremonial sites or resources by Federally-recognized Native Americans, Alaska Natives, or Native Hawaiians. (Note: All required NHPA Section 106 consultation with SHPO, ACHP, Tribes, and other interested parties must be completed prior to commencing with the proposed project.) NO / MAYBE / YES

h. Socioeconomics

This resource is analyzed in the FMMD OEI Solar Project EA.

22. Construction of the proposed project is anticipated to result in substantial loss or displacement of recreational opportunities and resources (e.g., hunting and fishing) relative to the baseline. NO / MAYBE / YES
23. Only one or two of all the residential areas bordering the installation are primarily occupied by low income and/or minority populations, and the site of the proposed project is adjacent or in close proximity to that low income / minority population area. NO / MAYBE / YES

i. Transportation and Traffic

This resource is analyzed in the FMMD OEI Solar Project EA.

24. Construction of the proposed project would require large construction and delivery vehicles to traverse poorly rated roads (e.g., Level of Service E or F) and intersections during peak usage times, or would degrade existing roads to Level of Service E or F. NO / MAYBE / YES

j. Airspace

This resource is analyzed in the FMMD OEI Solar Project EA.

25. The glint/glare report on the proposed project indicates a likely significantly negative impact on air operations at or near the installation. NO / MAYBE / YES

k. Utilities

This resource is analyzed in the FMMD OEI Solar Project EA.

26. The proposed project is designed so that it is not compatible with the existing nearby electrical grid system or is located such that there is no use for the generated electricity. NO / MAYBE / YES
27. Construction of the proposed project would sever the provision of utilities (electricity, natural gas, water, telecommunication service, wastewater management services, solid waste management service (non-hazardous), and other essentials), to local communities, homes, and businesses for durations that would affect health, welfare, and economic viability. NO / MAYBE / YES

l. Hazardous and Toxic Material and Waste

This resource is analyzed in the FMMD OEI Solar Project EA.

28. Construction is proposed on a closed landfill, Installation Restoration Program, Military Munitions Response Program or Compliance Cleanup site and would cause contamination or violate a Federal Facility Agreement, permit, and/or regulation. NO / MAYBE / YES
29. The installation would need to build, or significantly modify, facilities necessary to store waste petroleum, oil, and lubricant products associated with the construction, operation, and maintenance of the proposed project, in accordance with local/state/federal regulations. NO / MAYBE / YES
30. Construction of the proposed project would require substantial modification for the installation's Spill Prevention, Control and Countermeasures Plan. NO / MAYBE / YES

m. Human Health and Safety

This resource is analyzed in the FMMD OEI Solar Project EA.

31. Construction, operation, or maintenance of the proposed solar PV project would require substantial modification of the installation's health and safety plan. NO / MAYBE / YES
32. The addition of roof-top mounted solar PV modules requires substantial structure re-design to enable the structure to safely support the additional load. NO / MAYBE / YES

No rooftop mounted solar PV modules are part of the Proposed Action.

n. General

33. The installation (e.g., some ARNG installations) or the solar PV system operator is required to comply with state-level NEPA-like requirements and those requirements include analysis of topics not addressed in the PEA. NO / MAYBE / YES

o. Cumulative Effects

34. Other actions are underway, or proposed, that when combined with the potential effects of construction, operation, and maintenance of the proposed project, could have a significant cumulative effect on human health or the environment. NO / MAYBE / YES

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