

Construction of a flue gas desulphurisation plant on four units of this thermal power plant, introduction of a new thick slurry transportation system, and expansion of the existing ash and slag landfill - are major investment projects of EPS. Their value is some 300 million euros.

In years to come, Nikola Tesla A TPP will be one of the biggest construction sites inside Elektroprivreda Srbije. At this TENT branch location, three significant projects will be realized linked both functionally and environmentally. The construction of a flue gas desulphurisation plant on the four units of this thermal power plant, the introduction of a new thick slurry transportation system, and the expansion of the existing ash and slag landfill - are major investment projects of EPS, which, in addition to substantial funds, will engage the majority of local construction companies. In addition to this, there is the major overhaul of the TENT A4 unit, planned for 2018, commencing a series of large works at TENT A.

- These three projects are very important and mutually connected, hence, their implementation deadlines are almost identical. They should be completed by the first half of 2021. Given the existing ash and slag storage capacity, whose lifecycle is close to an end, these projects would open the possibility of extending the operating life of this thermal power plant - as indicated by TENT A.

These are strategic and capital investment projects of immense importance for EPS managed by the Key Investment Projects Department, part of EPS in charge of strategic and capital investments. To ensure their successful implementation, joint and combined teams of different professions and specialties will be formed, covering every stage.

When it comes to the project involving the flue gas desulphurisation plant (FGD) construction for four TENT A units, from A3 to A6, one might say that it is a forerunner.

- The contract for this project has already been signed with a consortium led by the Japanese company Mitsubishi Hitachi Power System, while the first advance payment will formally mark the start of its implementation. Detailed design of this plant requires, according to forecasts, about a year, followed by the obtaining of the necessary building permits and the actual commencement of works. This project is valued at some 170 million euros, secured by the Japanese Government, through the Japan International Cooperation Agency (JICA). In addition to the teams formed from EPS experts, the Japanese company TEPSCO will take a consulting and supervisory role. EPS is already preparing for the project, primarily by securing necessary space for the contractor, as well as the space required to store the equipment and perform preliminary works. For this purpose, a total of 6.5 hectares of area was envisaged, situated in three locations inside TENT A grounds - as noted by TENT A.

As for the thick slurry transportation project, including part of the gypsum produced by the FGD plant, project funds were secured from a loan extended by the German Development

Bank - KfW. The total value of this project is some 66 million euros, of which 45 million euros in the form of a loan are provided by KfW, while 21 million euros will be secured by EPS. The loan agreement was signed in February 2017, for a 12-year period, with a grace period of five years and an annual interest rate of 0.8 percent. It is expected that the implementation contract would be signed in the second half of 2018.

When it comes to expanding the ash, slag and gypsum storage capacity, the existing general regulation plan is currently being amended, which is also relevant for other facilities. It is expected that after public consultations, the plan would be adopted and effective by late this year. Subsequently, building permits can be obtained not only for these projects, but also for all other planned facilities, plotted and divided by zones within the thermal power plant. The area of the envisaged additional landfill is 150 hectares, of which 115 hectares will be used to store ash, while the remaining area is planned as a buffer zone. The land intended for ash and slag landfill development is owned by the Republic of Serbia, while the Ministry of Agriculture and Environment has use rights over it. The process of converting this land into construction land is in progress. Drafting of the complete design documentation, from the conceptual solution to the construction works design was assigned through public procurement to a consortium of companies consisting of the Mining Institute Belgrade and the Water Management Institute *Jaroslav Cerni*.

Bearing in mind that revitalisation of units A1 and A2 was planned for 2020 and 2021, which are already nearing the end of their lifecycle, TENT A location would in fact really become a large construction site in the next five years, which is almost identical with the time when the construction of this thermal power plant commenced.

Large works also require the engagement of a large number of people, and this, on the other hand, also creates the need to regulate the traffic of project participants to prevent overcrowding this small area. The parking space solutions are also sought, due to the expected large number of people who will be engaged in the above activities, not only TENT employees but also contractors. This issue should be resolved because part of the existing parking space, more precisely, an area of about 4,000 square meters, is planned to accommodate equipment and preliminary works during the FGD plant construction and is one of the three locations envisaged for this purpose.

The list of large works starts with a 308.5 megawatt Unit A4. This project is valued at some 41 million euros, plus 8.5 million euros donated from the IPA Fund for the nitrogen oxides reduction project. The funds were provided by the EU, through the European Delegation in Belgrade, the Ministry of Finance and the Ministry of Mining and Energy.

- Major overhaul of this unit, which has for years been the most reliable unit of the Nikola Tesla A TPP, due to the lowest number of outages throughout the year, regularly meeting its annual generation plan, would extend its operating life, capacity, and energy efficiency. This will also help meet environmental requirements - as explained by TENT A.

Overhaul of this unit, as foreseen, will start in early March 2018. It will take 140 days, while preparations are already under way. The equipment is arriving. It is valued at some 50 million euros.

Challenging task of Unit A5 overhaul is also expected in 2018, lasting for 58 days, together with maintenance of the oldest units A1 and A2, to enable them to successfully generate electricity until the moment of their final “rejuvenation”, planned for 2020 and 2021 respectively. Since these very complex and comprehensive tasks will be performed almost simultaneously at this location, all planned works need to be well-integrated, aligned and completed in time to ensure their success.