

Under its energy strategy adopted in 2019, two out of three scenarios foresee a coal exit by 2025, which makes North Macedonia the first Western Balkan country to clearly propose coal phase out deadlines.

North Macedonia, whose national flag depicts a stylized yellow sun on a red field, has about 280 sunny days a year and about 1,500 kilowatt-hours (KWh) of solar radiation per square metre. It falls into the countries with the largest solar radiation in Europe but not in the countries that have used their solar potential accordingly. But its government has now set an ambitious goal to speed up its energy transition in order to increase the share of renewables in its energy portfolio to 50 percent by 2024 to help speed up decarbonisation, reduce pollution and tackle climate change.

„Investments in a green economy and green energy are North Macedonia’s top priorities,“ Economy Minister Kreshnik Bekteshi said on 19 December 2020.

By 2024 the government aims to add as much as 400 megawatts (MW) of new solar power generation capacities, which will account for 10 percent of domestic production, as well as 200 MW of wind power capacities, said Bekteshi. New power generation capacities will be key for transitioning to a green economy in this country with serious capacity shortage and high reliance on lignite, the dirtiest form of coal. Lignite is one of the primary sources of air pollution, claimed to have caused an estimated 3,000 premature deaths a year, according to the European Environmental Agency. The estimated economic cost linked to mortality from exposure to air pollution ranges between \$500 and 900 million annually, equivalent to 5.2 to 8.5 percent of North Macedonia’s national output in 2016. To achieve the goal, the government of North Macedonia has developed a pioneering project among the Western Balkan European Union aspirants which aims at transforming its ageing and depleted coal mines into solar power plants.

Some 15 hectares of wasteland, once pitted with open cast coal mines near the western town of Kicevo, have been cleared to make space for a solar photovoltaic installation of more than 120 MW. The solar plant will replace the polluting 125 MW Oslomej coal-power plant, commissioned in 1980, but now operating only occasionally. The first phase of the project, which includes the construction of a 10 MW solar power plant, is already underway. The project is run as public-private partnership by the state power utility Elektrani na Severna Makedonija (ESM) and will be the first such capacity in the ESM portfolio. It is expected to go online this year. The European Bank for Reconstruction and Development (EBRD) extended a 5.9-million-euro loan for the project, while ESM will provide the rest of the total costs, estimated at 8.7 million euros. The solar power park will produce nearly 15 gigawatt-hour (GWh) of electricity a year and displace 12,177 tonnes of CO<sub>2</sub> a year. It will

also support ESM's efforts to rehabilitate the 26-hectare mine site that used to supply the thermal plant with coal.

„We believe this is the first successful energy transformation carried out by the state and the company (ESM). At the same time we are preparing the social transformation,“ said Vasko Kovacevski, the general manager of ESM.

He said that the new project will create jobs for nearly 1,000 Oslomej coal power plant workers. The EBRD is also considering a senior loan of up to 25 million euros to ESM that will serve for the expansion of the Oslomej solar park by an additional 10 MW and for the construction of another 20 MW solar power park, adjacent to the Bitola coal-fired power plant.

„The project will contribute to the Green transition quality by supporting the construction of 30 MW of solar PV generation capacity expected to result in CO<sub>2</sub> savings of 33,000 tonnes annually. In addition, the project will target the Inclusive transition quality by identifying the social implications of green transition and defining redeployment and reskilling opportunities at ESM,“ said the bank on its website.

Local resident Ilmi Adili praised the switch to new energy sources.

„This is good. The lives of the people living near the Oslomej plant have been in danger for years. The scent of coal can still be felt around and I believe anything that will help rid of it is more than welcome,“ said Adili.

### **Just transition for coal-reliant regions**

Nevena Smilevska, the programme coordinator for climate at non-governmental group Eko-svest, said that the solar power plant will only solve one part of the problem and warned that the government must do more to plan the transition away from coal in this coal-reliant region.

„A bottom-up approach must be applied in coal reliant regions. The government must assess the needs of the local residents in a timely manner,“ said Smilevska.

„The closure of the Oslomej power plant is not only a problem for more than a thousand of its employees but for all those who depend economically on them,“ she added.

Smilevska said that Eko-svest for that reason insists on other re-employment options, such as a transition to agriculture, which was the predominant activity in the region before the Oslomej power plant started operating.

ESM is owned by the Government of North Macedonia. The company provides around 90% of the entire domestic production. Due to the COVID-19 outbreak, the authorities of North Macedonia have twice extended the deadline for the submission of bids to construct and

operate two solar photovoltaic plants of 50 MW each on top of the old coal mine in Oslomej. The latest one was set for November 27 2020.

The public tender was launched in February 2020. Under the tender terms, the contract will be awarded for a period of 35 years, during which the private investor will pay ESM an annual fee equal to 10% of the revenues from the sale of the solar park's power output at market prices. After the expiry of the concession, the plant will be handed over to ESM. ESM's average annual production is about 3,600 GWh from 842 MW installed coal-fired capacity and 1,250 GWh from 554 MW installed hydropower plants' capacity.

It also operates the Bogdanci wind farm, the first wind farm in the country which has been online since 2015. It has an installed capacity of 37 MW and output of about 100 GWh annually, making up only a 3 percent share in the country's electricity generation.

ESM also plans to expand the Bogdanci wind farm by adding four more wind turbines, with a combined capacity of 13.8 MW.

The cost is estimated at 21 million euro, of which 18 million euros was provided by the German Development Bank KfW in the form of a loan and the rest by ESM.

### **Measures to lure investors**

As part of the EU harmonisation process, the Parliament adopted a new Energy Law in May 2018 which harmonised the energy legislation of North Macedonia with the EU Third Energy Package. To implement the provisions of the Energy Law, appropriate secondary legislation has been adopted. As the government has a strategic goal to invest in renewable energy sources, it also regulates supportive measures to help electricity producers that use renewables and was ahead of its regional peers in introducing a scheme based on auctions and premiums. Under the Decree on Support Measures for Electricity Production from renewable energy sources adopted in February 2019, premiums can be awarded to privileged producers generating electricity from solar and wind power plants. In order for the producer to attain the status of a privileged power producer and therefore be eligible to use premiums, the maximum installed power of the power plant should not exceed 50 MW for wind power and 30 MW for solar power. The premiums are granted in a tender procedure carried out by electronic auction and the selection criteria is the lowest amount offered on a fixed premium. The fixed premium is granted as an additional fixed amount on the price that the producer achieves through the sale of each kWh produced on the wholesale electricity market.

The Decree is subject to an ongoing complaint to the Energy Community Secretariat by Eko-vest and CEE Bankwatch Network for retaining the old "first-come, first-served" feed-in

tariff system for small hydropower plants. The groups say that this gives hydropower an unfair advantage compared to solar and wind plants that need to compete in auctions. But overall there is no doubt that North Macedonia is making a strong effort to move forward, particularly with solar. Thanks to the new measures, in December 2020 the power producer EVN Macedonia kicked off the first 1.48 MW solar plant with two-sided panels which use reflection from below to produce additional electricity in Voshanci, near the central town of Negotino.

“We have plenty of solar energy, we are a country with 280 sunny days a year and the highest quality peak of solar energy,” North Macedonia’s Prime Minister Zoran Zaev said at the opening ceremony.

He said that thanks to the public-private partnership initiative and new measures, such as streamlining bureaucracy and attracting investors and speeding up the energy transition, contracts for 62.5 MW in photovoltaic capacity have been signed so far.

Minister Bekteshi also said that two tenders for premiums for power production on private and state land have been closed successfully after attracting a lot of investors, and announced another photovoltaic tender for the first quarter of 2021.

Source: [just-transition.info](http://just-transition.info)