Generating Electricity from Renewable Sources in CEE & SEE

Energy Industry Group

Montenegro

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Country General Information

Capital: Podgorica

Location: Montenegro is a country in Southeast Europe, which is bordered by Croatia, Bosnia and Herzegovina, Serbia, Albania and the Adriatic Sea. The country is characterized by its mountainous terrain with more than 50 peaks that are over 2,000 m high. Montenegro is also known for its river valleys and the Bay of Kotor. Its geographic coordinates are 42°30 N 19°18 E.

Surface: 13,812 km² with 293.5 km of coastline.

Population: 622,781 (2016 estimate) of which approx. 25% live in the capital city of Podgorica.

Climate: Montenegro has 6 climate regions (mountain climate above 1,500 m - snowy forest climate with long, cold winters and snow cover all year; continental climate at an altitude of 1,000 m – short and wet summers and long and harsh winters; continental climate at an altitude of up to approx. 700 m with very low precipitation, Adriatic mountain climate - the highest amount of precipitation in Europe above the Bay of Kotor (Krivošija) with 5,000-7,000 mm rainfall annually (5,000 being the European maximum), coastline climate - long and warm summers and mild winters with large amounts of precipitation; Zeta-Bjelopavlić plain - long, hot and dry summers with high temperatures, mild winters with large amounts of precipitation).

Resources: Water, wood, coal, bauxite, sea salt, oil and gas, stone, gravel, and sand. Main source of income in the country is its services sector, especially tourism.

Electricity Grid: The transmission system is composed of 45 ducts divided into 400 kV (284 km), 220 kV (372 km), and 110kV (642 km). The distribution system is divided into 35kV (1,017 km), 10kV (5,054 km) and 0.4 kV (13,351 km). The transmission system is interconnected with Serbia, Bosnia and Herzegovina and Albania. The undersea interconnection with Italy allows a bi-directional exchange of electricity between the two countries, with a capacity of 600 megawatts (expected to be doubled in the near future).

Electricity Transmission, Distribution and Supply: Electricity transmission is operated by state-owned company Crnogorski Elektroprenosni Sistem AD (CGES). The electricity distribution system, operated by Crnogorski elektrodistributivni sistem d.o.o. Podgorica (CEDIS) is considered legally and functionally unbundled from its parent company, the largely state-owned Elektroprivreda Crne Gore AD Nikšić (EPCG). EPCG is the largest producer and supplier in the market, with the retail market fully supplied by EPCG, although several other suppliers are licensed. There are more than 70 local and foreign companies registered for the wholesale supply of electricity in the Montenegrin market.

Official Language(s): Montenegrin

EU Member: Candidate since 2010.

NATO Member: since 2017.

United Nations Member: since 2006.

Currency: Euro (EUR)

Schengen: no

Political System, Administrative Organisation and Economy: Montenegro is a parliamentary representative democratic republic with the Prime Minister acting as the head of government. Executive power is exercised by the government, while legislative power is vested in both the government and the Montenegrin Parliament. In the presidential and parliamentary elections that took place during 2023, pro-European candidates and parties won the majority vote. From an economic perspective and following its separation from Serbia, Montenegro's economy relies heavily on its services sector and many high-profile investments in the country are aimed at creating an elite tourist destination. Out of 50,353 companies, 15,466 companies are in the services sector, 11,167 are in retail, and 6,847 are in wholesale trade, based on data from December 2023.

1. RES potential in Montenegro

In their national strategy and commitments to the Energy Community, the Montenegrin Government had committed to increasing the percentage of RES as part of total final consumption to 50%. The Montenegrin Government went on record to confirm that these goals were fulfilled. Based on the Report on Energy Realization for 2022, Montenegro produced 1,780.94 GWh of electricity from RES, which is 55% of their total production of electricity. However, the remaining 45% was produced from coal-powered thermal power plants.

The largest hydropower potential is currently exploited through the HPP Perucica (over 700GWh per year) and HPP Piva (over 600 GWh per year). According to Wind Europe data, wind farms in Montenegro, particularly 46 MW Mozura and Masdar's 72 MW Krnovo, sometimes produce in excess of 40% of Montenegro's total electricity needs. EPCG's WPP Gvozd, with an estimated 54 MW, Alcazar Energy's WPP Bijela with an estimated 118 MW, and WPP Brajci with an estimated 100 MW are also in development.

The RES potential of Montenegro, in that regard, seems well-utilised but also shows great potential for growth, particularly in the domain of solar where potentials are largely considered untapped. Recent studies show that wind and solar power plants could cover all 217,000 households in Montenegro, with the potential of solar being estimated up to even 2.7 GW.

An interesting topic in Montenegro is also the potential for development of off-shore wind farms, but at present such initiatives still seem stalled by the lack of regulatory framework as well as infrastructure deficiencies. Poor road infrastructure remains one of the key hurdles for on-shore developments, particularly for wind power projects.

The key priorities in further development of the Montenegrin energy sector are achieving greater interconnection with the region and the EU, further liberalisation of the local market, strengthening the knowledge and capabilities of local authorities, and increasing private sector participation in infrastructure investments. State-owned EPCG is still considered the largest producer and trader in the market.

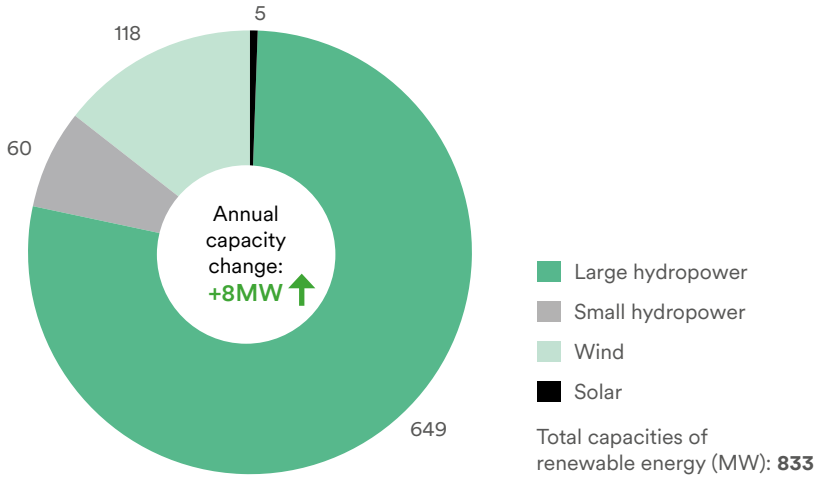
At the time of the drafting of this Guide, a new draft of a Renewable Energy Law was in the works, which should address some of these main challenges and also introduce auctions for premiums into the Montenegrin market. Additionally, the adoption of the new Law on Cross-Border Energy Infrastructure Projects is pending and, once in place, is expected to assist regional integration.

2. RES Market

2.1 Market Over the Years

- In 2007, Montenegro acceded to the Energy Community Treaty.
- In April 2016, Montenegro signed the 2015 Paris Agreement, which was later ratified by parliament and came into force on 19 January 2018.
- The Energy Law was also adopted in 2016.
- In February 2017, construction was completed on a EUR 800 million, 433 km underwater energy cable for the transport of electricity to Italy.
- In July 2017, a former strategic partner to the Government of Montenegro, Italian company A2A, initiated the withdrawal procedure by exercising the put option. Under the agreement, the Government would purchase A2A's 41.7 percent of EPCG shares for 250 million euros over a period of seven years. The government thus became the majority shareholder of EPCG, the largest producer, supplier and trader in the country.
- In December 2018, Montenegro opened Negotiation Chapter 27 on 'The Environment and Climate Change' in its ongoing process of accession into the EU. The Energy Law was amended several times in this process, mostly to harmonise the local market with EU legislation and allow for further integration of renewables into the market.
- In July 2022, the Montenegro Constitutional Court abolished the Decree on Wind Power Plants, which was adopted under an earlier version of the Energy Law, due to its noncompliance with the current Energy Law and the Montenegrin Constitution. Interestingly, the producers who acquired rights under said decree, prior to its abolishment, were granted privileged status under the decree and continue to benefit from the incentivised price of electricity.
- The total capacities of renewable energy in 2022 can be illustrated as follows:

Total Capacities of Renewable Energy 2022 (MW)



- In April 2023, BELEN, the operator of MEPX, the local power exchange, launched the day-ahead electricity market. The market has limited liquidity and is dominated by the incumbent producer and trader, EPCG. A total of 63 participants are registered to participate.
- In November 2023, EPCG announced its new partnership with Miami-based UGT Renewables for the development of 250 MW of total capacity of solar projects in Montenegro with a storage system of 50 MW. The technical engineering on the projects will be done by Hyundai Engineering from South Korea. At the same time, EPCG entered into a Memorandum of Understanding with Polish Respect Energy Holding for the purposes of exploring the possibility of development and operation of an offshore wind power plant with a capacity of approximately 2 GW, as well as the development of a battery energy storage and solar power plant. Additionally, the memorandum envisages the development of an ammonia and hydrogen production plant equipped with an 800 MW electrolyser.

- In November 2023, the Energy Support Package for the Western Balkans was adopted, and Montenegro received EUR 27 million of budget support from the European Commission to reduce the immediate impact of the energy crisis. As part of the package, Montenegro's Parliament adopted the national energy action plan, which consists of 13 measures covering a range of targets, including the preparation of a strategic framework for the NECP and implementation of the Commission's recommendations on energy.
- In December 2023, the first ground-mounted solar power plant in Montenegro, under the name Čevo, initiated operations with its total capacity of 4.4 MW.

2.2 Project Development in Montenegro

As is the case with most Western Balkans countries, one of the key steps in project development is securing real estate rights which may be problematic in rural areas where wind and solar projects may be developed, due to multiple individual owners and//or unresolved ownership issues.

Poor road infrastructure still remains one of the key hurdles, particularly for transport and delivery of large equipment. Farmers' protests against solar projects, as well as NGO engagement with respect to larger wind and hydropower projects, have also been recorded, so liaising with the local communities is a must for any project developer.

The Montenegrin Government announced several projects for the increasing of grid capacity, which should facilitate more projects to be connected in the upcoming period.

One of the main bottlenecks in project development in Montenegro continues to be the slow and highly formal administrative and licensing processes. Hard copies of documentation, together with required notarisation and apostille, are still the norm. For example, it can be seen on the website of the ministry in charge of construction that it issued only 17 construction permits for projects in 2023.

General Market Data	
Overall Production	In 2022, overall electricity production was 3.235.08 GWh
Production by Technology (GWh)	Wind – 9.97% Hydro – 44.96 % Solar – 0.12% Thermal – 44.95%
Key Authorities	○ Line ministry: Ministry of Capital Investments ○ Regulator: REGAGEN ○ Market operator: COTEE ○ Transmission System Operator: CGES ○ Distribution System Operator: CEDIS ○ Public supplier: EPCG
RES Support Schemes	
Current Energy Law	None available at the moment
New draft RES Law - Market Premiums	The right to a market premium is acquired in an auction procedure conducted by the Ministry of Mining and Energy.

2.3 Main Permits required for RES-Electricity Generation Facilities

Energy Permit	An Energy Permit is a precondition for obtaining a Construction Permit, where applicable.
Construction Permit	Depending on the capacity of the power plant, a Construction Permit is issued by the local municipality or the Ministry of Urban Planning, Urbanism and State Property.
Environmental Impact Assessment	An Environmental Impact Assessment (EIA) may be required in some cases.
Building Use Permit	The Building Use Permit certifies that the plant, as constructed, is in full conformity with the Construction Permit and other technical requirements.
Energy Licence	Electricity generation is subject to obtaining an Energy Licence from REGAGEN. This Energy License can only be issued to a Montenegrin legal entity, and with the exception of certain limited cases, is issued for a period of 10 years.

3. Significant and/or expected changes in 2024

3.1 New National Energy and Climate Plan (NECP)

The development and adoption of the National Energy and Climate Plan (NECP) was delayed, in part due to the 2023 elections, with its expected adoption postponed to the second quarter of 2024. The NECP will become the new strategic plan for the development of the energy sector until 2030, including policy and measures in the field of renewable energy and energy efficiency. This document is expected to align Montenegro's energy policy with Energy Community targets for 2030.

3.2 New Renewable Energy Law

Montenegro has prepared the draft Law on the Use of Energy from Renewable Sources. This law will introduce a number of new concepts, including auctions for premiums. The draft aims to transpose the Renewable Energy Directive (2018/2001). The law will also regulate financial support for generating electricity from renewable sources, generation capacities for self-consumption, use of renewables in heating and cooling and the transport sector, as well as guarantees of origin.

A series of roundtables will be held during the process of public discussion of this draft.

The Montenegrin Government was advised in this process by the European Bank for Reconstruction and Development (EBRD).

3.3 Preparing for auctions

Under the above law, Montenegro is expected to launch its first auctions for renewables in 2025. The Government of Montenegro is tasked with enacting a 3-year incentive plan for market premiums and feed-in tariffs. On that basis, annual quotas would be set for one or more auctions. The price ceiling should then be set by REGAGEN.

3.4 Promoting RES in households and public buildings

The Montenegrin Government has launched several initiatives and subsidy programs for the increase of solar power generation on household rooftops. Many private and public initiatives are also in place aiming to increase the energy efficiency of municipal buildings.

3.5 Focus on solar

According to a statement by the Montenegrin Minister for Energy, Montenegro is preparing for around 4 GW of solar projects in the upcoming period.

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