



### Technical Note

21/02/2005

#### Environment Protection through Energy Efficiency in Plant Operations

The meeting was held on 21/02/2005 at company's Registered office where in the conservation of Energy was specifically highlighted to reduce CO2 Emission for preservation of Environment. The meeting was attended by President Director, Technical Director, and Production Head.

During the discussion, it was decided that following CDM project activities shall be adopted:

- 1) Utilization of Waste Heat from Sulfur Recovery Unit (SRU) to Produce Power
- 2) Study to be undertaken to further reduce power consumption

#### Background & Extract of Discussions:

IRK is utilizing Electrical Power for Process from the Jawa Barat state electricity grid (PLN) supply to meet full electricity demand for the process.

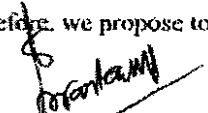
Energy Efficiency has been our focus so as to identify the areas of energy loss in process, utilize waste heat to generate power and thereby economize on cost to the extent possible as well as part of our commitment to keep the environment clean and green.

Though the implementation of waste heat recovery is not the main domain of our process capacity, we have identified that energy efficiency can be achieved by utilizing surplus steam generated during exothermic reactions of process to produce power and reduce GHG emissions.

Preliminary Energy balance for 145 TPD CS<sub>2</sub> production, worked out by the Process Engineering team indicate that there is a potential to produce 1.2 MW power from the available surplus steam from process thereby meeting total power requirement of the plant.

Further, this project activity would be eligible for Carbon Credits under CDM of Kyoto Protocol. CDM offers opportunities to undertake the program under CDM and derive Carbon Credits, and these credits may be used to minimize the risks associated with the Project activity.

Therefore, we propose to install 1.2 MW condensing turbine utilizing waste heat from SRU.

  
S.K. Srivastava  
(Technical Director)

12.04.2005

President-Director,

Sub : Sanction Request for Construction of Condensing Steam Turbine Generator Set

This has reference to Technical Note dated 21/02/2005 proposing installation of Condensing Steam Turbine Generator Set Utilizing waste heat from sulfur recovery unit (SRU) to produce 1.2 MW power.

The expected benefits from the project are as under :

1. 100 % utilization of excess steam from process
2. Zero power intake from PLN
3. Reduced instances of plant tripping due to power dips.

**Investment Break up**

**Amount (USD)**

1. Generator Set & Condensing unit	400,000
2. Electricals	15,000
3. Cooling Tower	35,000
4. Pumps & piping	30,000
5. Structural's	55,000
6. Civil	<u>15,000</u>
<b>Total</b>	<b>550,000</b>

Please Sanction

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- Negative - Any
- ...
- Total benefit of ...
- ...