Kosovo energy storage technologies

Kosovo energy storage technologies

The government in Prishtina reaffirmed, in its long-awaited energy strategy for the period 2022-2031, that coal would be phased out by 2050, in line with the Sofia Agreement and the European Union’s objectives. The Ministry of Economy published the document after its recent adoption.

The strategic vision is to create and integrate a sustainable energy sector into the pan-European market, ensuring energy security and affordability for citizens, it said. Kosovo* stressed it aims to provide reliable and clean energy to support economic development and social wellbeing.

Citizen participation and support for vulnerable groups place people at the heart of the energy transition measures, according to the blueprint. They include incentives for house insulation, installation of solar panels and the purchase of efficient household appliances and efficient heating systems together with support for community projects.

In regional cooperation, Kosovo* is leaning on market integration and system planning with Albania and the forthcoming operationalization of the joint Albanian Power Exchange (ALPEX). Market trends and technological developments such as (green) hydrogen, geothermal energy, small modular nuclear reactors and waste-to-energy plants will be considered once they have proven to be viable, the authors pointed out.

Kosovo* acknowledged the lack of an adequate approach to developing professional capacities and appropriate investments over the last decades. The dependence on old lignite-fired power plants means inadequate reliability and flexibility and high greenhouse gas and pollutant emissions, the document reads.

The share of renewables in the electricity sector is only 6.3%. The overall 25% share is dominated by the use of biomass in heating, burdening the electricity balance and generating emissions, especially because of inefficient equipment.

One strategic objective is to improve the resilience of the electricity system, mainly through flexibility tools and network modernization. The latter is intended to significantly cut transmission and distribution losses as well.

Kosovo* intends to launch market-based reserve services and reach at least 170 MW of flexible regulation capacity by 2031. The size of batteries in storage facilities planned to be completed by the end of the period is 170 MW, with an overall two-hour capacity, translating to 340 MWh. An ongoing project with Millennium Challenge Corp. (MCC), a United States development agency, was initially estimated at over 150 MW and a capacity of 200 MWh.

The government opted to refurbish both units in Kosovo B by 2025 and 2026 and at least one unit in the only

other coal-fired thermal power plant, Kosovo A, by the end of next year. The aim is to ensure at least 540 MW for baseload and 360 MW in strategic reserve capacity.

In the final scenario, Kosovo A3 would be in reserve mode after 2028, available for three months per year. Two gas-powered units of 100 MW each would be installed in 2024 and 2025, outside Kosovo*, the document reads. There are no plans for pumped storage hydropower plans.

In the segment for decarbonization and renewable energy promotion, the energy strategy sets out a goal to implement a carbon pricing system by 2025 and gradually increase prices until it joins the EU"s Emissions Trading System (ETS).

The target for the reduction of greenhouse emissions in the power sector is at least 32% by 2031 while renewables need to cover at least 35% of electricity consumption by that point. The government said that at the end of the period 600 MW in new wind power, 600 MW in solar power, 20 MW in biomass-fired plants and at least 100 MW of new prosumer capacity needs to be installed, resulting in 1.6 GW of renewables in total.