

CDM Projects

In our company, CDM initiatives have already started and M/s Ernst & Young Pvt. Ltd (E&Y) was engaged in Oct-2005 as consultant for our first CDM project viz. "Carbon Dioxide Recovery Unit".

Additionally, after a detailed review, three more CDM eligible projects have been identified in NFCL, which are listed below.

Project-1: GT-C steam injection for power augmentation

Project-2: S-300 converter installation in Ammonia-I plant.

Project-3: Advanced Process Controller (APC) in Ammonia-II plant.

These have been discussed internally and with E&Y during their visit to NFCL in Dec-2005. According to E&Y, these projects have very good potential as CDM projects and approved evaluation methodology for similar projects is already available. While **Projects 1 and 2** will be implemented during PTA-2007, **Project-3** is already implemented and Guarantee Test Run is in progress. This helps in getting the projects registered early and easily. A brief description of the projects is given below.

- Steam injection in Gas Turbine air path is one of the recent advancements in Gas Turbine capacity augmentation technology. With steam injection in our GT-C, heat rate reduction is expected to be about 7.2% and output power increase is expected to be 16.5%. The expected energy saving works out to around 44055 Gcal/year, after utilizing the additional power generated.
- As per original design and also present operating conditions, the ammonia synthesis reaction in our Ammonia-I plant takes place at about 140 kg/cm²g pressure and conversion of about 25% is achieved across existing S-200 reactor. However, when an additional S-300 converter with three beds and intercoolers is installed in parallel with existing Ammonia synthesis converter, the ammonia conversion increases resulting in lower loop pressure and lower steam consumption in the synthesis gas compressor drive turbine. The energy saving due to this is estimated to be about 26690 Gcal/year.
- The Advanced Process Control (APC) system enables process plants to be run closer to optimum in terms of yield or efficiency, than what is possible without optimization packages like APC. This typically results in better energy efficiency of the process plants. In view of this, APC has been installed in Ammonia-II plant and is expected to result in saving of minimum 1% of the A-II plant energy consumption, which is equivalent to 24948 Gcal/year (with APC controller remaining on-stream for 270 days in a year).

Scope of Services

The selected consultant will carryout the following work:

1. Preparation of Project Idea Note (PIN).

The PIN document will briefly check the suitability of the project as a CDM project.

