

Environmental permit not in line with Bosnia and Herzegovina's international obligations
Usually the most reliable source of information about expected and permitted emissions levels for a power plant would be the environmental permit. However the permit for Stanari does not contain any information about the expected emissions; it only mentions the permitted emissions. According to the current environmental permit, the emissions would be 2-10 times higher than allowed by the Industrial Emissions Directive, and 2-3 times as high as allowed by the Large Combustion Plants Directive[1]. Regarding efficiency, EFT's website states that its gross thermal efficiency is 38.5%. As gross electric power is 300 MWe and net electric power is 265 MWe, it can be concluded that net thermal efficiency is $(265/300) \times 38.5\% = \text{ca. } 34\%$. This value is much lower than the relevant limit of 40% laid out in the Best Available Techniques reference document. Also, EFT claims that Stanari will be in line with the LCPD. However, as the emission limit values laid out in the environmental permit are much less strict, it will not be realistic to hold the company accountable to even this standard.[2]

The urgent need for a new Environmental Impact Assessment

The Environmental Impact Assessment Directive[3] (EIA Directive) should have been implemented by Bosnia and Herzegovina, as according to the Energy Community Treaty. Article 3 of the EIA Directive states that the direct and indirect effects of a project on several factors[4] need to be assessed during the EIA process. However, in the Stanari Environmental Permit there is only data on limits for some pollutants, while important data on annual amounts of air pollution, solid waste and waste water pollution is missing. Without this information, a correct assessment of environmental impact for a lignite-fired power plant is impossible. Another problem with the EIA is that after it was conducted, the plant underwent major design changes. After the first Stanari Environmental Permit was issued, the project was changed from 410 MWe to 300 MWe and from pulverised coal with supercritical steam parameters to subcritical steam parameters in a circulating fluidised boiler, also with a lower thermal efficiency than the 410 MW version (34% net thermal efficiency compared to 43%). But there was no new EIA process. As a result, a concern from local groups is whether the changes require a new EIA report.

The first change will have an ambiguous effect. Generally, one can expect that the replacement of pulverised coal combustion by circulating fluidised bed combustion will increase SO₂ emission and decrease NO_x emissions. According to the previous project (pulverised coal combustion), Stanari should emit a maximum of 150 mg/m³ of SO₂ and 200 mg/m³ of NO_x, while according to the present one (circulating fluidised bed combustion) - maximum 200 mg/m³ of SO₂ and 150 mg/m³ of NO_x. The net environmental effect of such

change is debatable; however higher emissions of one crucial pollutant (SO₂) and lower emissions of another one (NO_x), requires a new environmental impact assessment. The second change, i.e. the decrease of electric power from 410 MWe to 300 MWe, will only seemingly decrease the environmental impact of the whole power plant. However, as a decrease in efficiency seems to have taken place as well, there will likely be more pollution per unit of energy with the new, smaller project, and this needs to be assessed. In fact, the above described changes on Stanari PP are so large, from the viewpoint of their environmental impact, that this project can be regarded as a new one, compared to the time when the environmental decision was issued.

The changes in the Stanari power plant project therefore require a new Environmental Impact Assessment.

[1] This is slightly complicated as the permit in fact lists three different standards that the plant is obliged to adhere to and which include limit values for air pollution: Bosnia and Herzegovina's own legislation; the Large Combustion Plants Directive, and Best Available Techniques. However the document is internally contradictory and the only limit values actually copied into the document are the ones from the Bosnia and Herzegovina legislation, which are also the least stringent.

[2] For more details and references on the emissions issues, see <http://bankwatch.org/sites/default/files/analysis-Stanari-compliance.pdf>

[3] Directive 2011/92/EU of the European Parliament and of the Council, of 13 December 2011, on the assessment of the effects of certain public and private projects on the environment

[4] "(a) human beings, fauna and flora; (b) soil, water, air, climate and the landscape; (c) material assets and the cultural heritage; (d) the interaction between the factors referred to in points (a), (b) and (c)."

Energy Finance Team is currently developing a lignite power plant in Stanari, Bosnia and Herzegovina. The proposed 300 MW plant is being built by Dongfang Electric Corporation using circulating fluidized bed combustion (CFB) technology and a dry cooling system. It is financed by the China Development Bank.

There are three main concerns with the plant: pollution levels, the need for a new environmental impact assessment for the coal plant.

source; coalbanks.org