

One of the largest projects in the European transmission network, the development of a HVDC cable line facilitating electricity exchange between the power systems of Italy and Montenegro, is entering its final stage.

The project will ensure electricity transmission by an HVDC system, while the total length of the cable between Peskare and Cape Jaz is 455 kilometres, with the submarine part being 433 kilometres long.

It is the most advanced and at the same time the most complex connection of this kind in Europe, and the project is included in the official lists of projects of importance for the European Union and the Energy Community.

The capacity of the submarine energy link between Montenegro and Italy was halved from the initially designed 1,000 MW to 500 MW, due to a slower development pace of RES projects in the Balkans, with a joint agreement between Italy and Montenegro, as published in March 2018.

Montenegro will retain the right to use 200 MW of total interconnector capacity, as originally agreed.

The interconnector, whose costs were estimated at some EUR 1 billion, is designed to enable the export of renewable energy from the Balkans to Italy, as well as strengthening regional energy security and attracting investments in a largely unused hydroelectric sector.

The project has a strategic importance for the regional countries because it represents the first energy interconnection of the Balkans with the European Union.

The cable development contract was signed in December 2010 between the Italian company Terna and the network operator of Montenegro - CGES, as part of a wider interstate agreement between Italy and Montenegro that was launched in 2007.

The project involves the development of a submarine cable between Italy and Montenegro with associated converter facilities, the construction of SS 400/110/35 kV Lastva, 400 kV transmission line Lastva-Cevo-Pljevlja, the introduction of the existing 400 kV transmission line Podgorica-Trebinje to SS Lastva as well as the expansion of SS Pljevlja 2. Furthermore, the project includes the construction of a 400 kV transmission line to Serbia and Bosnia and Herzegovina.

The total value of the CGES investment, which involves the construction of the Lastva substation, 400 kV Lastva-Cevo-Pljevlja transmission line, the introduction of the existing 400 kV transmission line Podgorica-Trebinje into SS Lastva, as well as the expansion of SS Pljevlja 2 is EUR 106 million, or EUR 127 million if the construction of a transmission line from Pljevlja to the Serbian border is taken into account, together with the investments into the internal network of Montenegro, for which an EU grant was secured.

Construction of the HVDC cable connection between Montenegro and Italy is assessed as a new step towards creating an integrated European energy market, which will make

Montenegro a significant regional energy hub.

Lastva-Cevo-Pljevlja transmission line, Lastva substation and the Pljevlja-Bajina Basta transmission line, are part of the Trans-Balkan Corridor, connecting Montenegro, Serbia and Romania with Italy, in order to secure the coupling of the Balkans market with Western Europe.

### **Planned works**

Planned works, which will ensure the connection of the submarine cable to the transmission network of Montenegro, and for which the Montenegrin power system is in charge, are in agreement with the works schedule for the part of the project implemented by the Italian company Terna.

In July last year, Terna, as the project investor, successfully performed the voltage test of the entire submarine cable from Italy to Montenegro. Preconditions to start synchronizing the submarine infrastructure with the Montenegrin national transmission network were created by completing the works on the Lastva substation.

According to expectations, the submarine cable development works will be finished in early April, after which the final tests of the facilities owned by Terna will be under way, according to latest information announced by Montenegrin officials at the end of March. This has been confirmed by earlier announcements that the commercial use of the cable is expected in late 2019.

“Functional testing of the submarine cable and associated infrastructure are in progress, followed by the trial operation. After examining and implementing the other necessary procedures, it can be expected that the commercial use will commence in the fourth quarter of this year,” Nikola Vujovic, State Secretary at the Ministry of Economy said.

Lastva substation was completed, and its trial operation is in progress, while the Lastva-Cevo transmission line works are coming to an end, which will connect the substations in Lastva and the submarine cable to the power grid.

The submarine cable will make the power system of Montenegro more stable, while the supply of electricity to consumers will be safer and better.

“The benefits will be felt by the citizens in the north and along the coast, as well as by the entire economy, as the transmission capacity increase creates preconditions for dynamic economic development,” Vujovic said.

Energy connections with Italy will also be beneficial for state revenues. This project will also provide significant revenues for Montenegro based on 20% of the CGES share in the total cable capacity.

### **Project perspectives**

Terna recently announced a scheme detailing the significance of the project implemented in partnership with CGES.

The scheme shows the movement of electricity from Montenegro primarily to Italy, which

has already successfully implemented the connection projects with Switzerland, Austria, France, Slovenia, Greece and Malta.

After the construction of the second unit of the Pljevlja thermal power plant, followed by the largest solar power plant in Europe, to be built in Ulcinj, and renewable sources of electricity, it is expected that Montenegro could become an energy independent state. Energy independence, in addition to benefiting citizens, who will not pay expensive electricity from imports, will strengthen the Montenegrin economy, and the country could for the first time be able to export surpluses of electricity to other European countries. When it comes to RES investments in Montenegro, in September 2017, after 35 years, a new generation facility was connected to the power system - Krnovo wind farm, with installed capacity of 72 MW.

In addition to this, after several delays, it is expected that the Mozuri wind farm, with a capacity of 46 MW, will soon be commissioned.

Elektroprivreda Crne Gore has started building a new solar power plant in Briska Gora. In cooperation with the Finnish company Fortum, EPCG won the tender invited by the Ministry of Economy.

A Memorandum of Understanding was signed with the Austrian company Ivica to develop the Gvozd wind farm, which has already started. Its commissioning is expected in 2022. The new cycle of EPCG's investments is worth more than EUR 170 million. In addition to the above projects, in cooperation with the German Development Bank, contracts for the reconstruction and modernization of the Piva hydroelectric power plant have been signed, and negotiations on a new credit arrangement for the reconstruction of HPP Perucica are underway.

EPCG has initiated the reconstruction of its five small hydropower plants and together with its Norwegian partner Zeta Energy, it is implementing a project involving the reconstruction of existing small hydroelectric power plants operated by the company.

The submarine cable has a wider regional significance, as it is a positive impulse for newer large energy facilities of the region, such as the Stanari thermal power plant in Bosnia and Herzegovina and the Banjes hydroelectric power plant in Albania.

Furthermore, by implementing the 400 kV interconnection between Bajina Bašta in Serbia and Pljevlja in Montenegro, part of the Trans-Balkan Corridor, the submarine cable will form part of an electricity corridor between Romania, Serbia and Italy.