Serbia: Increase of transmission capacities investment plans

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In 2014, activities on regular maintenance, overhauls and reconstruction of facilities were implemented within the transmission system, but, due to extreme weather, especially due to floods in many parts of Serbia and freezing rain in eastern Serbia, it was necessary to get engaged greatly in bringing parts of the transmission network which underwent huge damage back into operation.

There was a follow-up of investment projects, i.e. some important facilities were constructed such as TS 400/110kV Vranje 4, overhead line 110kV Majdanpek – Mosna. In addition, the construction of TS Belgrade 20 was continued and the construction of the 400 kV overhead line was initiated in order to provide the supply for that TS. The reconstruction of the following transformer stations was either continued or initiated: TS 400/220 kV Obrenovac, TS 400/110 kV Kragujevac, TS 220/110/35 kV Belgrade 5, TS 220/110 kV Belgrade 3 and TS 220/110 kV Kraljevo 3.

Transmission system operator is obliged by the Energy Law to prepare a transmission system development plan every year for the following 10-year period. The development plan is based on the amended version of the former one, in line with new insights and requirements, bearing in mind the experience in transmission network operation and maintenance. The plan is being harmonised with the plans of neighbouring distribution and transmission system operators. The position of the Serbian transmission system within a synchronised area of “Continental Europe” is considered and there is active participation in the preparation of a Ten Years Network Development Plan as well as the Regional Investment Plan within ENTSO-E. The Energy Law of the Republic of Serbia which was adopted in the end of 2014 stipulates that the electricity transmission system operator is obliged to adopt a plan of investments in the transmission network every year for the three-year period, in line with the distribution system investment plan.

A set of strategic documents which is published by PE EMS includes:

- Ten-year Development Plan of Transmission Network of the Republic of Serbia;

- National Strategic Investment Plan – NASIP and

- Annual Investment Plan – GIP. The Development Plan of Transmission Network of the Republic of Serbia for the period from 2015 until 2024 (2030) was drafted by PE EMS and submitted to the Agency on 26/12/2014 and it is harmonised with the provisions of the Energy Law in general. In comparison to the previous plan, some elements of the document were upgraded and harmonised with the ENTSO-E criteria further. The Plan was drafted in line with the Pan-European Transmission Network Development Plan and with regional

investment plans. This document was improved in comparison to the previous one to a great extent.

Analyzing the state of play in the transmission network within the Transmission System Development Plan, taking into consideration consumption forecast and expected commission of new generation units, PE EMS proposed the construction of new elements of transmission network, i.e. rehabilitation or upgrade of existing ones. Thereby, existing and expected congestions could be removed and the efficiency of transmission system operations could be increased.

The plan defines several projects which jointly represent a unique project known as the Trans-Balkans Corridor. The most important activities within this Project include:

- construction of a new two-direction overhead interconnector line of 400 kV TS Pančevo 2 – TS Rešica (Romania) which will contribute significantly to the security of supply in the whole region;

- a follow-up of the construction of TS 400/110 kV Belgrade 20 of installed capacity of 2x300 MVA which is a condition for secure supply of central Belgrade zones;

- construction of a new overhead line of 400 kV TS Kragujevac 2 – TS Kraljevo 3;

- upgrade of the grid from 220 kV to 400 kV voltage level in the western Serbia region – increasing the hub voltage level Bajina Bašta to 400 kV voltage level and the construction of a new two-direction 400 kV overhead line between TS Obrenovac and TS Bajina Bašta and

- construction of 400 kV interconnection overhead lines between Serbia, Montenegro and Bosnia and Herzegovina.

Bearing in mind planned demand, construction of new sources, planned development of regional and European grid, and these projects will contribute to the security of supply and reliability of system operations. The conditions and tempo of realisation of the interconnection between Serbia, Montenegro and Bosnia and Herzegovina will be considered in more detail upon the completion of additional study documents.

In terms of the transmission network of 220 kV voltage level, the PE EMS has a strategic plan to withdraw this network gradually, i.e. to increase its voltage level to 400 kV. However, until this is completed, there is a plan to construct TS 220/110 kV Bistrica and to increase the installed capacity in some of 220/110 kV transformer stations.

In terms of the development of the 110 kV transmission network, the Development Plan offers solutions for the existing areas with insufficient security of electricity supply, first of all, for the area of Raška and south Banat. The Plan also includes the solutions for connection diagram of overhead lines coming along the new transmission facilities, as it is the case of the cities of Belgrade and Niš. The Development Plan was harmonised with the distribution system operator’s development plans, in compliance with the data submitted by electricity distributors to the PE EMS during the preparation of the Plan. , transmits Serbia-energy.eu