



The emergence of the concept of sustainable development in the recent years has brought in the general realization that environmental issues are inexorably linked with development objectives and policies. Any project activity can cause impacts on environment either positive or negative depending on the type of the activity, throughout the project lifetime. Therefore, it is important to discuss such aspects. To predict the cause-condition-effect-relationship of the activities on the environment, the GPIL facility has conducted an Environmental Impact Assessment (EIA) study. EIA study helps in justifying a project's sustainability plus provides with mitigation and management plan to abet the negative impact and enhance the positive ones. Thus EIA study is obligatory under Indian government policy under the Environmental (Protection) Act 1986 promulgated a notification on 27 January 1994 (amended on 04/05/1994, 10/04/1997, 27/1/2000 and 13/12/2000). GPIL also submits Environmental Statement for every financial year by 31st September as per provision of Environmental Protection Rule 1989.

It should also be noted that the facility has been constructed in an industrial area where other types of industry also exist and thereby it is very difficult to account for the exact magnitude of the impacts due to operation of the project activity on the environment. Also, it is difficult to quantify all impacts, as some of them are intangible like social issues.

After conducting the EIA study it was found that the project returns benefits to the local, regional and global environment in various ways.

- Reduced additional GHG emission related to thermal power production, which includes a huge emission in percentage including carbon dioxide, sulphur dioxide, oxides of nitrogen, and particulate matter, which would have occurred in absence of this project in business-as-usual case.
- Reduced adverse impacts related to air emission at coal mines, transportation of coal that would have been required to meet the additional capacity requirement of thermal power stations.

It has also successfully conserved the non-renewable natural resource such as coal, oil and natural gas by reducing power demand by 21 MWh annually on local grid.

Project activity has also enable GPIL to save energy loss by utilizing waste heat energy of the flue gas of sponge iron kiln.