

Clarification requested by the EB:

1. The PP/DOE is requested to further clarify that continuing and real actions were taken to secure CDM status for the project activity in parallel with its implementation (EB41Annex 46, Para. 5(b) guidance).

Response of the PP:

The following sequence of events have been provided below which provide the real and continuing actions that were taken to secure CDM status for the project activity.

- a. The PP had been interacting with a CDM consultant (namely M/s Ernst & Young) since September 2004. The CDM consultant had made presentations on Climate Change & CDM opportunities to the management of the PP based on which the PP had requested the consultant to make evaluations of a number of projects (including the project activity under consideration). Please refer to Annex I – Communications between PP and CDM Consultant dated 2004.
- b. Implementation of the project activity was approved as a CDM project activity dated 21st November 2005 – please refer to the approval note attached as annex to the PDD submitted for request for registration.
- c. Project activity technical details were discussed and scope of work was framed up by the CDM consultant in discussion with the PP in December 2005. This is evident from the “Note for Approval for Clean Development Mechanism (CDM) related projects (Capital Budget 2006-07: CBR No. 2007089) attached as Annex II to this reply.
- d. After due evaluation of the project technical details and consequent fee negotiation with the CDM Consultant, the PP placed the order for development of CDM PDD for the project in September 2006 – Please refer to Annex III – engagement letter with CDM Consultant dated 4th September 2006.
- e. From September 2006, the PP along with the CDM Consultant was involved in developing the Project Idea Note (PIN), PDD and the Project Concept Note (PCN).
- f. Proposal for validation of the project activity received from the DOE on 25th May 2007 (please refer to annex VIII)
- g. Submission of PDD and PCN to Indian DNA applying for Host Country Approval – 4th June 2007 (Please refer to application letter from PP to Indian DNA attached as Annex IV to this reply)
- h. Work order placed on DOE for validation of the project activity – 30th July 2007 (Please refer to copy of work order to DOE attached as Annex V to this reply)
- i. Invitation from Indian DNA for presentation of project to CDM cell of Indian DNA – 14th August 2007 (Please refer to copy of the invitation letter from Indian DNA attached as annex VI to this document)
- j. Commencement of validation corresponding to Webhosting of PDD in DOE website for global stakeholder consultation – 18th September 2007 – 17th October 2007

Clarification requested by the EB:

2. The DOE is requested to further clarify why project emission and/or leakage from the project activity has been considered as zero.

Response of the PP:

The EB is requested to refer to the response of the DOE for this clarification. The PP would also like to clarify to the EB that there will not be any project emissions and/or leakage because of the following reasons:

1. No project emissions: There will not be any increment in fossil fuel firing or electricity consumption within the project boundary and hence there will not be any project emissions. This is because the project activity is purely an energy efficiency improvement activity involving modification of the operation of the gas turbine by injection of steam into the combustion chamber of the GT-C. As a result of the modification, the gas turbine will operate more efficiently with a lower station heat rate and to generate the same power as that in the baseline, lower quantity of fossil fuel (Natural Gas) will be combusted. There will be an additional high pressure steam requirement for injection (compared to that used for running cooling water pumps in the baseline) which will be automatically catered to by the additional steam generated by the increased flue gas quantity routed to the HRSG C obtained because of higher power generation in the GT-C. This is evident from the steam balance post project submitted to the DOE. Same has also been attached as Annex VI I to this response.
2. No leakage emissions: The energy efficiency improvement modification neither involves any transfer of existing equipment to another activity nor does it involve transfer of equipment to another activity. The EB may please note that the cooling water pumps which would run on steam in the baseline will run on electricity in the post project case. This additional electricity will be obtained from the augmented power generated by the gas turbine (GT-C) on injection of steam on implementation of the project. Moreover the project activity claims efficiency improvement only for the power generated in the baseline case and not the augmented power generation post project. This is evident from the baseline emission computation formulae in the PDD submitted for request for registration. Hence there will not be any leakage due to the project activity.

Clarification requested by the EB:

3. The PP/DOE is requested to clarify the overlapping of the project boundary with the other two proposed CDM projects by the same PP. The DOE is requested to further confirm how they have validated that there is no double counting of the energy savings between all the CDM projects in the unit.

Response of the PP:

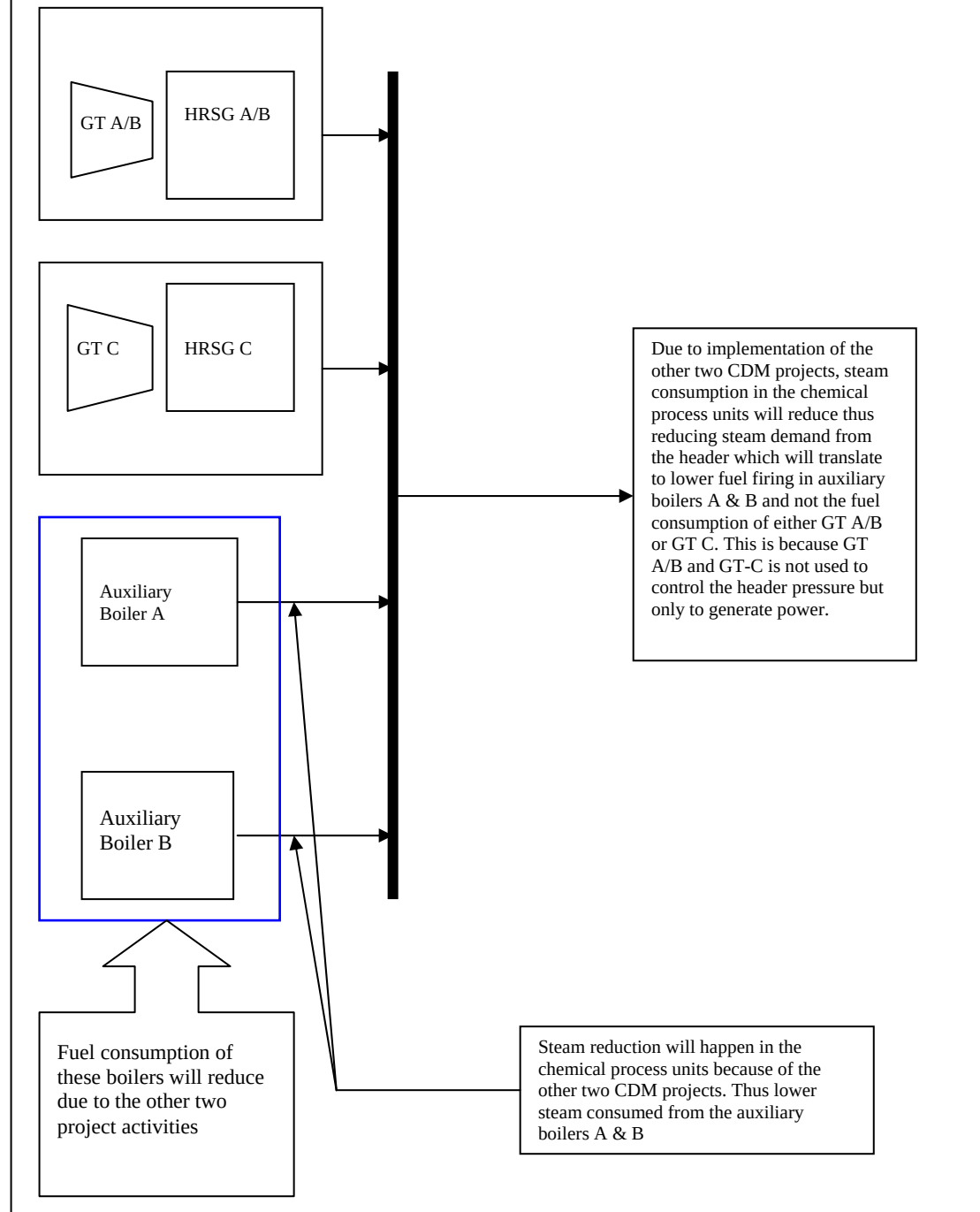
The other two proposed CDM projects by the same PP involve reduction in steam demand in the chemical processing units (Ammonia plants) of the fertilizer unit and do not affect in any way the fuel combustion by the GT-C to generate power. The monitoring and emission reduction calculations are based on the difference between the station heat rate (fossil fuel consumption to generate unit power) of the GT-C. The baseline emissions are calculated as the reduction in the station heat rate (i.e. fuel to generate unit power) by the GT-C multiplied by the emission factor of the concerned fossil fuel (natural gas). Hence this formula gives the actual emission reductions due to lower fuel consumption by the GT-C to generate 1MW of

power. This is then multiplied by the power that would have been generated in the baseline to arrive at the total emission reductions. Thus the formulae proposed do not include fuel savings due to the two other CDM projects. Thus there is no overlapping of the project boundaries of the other projects with the one under consideration. Please refer to the figure below representing the emission reductions by all the proposed CDM projects of the PP.

Steam demand of the process units will decrease due to implementation of the other two proposed CDM projects which will lead to lower steam demand from the common steam header. This will lead to lower fuel firing in the auxiliary boilers A and B. Fuel firing in the GT-C (the monitored quantity) will not be affected because it does not determine the steam header pressure. The only boilers primarily responsible for controlling the header pressure are the auxiliary boilers A & B.

Hence there is no possibility of accounting emission reductions due to the other two CDM project activities in the proposed monitoring plan of the project activity under consideration as outlined in the PDD submitted to request for registration.

Steam and Power Diagram considering all the three CDM projects in the complex



Clarification requested by the EB:

4. The DOE is requested to clarify how the correctness of the baseline methodology is followed in the PDD, in particular the consideration of energy form of steam in the emission baseline.

Response of the PP:

The EB is requested to please refer to the response of the DOE for this clarification.

Clarification requested by the EB:

5. The PP/DOE is requested to clarify how the energy flow of the project activity is monitored, in particular, the steam to be diverted from the water cooling pumps to the gas turbine.

Response of the PP:

As the project activity is simply the efficiency improvement in operation of gas turbine, the difference in the fuel consumption to generate unit power in the baseline and post project scenarios will give the accurate measurement of emission reductions by the project activity.

The emission reductions are computed based on direct measurement of fuel consumption per unit of output of the equipment on which the energy efficiency improvement measure has been implemented.

In line with the guidance of the approved methodology AMS II.D, the monitoring plan involves direct measurement of the fossil fuel fired (NG) to generate per unit of power by the GT-C in the pre and post steam injection cases, taking the difference of the two to compute the efficiency improvement with steam injection and thus computing emission reductions. The monitoring of steam flow is thus not necessary to compute the emission reductions by the project activity as the proposed direct measurement of fuel is sufficient. Moreover, as there is no additional fuel firing to generate additional steam (please refer to earlier responses) the monitoring of steam flow is not necessary.

Hence it has been excluded from the monitoring plan of the project activity.