CDM: Recommendation Form for Small Scale Methodologies (version 01)

(To be used for presenting questions/proposals/amendments to the simplified methodologies for small-scale CDM project activity categories)

Date of SSC WG meeting:	21–24 September 2009, SSC WG 22
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification regarding baseline of the methodology
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.H
Name of the authors of the query:	Mr. Mukherjee, Arghya Institution: H. & R. Johnson (India) Limited mukherjee.arghya@milanobath.com

Summary of the query:

Please use the space below to summarize the query related to SSC methodologies/categories SSC Modalities and Procedures provide recommendation/analysis of the SSC WG.

Original text from PP:

M/s H. &R. Johnson (India) Limited (HRJ) has a tile manufacturing facility located at Pen in the Raigad district of the state of Maharashtra. The facility has been equipped with a coal gasifier unit to meet its thermal energy demand while electrical power was imported from the grid.

On April 8, 2009, HRJ has signed a gas supply agreement with the Gas Authority of India Limited (GAIL). From April 9, 2009, Natural gas is being made available on fall back basis at the site. Firm quantity of natural gas would be available latest by 1st Jan.2010 onwards. Considering the gas supply agreement, HRJ proposed to setup Gas Turbine Generator for electricity generation and the exhaust coming out from the turbine would be used thermal applications. Thus this project activity centralizes the existing grid power and coal gasification unit into one natural gas based cogeneration system. HRJ has proposed to use AMS II H methodology to estimate emission reductions accrued due to the project activity.

As per the methodology, the baseline to the project activity is in compliance with paragraph 6(a). The emission reductions due to electricity generation will be claimed as per the procedure mentioned in the paragraph 9.

But as per the methodology, paragraph 10 says that

10. In the case of a project activity displacing a captive steam generation plant:

(a) The baseline emissions are calculated based on the equivalent amount of fuel that would have been used in the absence of the project activity. The baseline emissions of the captive steam generation plant can only be calculated up to $(DATE_{ServiceEnd})$.

(b) The equivalent amount of fuel (in thermal unit) that would have been consumed by the captive steam generation plant in year "y" (FC_y) is calculated using the efficiency of the displaced equipment (η_{cs}) and the project thermal energy delivery ($S_{p,y}$) using the following relationship:

$$FC_y = \frac{S_{p,y}}{\eta_{cs}} \quad (4)$$

Where:

FC_y Equivalent amount of fuel that would have been consumed by the captive steam generation plant in year "y" (TJ)

η_{cs} Efficiency of the displaced captive steam generation plant in year "y"

$S_{p,y}$ Thermal energy delivery of the project activity (TJ)

We request EB to kindly clarify whether equation 4 mentioned in the paragraph 10 may be used to estimate reductions due to utilization of exhaust gas (captive hot gas instead of captive steam) as mentioned from the Gas turbine. The parameters pertaining to emission reductions due to heat will be monitored at regular intervals.

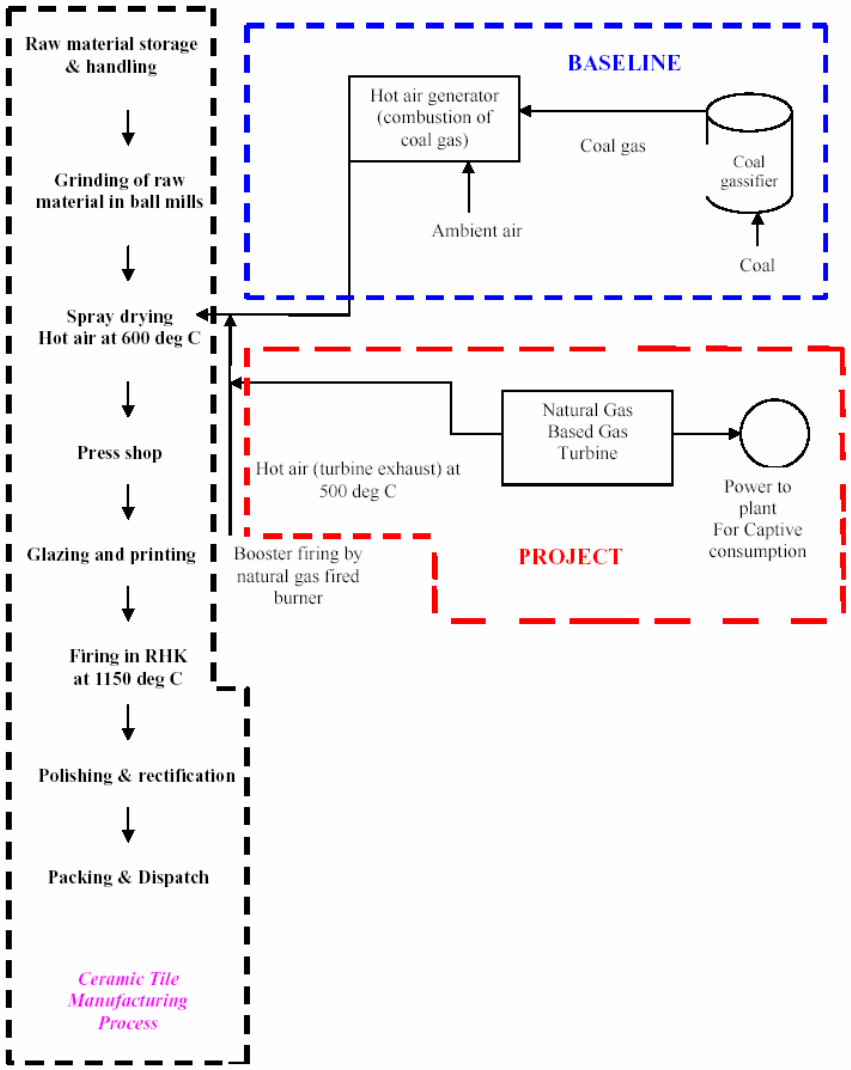
Similarly, we request EB to advice monitoring methodology and parameters required to monitor energy content in hot air generation as mentioned for steam and cooling output as below ------

(b) The metering of electricity, cooling and steam outputs (net of internal consumption) generated by the CHP or CCHP utility and delivered to its users.

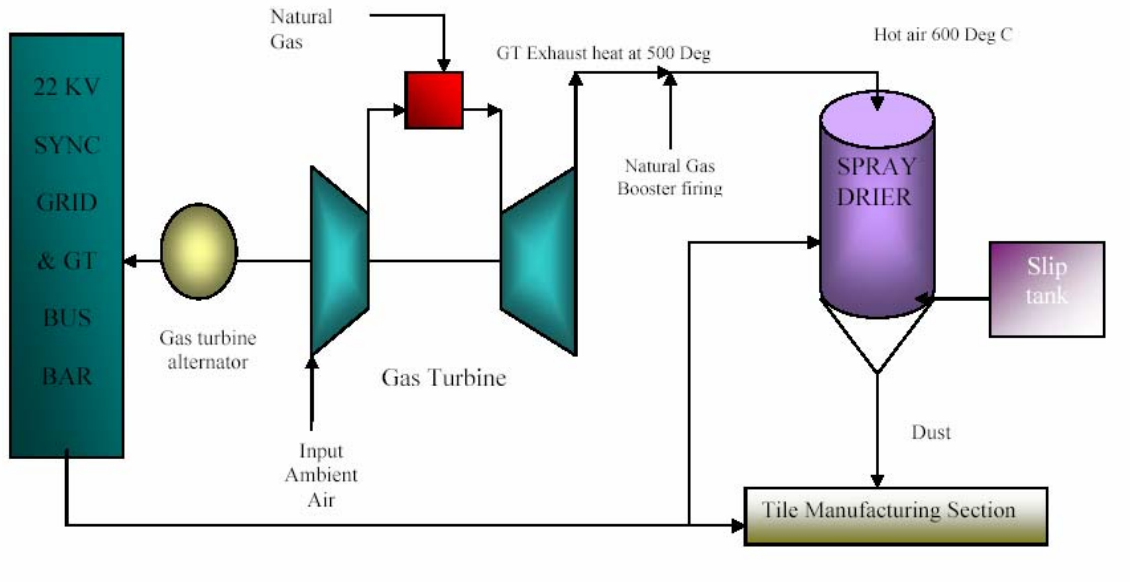
(i) The measurement of steam output is based on continuous monitoring of steam flow-rate, temperature and pressure

(ii) The measurement of cooling output is based on continuous monitoring of chilled water flow-rate and the temperature difference between incoming and outgoing circulating water.

Diagrammatic representation of baseline and project scenario:



Detail Schematic diagram of the project scenario:



Recommendation by the SSC WG:

Please use the space below to provide amendments/change (in your expert view, if necessary).

Please refer to paragraph 37 of the meeting report of the SSC WG 22 (http://cdm.unfccc.int/Panels/ssc_wg).

Answer to authors of query by the SSC WG:

Please use the space below to provide answer to the authors of the above query.

The small-scale working group of the CDM Executive Board would like to thank the author for the submission and agreed to provide the following responses:

Query 1: Whether equation 4 of AMS-II.H can be used to estimate emissions reductions considering that the described project activity displaces a captive hot air generating plant instead of a captive steam generating plant.

SSC WG Response to Query 1: Taking into account the applicability condition in AMS-II.H that states "This methodology comprises energy efficiency measures implemented through integration of a number of utility provisions (for power, steam/heat and cooling) of an industrial facility into one single utility…", the SSC WG agreed to clarify that the procedure described in paragraph 10 (equation 4) of AMS-II.H is equally applicable to hot air generation as it is to steam generation. The SSCWG thus agreed to clarify that AMS-II.H is applicable to the described cogeneration project activity producing heat (hot air) and electrical energy if all other requirements of AMS-II.H are met. The SSC WG agreed to recommend a modification in the next version AMS-II.H to indicate that hot air (exhaust) generation, in addition to steam generation, is applicable to AMS-II.H.

Query 2: How to undertake the monitoring of the energy content of the hot air given that the currently written methodology provides continuous monitoring procedures for steam and cooling output)

SSC WG Response to Query 2: The SSCWG also agreed to clarify that in the case of hot air, continuous monitoring of flow and temperature, per AMS-II.H, paragraph 16, is required to determine enthalpy of hot air that is used in the process application(s), i.e., net of any lost or vented hot air. The measurement

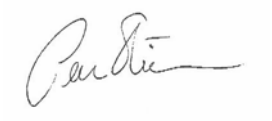
procedure shall also follow monitoring section (paragraph 12) of SSC general guidance. However, the SSC WG agreed that continuous measurement is not required if it is justified that the physical conditions (for example, very high fluid temperatures) do not permit such measurements. Thus, if continuous measurement cannot be done, spot measurements can be used if a mean daily average flow rate can determined through sampling with a 90% confidence level and a 10% precision. SSC WG agreed to recommend this modification at the next opportunity to propose a revision of AMS-II.H for the consideration of the Board.

It is also understood from the additional information provided by the submission author that a supplementary natural gas booster firing is used to bring temperature of exhaust gas (from 500 ºC to 600 ºC) for the baseline application. These supplementary natural gas burners should be included in the boundary and the gas consumption shall be continuously monitored.

Signature of SSC WG Chair ……..

(Hugh Sealy)

Date: 24/09/2009



Signature of SSC WG Vice-Chair ……..

(Peer Stiansen)

Date: 24/09/2009

Information to be completed by the secretariat	
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