

SOLAR ENERGY PLAN OF DEVELOPMENT

The following outline identifies the usual requirements for a Solar Energy Plan of Development (POD) to be submitted prior to initiation of NEPA analysis (including publication of a Notice of Intent to prepare an EIS, if necessary) for a solar energy development project. A Plan of Development (POD) is required for both a solar energy non-competitive right-of-way application (43 CFR 2804) or a solar energy competitive right-of-way lease (43 CFR 2809). These requirements provide the basic information necessary to begin the NEPA analysis and review process for a proposed solar energy project as part of a non-competitive right-of-way application or a proposed project within an issued competitive right-of-way lease. The specific outline format and title for each section of the POD does not have to be consistent with this template, however, the content of the POD needs to include these requirements.

The Solar Energy POD is a dynamic document that may require additional information during the NEPA review and analysis process. The initial POD template is just that, initial. It may require different information from the proponent depending upon the solar technology, the environmental resources that may be impacted, the location of the proposed project, the timing of the project, etc. There may be information required from one proponent that is not required by another proponent, because of the issues or resources involved.

Due Diligence: A solar energy non-competitive right-of-way applicant is required by the regulations (43 CFR 2804.12(b)(1)) to submit with the right-of-way application a general description of the proposed project and a schedule for the submission of a more complete POD. The BLM will not begin processing the application until submittal of the more complete POD. During the NEPA review process for the application additional information may be requested of the applicant. If the BLM needs more information as part of the POD, the BLM will identify this information in a written deficiency notice asking the applicant to provide the additional information within a specified period of time (43 CFR 2804.25(c)). The applicant is also required by the regulations (43 CFR 2804.25(c)(1)) to commence any required resource surveys or inventories within one year of the request date from the BLM. A 30-day show cause letter will be provided to the applicant prior to issuing any decision to reject the application for failure to respond to a deficiency notice regarding the POD (43 CFR 2804.26(a)) pursuant to the regulations (43 CFR 2804.25[b] and 2804.26[a]).

A solar energy competitive right-of-way lease holder is required by the regulations (43 CFR 2809.18(c)) to submit a complete POD within 2 years of the lease issuance date. The BLM will not begin the NEPA review process for the proposed solar energy development project within the issued lease until submittal of the complete POD. During the NEPA review process for the POD additional information may be requested of the lease holder. If the BLM needs more information as part of the POD, the BLM will identify this information in a written deficiency notice asking the lease holder to provide the additional information within a specified period of time. A 30-day show cause letter will be provided to the lease holder prior to issuing any decision to suspend or terminate the lease.

Supplementary Information: Additional Supplementary Information (attached) will be required to complete the final NEPA and approval process. Alternative designs, design features and mitigation measures developed in the NEPA analysis will be incorporated into a final POD as part of the final decision package. Additional environmental information and data (including wildlife surveys, sensitive plants and cultural resource surveys) collected by the proponent will also be required as part of the final NEPA analysis and approval process.

Solar Energy Plan of Development Outline:

1. Project Description

a. Introduction

- Describe type of facility, planned uses, generation output
- Schedule for project, including anticipated timelines for permitting, construction and operation, and any phased development as appropriate

b. Proponents Purpose and Need for the Project

c. General Facility Description, Design and Operation

- Project location, land ownership and jurisdiction
- Legal land description of facility (federal and non-federal lands)
- Total acreage and general dimensions of all facilities and components
- Power plant facilities, thermal conversion process
- Numbers and general dimensions of solar array, power generation units (wet or dry cooling), towers, substations, transmission lines, access roads, buildings, parking areas
- Temporary construction workspace, yards, staging areas
- Geotechnical studies and data needs, including solar insolation testing
- Ancillary facilities (administrative and maintenance facilities and storage sites)
- Water usage, amounts, sources (during construction and operations)
- Erosion control and stormwater drainage
- Vegetation treatment and weed management
- Waste and hazardous materials management
- Fire protection
- Site security and fencing (during construction and operations)
- Electrical components, new equipment and existing system upgrades
- Interconnection to electrical grid
- Spill prevention and containment for construction and operation of facility
- Health and safety program

d. Alternatives Considered by Proponent

- Alternative project site location considerations (**not required for a competitive solar energy lease**)
- Alternative technology considerations
- Alternative project design/layout/phased development considerations
- Alternatives considered but not carried forward
- Comparative analysis of alternatives

e. Other Federal, State and Local Agency Permit Requirements

- Identify required permits (entire project area on both federal and non-federal lands)
- Status of permits

f. Financial and Technical Capability of Proponent (see IM 2017-099, issued 9/14/2017)

2. Construction of Facilities

a. Solar field design, layout, installation and construction processes including timetable

and sequence of construction

- b. Phased projects, describe approach to construction and operations
- c. Access and transportation system, component delivery, worker access
- d. Construction work force numbers, vehicles, equipment, timeframes
- e. Site preparation, surveying and staking
- f. Site preparation, vegetation removal and treatment
- g. Site clearing, grading and excavation
- h. Solar array assembly and construction
- i. Power plant construction
- j. Gravel, aggregate, concrete needs and sources
- k. Electrical construction activities
- l. Aviation lighting (power towers, transmission)
- m. Site stabilization, protection, and reclamation practices

3. Related Facilities and Systems

- a. Transmission System Interconnect
 - Existing and proposed transmission system
 - Ancillary facilities and substations
 - Status of Power Purchase Agreements
 - Status of Interconnect Agreement
 - General design and construction standards
- b. Gas Supply Systems (as appropriate)
 - Backup natural gas generation requirements
 - Pipeline routing considerations and construction standards
 - Metering stations
- c. Other Related Systems
 - Communications system requirements (microwave, fiber optics, hard wire, wireless) during construction and operation

4. Operations and Maintenance

- a. Operation and facility maintenance needs
- b. Maintenance activities, including mirror washing and road maintenance
- c. Operations workforce and equipment

5. Environmental Considerations and Other Resources

- a. General description of site characteristics and potential environmental issues (existing information)
 - Special or sensitive species and habitats
 - Special land use designations
 - Visual Resource Management (VRM) designations
 - Cultural and historic resource sites and values
 - Native American Tribal concerns
 - Other environmental considerations

- b. Other uses on project site
 - Grazing permit (grazing use, range improvements including fences and water sources and distribution, access, proposed mitigation, and any agreements with permittee)
 - Other existing authorized uses (rights-of-way, leases and permits)
 - Public access and roads
 - Recreation and OHV conflicts
 - Aviation and/or military conflicts (as appropriate)
 - Mining claims
 - Other environmental considerations
- c. Mitigation measures proposed and included in POD

6. Maps and Drawings

- a. Maps with footprint of solar facility (7.5 min topographic maps or equivalent to include references to Public Land Survey system)
- b. Initial design drawings of solar facility layout and installation, thermal power conversion facilities, electrical facilities and ancillary facilities. These initial design drawings will typically be a 30% Engineering and Civil Design package to adequately describe the proposed project and evaluate the design considerations for soils, drainage and watershed management.
- c. Initial site grading plan
- d. Maps with transmission facilities, substations, distribution, communications
- e. Access and transportation maps
- f. Preliminary visual resource evaluation and visual resource simulations (as appropriate)

SUPPLEMENTARY INFORMATION

Additional Supplementary Information will be required in order to prepare the final NEPA analysis and complete the review and approval process, but is not required to be submitted with the initial POD. This information is required before the BLM can complete the environmental analysis. This information is developed as further data is gathered on-site and as alternative designs and mitigation measures are incorporated into a final POD. Other environmental data and inventory information (including but not limited to cultural resources, sensitive species and other biological data) will also be required to be collected by the proponent in order to prepare the final NEPA analysis.

1. Engineering and Civil Design

- a. Facility survey and design drawing standards
- b. Supplemental engineering and civil design packages may be required based on modifications to the initial POD during preparation of the NEPA analysis. Final engineering and civil design packages will be required prior to approval of the Notice to Proceed for all solar facilities, thermal power conversion facilities, electrical facilities and ancillary facilities that incorporate all mitigation measures developed in the final NEPA analysis and incorporated into the final approved POD. Final as-built drawings will be required for all facilities after completion of construction.
- c. Watershed and drainage analysis and calculations
- d. Watershed protection and erosion control design drawings
- e. Supplemental site grading plans may be required based on modifications to the initial POD during preparation of the NEPA analysis. Final site grading plans will be required prior to approval of the Notice to Proceed that incorporate all mitigation measures developed in the final NEPA analysis and incorporated into the final approved POD.

2. Alternatives Considered by the Proponent

- a. Alternative engineering design considerations
- b. Alternatives considered but not carried forward by proponent
- c. Comparative analysis of design alternatives

3. Facility Management Plans

- a. Stormwater Pollution Prevention and Protection Plan
- b. Hazardous Materials Management Plan
- c. Waste Management Plan
- d. Invasive Species and Noxious Weed Management Plan
- e. Health and Safety Plan (meeting OSHA requirements)
- f. Environmental Inspection and Compliance Monitoring Plan
- g. Worker Education and Awareness Plan

4. Facility Decommissioning

- a. Reclamation and site stabilization planning
- b. Temporary reclamation of disturbed areas
- c. Removal of power generation and substation facilities
- d. Removal of heliostats/panels
- e. Removal of other ancillary facilities