

Smart Siting Guide: Montenegro

Balancing renewable energy, conservation and community priorities – Frequently Asked Questions

1) What is the current state of renewable energy development in Montenegro, and what is planned in the future?

Montenegro has adopted the National Energy and Climate Plan (NECP), which lays out the country's commitments and strategic direction for the energy sector through 2040. The NECP envisions a decarbonized energy system with a prominent role for renewable energy sources and electrification of transport. A priority within this framework is the gradual coal phase-out, accompanied by a just socio-economic transformation in the Pljevlja coal region and the securing of new employment opportunities for former coal workers.

Renewable energy investments come from both private and public sectors, with the national electric power utility company, Elektroprivreda Crne Gore (EPCG) developing public-sector investments. In recent years, Montenegro has advanced several solar and wind projects, but overall deployment is not progressing quickly enough to meet NECP targets or to compensate for the energy generated by the Pljevlja Thermal Power Plant.

2) What is Montenegro doing to accelerate renewable energy development, and what role does the MEGA study play in this process?

As Montenegro becomes an EU member state, it is required to harmonize its energy legislation with that of the EU. Following the transposition of the Renewable Energy Directive (RED II), the country is working on transposing the revised Renewable Energy Directive (RED III) by introducing Renewables Acceleration Areas (RAAs) within the legislative and spatial planning framework to expedite permitting for projects located in low-conflict zones. Beyond legislative changes, the Government is pursuing greater investments in renewable energy by signing memoranda of understanding with international companies and foreign governments, signaling a clear commitment to meeting energy targets.

The Nature Conservancy and Eco-team, with support from the Ministry of Energy and Mining and other national institutions, developed the MEGA study to map low-conflict locations for solar and wind development. This work underpins the RAAs designation and supports data-driven decision making to accelerate project delivery while protecting landscapes, biodiversity, livelihoods and core national economic sectors.

3) What are the main challenges and prospects for renewable energy in Montenegro, and how does MEGA address them?

The principal challenge is spatial: solar and wind farms require substantial land, which can conflict with biodiversity conservation, natural resources, cultural values, and other economic activities such as agriculture and tourism. The MEGA study demonstrates that the energy transition does not have to come at the expense of these valued assets if planning is smart and supported by high-quality data. Because of how important people's surroundings are to their lives, MEGA study piloted employed Public Participation Geographic Information System (PPGIS) consultations across several

municipalities, allowing communities to mark locations that matter to them and describe their values. This inclusive approach seeks to direct development toward locations with public support, reducing project delays and cancellations.

Another major bottleneck is the slow progression from project planning to realization, with delays often arising from information gaps such as grid capacity, area sensitivities, and other constraints that affect financing. MEGA addresses these gaps by considering not only resource potential but all other factors relevant to project planning, including legal constraints, proximity to roads, grid capacity, distance from consumption centers, ecological and cultural values, landscape impacts, and other land uses like agriculture, tourism, and forestry. The results help developers better assess where to direct investments to secure funding and move projects toward realization.

4) What are the results of the MEGA project?

The findings identify a substantial number of locations with favourable development potential and minimal risk of conflicts with natural, cultural, and socio-economic values. At low-conflict, high-development-potential sites, solar capacity is around 15,630 MW (about 16 GW), with an estimated 650 MW for wind power. Build-out of solar and wind on just one-fifth of the identified low-conflict locations could enable Montenegro to meet its 2030 energy targets.

5) What are brownfield locations, and why are they emphasized in MEGA study?

Brownfields are already altered, underutilized, or abandoned areas, such as landfills, quarries, and former industrial sites. They are highlighted because their use for renewable energy helps avoid converting valuable natural or agricultural land into development zones. Brownfields often come with existing grid and road networks, which facilitates project development. The MEGA study identified low-conflict brownfield locations with high or medium development potential for solar capacity totaling around 346 MW; wind capacity was not assessed on brownfields due to spatial constraints. Importantly, this focus aligns with RED III that prioritize brownfields for renewables development.

6) What are the main limitations of the MEGA study and how can they be improved in future adaptations?

The MEGA study relies on a large number of spatial and technical data inputs, and one of its key limitations is the absence of a comprehensive digital cadaster - a spatial database containing ownership and parcel structure information. Such data would greatly improve investment assessments by clarifying land tenure and rights. Additionally, more detailed information on forest units and agricultural land quality could refine results if collected at a national level. Finally, biodiversity data, particularly in the context of Natura 2000 monitoring, is rapidly evolving, so future iterations are likely to include more information on potential conflicts with living ecosystems.

7) Which types of locations or projects could most quickly move from planning to realization, and why?

MEGA smart siting approach is designed to accelerate project realization by evaluating location-specific resource potential alongside other determinants such as legal constraints, proximity to roads, grid capacity, distance to consumers, ecological and cultural values, landscape impacts, and other land uses. Nonetheless, Under the present legal framework, developers seeking to invest in

renewable energy projects must follow the legally prescribed procedures and cannot use expedited processes, even if their projects are situated in optimal locations. Despite this, directing investments toward low-conflict locations can substantially speed up realization because such sites face lower resistance from local communities and reduce downstream obstacles in permitting.

8) How important is local community acceptance for the successful energy transition, and what common missteps occur in communication?

Local community acceptance has proven pivotal in Montenegro's OIE project outcomes. There have been cases where proposals faced resistance from communities, underscoring the need for proactive and inclusive engagement with local stakeholders. The major missteps typically involve insufficient or late communication between national authorities, local authorities, and communities, which can foster distrust or opposition. The MEGA experience suggests that timely, transparent, and participatory consultations help identify concerns early, allowing developers to adjust plans, avoid conflicts, and direct development to less contentious sites.

9) What are the next steps planned after development of the MEGA study?

Going forward, our activities will focus on integrating the MEGA results within the regulatory and institutional framework to create conditions for developing renewable energy projects at optimal locations. Implementation includes:

- using the study results as the basis for designating Renewables Acceleration Areas;
- incorporating the optimal locations for renewable energy development in local spatial planning documents;
- using the study maps for planning the optimization and development of the transmission and distribution network;
- incorporating maps in the design of auctions, either as a tool for selecting locations for site-specific auctions or for assessing the sustainability of projects proposed by developers; and
- leveraging the study maps to prioritize projects with low environmental and social conflicts over those following a business-as-usual approach.