

Checklist 4

Description of a proposed large-scale solar energy project (photovoltaics, hot water and concentrated solar power)

CLARIFICATION OF THE NEED FOR AND FEASIBILITY OF THE PROPOSED PROJECT

- justification of the need for the proposed solar energy project
- compliance with existing legal frameworks and/or with other local, national, regional or international policies and strategies related to renewable energy and solar energy
- justification of the site selection for the proposed solar energy project
- solar incidence data and energy efficiency of the proposed solar infrastructure
- studies clarifying the site's real potential for solar energy exploitation

DESCRIPTION OF THE PROPOSED SOLAR ENERGY PROJECT

- technical information concerning the proposed solar energy project:
 - technical drawings and reports of the proposed solar energy project
 - proposed installed energy capacity
 - typology and layout of installations
 - number of energy-generation elements
 - material used
 - ancillary facilities
 - access infrastructures
 - energy grid and distribution infrastructure
 - technical characteristics of the proposed solar energy installation
 - drawings: plan, elevation and section
 - visualizations from relevant perspectives
 - layout of the installation
 - colour and finishing (also glare, important not only for its possible visual impact, but also for possible perception by animals)
 - height of the installations
 - details of foundations
 - height above the ground of the installations
 - material of and design of the supporting infrastructure
 - amount of land to be cleared
 - expected lifetime
 - electrical output
 - technical information on the installation
 - overview of security plans and systems in place (lights, fences, override systems, fire warning systems)
 - description of the proposed life cycle
 - proposed lifetime of the solar energy project
 - Life Cycle Assessment, if available
 - description of the construction phase, including, for example:
 - CO₂ emissions
 - information on infrastructural plans
 - energy and water resources needed

- quantification of waste and sewage water produced
 - information concerning construction sites and logistics
- description of the operation phase, including, for example:
 - glare
 - waste disposal
 - lights and security visual signals
 - maintenance plan
 - risk management plan
 - traffic forecasts
- outline of the end-of-life options planned
 - in case of repowering: possible repowering scenarios (considering the possibility of technological advancements that might modify these scenarios)
 - in case of decommissioning: preview of models for a sustainable decommissioning scenario, dismantling of the solar energy infrastructure and requalification plan
- geographical information (including GIS coordinates) for the location of all the infrastructural components of the solar energy project
 - solar energy generation elements
 - access roads
 - substations
 - transformers
 - power-grid lines
 - construction sites
 - the project's area of influence, for example, with regard to glare
- cost plan with a detailed estimate of costs
- measures for environmental improvements
- visibility studies and visual modelling from different selected viewpoints, considering night- and daytime

ALTERNATIVES CONSIDERED

- outlining of all alternatives proposed
 - alternative location
 - alternative type and layout of solar installation and transmission infrastructure
 - No-go option
 - assessment of the alternative proposed and comparison with other alternatives considered
- explanation and justification of the preferred alternative