

The primary objective of the project is to reduce sulfur dioxide emissions by 200 milligrams per cubic meter. If the EU tightens these criteria, the plant is so designed that it can go down to a lower value.

The project for the construction of a flue gas desulphurization plant (ODG) in the TPP “Nikola Tesla A” in Obrenovac is one of the most important ecological investment through which “Elektroprivreda Srbije”, through the Sector for Key Investment Projects (SKIP) continues a number of major projects in the field of environmental protection. EPS’s investments in this direction reached about 200 million euros, and the project of flue gas desulphurization on TENT A is worth more than 167 million euros. Due to the positive ecological effects expected by its realization, it is very important not only for Serbia, but for the whole region.

The project is being implemented under the agreement of the governments of the Republic of Serbia and Japan, on the basis of a loan agreement for its financing between JP EPS and Japan International Cooperation Agency (JICA). Agreement on the construction of a plant between EPS and a consortium of companies led by the company “Mitsubishi Hitachi Power System” (MHPS), was signed on September 8, 2017.

At the beginning of December, an introductory meeting was held with the consortium of contractors on the occasion of the start of the project realization, in the presence of Aleksandar Antić, Minister of Mining and Energy in the Government of Serbia and the General Director of JP EPS Milorad Grčić with associates. The beginning of works is planned for the first quarter of 2019, and the deadline for realization of the project is 42 months, followed by a guarantee period and trial operation of the plant of 12 months. In the meantime, a team has been appointed for the implementation of the project in EPS.

The largest absorbers in this part of Europe

The flue gas desulphurization system on TENT A will be built on four blocks (A3-A6) which use the Kolubara lignite as a fuel. In addition to two absorbers with chimneys (one for two blocks), the plant includes a plant for the preparation of limestone and gypsum production and a wastewater treatment plant that has been generated by the desulphurization process, which has already been built. A special track for unloading of limestone will be built, as well as a bridge that will transport the molded limestone to the absorber. By building all projected facilities that are included in the plant, the remaining free space within the thermal power plant will practically be used for the most part. Upon completion of the construction of the ODG plant, the visual impression will be as if new blocks were built. The height of each absorber will be 34 meters, along with a large chimney at the top of 140 meters with a base of 24 meters in diameter. Absorbers are the biggest in this part of Europe and through one can pass four million cubic meters of flue gas per hour. When the desulphurization plant starts to operate, existing chimneys in the thermal power plant will no longer be in permanent use, will remain in reserve, and it will only be used in the event

of a fall and at the start of the block, which will be specified additionally.

#### Procedure

All four blocks will be used with the wet method of desulphurization using limestone as a reagent. Grounded limestone, mixed with water to get an emulsion, will be inserted into the absorber through the pipelines. The emulsion, by means of sprinklers, will be inserted into the flue gas by small droplets. The limestone emulsion extracts sulfur from the flue gas, which from the bottom enters the absorber and makes plaster that drops down into the water. It has two paths: either it will go to the gypsum production plant, where, after drying, it will be so clean and according to the European standard of quality to be ready for sold, or mixed with water and ash, will be disposed at the landfill. The estimate is that, if the average content of sulfur in coal, the production of plaster would be about 500-600 tons per day per absorber, which is about 25 tons per hour.

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#### Construction

Preparations are under way for the pre-assembly and fitting-out of equipment. For this, three parcels of almost 6, 5 hectares of total area are planned. There will be containers in which the experts of the contractor and all the employees will stay, as well as workshops where equipment, canteens and parking will be built. On these plots will be introduced all the necessary infrastructure and these works should be completed in March 2018.

According to the contract, the contractor is obliged to develop projects in the next year for all planned facilities and, together with the authorities in TENT A, acquires necessary building permits.