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:	16–19 August 2010, SSC WG 27
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Applicability of AMS-II.D to total energy efficiency improvement by Installing CHP at site
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.D "Energy efficiency and fuel switching measures for industrial facilities"
Name of the authors of the query:	Eiten Chin Institution: Kao Corporation chin.eiten@kao.co.jp

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:

We would like to confirm this project qualifies the condition of AMS II.D or not.

The project activity involves a new natural gas fired captive on-site CHP (Combined Heat & Power) facility (1000kW + 0.8ton-steam/h) to meet the electricity and steam requirements of chemical production plant in Indonesia. The baseline scenario is the same as pre-project scenario, where electricity is supplied from the grid and steam by natural gas fired boiler at site.

The total energy efficiency in the pre-project, which replaced by newly installed CHP, is around 46%.

It is calculated from the power efficiency 36% at JAMALI grid (the regional Jawa, Madura and Bali interconnected power grid), and natural gas fired boiler efficiency 63%

It can say the energy efficiency 36% at JAMALI grid is in the range of world average, and its energy balance is as following.

Input: 100%

Power efficiency at produce end: 40% (Remaining 60% is the heat loss)

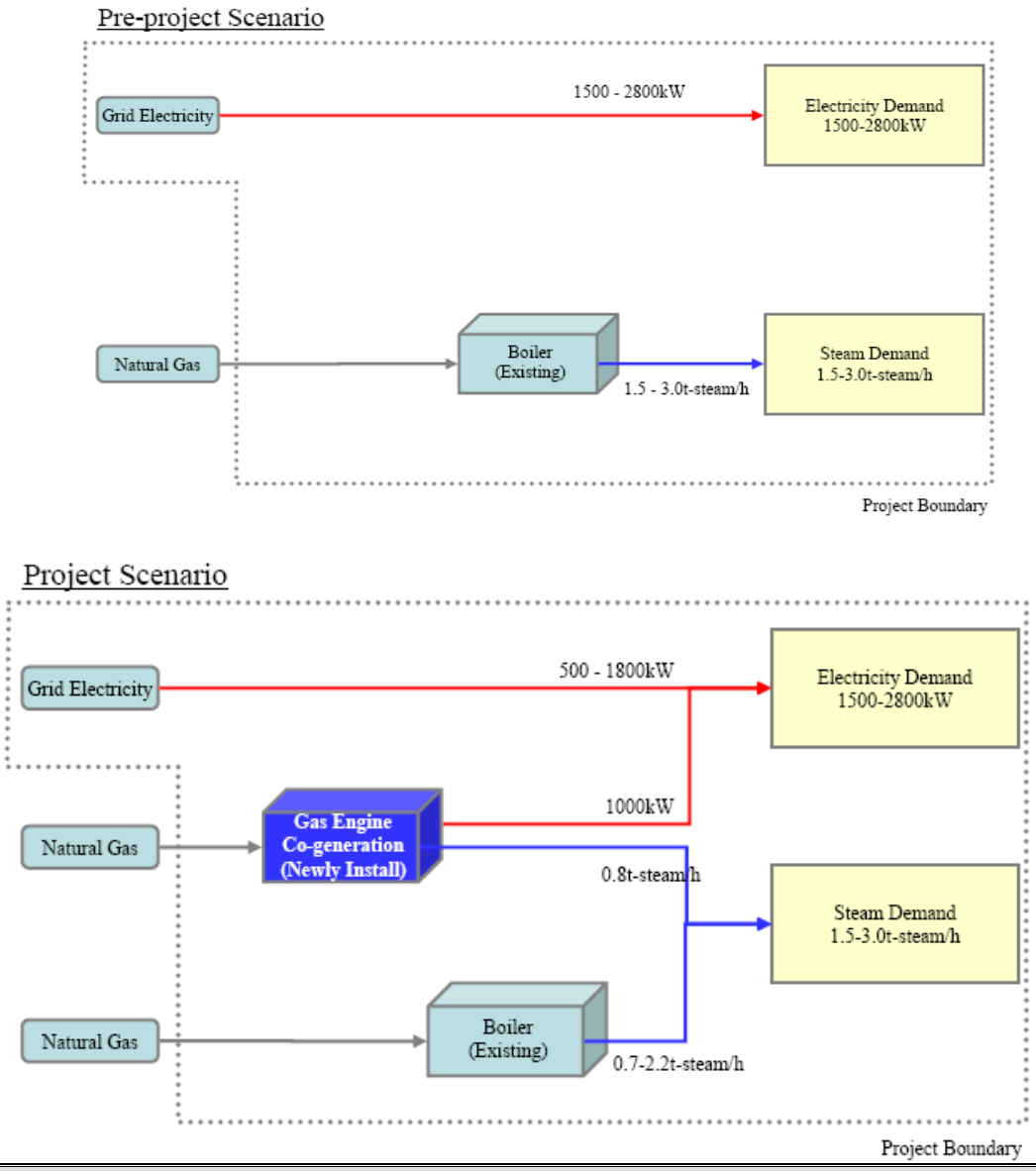
Power transport loss from produce end to user end: 4%

Out put (Power efficiency at user end): 36%

On the other hand, CHP facility in this project is located at site, and not only can prevent power loss in transportation, but also can utilize steam by recovering waste heat from generator set. The energy efficiency of CHP is calculated as (Energy outputs of electricity & Steam) / (Energy input of natural gas), and it reaches 60%, where 40% by electricity and 20% by steam out of 100% of energy input of natural gas in this project. And it is much higher than 46% by pre-project (baseline) scenario.

Therefore, the CO2 emission reduction is calculated as the difference of CO2 emission from primary energy input between BL and PJ scenarios to generate the same amount of secondary energy (electricity and steam)

Diagrammatic representation of the Project and the Baseline Situation



Recommendation by the SSC WG:

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

Please refer to paragraph 19 of the meeting report of the SSC WG 27 (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.

The SSCWG agreed to clarify that the underlying project described by the author in their submission does not qualify to apply AMS-II.D. The proposed project activity is not a typical energy saving project as intended by the methodology. Examples under AMS-II.D include energy efficiency measures (such as efficient motors), and efficiency measures for specific industrial or mining and mineral production processes (such as steel furnaces, paper drying, tobacco curing, etc.). Although a description of energy

savings by the underlying project is provided in the accompanying PDD, we believe the activity is better described as a centralization of the utilities (electricity and Steam) provided in the industrial plant, but with deficit electricity (not covered by the CHP production) being supplied from the grid and deficit heat (not covered by the CHP production) supplied from some boilers retained from the pre-project facilities for such a purpose. The methodology AMS-II.K best described the type of centralization of utilities proposed by the underlying project activity described above; unfortunately this methodology is only applicable to commercial and not industrial plants. The SSC WG agreed to clarify that AMS-II.H is intended to cover project activities involving centralization of utilities in industrial facilities (for power, steam/heat/hot air and cooling), and the group is of the opinion that the underlying project in principle is covered under AMS-II.H. However, a procedure in AMS-II.H to cover the project activity with the continued use of existing baseline system is needed. The SSC WG therefore agreed to include such a procedure at the time of recommending a revision of AMS-II.H in line with paragraphs 3, 7 and 23 of AMS-II.K as reproduced below:

> "3. If it is identified that the baseline situation is the continued use of existing system then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available".
>
> "7. If it is identified that the baseline situation is the continued use of existing system then the existing system must have been in operation for at least the immediately prior three years, to the start date of the project activity, in order to ensure that adequate baseline performance data are available."
>
> "23. Project emissions are equal to the emissions associated with consumption of fossil fuel and electricity within the project boundary by the co-generation or tri-generation system, auxiliary equipment, and systems (such as boilers, chillers, hot water heaters and captive electricity generation plants) used to generate any backup or supplemental electricity, heating or cooling."

Project emissions are determined as follows:

- Fuel consumption of project including any fuel used to run auxiliary equipment. Emissions are calculate using the "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion";
- Electricity consumption of project including any electricity used to run auxiliary equipment is calculated using the "Tool to calculate baseline, project and/or leakage emissions from electricity consumption."

Signed by the Chair, Mr. Peer Stiansen

Date: 19/08/2010

Signed by the Vice-Chair, Mr. Hugh Sealy

Date: 19/08/2010

Information to be completed by the secretariat	
SSC-Submission number	SSC_442
Date when the form was received at UNFCCC secretariat	19 August 2010
Date of transmission to the EB	19 August 2010
Date of posting in the UNFCCC CDM web site	19 August 2010