

## Serbia, Bosnia, Montenegro: New Interconnection Serbia-Bosnia-Montenegro to increase SEE cross border capacities and support the Italian export power cable

The Feasibility Study of the project for 400 kV interconnection Serbia - Bosnia and Herzegovina - Montenegro has shown that the project is technically and economically viable. The Study indicates that the project will bring economic benefits to Serbia, BiH and Montenegro. Moreover, project implementation will probably bring economic benefits, as well as the benefits on the electricity market within the Southeast Europe, particularly when the 400 kV interconnection Lastva - Pljevlja and the submarine cable to Italy are built. The ESIA indicates that the project can be implemented in the manner which causes the least possible harm to the environment. Probable environmental and social impacts can be prevented, reduced or compensated. A set of mitigation and monitoring measures, aimed at eliminating harmful environmental and social impacts, has been developed as a part of the ESIA process and as an assurance that all harmful impacts will be mitigated.

The technical assessment has shown that the connection is feasible. For the most part, the chosen routes (RoL) i.e. corridors in all three countries, are already covered by the existing TSO for low-voltage long distance lines, which have been used for more than 50 years already.

The Project Implementation Plan envisages two project implementation phases. The Phase I should begin in 2018, whereas the beginning of the Phase II is planned for the period between 2022 and 2023. The main risk is the delay in the upgrading of the substation Bajina Bašta and the postponement of the construction of the new 400 kV line Obrenovac - Bajina Bašta.

The Phase II includes the construction of a 400 kV interconnection to the hydro power plant Bistrica and the postponement of its construction has been identified as a probable risk. Project benefits have been analyzed using the ENTSO-E cost-benefit methodology. Project implementation will increase the potential of connecting new renewable energy resources and the possibility of energy exchange within the region. For the most part of its economic life, the project will provide the economic benefits amounting to around 10 million euros annually. The expected economic and financial benefits will provide an acceptable return on invested money for the participating countries.

Investment costs show a high level of variation, which is the consequence of various line lengths through national territories. Serbia will bear the highest costs of the project (around 70 percent) but it will also achieve the greatest benefits. The investment value of the project is 66 million euros, and it is assumed that around 80 percent will be funded from a loan. In the Southeast Europe, two main transit routes can be identified- 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,

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which are large importers. When it comes to these two routes, the introduction of a new interconnection between Serbia, BiH and Montenegro brings the benefits in terms of electricity export from the east to the southwest, whereas its impact on the east-northwest energy corridor will be moderate.

The construction of the submarine cable between Italy and Montenegro should be finished in 2017, which will enable the energy transfer between the Southeast Europe and Italy, and potentially, from Italy towards the region. The development of cross-border electricity trade within the region demands the development of transmission capacities, through the extension and strengthening of interconnections, aimed at the sale and exchange of electricity and the increase in system security.

The socio-economic benefit of the project is considered on three levels: on the level of the Southeast Europe, for Serbia, BiH and Montenegro jointly, as well as for each individual country.

The strengthening of the north-south corridor by the new interconnection between Serbia, BiH and Montenegro will bring a significant reduction in the overall costs of electric power systems in the region within the period from 2018 to 2023. The main benefit comes from the fact that cheaper electricity from the region could emerge on the Italian market - from Romania, Bulgaria, Serbia, BiH. The expansion of generation capacities in Serbia and Montenegro in this period enables the full effects of energy exports.

Project implementation is aimed at achieving several regional objectives, such as the construction of the 400 kV corridor in the east-west direction, from Turkey to Bulgaria towards BiH and Croatia; the enhancement of the regional transmission system from the Southeast Europe to Italy, and vice versa; the increase in the grid reliability and capacity in the conditions of expected load growth within the region; the reduction in technical losses; the support for the development of the regional energy market and the creation of trading possibility between the Southeast Europe and Italy; the reduction in the costs of providing reserve capacities.