

**Sector:** Air

**Name of the Pilot Location:**

TPP Oslomej Kicevo (FYR of Macedonia)

**Proposed Project Title:**

Semi Dry Scrubber Installation for the REK OSLOMEJ Power Plant

**Summary of existing Environmental Situation:**

The Thermal Power Plant and Mine at Kicevo is owned by the State. The power plant generates 125 MW of electricity as a base load unit. The boiler is fired by Lignite, and the waste gases from the boiler are discharged from a 4 m diameter stack, 180 m in height. The unit emits some 1,500 – 2,000 mg/Nm<sup>3</sup> of SO<sub>2</sub> (The State standard for SO<sub>2</sub> is 400 mg/Nm<sup>3</sup>) and 90 – 157 mg/Nm<sup>3</sup> of NO<sub>x</sub>. In addition to the acid gases, the unit also emits some 45-49 mg/Nm<sup>3</sup> of particulates.

The result of the acid gas emissions will have a negative environmental impact on the inhabitants of Kicevo, some 9 km from the site, but there is a village Oslomej located only 0.5 km from the plant, which could suffer from the fall out of large particulates. The town of Kicevo and the associated ecological areas could suffer from the deposition of acid rain which could affect both the well being of living organisms and also increase the acidity of the soil.

**Strengths:** Plant is fully aware of environmental situation and has taken steps to address the shortcomings in terms of SO<sub>2</sub> Control. Since the plant is registered, and presumably discussions have been held with the Inspectorate, the project should be well defined.

**Weaknesses:** Increase in both operational and maintenance costs plus raw material costs for the scrubber, against bottom line.

**Opportunities:** Semi dry scrubber technology is well proven and should work well, since only an 80 % reduction will meet compliance. With only SO<sub>2</sub> control required, plant should meet environmental emission requirements following installation.

**Threats:** Although the unit has an electrostatic precipitator, no details are given, so there may be an increase in particulate emissions. There may also be a problem in disposing of the material removed by the electrostatic precipitator.

**Summary of Directions for Future Work:**

To meet the requirements of the LCPD Directive 2001/80/EC, dated 27/11/2001 the following needs to be addressed: Address additional costs of operation the use of in case of applying semi-dry scrubbing; Investigate the source of suitable absorbent reagents; Ensure that there is room for the scrubber and lime slaker if this is the preferred absorbent; Check if the existing electrostatic precipitators will handle the additional spent absorbent; Improve and optimise furnace combustion to reduce excess air operation; Check on the disposal of the calcium rich precipitator catch; Proceed to firm up the details of the semi-dry scrubber installation and proceed with issuing of proposal document to vendors; Make a decision about suitable absorbent vendors; Formulate a decision on the potential enhancement of the existing electrostatic precipitators.