



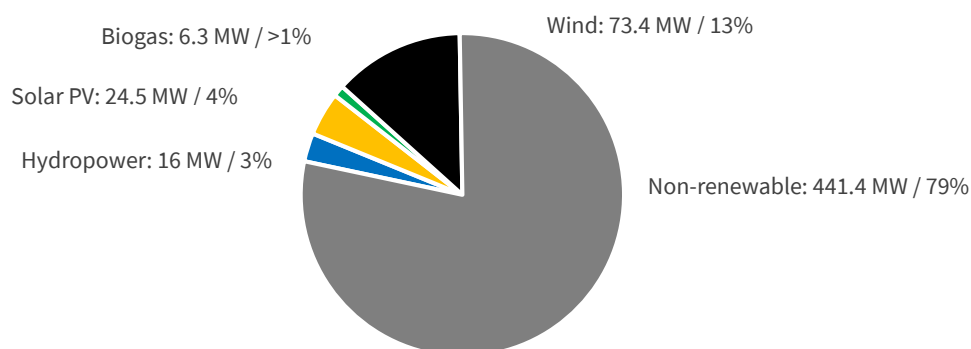
## UNECE Renewable Energy Uptake

# Factsheet: Renewable Energy in Moldova

## Status of Renewable Energy Deployment

The energy system of the Republic of Moldova is characterised by low levels of domestic natural resources and production and thus has a heavy reliance on energy imports; more than 70% of primary energy supply, including natural gas, petroleum and electricity is imported. In 2020, the share of renewable sources in the gross final energy consumption amounted to 25% with biomass being the dominant renewable energy resource. While the heating and cooling sector reports a renewable energy share of 41%, transportation and electricity generation have shares of only 0.2% and 3%, respectively. The share of electricity in the final energy consumption is also low at approximately 15% as of 2019, illustrating the low level of electrification and heavy reliance on gas imports and generation. In order to accommodate an increased share of variable and local renewables, Moldova requires a modern and flexible electricity system. In addition, renewable energy targets and specific support mechanisms need to be strengthened if any significant expansion and use of local energy production from local, renewable resources such as wind is to be realised. Despite the high potential, deployment of wind and solar energy in Moldova has been very slow. As of 2022, only 97.9 MW of renewable capacity for electricity generation was installed.

Figure 1. Installed electricity generation capacity by technology (Ministry of Infrastructure and Regional Development, 2022)



## Renewable Energy Potential

The Republic of Moldova features great potential for the use of renewable energy, including wind and solar resources. Offering technically suitable locations in almost the entire country, wind is the most abundant renewable energy source in Moldova. Compared to other European countries, Moldova has a relatively high amount of sunshine hours per year and therefore significant potential for the use of solar energy.

Table 1. Renewable energy potential (IRENA 2019)

Technology	Technical Potential 2030 [GW]
Wind	20.9
Solar PV	4.6
Biomass	0.9
Hydropower	0.8





The technical potential for renewable energy electricity generation in 2019 was estimated at a total of 27GW. In addition to the clear benefit of increased energy security and diversification of supply, the expansion and use of renewable energy sources offers a range of benefits, such as increased employment and improved health, as well as a reduction in emissions and negative climate impacts associated with the use of fossil fuels.

## **Policy Landscape and Targets**

- The Energy Strategy of Moldova 2030 provides guidelines for national energy sector development and specific policy objectives. These include the following targets for 2020: 20% renewable energy share in the total final energy consumption, 10% biofuels in transportation, 10% renewable energy share in electricity generation, and 27% renewable energy share in heat consumption.
- The National Renewable Energy Action Plan (NREAP) for 2013-2020 is currently under revision and features legal and technical measures to achieve higher shares of renewable energy.

## **Support for Renewable Energy**

- The Law on the Promotion of the Use of Energy from Renewable Sources (Law No. 10/2016), which came into force in March 2018, contains the main provisions for supporting and promoting renewable energy. Accordingly, Moldova has established three distinct support schemes depending on the size of the power plant: net metering, feed-in-tariffs, and tendering. Supporting policies include:
  - Net metering for plants up to 200 kW, administratively-set FiTs for small-scale projects, and auctioned fixed prices for larger projects
  - Obligation for the central electricity supplier to purchase all eligible renewable-generated electricity for 15 years at a determined tariff/price
  - Non-discriminatory grid connection and priority dispatch for eligible producers of renewable energy

## **Core Challenges for the integration of further renewable capacity**

### **Increasing power system flexibility**

The current power system infrastructure and supporting processes are insufficient to accommodate large shares of variable renewable generation. Increasing power system capacity and flexibility is required for a reliable and cost-efficient management of growing demand and a modern, sustainable energy system with high shares of renewable energy. Investments in and adoption of flexibility options, including network interconnection and integration, demand-side management, flexible and renewable capacity such as biogas-fired power plants, and battery storage is required.



## Removing regulatory barriers to attract investment

Stimulating investment in the renewable energy sector requires the removal of regulatory and fiscal barriers as well as the abolition of complex bureaucratic processes. There is a need for transparent guidelines for technical requirements for grid connection, long term off-taker agreements, consistent tax reductions or exemptions, reasonable policies for land sharing and infrastructure for the RE facilities, and the provision of financial guarantees through standardized instruments such as long-term PPAs. Effective implementation of integrated planning and strategy should be prioritised in order to send clear signals to the market and enhance investment in RE projects.

## Key Actors in the Moldovan Energy Sector

Institution	Function
Ministry of Infrastructure and Regional Development (MIRD)	Energy Policy Directorate; development and implementation of energy policy
National Agency for Energy Regulation (ANRE)	Provides regulation and monitoring of the electricity sector; determines RE support schemes
Energy Efficiency Agency (EEA)	Informs public and local authorities on energy efficiency and (renewable) energy, implements energy efficiency programmes
Ministry of Environment	Policy development for environmental and natural resource management, land-use management for RE plants, implementation of environmental and climate treaties
Moldavskaya GRES (MGRES)	Largest generation company, located in Transnistria
Moldovatransg LLC	Operator of the gas transmission system
SE Moldelectrica	State-owned single power transmission system operator
Energocom JSC	State-owned central electricity supplier
Electricity Distribution System Operator (OSHEE)	Operator of the low-medium voltage distribution system network
Association of Energy Consumers	Represents and protects interests of energy consumers
ÎCS „Premier Energy Distribution” SA	Largest private operator of the national electricity distribution system

## Hard Talk on the uptake of renewables in Moldova

As part of the UNECE RE-Uptake Project 2021, a “Hard Talk” on renewables, resilience and flexibility options in the Republic of Moldova was held with members of the Moldovan and international energy community on June 14<sup>th</sup>, 2022. The “Hard Talk” is a discussion format on current topics of renewable energy with the objective to identify the best methods for realising the potential of renewable energy in the respective country.





## Sources

Ministry of Infrastructure and Regional Development, Moldova Energy Sector, 2022

IEA, System Integration of Renewables for Moldova: A Roadmap, 2022

IRENA, Renewables Readiness Assessment: Republic of Moldova, 2019

IRENA, Cost-competitive renewable power generation: Potential across South East Europe, 2017

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