

Checklist 2: Energy Community Technical Design & Digitalization

Checklist for Energy Community Technical Design and Digitalization		
Legal and Regulatory context for RECs	Yes/No	Comments
Has the EU Renewable Energy Directive (RED II and RED III) been fully transposed into national law, and what provisions are made for Renewable Energy Communities (RECs) and self-consumption schemes?		
What specific national laws or regulations have been established to facilitate the implementation of RECs, including eligibility criteria, support mechanisms, and operational guidelines		
Are there any provincial or municipal regulations that modify or adapt national REC frameworks		
How do existing regulations enable or hinder citizen participation in RECs, and what regulatory barriers exist that may limit collective self-consumption and decentralized energy production at local levels		
Identification of the REC or Self-Consumption scheme Members: Producers/Prosumer and Consumer	Yes/No	Comments
Have all members (producers, prosumers, and consumers) of the REC or Self-Consumption scheme been clearly identified and categorized based on legal eligibility, geographical proximity, and technical compatibility		
Does the membership plan include vulnerable households, public bodies, and local enterprises, in alignment with EU objectives for an inclusive energy transition?		
Has the potential for adding additional participants to the REC or Self-Consumption scheme been evaluated for future expansion?		
Identification of Economic Resources	Yes/No	Comments
Have various economic resources, such as grants, loans, strategic partnerships, and private investments, been identified to support the establishment and sustainability of the REC or Self-Consumption scheme?		
Has a diverse range of financial support mechanisms been considered to ensure the project's long-term sustainability and expansion?		
Technical Feasibility and Energy Modelling	Yes/No	Comments
Have national, provincial, and municipal regulations regarding photovoltaic (PV) plants been thoroughly reviewed, particularly in terms of spatial planning, permitting procedures, and integration with local energy strategies?		
Has the installation area for the PV plant been clearly defined, including the type of terrain (flat or inclined) and the characteristics of surrounding buildings or land (e.g., roof type, land usage)?		
Have key environmental factors (solar radiation, temperature, wind speed, humidity, and precipitation) been gathered for the identified installation area?		
Have the installation area's landscape, architectural, and archaeological restrictions been checked, in accordance with heritage protection regulations?		
Have potential conflicts with critical infrastructure that may affect the installation been assessed?		
Has the local solar potential been fully assessed?		
Have the necessary permits and authorizations for the PV plant installation been identified, taking into account the plant's size, location, and area-specific restrictions?		
Has the electricity consumption profile been defined?		
Has the peak power installed been evaluated?		
Has the producibility of the PV system been evaluated?		
Have different scenarios been considered?		

Has a detailed electrical schematic been created, including all plant components, connections, and mapping to evaluate energy losses and system layout, up to the primary cabin?		
Has the environmental impact of RES installations been evaluated (if required)?		
Are done the verification of the weight capacity of the roof or consistency of the terrain?		
Have the most suitable supporting elements been chosen for the PV panels, considering the roof or terrain type, and ensuring structural integrity and waterproofing?		
Are all the necessary permissions defined for the installation of the PV plant?		
Territorial & Landscape Regulations	Yes/No	Comments
Are energy installations compliant with local zoning and land-use regulations?		
Has the visual and ecological impact of the REC been assessed?		
Are all installations compliant with local building codes and regulations?		
Has stakeholder consultation been conducted with local authorities and communities?		
Additional requirements	Yes/No	Comments
Has the necessary documentation been submitted to the municipality, and has it been verified whether additional permissions (e.g., environmental impact evaluation, fire protection, or safety regulations) are required?		
Have the applicable incentives for energy fed into the grid been identified?		
Have potential installers and service providers near the installation site been identified and evaluated, with a focus on local inclusion and regional economic development?		
Has an ordinary maintenance program been developed, tailored to the site's characteristics and environmental conditions, and have contracts been prepared with selected service providers for regular monitoring and diagnostics?		
Economic Evaluation of the PV Plant	Yes/No	Comments
Has a comprehensive economic evaluation been conducted for the PV plant, covering design authorization costs, installation, maintenance, and estimated payback period?		
Grid System & Smart Meters	Yes/No	Comments
Has all required project documentation, including details about the PV plant's capacity, location, and applicable regulations, been prepared and submitted to the Energy Services Manager?		
Have suitable grid connection points been identified for the REC?		
Are smart meters correctly installed and integrated for real-time monitoring?		
Is the grid system capable of handling the energy output from the REC?		
Are energy storage systems included in the design for managing surplus energy?		
Will the measurements from the installed devices be available to the management tools?		
Is there any system considered to ensure data quality?		
Management Tools	Yes/No	Comments
Are data management systems in place for monitoring REC operations?		
Are data governance mechanisms properly defined?		
Do REC members have access to user-friendly tools for monitoring energy consumption?		
Are billing and payment systems automated and integrated into the REC platform?		
Do REC members have clear protocols to report issues and request assistance?		
Have cybersecurity measures been included to protect data and system integrity?		
Does the REC manager have tools to incentivize and maintain REC members in the community?		
General Verification of Technical Parameters	Yes/No	Comments
Have the energy production capacities been verified?		
Is there an alignment between energy production and consumption in the REC?		
Are smart metering systems calibrated and functional?		

Have all technical systems (grid, storage, metering) been tested for compliance?		
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