

Serbia, Bosnia, Montenegro: Project of 400 kV Interconnection will increase cross border electricity trading and connection with Italy

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Date : July 1, 2015

The Feasibility Study, with Environmental and Social Impact Assessment ESIA, for the 400 kV interconnection between Bajina Bašta in Serbia, Pljevlje in Montenegro and Višegrad in Bosnia and Herzegovina, has shown that the project will bring economic benefits to the states included in the project and that it is economically feasible for the transmission system operators. Project implementation will probably also generate economic benefits for the electricity markets in Southeast Europe.

The Study, the budget of which amounted to 950.000 euros, was funded by the EU, and the main beneficiaries are the transmission system operators of the three countries – The Power Grids of Serbia, the Montenegrin Electrical Transmission System, The Independent System Operator and BiH Power Transmission.

The Study was supported by the potential project financier, the European Bank for Reconstruction and Development.

The Study has shown the justifiability and feasibility of the project. The Energy Community Secretariat has put this interconnection on the list of priority projects, and it has also been included in the ten-year development plan of the association ENTSO-E for Southeast Europe. When the project has been implemented, it will be a part of the electricity corridor between the central Serbia and Italy, through the planned submarine cable between Montenegro and Italy.

The technical assessment has shown that the connection is feasible. In all three countries, the chosen routes are mostly already covered by the existing TSOs for low-voltage long distance lines, which have been used for more than 50 years already.

The Project Implementation Plan envisages two phases in project implementation. The phase I should begin in 2018, whereas the beginning of the phase II has been planned within the period between 2022 and 2023.

Two main transit routes can be identified in Southeast Europe – from the east to the northwest and from the east to the southwest. In the east, Romania and Bulgaria are large electricity exporters, with Hungary and Croatia in the northwest and Italy in the south, which are large importers. With respect to these two routes, the introduction of a new interconnection between Serbia, BiH and Montenegro brings the benefit in terms of energy export from the east to the southwest, whereas the impact on the energy corridor east-northwest will be moderate.

Project implementation will increase the potential for connecting new renewable energy resources and the possibility of energy exchange within the region. During the most part of commercial use, the project will provide economic gains amounting to around 10 million euros annually. The expected financial benefit will provide an acceptable return on investment for the participating countries.

The investment costs show a high level of variation for the participating countries, which is the consequence of the various lengths of lines through national territories. Serbia will bear the highest project costs (around 70 percent) but it will also achieve the largest benefit. The investment value of the project amounts to 66 million euros, and it is assumed that around 80 percent will be financed from a loan.

Taking into account the development plans of production capacities in Serbia and BiH, as well as the project of construction of a 1.000 MW submarine cable between Montenegro and Italy, which should be finished in 2017, the 400 kV connection between the systems of these three countries would be of great benefit in the case of export from BiH and Serbia towards Italy.

The strengthening of the north-south corridor with the new interconnection between Serbia, BiH and Montenegro will bring a significant reduction in the total costs of electric power systems in the region within the period from 2018 to 2023. Through the development of this interconnection, cheaper electricity from the region could enter the Italian market – from Romania, Bulgaria, Serbia, BiH. The expansion of production capacities in Serbia and Montenegro in this period enables the full effects of energy export.

The organization Bankwatch Network assesses that, in 2024, if all planned electricity production capacities have been finished in the Western Balkans region, in the low demand scenario, the region will have the excess electricity amounting to 56 percent, in which BiH and Serbia will be leading. Other countries have a lower potential for contributing to the regional surplus, but compared to domestic demand, their export potential is significant.

A researcher of this organization, Pipa Galop, says that Montenegro has ambitions to export electricity to Italy, and the potential export capacities are the hydropower plants Morača and Komarnica and the planned second unit of the lignite-fired thermal power plant Pljevlja.

In 2009, Serbia signed an agreement with the Italian government and the company Seci Energia on the construction of small hydro power plants on the rivers Ibar and Drina. 10 HPPs are planned on the river Ibar, one HPP on the river Sava, three on the middle Drina and 5.000 MW of capacities from the wind.

Galop says that, when it comes to BiH, the power plants on the Middle Drina have been mentioned most often for the majority export to Italy, but an extensive list has leaked to the public in which there are Gornji Horizonti, Ulog on the river Neretva and nine small HPPs.

How much electricity will be available for export in 2024 depends primarily on which new capacities will be constructed (at this moment, this is very hard to assess due to the multitude of contradictory information), i.e. on how many capacities will be withdrawn from

use. In addition, the key factor is the difference between the high and low demand, amounting to more than 18.000 GWh.

The interconnection Serbia - Bosnia and Herzegovina - Montenegro is a part of a wider project - the Trans-Balkan Corridor - which also includes the 400 kV interconnection between Serbia and Romania, the long distance power line TS Kragujevac 2 - TS Kraljevo 3 and the increase in the voltage level of the Western Serbia grid to 400 kV between the TS Obrenovac and the TS Bajina Bašta.

In the PE Power Grids of Serbia, they comment that the Trans-Balkan Corridor represents a project of utmost national and regional interest, which will enable long-distance electricity transmission with minimum losses and which will connect the markets of Western and Eastern Europe. In the Power Grids of Serbia, they believe that the project will enable the electric power system of Serbia to use its potential and become a regional leader in near future. , transmits serbia-energy.eu