

Green Agenda: Decarbonisation of the Electricity Sector in the Western Balkans

The challenge

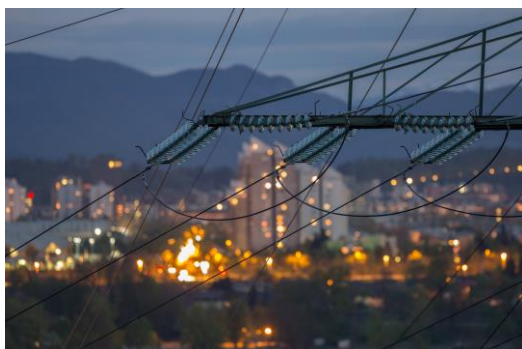
Most of the electricity in the Western Balkans (WB) is generated by large coal-fired power plants (THPs) accounting for more than 50% of regional CO₂ emissions; many of those were built more than 40 years ago. Given their poor technical condition and lack of modernisation, THP fleet of WB is particularly a dirty air polluter, threatening human and fauna habitats and the nationally determined contributions to the reduction goals to ease global warming as set out in the Paris Agreement. Positive potential for development for a full-scale energy transition based on renewable energy (RE) in the WB is framed by strong collective aspirations for EU accession. WB countries interconnectivity is based on fruitful geospatial and climate conditions and historical interconnectivity of the power grids. The WB energy transition goes hand in hand with the decentralisation of power generation infrastructure and should broaden the countries' energy resilience by a large diversity of energy actors, new jobs and investment opportunities, endorsed by solid public ownership.

As for RE, electricity output varies depending on the sun and wind atmospheric conditions. Power grids in the Western Balkans require new operating routines, technologies and know-how for grid balancing while yet, electricity market operators are not sufficiently familiar with methodological and technological solutions that ensure the safe and reliable grid integration larger shares of RE. Corresponding adjustments to the regulatory framework, for example with respect to RE tendering procedures, are already yielding initial successes in the form of the construction of large wind and solar power plants, which become increasingly competitive with fossil power generation. The number of small-scale electricity producers and consumers or "prosumers" in the WB rose from 105 to 911 in 2021. While demand for RE technologies is steadily growing, the need for skilled employees and integrative regulation based on EU market integration for the energy transition becomes more evident: At the moment, many energy sector decision-makers see professional education and training of technicians and specialists neither as an opportunity nor as a challenge for the labour market or energy companies alike.

Name	Green Agenda: Decarbonisation of the Electricity Sector in the Western Balkans
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Countries	Bosnia and Herzegovina, Serbia, North Macedonia, Albania, Montenegro, Kosovo
Lead executing agency	Regional Cooperation Council (RCC)
Implementing partner	Western Balkans competent authorities for electricity and renewables; grid operations; Energy Community (intl. organisations in charge of transferring EU Energy acquis to contracting parties, i.e. all WB countries)
Duration	2022 – 2025
Project value	3.5 million Euros

Goal

The demand by key actors in the electricity sector in the Western Balkans for technological, regulatory and human resources solutions for the implementation of an environmentally and climate-friendly energy transition has increased.



Left to right:
Electricity Transmission grids; Visualisation of variable renewable energy installations (Wind/Photovoltaic)

Our approach

This regional project focuses on building competencies and providing up-to-date knowledge on innovative technological solutions for the electricity sector in the WB. Technological progress is amplified by enhancing the regulatory framework for an increased use of RE. In addition, the project aims to create the basic awareness for the need to establish appropriate education and training opportunities for a RE based energy transition among the relevant organisations. The project's activities are delivered by the following three components:

- (1) Familiarising grid operators and, to a lesser extent, national ministries with solutions for handling large shares of variable RE, mainly through trainings and workshops, e.g. on RE generation forecasting or digital automation especially at the distribution grid level;
- (2) Capacity development (workshops, trainings, process efficiency) with ministries and regulators and, to a lesser extent, grid operators with regulatory options to design conducive framework conditions for the transition to renewable energy;
- (3) Advising vocational education and training organisations on the opportunities, needs and content requirements of vocational education and training for a RE based energy transition.

At the operational level, the main partners of the project include grid operators, regulatory authorities and national ministries responsible for energy as well as networks and organisations of vocational education and training in the region. As a regional project, the focus is on providing fundamental knowledge that is of equal importance for as many as possible of the WB countries. The transfer of universally relevant knowledge on energy transition shall accelerate the demand for country-specific further elaboration, detailing and implementation of solutions. Corresponding in-depth support subsequently may be complemented by other projects of the development partners' community, especially within the framework of specific bilateral development measures and public/private macro-financial investors.

Wherever possible, workshops and training events shall be organised regionally and in cooperation with the Energy Community (EnC), or coinciding with thematic EnC working groups. This underlines the project's regional approach, reduces travel requirements, and ensures efficient use of spare resources among partners and grid operators.

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The United Nations Sustainable Development Goals (SDGs) that the Project focuses on in its implementation are:



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