

Serbia: Revitalization of Unit A2 of HPP Djerdap 2 successfully completed

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New green megawatts for EPS

EPS has a serious plan to significantly increase the level of its investments in 2020, this was pointed out by Mr. Milorad Grcic, acting director of JP EPS, who also announced full revitalization of 10 units of HPP Djerdap 2.

With the commissioning of the revitalized unit A2 at Djerdap 1 hydropower plant, a major and significant work was completed for Elektroprivreda Srbije and power system stability, while the capacity of Serbia's largest hydropower plant was increased by 30 megawatts.

The upgraded unit was commissioned by Mr. Aleksandar Antic, Minister of Mining and Energy, Mr. Milorad Grcic, acting director of JP EPS, and His Excellency Alexander Bocan-Harchenko, Ambassador of Russia to Serbia. They pointed out that the Russian company Silovie Mashini will also revitalize the last - sixth unit of HPP Djerdap 1, as well as 10 units of HPP Djerdap 2.

- EPS and HPP Djerdap 1 now have five new units, out of six in total. One more unit needs to be revitalized, with the works commencing in 2020. When we finish this and revitalize the stilling basin, we will be able to say that we have Djerdap 1 as if we had just built it - Milorad Grcic said, acting director of JP EPS, after commissioning of the revitalized unit at the hydropower plant in Kladovo.

Grcic added that this is part of our obligation and the policy of the President of Serbia, Aleksandar Vucic, to preserve everything we inherited, but also to modernize it and leave to future generations.

- EPS has a serious plan to significantly increase the level of its investments in 2020 - Grcic said and announced full revitalization of 10 units of HPP Djerdap 2 in cooperation with the Russian company Silovie Mashini, which will give EPS an additional 50 megawatts.

Aleksandar Antic, Minister of Mining and Energy of Serbia, explained that Silovie Mashini was selected for the job because it manufactured the original turbines and unit equipment during the construction of Djerdap 1 over 40 years ago.

Antic also said that Djerdap 1 is Serbia's biggest treasure. He said that it was important for

the revitalization, during which the units were shut down, to last as short as possible, and he praised the Russian company Silovie Mashini and EPS for completing this unit in only 416 days, which he said was about 200 days less than the revitalization of the previous four units.

- Completed revitalizations ensured that these units have a new operating life for the next four decades - Antic said, adding that Djerdap 1 is of utmost importance for the Serbian power system as it produces more than half of hydro power in Serbia.

HPP Djerdap 1 has generated about 14 billion euros worth of electricity in its 47 years of operation, while one unit generates kilowatt-hours worth between 40 and 50 million euros a year. When the revitalization of the sixth unit is completed, HPP Djerdap 1 will have a total of 180 megawatts more to produce clean electricity.

Alexander Bocan-Kharchenko, Russian ambassador to Belgrade, estimated that the commissioning of the fifth unit also showed that the revitalization was going according to plan and that there were no delays.

- This is the result of the joint action of the experts coming from the company Silovie Mashini, one of the most reputable and professional companies in Russia, and experts from Serbia. The commissioning of the new unit is being realized in the course of intensified political contacts at the top of Russia and Serbia. With political contacts and intense dialogue, we have managed to realize in practice what we have discussed - the ambassador said.

The fifth stage of the revitalization of HPP Djerdap 1 was completed the fastest, regardless of the much larger volume of repair works in the discharge structure and on individual turbine parts. The assembly and dismantling work was done by EPS employees and Djerdap Usluge employees. This covered the replacement of the vital turbine parts: shaft, runner blades, runner hub, runner mechanism parts, lower guide vanes ring, 16 of 32 guide vanes, upper guide vanes ring, turbine cover. The stator of the main generator was replaced, rotor poles were revitalized, and the auxiliary generator was repaired. A new automatic control system, a new excitation system, new protections, monitoring of thermal controls, vibrations and air gaps, magnetic flux and partial discharges have all been installed.

Significant investment

Unit A2 was commissioned in 1970 and stopped after 47 years for revitalization after more than 330,000 operating hours. The reconstruction of the first four units was completed from 2011 to 2017, while the revitalization of the last, sixth unit is expected to start next year.

Memories

After the fifth unit was commissioned, the delegation laid a wreath at the monument to

Serbian and Russian soldiers in the village of Vajuga near Kladovo. Wreaths were laid on the monument to the victims of the final battle against the fascist aggressor in World War II by Russian Ambassador to Serbia Alexander Bocan-Harchenko and acting director of JP EPS Milorad Grcic.

The pyramidal monument in the village of Vajuga was erected in memory of the Red Army Forces who in 1944, with Serbian fighters, from this village, went on to liberate the former Yugoslavia. The monument was erected on 22 September 1985, and on that date, freedom arrived in the Kladovo area 75 years ago. Representatives of the Russian company Silovie Mashini, engaged in the revitalization of HPP Djerdap 1 in Kladovo, also laid wreaths at the memorial.

Djerdap 1 hydropower and navigation system

Djerdap 1 hydropower and navigation system was built on the 943th kilometer of the Danube, near Kladovo. The power plant was completed in 1972. It is part of the branch of HPP Djerdap and the system of Elektroprivreda Srbije, producing annually an average of 5.5 billion kWh of electricity, or about half of the total generation of EPS hydropower plants.

Value

The total value of Phase 5 is more than EUR 27 million, while the value of the equipment delivered from the Russian Federation is EUR 18,780,922. Value of the rehabilitation works in domestic factories, installation of the main and auxiliary generator, new pipelines for the cooling and turbine regulation is at the level of EUR 8,500,000. The total value of the HPP Djerdap 1 revitalization is more than EUR 160 million.