

The Ministry of Mining and Energy will present an investment plan worth 17 billion euros in September. Among the investments in new power plants, the construction of reversible hydropower plants (RHE) Đerdap 3 and Bistrica stands out, which, according to Professor Nikola Rajaković, could play a big role in the energy transition, more precisely in easier integration of solar power plants and wind farms.

The Deputy Prime Minister and Minister of Mining and Energy, Zorana Mihajlović, stated that the investment plan of the Ministry will be presented in September and that it will include projects worth 17 billion euros.

“We expect that the first large investments will begin to be realized in 2022. There is the construction of large hydropower plants, such as Đerdap 3 and Bistrica, as well as solar, gas and wind power plants. All that will contribute to the stability of the energy system”, Mihajlović pointed out.

Mihajlović: If we do not turn to green energy, we will have to pay big tax

She emphasized that the Ministry is making a program how in the next 20, 30 years, Serbia will get more capacities that use renewable sources, because it is a question of the competitiveness of the economy.

“If we do not turn to green energy, we will have to pay big taxes, which is why the economy and citizens will suffer. “Step by step, we are moving towards that both as a society and as an economy”, she emphasized.

Rajaković: The construction of Bistrica is more feasible than Đerdap

Plans to build reversible hydropower plants (RHE) Đerdap 3, with a capacity of 2,400 MW, and Bistrica, with a capacity of 680 MW, have existed for several decades. On several occasions, foreign investors expressed interest in the construction, but nothing concrete happened. The investment in Đerdap 3 is very high and is estimated at several billion euros, and in Bistrica at around 600 million euros.

Reversible hydropower plants also solve the problem of variable production of wind farms and solar power plants

These power plants work on the principle of pumping water from the lower reservoir or river into the upper reservoir, from where water is used for conventional production in hydroelectric power plants.

Reversible hydropower plants produce peak energy and power to cover maximum consumption during the day, in other words they produce the most expensive energy. They are also a solution for the variability of green power plant production. Namely, when there

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is too much energy from solar power plants and wind farms, that energy can be used to pump water into the upper reservoir, and when their production is lower, then reversible hydropower plants can compensate for that shortage and start production very quickly. These hydroelectric power plants also act here as energy storage facilities

Bistrica is a semi-prepared project

Nikola Rajaković, a professor at Belgrade's Faculty of Electrical Engineering and president of the Energy Association, told Balkan Green Energy News that the great news is that the ministry's investment plan envisions the construction of renewable energy power plants, especially the Đerdap 3 and Bistrica projects. These two power plants, and especially Bistrica, would enable easier integration of wind farms and solar power plants.

Bistrica, he points out, is an excellent project because a lot of things have been set up and it can be said that it is a semi-prepared project

Đerdap 3 exceeds the needs of Serbia, and makes sense as a regional or European project

"The natural lake as an upper accumulation already exists, and the construction works are not expensive, but there was always a lack of money for that project. The purpose of Bistrica is to help integrate a larger amount of electricity from power plants to renewable sources into the electricity system as easily as possible". With the Bajina Basta hydroelectric power plant, which is also reversible and is part of the Electric Power Industry of Serbia, it will be much easier", he points out.

When it comes to Đerdap 3, Rajaković says that it is a big project, when the upper lakes would be built. According to him, the construction is very expensive and exceeds the needs of Serbia.

"But it would be good for the needs of the region and Europe, it would be great for balancing variable production from wind farms and solar power plants. This means that funding could also come from that side. It is difficult to estimate how much it would cost", he said

EPS: Đerdap would be built in three phases

As the Electric Power Industry of Serbia (EPS) states on its website, the hydro potential of the Danube has not been exhausted by the construction of Đerdap power plants, but there is a plan to build a reversible pump-accumulation plant Đerdap 3 on the 1007th kilometer of the Danube.

"The concept of the solution is that the water is taken from Đerdap Lake from a height of 68 meters, pumped into the above-mentioned basins of Pesac and Brodica, when the electric

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power system of Serbia has a surplus of electricity. At the peak of the load, it works as an accumulation power plant that provides the necessary power and the necessary amounts of energy “, states EPS.

It is envisaged that the reversible hydroelectric power plant Đerdap 3 will be built in three stages. The energy equivalent of both accumulations, in that last phase of development, would be around 484 GWh.

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