

Roughly EUR 500 million invested in environmental improvement projects. EPS is the largest investor in environmental protection in Serbia, primarily investing in improving air quality

Environmental protection is an important part of Elektroprivreda Srbije's strategy. Since 2001, with the revitalization and modernization of production capacities, with capacity increase, environmental protection has been improved. The goals are to preserve security of supply, increase the energy efficiency of plants and reach EU standards, and the production capacity of JP EPS is on a much higher level than before.

Over the last 15 years, Elektroprivreda Srbije has invested around EUR 500 million in projects that improve the quality of air, water and land. In doing so, EPS has taken the lead as the largest environmental investor in Serbia. It has primarily invested in improving air quality by introducing measures in thermal power plants. So far, the reconstruction of electrostatic precipitators has been completed in all thermal power plants, thus significantly reducing the emissions of particulate matter. Since 2004, EUR 97 million has been invested. The result is two and a half times less dust emissions in 2018 than in 2011.

EPS continues along the green path in the coming years, as additional environmental investments worth more than one billion euros are planned in a series of projects protecting air, water and soil and improving environmental quality. EPS' environmental investments will bring 90 per cent reduction in sulphur dioxide emissions by 45 per cent, nitrogen oxides by 45 per cent and powders by 95 per cent compared to 2008-2012.

Bringing Serbia closer to the European Union, opening up the electricity market and the need to improve environmental protection are the main reasons why EPS increases its environmental investments.

Priority and maximum investment, of nearly EUR 650 million, is envisaged in the field of air quality protection through the construction of flue gas desulphurisation systems and primary and secondary measures to reduce nitrogen oxide emissions in thermal power plants. In doing so, EPS meets stringent EU environmental standards and lowers emissions below the limits set by domestic and European regulations.

Reduction of sulphur dioxide emissions and further reduction of particulate matter are brought about by flue gas desulphurisation systems. These are the most expensive and technically complex projects.

EPS has completed construction of such a plant at TPP Kostolac B, worth EUR 96 million, and guarantee measurements have shown that SO₂ emissions are well below the current European standard of 200 milligrams per cubic meter.

The most valuable EUR 217 million project underway will provide a TENT A flue gas desulphurisation system. It is one of the most important investments in the region because of the level of investments and positive environmental effects as well as the fulfilment of

obligations towards the Energy Community.

EPS paid full attention to the project, which is being implemented under an agreement between the Government of the Republic of Serbia and the Government of Japan, on the basis of which a loan agreement was signed between JP EPS and the Japanese International Cooperation Agency - JICA. A contract signed between EPS and a consortium led by Mitsubishi Hitachi Power System was signed on 8 September 2017. The contractor consortium also includes ITOCHU Corporation from Japan and MPP Jedinstvo from Sevojno. The flue gas desulphurisation system in Obrenovac is being built for four 350 megawatt TENT A units, firing lignite from the open cast mines of RB Kolubara. On units A3, A4, A5 and A6, the flue gas desulphurisation technology will be applied, using limestone as a reagent. Gypsum, will be obtained as a by-product which can be used in building industry, while mixed with ash it can be utilised for road construction.

Works began in February 2019. The project implementation deadline is 42 months with an additional 12 months warranty period. Upon completion of this project, the expected level of emissions will be reduced by more than nine times. More than 1,600 local workers will be involved in the various phases throughout the project.

Projects are also planned for the remaining two units of TENT A, as well as for units of TENT B, TPP Kostolac A and a new unit Kostolac B3, which is under construction.

TENT, the largest electricity producer in EPS, has implemented several environmental projects, with more than EUR 200 million invested. The reconstruction of electrostatic precipitators on all thermal power plant units in Obrenovac has been completed.

Electrostatic precipitators are the most important barrier from PM particles. This is evidenced by white smoke coming out from the TENT A and TENT B stacks. Electrostatic precipitators reconstruction effects are visible, as the dust emission has been reduced by as much as eight times.

In the coming period, it is planned to invest more than EUR 445 million in environmental projects. The most important priorities are to increase efficiency and to comply with legally prescribed environmental standards in the fields of environment, water, air and soil.

Significant funds have also been invested into modernizing the Kostolac B TPP units at the level of USD 340 million with the construction of two new electrostatic precipitators. A flue gas desulphurisation system was built on both units of TPP Kostolac B, as well as a new fly and bottom ash handling system on all four units. All this has yielded results - reduced emissions and improved air quality. The Kostolac branch monitors flue gas emissions in accordance with the law and in cooperation with relevant institutions and organizations.

Heating and traffic are dominant

According to a 2018 report by the Environmental Protection Agency, the latest available one, the dominant share of PM 10 emissions during that year came from power plants of

less than 50 megawatts and individual combustion plants, accounting for 57 per cent of these particles.

Industry and agriculture without livestock breeding, account for 13 or 10 per cent of these particles, while road transport emitted six per cent of total PM 10 emissions.

Electricity and heat generation accounted for five per cent of the emissions of this pollutant. Other sources accounted for nine per cent.

Less than 50 megawatts of heating and individual combustion plants were also the largest sources of PM 2.5 - as much as two-thirds of emissions. As with PM 10 particles, the industry came second, but only with nine per cent, while road transportation came third with six per cent.

Other sectors accounted for seven per cent of total PM 2.5 emissions.

Caring for water and soil

Much attention has been paid to projects that have reduced the impact of thermal power plants on water and soil. In some power plants, wastewater treatment plants have been built, and projects for other capacities have been initiated and prepared. The systems for collecting, transporting and depositing ash have been upgraded and reconstructed, which has also improved air protection, considering that it prevented ash dispersion.

In line with NERP

EPS complies with all laws of the Republic of Serbia and is fully compliant with the National Emission Reduction Plan (NERP). As early as 2017, a notification was received from the competent Ministry of Environment that the implementation of NERP would start in early 2018, in accordance with the regulation on emission limit values for large combustion plants.

Source: EPS Energija