

The process of approving and adopting the NERP in Serbia is marked by a lack of transparency and several contradictions

The whole process of approving and adopting the NERP in Serbia is marked by a lack of transparency and several contradictions. It was necessary for the Energy Community Secretariat to initiate proceedings against Serbia for the country to finally adopt the document, five years after it was first written.

In February 2020, the Ministry of Environment finally adopted the NERP, but the Serbian NGO Regulatory Institute for Environment and Renewable Sources (RERI) warned that the plan was not approved in one of the legally prescribed formats, such as a Decision or Regulation, meaning that it may be unenforceable due to the lack of a legal framework governing such documents.

In addition to the delay in adoption, the new document also mentions delays in the implementation of measures to reduce sulfur oxide emissions (for units of TPP Nikola Tesla A3 and A4-A6), from 2020 to 2022 and 2021, respectively. The decision to dispose of these retrophytes was made unilaterally by the Ministry of the Environment. Therefore, the NERP no longer corresponds to the version approved by the Energy Community Secretariat in 2017.

In January 2021, RERI initiated a lawsuit against Elektroprivreda Elektroprivreda Srbije (EPS), for exposing the citizens of Serbia and the EU to poisonous gases six times above the legal limit, violating both national and international law. The complaint was based on SO₂ emissions in 2018 and 2019, which were six times above the national border.

Compliance with NERP ceilings in 2020

Emissions from coal-fired power plants in Serbia have far exceeded the 2020 upper limits set in the NERP. The violation is even bigger than in the previous two years, because certain emissions of units increased in relation to 2019 and 2018.

The biggest problem remains SO₂ emissions, which were 6.1 times higher than the state ceiling, and significantly higher than in 2019, when they were 5.6 times higher. In absolute numbers, SO₂ emissions from 14 coal-fired units included in the NERP amounted to 333,602.29 tons, while the upper limit in the NERP for 2020 for 18 large combustion plants was set at a maximum of 54,575.33 tons. This is a significant increase from 305,306.90 tons in 2019. At the plant level, the largest emitters were Kostolac B, whose SO₂ emissions exceeded the national ceiling for 2020 1.74 times, with 95,096.75 tons, followed by Nikola Tesla B1 and B2, which emitted 85,765.9 tons.

Kostolac B1 and B2 are in danger of becoming an unsuccessful investment in pollution control, as the power plant has undergone a remediation process, and in 2017, desulfurization equipment was allegedly completed and put into operation by China Machinery Engineering Corporation. Kostolac B is the only power plant in Serbia that has

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installed flue gas desulphurisation equipment (FGD), and yet it has broken through its individual SO₂ ceiling for 2020 given in the NERP almost 12 times! The breakout for the previous year was close to 10 times, which is a huge increase considering that the power plant operated only about 100 hours more than in 2019.

Kostolac B is therefore the largest polluter of sulfur dioxide in the country, both in terms of breaking the individual ceiling and the total amount of pollution.

A significant continuous increase in the amount of SO₂ emitted annually can also be seen in the Nikola Tesla A power plant. Units A1-A3 emitted 43,342.36 tons in 2020, compared to 35,680.9 in 2018 and 36,471.5 in 2019. , while A4-A6 units emitted 25 percent more in 2020 than in 2018 when the LCPD came into force. The number of working hours had small variations over three years. Nikola Tesla's A1-A3 and A4-A6 units broke through their individual ceilings more than five times, and together they emitted twice as much as the national ceiling for 2020.

Dust emissions are within the national limit; however, the A1-A3 Nikola Tesla units broke through their individual ceiling almost twice, emitting 1,984.10 tonnes, compared to the 1,031.79 ceiling.

Kostolac B emitted 69 tons above its own ceiling, and Kostolac A 18 tons, but dust emissions in other units were significantly lower than their individual ceilings, which allowed Serbia to adhere to the ceiling at the national level.

Nitrogen oxide (NO_x) emissions in Serbia in 2020 amounted to 76 percent of the upper limit set in the NERP, although Kostolac A2 emitted 47 tons above its ceiling. Although current emissions are in line with the upper limit, it will continue to decrease from year to year, and if measures to reduce NO_x are not immediately considered, violations of NO_x emissions can be expected as early as 2022.

It is estimated that in 2020, there were 847 cardiovascular hospital admissions due to PM_{2.5} emissions from NERP coal-fired power plants, which cost not only Serbia but other countries a total of 1.12 million euros.

It is estimated that health effects included 42,752 days with asthma symptoms in asthmatic children due to PM₁₀ and 4,077 cases of bronchitis in children due to the same pollutant.

The plants are associated with over 3.3 million days with limited activities and lost days - which cost the economies of Serbia and other countries a total of 135.8 million euros in 2020. Two thousand three hundred and twenty-six deaths due to all pollutant overruns cost almost 5 billion, and the incidence of bronchitis in adults cost 59.7 million euros in 2020.

Current investments

Serbian energy company EPS secured funding for a complete overhaul of Kostolac B1 and

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B2 in December 2011. The Serbian government took a \$ 293m loan on behalf of EPS from China's Exim Bank to equip two units with flue gas desulphurization technology to adjust emissions SO₂ with the Directive on Large Combustion Plants until the entry into force of the Directive in January 2018. The company that contracted the works was the Chinese CMEC, the same company that is building a new unit in Kostolac B.

The works were completed in July 2017, according to media reports. However, the EPS Environmental Protection Report for 2018 shows that the request for a building permit for the installation of the FGD was submitted only in November 2018 - more than a year after the ceremonial opening of the facility. The permit has not yet been issued at the time of writing, but has in fact been refused twice - in December 2018 and in January 2019 - although the reasons for the refusal are not known.

The only explanation of EPS and the Ministry of Energy and Mining of Serbia is that the gypsum landfill was not ready for the start of the desulphurization system. A member of the Serbian Parliament asked about the installation permit due to the increased level of air pollution, which is why the power plant operator, EPS, put the equipment into operation in October 2020.

In April 2021, the Ministry of Mining and Energy announced that the installation was in fact operating in a test mode from October 2020. Without access to monthly data on continuous monitoring of emissions, it is difficult to verify this information. Even in the testing phase, the reduction of emissions should be noticed from October, but the fact that the annual emissions in 2020 were much higher than those in the previous year calls into question the statement of the Ministry.

In December 2019, EPS launched a public consultation for an "updated" environmental impact assessment report (EIA) for the desulphurisation unit at Kostolac B1, and a public consultation was held in January 2020. The decision to approve this new EIA for an already built SO_x removal plant was brought in August 2020. The fact that SO₂ emissions have increased compared to 2019 raises doubts about this investment: what is wrong, and why is the repair taking so long? Almost four years after it was declared completed, the public received almost no information about why the equipment was not working. Such information should not be withheld from the public, which ultimately pays the costs - both financial and health.

In Kostolac A, EPS published an offer for the feasibility study of the desulphurization installation in October 2020. The intention of the operator is to extend the working life of the power plant for an additional 15 years. This seems extremely unrealistic, given that Kostolac A1 is among the oldest units in the region - 54 years old - and A2 has also been

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operating for more than 40 years. In fact, initially, the two units were supposed to be closed by 2023 at the latest, but were later included in the NERP, which allows them to continue operating until the end of 2027.

The Program for the implementation of the Energy Strategy of Serbia for the period from 2017 to 2023 states: the preparation of investment and technical documentation for the status of the location of TPP Kostolac A is in progress. Preliminary analyzes show that thermal block A1 should be withdrawn from operation, and block A2 should be reconstructed with the application of environmental protection measures, with the necessary investments of 187 million euros.

There is no public data on the source of this funding, and it is highly questionable whether A1 should be considered for rehabilitation.

Nikola Tesla A3-A6 units have also been considered for retrofitting and installation of desulfurization equipment since 2011. However, this project was moving at a slower pace than Kostolac B1 and B2, and the start of work was announced only in 2019. Violating Serbian law, this announcement is issued one month before the Ministry of the Environment made a decision on the environmental impact assessment.

This project is funded by a loan from the Japan International Cooperation Agency (JICA), and the contractor is Mitsubishi Hitachi Power Systems. According to the funding agency, the remediation should be completed by 2022, which explains the adjustment in the adopted version of the NERP from 2020 to 2022, but does not make it acceptable.

The installation of desulfurization equipment for the Nikola Tesla B1 and B2 units - the second largest SO₂ emitter in the country after Kostolac B - was completed in December 2020 and should be completed by 2024. The contractor is also Mitsubishi Power and the price is 210 million euros. . The source of project funding is unclear. Although it can be expected that this will be covered by a loan from the Japan International Cooperation Agency, as in the case of Nichols Tesla A or Ugljevia, the Agency's annual report for 2020 does not confirm that.

In order to avoid delays and technical problems, such as those encountered by the same contractor at the Ugljevik power plant in Bosnia and Herzegovina, appropriate quality control and transparency will be needed in the project implementation phases.

In its Annual Report on the Environment for 2019, the power plant operator also mentioned that there is a plan to introduce measures to reduce nitrogen oxides in the coming period for Nikola Tesla units A6, B1 and B2, but there are no clear indications of the time frame.

Source: bankwatch.org