UNECE Renewable Energy Uptake

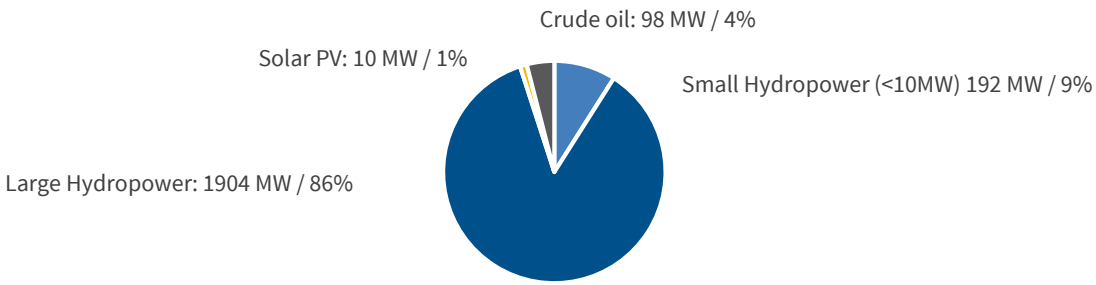
Factsheet: Renewable Energy in Albania

Status of Renewable Energy Deployment

With 45% of the total primary energy supply (TPES), Albania has one of the largest shares of renewable energy in its energy mix in South-East Europe. The renewable energy share in Albania is predominantly hydropower of which accounts for 95% of all generating capacity, with the remaining divided between solar (1%) and crude oil (4%). The remaining share of supply comes from imports making Albania a net energy importer and thus heavily reliant on imports. Being also heavily reliant on hydropower also means that renewable generation is sensitive to rainfall, of which has seen considerable annual variations and a steady decline in recent years. This is likely to further decline with the effects of climate change. In addition to hydropower resources, Albania also has abundant solar and wind resources, which are currently almost entirely untapped.

In order to improve energy security and climate resilience and to meet growing energy demand, it is imperative that Albania accelerates the transition to those abundant, available and local, renewable energy sources.

Figure 1. Installed generation capacity by technology (source: IRENA, 2021)



Renewable Energy Potential

Within Europe, Albania has some of the highest sunshine hours per year, representing significant potential for solar energy development. The coastal south and far north of the country also hold immense potential for wind power development. Both solar and wind could effectively complement the existent hydropower fleet.

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

Technology	Capacity 2019 [MW]	Economic Potential 2030 [MW]	Technical Potential 2030 [MW]
Hydropower	2105	2150	4813
PV	3	1074	2378
Wind	0	616	7483
Bioenergy	1	86	1832

Policy Landscape and Targets

- The current National Renewable Energy Action Plan (NREAP) sets a target of 38% for the renewable energy share of total final energy consumption (TFEC) by 2020.
- The NREAP also stipulates technology-specific deployment targets to achieve this goal: 7MW hydropower, 490MW solar PV, 50MW wind and 41MW waste-to-power by 2020, which have not yet been reached.
- The National Energy Sector Strategy (2018) formulates a target of 42% of renewable energy in the TPES by 2030 which has already been achieved.
- A National Energy and Climate Plan (NECP) is under development and will set out renewable energy targets up until 2030.

Support for Renewable Energy

- Small-scale renewable assets in Albania are eligible for feed-in-tariffs guaranteed through the obligatory purchase of energy by the distribution system operator (DSO).
- Utility-sale projects are auctioned and financed through a Contract for Differences (CfD) scheme. Albania was one of the first countries in the South-East European region to introduce auctions for renewable energy projects and has since successfully tendered PV projects at competitive prices.
- Net-metering is eligible for small to medium-size solar and wind systems of up to 500 kW.
- Certain customs duty exemptions apply for machinery and equipment used in the construction of all power plants, including both renewable and conventional power plants.

Core Challenges for the integration of further renewable capacity

Strengthening the distribution network

Power generation from renewable energy sources fluctuates and is naturally variable. This requires more sophisticated network infrastructure and operation that can handle bidirectional energy flows and changing supply profiles. Particularly in high-demand centres such as the capital Tirana, the Albanian distribution grid lacks sufficient capacity and dynamic operation to handle variable electricity injection. This severely hampers the successful integration of renewable energy sources in the country.

Improving support mechanisms for renewable energy

While minimizing land use and enabling prosumer schemes, small-scale renewable energy projects such as rooftop PV are often less cost-effective than utility-scale wind or solar PV parks. Considering this, a revision of the existing support landscape for RE in Albania would foster the deployment of small-scale projects in the country.

Ensuring bankability of project proposals

Renewable Energy investments are relatively capital intensive and require long time frames to amortize costs, which are almost exclusively based on energy prices. Although the technology is well developed, long time frames and uncertain market conditions result in relatively high investment risks. Further de-risking of renewable

energy projects would entice private investment and accelerate development. Thoroughly developed planning and financial instruments such as Power Purchase Agreements, for example, would inspire confidence and stimulate international investment in renewable energy in Albania.

Key Actors in the Albanian Energy Sector

Institution	Function
Ministry of Infrastructure and Energy (MIE)	Strategic development of energy sector, including policy development
National Agency of Natural Resources (AKBN)	Monitors economic activities that deal with natural resources
Energy Efficiency Agency	Policy development, energy auditing, implementation of energy efficiency programmes
Ministry of Tourism and Environment	Environmental protection, coordination of national climate change mitigation
National Environmental Agency	Environmental impact assessments of power projects, *inter alia*
Ministry of Agriculture, Rural Development and Water Administration	Responsible for water use permits for hydropower projects, *inter alia*
Energy Regulatory Authority (ERE)	Regulator of electricity and gas markets
Transmission System Operator (OST)	Operator of the high-voltage transmission system network
Electricity Distribution System Operator (OSHEE)	Operator of the low-medium voltage distribution system network
Albania Power Exchange (ALPEX)	Market operator of Day-Ahead and Intra-Day markets in Albania and Kosovo
Albanian Power Corporation (KESH)	Public electricity supplier (currently subject to liberalisation)
Albania Energy Association	Represents the interests of Albanian and international energy producers
Albanian Renewable Energy Association (AREA)	Represents the interests of renewable energy producers in Albania

Upcoming Hard Talk on the uptake of renewables in Albania

As part of the UNECE RE-Uptake Project 2021, a “Hard Talk” on the uptake, integration & harmonisation of renewables in Albania will be held with members of the Albanian and international energy community on July 6th and 7th, 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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Dena, Status and perspectives for renewable energy development in the UNECE region, 2017

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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.

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