Checklist 3

Description of a proposed wind energy project

CLARIFICATION OF THE NEED FOR AND FEASIBILITY OF THE PROPOSED PROJECT

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

DESCRIPTION OF THE PROPOSED WIND ENERGY PROJECT

- Technical information concerning the proposed wind energy project:
    - technical drawings and reports pertaining to the proposed wind energy project
        - proposed installed energy capacity
        - typology and layout of wind turbines
        - number of wind turbines
        - material used
        - ancillary facilities
        - access infrastructures
        - energy grid and distribution infrastructure
    - technical characteristics of the proposed wind turbines
        - drawings: plan, elevation and section
        - visualizations from relevant perspectives
        - layout of the tower
        - colour (important not only for its possible visual impact, but also for possible perception by animals)
        - height of the wind turbine with and without the rotor
        - diameter and depth of foundations
        - diameter of the rotor
        - material of the turbines
        - amount of land to be cleared
        - expected lifetime
        - electrical output
    - technical information on the rotor, rotor blade and brake system
    - overview of security plans and systems in place (lights, stabilization measures, ice protection systems)
    - description of the proposed life cycle
        - proposed lifetime of the wind energy project
        - Life Cycle Assessment, if available
        - description of the construction phase, including, for example:
            - CO_2 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:
        - noise
        - vibrations
        - non-ionizing radiation
        - 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 wind energy infrastructure and requalification plan
- geographical information (including GIS coordinates) for the location of all the infrastructural components of the wind energy project
    - wind turbines
    - access roads
    - substations
    - transformers
    - power-grid lines
    - construction sites
    - the project's area of influence, for example, with regard to shadow flickering
- 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 wind turbines
    - no-go option
- assessment of the alternative proposed and comparison with other alternatives considered

explanation and justification of the preferred alternative