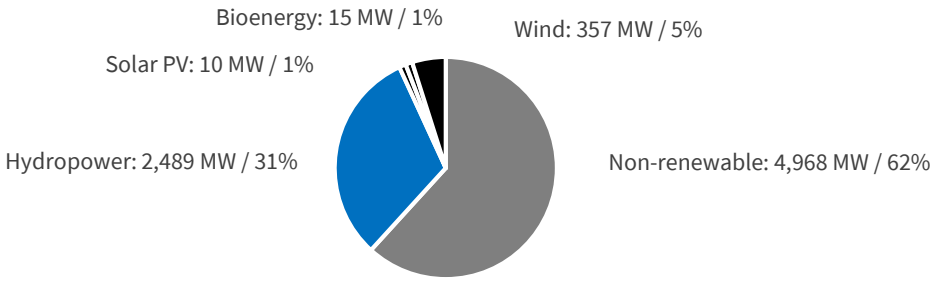
UNECE Renewable Energy Uptake

Factsheet: Renewable Energy in Serbia

Status of Renewable Energy Deployment

Fossil fuels dominate Serbia's energy mix as of 2017 with 87% of the total primary energy supply (TPES), mainly consisting of an abundance of local coal, together with imported gas and oil. Only 13% of the TPES is covered by renewable sources, including Hydropower with 45% (in the power sector) and Bioenergy with 54% (mainly in the heating sector), and negligible shares of wind and solar. The growth of renewables from 2016 to 2017 had however already more than doubled the growth of the previous five years. Growth from 2016 to 2017 was 12.2% in comparison to 5.6% growth from 2011 to 2016. By installing the biggest wind park in region, Serbia intends to further diversify its renewable mix. However, the development of new renewable energy sources remains stagnate, especially in the PV sector, leading to Serbia not meeting its set renewable energy targets. The contribution and rise in renewables has also been outpaced by the general rising energy consumption in the country, further decreasing the overall share of renewables in final consumption.

Figure 1. Installed generation capacity by technology (source: IRENA, 2019)



Renewable Energy Potential

As displayed in the table below, Serbia has significant potential for renewable generation. Both solar PV and wind have far greater potential than Hydropower.

Table 1. Renewable energy potential in Serbia (source: IRENA 2017; 2020)

Technology	Capacity 2019 [MW]	Economic Potential 2030 [MW]	Technical Potential 2030 [MW]
Hydropower	2,489	2,941	4,736
PV	10	3,582	6,902
Wind	357	1,796	29,670
Bioenergy	15	898	1,671

Policy Landscape and Targets

- The current National Renewable Energy Action Plan (NREAP) sets a target of 27% for the renewable energy share of total final energy consumption (TFEC) by 2020.
- The report on the implementation of the NREAP for 2018-2019 calculates 21.4% for TFEC in 2019, therefore missing the original target. The fact that the TFEC in 2014 was 1.4% higher than 2019 shows that the consumption grows stronger than the growth of renewable energy sources.
- The NREAP is to be superseded by the National Energy and Climate Plan (NECP), which its draft is planned to be adopted by the government by the end of November 2021 and therefore being the last member of the Energy Community (EnC) contracting parties contributing a draft. It will set out renewable energy targets to 2030.

Support for Renewable Energy

- Administratively set feed-in tariffs (FiT) serve as a support for renewable energy. Serbia has so far supported the construction of 511 MW of different renewable energy capacities with 300 MW remaining.
- The possibility of becoming a prosumer will be facilitated by the new renewable energy sources bill adopted in early 2021, making net-metering possible and adding a fast-track for implementing small scale facilities.

Core Challenges for the integration of further renewable capacity

Increasing (foreign) investment

The new renewable energy sources bill mentioned above is designed to speed up the development of green energy projects including the construction of wind farms and solar power plants. It is yet not clear to what extent.

The new bill introduces auctions but further information on auction design is lacking. Having the advantage of being the only contracting party of the Energy Community with a day-ahead market, more market-based support schemes such as market premiums of contracts for difference could strengthen investment and transparent pricing. Furthermore, administrative procedures for project development remain unconsolidated and lengthy.

Although the energy market is officially liberalized the state-owned electric utility power company EPS offers a guaranteed price of around 5 cent/kWh for households which is far below market prices. Industrial companies have no such price guaranties, yet, the majority of companies and all households buy energy from EPS. These subsidy-like prices make it very difficult to attract investment, as private companies cannot offer such low prices.

Unfolding Serbia's bioenergy potential

Serbia has great potential in bioenergy, yet capacities remain very low. In fact, Serbia exports much of its biomass throughout the region. Serbia could utilize the local biomass resources, especially for domestic heating. Efficiency measures would have to be pursued as most of the buildings heat with old and therefore inefficient boilers. Several projects have been launched in the past decade, mainly with the support of foreign aid. Serbia should build upon this work and develop a bioenergy strategy to properly unlock the significant bioenergy potential and enable the use of renewable energy across all sectors, including the heating and transport sectors.

Key Actors in the Serbian Energy Sector

Institution	Function
Ministry of Mining and Energy	Strategic development of energy sector, including policy development
Department of Renewable Energy (within the Ministry of Mining and Energy)	Responsible for participating in policy making and monitoring the situation in the field of renewable energy
Elektroprivreda Srbije - Public Enterprize Electric Power Industry of Serbia (EPS)	State-owned Electricity provider and utility
Elektromreza Srbije Belgrade (EMS)	State-owned Transmission System Operator
Elektroprivreda Srbije - Public Enterprize Electric Power Industry of Serbia (EPS) – Distribution	State-owned Distribution System Operator
SEEPEX power exchange	Day-ahead market power exchange
Srbijagas AD	State-owned natural gas company performing trade and distribution operations
Transgas AD	State-owned natural gas company performing transport and storage operations
Energy Agency of the Rep. of Serbia (AERS)	Contributes to development of energy regulation and policy

Upcoming Hard Talk on the uptake of renewables in Serbia

As part of the UNECE RE-Uptake Project 2021, a Renewable Energy “Hard Talk” on the upcoming renewable energy support schemes, including net metering and auctions in Serbia will be held with members of the Serbian and international energy community in November 2021. 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

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This publication and associated works of the UNECE RE-Uptake Project was commissioned by the Federal Ministry for Economic Affairs and Energy. Through various projects, dena supports the German government in implementing energy and climate policy goals.

In cooperation with

UNECE: The United Nations Economic Commission for Europe is one of the five regional commissions under the jurisdiction of the United Nations Economic and Social Council. All activities relating to the Hard Talks are implemented in close cooperation with the UNECE Secretariat.

REN21: REN21 is the global community of renewable energy stakeholders from Science, academia, governments, NGOs and industry. They provide up-to-date facts, figures and peer-reviewed analysis on global developments in technology, policy and markets, to inform decision makers.

Publisher:
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Date: 10/2021