

## Serbia Power utility EPS new power gen projects presented on energy fair

**Categories :** [News Serbia Energy](#)

**Date :** November 7, 2017

One of the presented projects was the project comprising the revitalization of the Zvornik HPP, whose capacity after the said works will amount to 125.6 megawatts, which is 30 percent more than the current capacity.

- Revitalization will ensure higher electricity generation, lower maintenance costs and extend the life of this hydroelectric power plant for another 40 years - said Gojko Bajic, the project manager. - The expected increase in electricity generation of this hydroelectric power plant will amount to up to 15% annually. *Zvornik HPP Revitalization* project is the fourth project of the Drinsko-Limske HE branch in the last 12 years. Namely, during this period, revitalizations of the pumped-storage HPP Bajina Basta, both power plants of the Elektromorava HPP and Bajina Basta HPP, were successfully completed.

Zvornik HPP units have been operating continuously for 60 years. The revitalization project envisages complete replacement of turbine equipment, control, cooling water system, compressed air, generators with excitation systems, unit transformers, generator voltage equipment, 110 kV switchyard and control and instrumentation systems of the power plant. New turbines will have a larger runner diameter, higher efficiency, higher discharge and capacity. According to plans, the works on each of the units will last 12 months.

Guests who visited the EPS stand could also hear the presentation about the wastewater treatment plants of TENT A. Ljiljana Velimirovic, head of the Mechanical Supervision Division of TENT A, presented the details of the four wastewater treatment plants operation method.

- The wastewater treatment plant of TENT A is the first plant built to treat water created throughout electricity generation. They can treat some 750 cubic meters of water per hour - Velimirovic said. - They were developed partly by utilising EPS own funds (EPS invested some 3.5 million euros into the development of the oily water treatment plant), while for the most part (six million euros) the construction was financed from the donation extended by the European Union and the IPA 2011 Program.

The plant treating waters containing heavy fuel oil can process 100 cubic meters of water per hour. Water from the boiler room is being processed, and the suspended solids mechanically deposited inside the plant. Water is further directed to an oily water treatment plant, processing 500 cubic meters of water per hour. It is near the bank of the Sava River, while the treated water is subsequently discharged into the river. All treated water quality indicators are within legal limits.

Goran Stefanovic, a mechanical engineer, working on the combustion products discharge in the Kostolac B Thermal Power Plant, noted that ash could become inevitable in the

development of infrastructure projects.

- The first contract was signed with the Cement Plant *CRH Srbija* from Popovac for the sale of 12,000 tons of ash and 5,000 tons of slag from the Kostolac B Thermal Power Plant. Another contract was recently signed with this cement plant, under which the buyer committed to take over 30,000 tons of fly ash from thermal power plants located in Kostolac in the coming period - Stefanovic says.

He explains that around 35 million euros were invested in the Kostolac B TPP to replace the ash and slag handling system, of which 25 million euros was from the loan extended by the European Development Bank and 10 million euros from own resources of Elektroprivreda Srbije. This investment in new technologies has enabled Kostolac B TPP to acquire a new system characterised by a considerably higher degree of energy, environmental and economic efficiency. The precondition for using ash was the decision to classify it under domestic legislation as a building material.

#### Most Important Projects of EPS

As part of the accompanying program of the energy fair, at the EPS stand, the experts of Elektroprivreda Srbije presented the most important projects during this three-day event, including the construction of a new thermal power unit B3 in Kostolac, desulphurization plant in TENT A and Kostolac wind farm.

The project comprising the building of a new unit B3 (350 megawatts) runs parallel on several tracks. Permits are being obtained, design documentation prepared, construction site development, while activities entrusted to a third party are also under way. International approval is expected to the Environmental Impact Assessment Study, given that public consultations were recently held in the Romanian town of Oravița.

- The key planned events comprise permitting, development of an execution design and commencement of works at the site by late this year - Milos Stojanovic, the project manager said.

From an environmental point of view, a very important project is the construction of a flue gas desulphurization plant in TENT A. The contract with the contractor was signed in mid-September and preliminary activities are currently in progress, as the preparatory works begin by late October or early November.

- One of the most important tasks is to prepare the accompanying designs, such as wastewater treatment plants, ash and slag transportation systems, gypsum landfill, etc. - Predrag Djordjevic, the senior project manager, said.

On the other hand, the Kostolac wind farm project is in the investigation and preparation phase, also on several tracks. This year, a feasibility study was carried out with the preliminary design for the construction of this farm. Another important task was to implement a public procurement to develop a building permit design.

- Field measurements continue, this is something that is ongoing. So far, wind farm potential results are highly encouraging. The estimated capacity of 66 megawatts is practically guaranteed, as we have indicators that show more - Dragoslav Cicovic, the project manager, explained.

### Savings and Energy Efficiency

- After finalising Phase I of TENT B1 and B2 revitalisation, the two most powerful thermal power plants of EPS have not only been modernized but their life span has also increased, together with reliability, availability, capacity by an additional 30 megawatts, from 620 MW to 650 MW, and energy efficiency. Environmental improvements are also essential - Ivan Gajic, director of TENT B, said, speaking about the revitalization effects.

He pointed out that the energy effects of the above upgrades and modernization of these thermal power stations are *inter alia* reflected in the fact that both units now operate with the capacity higher than 650 MW.

The total number of Unit B1 operating hours, from its first synchronization to the Phase I of revitalization, was 210,000, while by October 2017, this unit achieved 246,000 operating hours. Phase I of revitalization of the second thermal power unit in TENT B was completed last year. By this time, Unit B2 achieved 220,000 operating hours, with 227,000 hours by October this year. By October 2017, both units generated some 270 billion kilowatt-hours of electricity.

- Coal consumption was reduced by 230,000 tons annually while operating at 620 MW, ash and slag amounts were also reduced, from 35,000 to 46,000 tons per year. Moreover, sulphur oxides and nitrogen oxides emissions were also reduced. Operation of electrostatic precipitators has also improved owing to the reduced flue gas temperature, he said.

Furthermore, on the financial side, large savings have also been made.

- Investing into a new 35 MW power plant would cost 50 to 60 million euros, while TENT B2 upgrades and modernization secured this much capacity increase by much lower investments and in a much shorter time period. Modernization and capacity increase are highly cost-effective projects, enabling short-term return on investment - Gajic pointed out. - Phase II of upgrades and modernization still need to be implemented. Phase II would include the spiral evaporator, burner system, air distribution and mill systems. According to plans, these capital activities will be implemented in 2020 and 2022 on Units B1 and B2, respectively.

### EPS at the “New Energy – Smart Cities” Panel

#### Balanced Development is Vital

EPS takes care of its future business and technical sustainability and the need to balance electricity consumption and generation

Serbia should follow the development plans of the world's metropolises and start thinking about implementing the concept of “smart cities” to achieve the best possible organization of life in cities with maximum energy efficiency by employing different information and communication technologies, this was the message from the panel “New Energy - Smart Cities” held at the International Energy Fair.

In energy, distribution terms, smart grids can help customers reduce electricity consumption. On the other hand, from the generation perspective, developing “smart cities” implies a significantly higher share of renewable energy sources (RES) to meet their needs, whereas this raises the issue of financial sustainability.

- This story is centred on one of the basic energy postulates – it is essential to keep in mind that final customers are the ones who will pay for all of this. Transformation speed in the distribution segment of the value chain is linked with the speed at which the customer can accept all that from a cost perspective - Dragan Vlaisavljevic, executive director for electricity trading in JP EPS, said.

Considerably higher RES use requires much more capacities to balance RES volatility. EPS takes care of its future business and technical sustainability and the need to balance electricity consumption and generation to enable customers to choose their supplier.

- Some 500 megawatts of electricity from wind will be connected to the Serbian power system, according to the plans of the Ministry of Mining and Energy. In practice, other energy generation segments will need to rush to balance this wind volatility in real time, and time is money. EPS absolutely possesses the capacity to respond to this this type of developments. In the future, if the limit were to be raised after 2021 and wind was to get a higher share, then more balancing capacities would be necessary, which, according to the analysis, Serbia does not possess - Vlaisavljevic explained.

ICT propelled “smart city” concept integrates and coordinates the operation of all city services in order to improve their work and ensure better connectivity between city administration and citizens, contributing to more efficient and more rational use of resources, which means saving energy and reducing adverse environmental impacts.

**EPS – the Cornerstone of Serbian Economy**

We will continue the reorganization process in accordance with the Serbian Government's policy, as well as the modernization investments into all parts of the system, Milorad Grcic said. The construction of the new 350 megawatt Unit B3 in Kostolac runs parallel on several tracks. The Kostolac Wind Farm Project is in the investigation and preparation stage.

The best indicator of the successful operation of Elektroprivreda Srbije is its leading position among the Serbian companies on the list of the top 100 companies in Southeast Europe, Milorad Grcic, acting director of EPS, said on 4 October, at the opening of the 13th International Energy Fair in Belgrade.

- EPS, based on revenue growth, jumped from the nineteenth to the seventh position on the said list and was best placed among all Serbian companies, which is an indicator of a successful business. We will continue the reorganization process in accordance with the Serbian Government's policy, as well as the modernization investments into all parts of the system. Soon we will lay the foundation stone for the new thermal power unit B3 in Kostolac, the first one after nearly three decades – EPS' top man said.

For the company's success, Grcic thanked the hardworking employees of EPS, who, by being responsible towards the state-owned company, show their responsibility towards the state, emphasizing that it is therefore proud of EPS employees.

- EPS is the largest and most important energy company in Serbia and one of the cornerstones of Serbian economy. We also have responsibility towards 3.5 million of our customers, and to get closer to them and offer better services, we will launch a new website, enabling them to find all the answers they need - Grcic said.

Mirjana Filipovic, State Secretary at the Ministry of Mining and Energy, said that energy companies realized a large number of infrastructure investments in the past, but also successfully restructured their businesses.

- Serbia is now at an enviable level as far as EPS and other companies are concerned, - Filipovic said, adding that it is necessary to invest into new, renewable energy sources and energy efficiency, however, that resources available in Serbia, such as coal, should also be utilised together with the new smart technologies.

The International Energy Fair brought together companies dealing with electricity, coal, oil, and renewable energy, and was organized simultaneously with the ecology and urban smart technologies fairs under the slogan “New Energy - Smart Cities”.