

Serbia: Power utility EPS 2016 overhaul season in progress

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Besides the regular maintenance activities, significant investment projects are being implemented during the overhaul period – reconstruction, modernization and construction of new plants from the field of environmental protection. Much is expected from the completion of the implementation of several major projects. The most complex and most significant activity for the electricity generation in EPS this year is the first phase of revitalization of Unit B2 in TENT Nikola Tesla Power plants.

First phase of revitalization of Unit B2 in TENT represents the most complex and most significant work for power generation in EPS this year.

Generation capacities of Electric Power Industry of Serbia are in the middle of overhaul season. Overhauls in thermal power sector are being finalized while overhauls in hydro power plants will start in this period, said Savo Bezmarević, Executive Director for Electricity Generation in EPS in his interview for the magazine “EPS Energija”.

Our interviewee underlines that along with the general works, such as TENT B2 overhaul, standard overhauls are being conducted in all other plants. According to his words, all thermal power units and hydro units have to be ready for both autumn and winter.

- We are expected to complete this and everything done is done in order to achieve this goal. It should be noted that it is very important that the employees are devoted to their jobs – says Bezmarević.

What are currently the most important activities in power generation sector in EPS?

We continually monitor and analyze generation capacities’ operation. This represents an extremely important activity in maintaining good operating condition of plants and equipment and represents basic prerequisite for safe and reliable operation of generation units. Overhauls on 14 thermal power units and three hydro units were conducted during the first half of the year.

Besides the regular maintenance activities, significant investment projects are being implemented during the overhaul period – reconstruction, modernization and construction of new plants from the field of environmental protection. Much is expected from the completion of the implementation of several major projects. The most complex and most significant activity for the electricity generation in EPS this year is the first phase of revitalization of Unit B2 in TENT. Second phase of general overhaul of Unit in TPP Morava is also very significant. Ecological projects in thermal power sector that are being finalized are the following: flue gas desulphurization in TPP Kostolac B, ash transport by thick-slurry in TPP Kostolac A, as well as

construction of new electrostatic precipitator in TPP Morava.

In hydro sector, the fourth phase of revitalization HPP Djerdap 1 is ongoing, where Unit A1 is being revitalized. Revitalization of Unit A1 in Zvornik is ongoing, while new modern turbine regulators should be installed on both units in PSHPP Bajina Basta. All these activities should contribute to more secure generation and to new megawatts when it comes to projects TENT B2 and HPP Zvornik. This represents additional revenue for EPS.

One of the most important overhauls is being carried out in TENT B, what is the progress of this work?

According to the current level of works, although only 50 days passed, all is in accordance with the defined plan and we will try to maintain such pace until the end. The most significant activities of this overhaul are reconstruction and increase of boiler production, turbine general overhaul, installation of new generator and high-pressure bypass. Management system will be replaced entirely and modern DCS will be installed. Generator switch will be replaced. Extensive works on fireproof structures, where no larger works have been done since the first commissioning of the unit. Beside all this, the duration of this overhaul will be used to carry out the extensive works on other equipment as well. Overhaul on Unit B2 in TENT started on 7th May. Planned duration is 180 days and unit should be put back in regular exploitation on 2nd November. During the first several days after the overhaul unit will not operate in full capacity because this period represents adjustment and optimization phase; but soon after 15 days of trial period stable unit operation may be expected. Due to the extended tender procedure caused by the complaints of tenderers, the contracting of some very important works was late and delivery deadlines might threaten the completion of the overhaul as planned. However, all is according to the plan for now.

What are the main goals of that general overhaul?

Unit TENT B2 has been operating since 1985 and until now it has been connected to the network for more than 220 000 hours. Until today, no activities of such large scope have been performed on this unit. Data show that it was high time to do this and that it was necessary to conduct one such unit overhaul during this year. One of the goals is the extension of operation lifecycle for another operational cycle, and it is of equal importance to increase both unit reliability and unit availability as well as to increase the capacity of the unit by 30 MW. This capacity increase is accompanied with the increase of boiler utilization level, therefore the increase of coal consumption will be proportionally reduced. Units and TENT B are our largest and most important generation capacities, thus they have to be maintained and operated with particular attention.

What is the current state in hydro sector?

The fourth phase of revitalization of unit A1 is being implemented in HPP Djerdap 1; works on reconstruction and modernization of the system for own consumption supply, reconstruction of pumping station, automatic and equipment of pumping station Kosovica are initiated. General overhaul of A6 unit is planned as well. Revitalization of A1 unit is also being implemented, as well as the reconstruction of the own consumption system and siphon

cranes in HPP Zvornik.

HPP Djerdap 2 initiated the general overhaul on A10 Unit, general overhaul on A9 unit is planned, as well as the replacement of spill dam servomotors. Works on the replacement on step-up transformer, as well as the works on the reconstruction of hydro construction part of the facility and equipment are carried out in Vlasninske Hydro Power Plants. HPP Bajina Bašta is planning the installation of generator monitoring, while in the pumped-storage HPP Bajina Bašta the installation of turbine regulator on both units is being planned. Works planned for this year that should be mentioned are electric installation works on the equipment in HPP Elektromorava, as well as the revitalization on bridge crane in Limske HPPs.

More efficient business operation and savings at all levels represent the part of EPS management goals. What has been done during this year by power generation, what are the savings?

Savings are one of the business operation goals. That goal is being realized on several levels within power generation. Plan is to reduce the overhaul duration by 3% and that measure is currently being conducted accordingly. We plan to reduce generation costs by more reliable unit operation with less outages. In order to achieve this, we are required to bring exploitation and maintenance to a more efficient level. Planning and conducting procurements through competition increase can bring many savings. The best examples are tender procedures conducted for contracting the works for the first phase of revitalization of B2 unit in TENT.

Higher capacity

How much has been done regarding the certification of the previously increased capacity of units after the revitalization?

Having in mind the status and organizational changes in PE EPS and overhaul and reconstruction works performed in the previous years, the procedure for the issuance of new licenses for all electricity and heat generation capacities on particular thermal and hydro power plants has been initiated. Necessary documentation includes the overview of all conducted works that significantly affect the generation characteristic for the facilities, technical reports prepared by equipment manufacturers as well as the acceptance tests and guarantee tests carried out within warranty period. All documents are revised and approved by the inspections of competent ministries. Major part of technical documents for reconstructed thermal power units and hydro units is completed and several guarantee tests are yet to be done, particularly the new facilities for the reduction of harmful substances from thermal power plants. The plan for possible generation and auxiliary services for the work in electric power system uses the realized values of increased capacities of certain thermal power units and hydro units, transmits Serbia-energy.eu