



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)

<i>Date of SSC WG meeting:</i>	11 - 13 February 2008, SSC WG 14
<i>Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):</i>	Applicability of AMS I.C. to solar thermal water heaters displacing heat produced by a fossil fuel-fired cogeneration plant
<i>Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.</i>	AMS I.C. version 12
<i>Name of the authors of the query:</i>	Han, Seung-ho Institution: KEMCO shhan@kemco.or.kr

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.

The proposed project activity is a green field project, which includes installing solar thermal water heaters. It is envisaged solar thermal energy will partially displace the heat supply from a proposed gas turbine cogeneration system planned for construction. Electricity from the cogen unit will be either used onsite or exported to the grid. .

The submission clarified that the total efficiency of the gas turbine-type cogeneration is typically 63~75% with electricity generation and thermal efficiency of 23~35% and 40~45% respectively.

In total, seven hundred sixty new solar thermal water heating systems planned to be mounted on the roof of individual houses to partly meet the need for hot water. The gas turbine cogeneration plants will meet the remaining demand for hot water. Clarification is requested in the context of application of AMS I.C. ver12 to the proposed project activity, in particular about choosing the efficiency of the baseline plant that uses fossil fuel for calculations. Project participant envisages the following two options in this regard:

Option 1) Application of typical thermal energy efficiency only in a cogeneration unit without considering electricity generation efficiency: about 40~50%.

Option 2) Application of the total efficiency (thermal and electrical both included) of a cogeneration unit: more than 80%.

Project proponent is of the opinion that option 1 is appropriate to apply for the project activity described (i.e., solar thermal water heaters provide the heat energy which otherwise a district heating cogeneration system would provide) as only thermal energy efficiency is applicable in calculating baseline emissions since heat supply is given priority in operating the district heating cogeneration system and electricity generation can be a by-product.

It shall also be noted that for renewable energy projects providing thermal energy for users AMS I.C

version 12 provides two options for baseline calculations as below:

- 1) For steam/heat produced using fossil fuels: $BEy = HGy * EF_{CO2} / \eta_{th}$ (paragraph 10);
- 2) For electricity and steam produced in a cogeneration unit, using fossil fuels:
 $BEy = (HGy + EGy * 3.6) * EF_{CO2} / \eta_{cogen}$ (paragraph 12).

Recommendation by the SSC WG :

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

Please refer to paragraph 29 of the meeting report of the SSC WG 14
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 SSC WG agreed to clarify that the project participant should use the option provided in paragraph 12 of AMS I.C. version 12 using the value of total efficiency (both thermal and electrical efficiencies are included) of the planned cogeneration system to determine the baseline emissions. Such an application of the formula for determining baseline emissions will result in an accurate and conservative estimate of the reductions resulting from the solar water heating systems that will displace the heat from the proposed cogeneration system.



Signature of SSC WG Chair

(Ulrika Raab)

Date: 19/02/2008



Signature of SSC WG Vice-Chair

(Kamel Djemouai)

Date: 19/02/2008

Information to be completed by the secretariat

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