



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:	22–25 August 2011, SSC WG 33
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification on the applicability of AMS-II.H to project activities promoting waste-heat based chillers
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS.II-H. “Energy efficiency measures through centralization of utility provisions of an industrial facility”
Name of the authors of the query:	Cynthia Hendrayani / Ravi Desai Institution: cynthia.hendrayani@gmail.com , desai@g3.co.id

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 request clarification of the applicability of AMS.II-H for *programme promoting waste-heat based chiller technology*, independent of the type of waste-heat source.

Context of Situation

PT Golden Global Green Energy (“G3E”) is initiating a programme to promote the use of waste-heat based chiller technology to situation(s) where available heat source(s) can be identified within vicinity of cooling demand.

The target user of the technology can either be (i) general industrial activities or (ii) operator of commercial buildings. For the later type of target consumer, we notes clarification SSC_248, which already expanded AMS-II.H applicability for building / commercial center applications.

We also notes that AMS.-IIH (at its present wordings) limits the definition of “measure” (in paragraph 1) for installation of CHP or CCHP and a waste-heat based chiller that we promote, is only one component of a CCHP.

On the other hand, we find that this methodology is well equipped and well fitted into our programme in terms of emission reduction calculation and monitoring methodology.

Clarification Sought

We would like to:

- (a) request guidance whether or not AMS-II.H, with minimum modification (as illustrated in the enclosed document), -can be applied for programme promoting waste heat based chiller to be installed on available waste-heat *whether on existing power generation or other types of recoverable heat sources*.
- (b) Request recommendation for best course of action, considering time constraints: whether to propose a new methodology, or the illustrated revision can be proposed.

In order to assist the decision making process, we provide you with an illustration of the typical

scenario(s) with and without the project.

Illustration of Situation Without the Project

Without the Project There exists (unused) heat source(s) within vicinity of a target user with cooling demand.

The heat sources may be tapped from: (a) flue gas of an operating boiler or captive power plants; (b) spent steam or condensates; (c) hot air from oven, or other high temperature processes; (d) combinations of all of these sources.

The cooling demand can be: (a) chill water for air handling units, or (b) chill water for various other uses, eg. jacket water for temperature control, etc. Without the Project, this chill water demand will be fulfilled using (one or more) electric chiller(s) sized accordingly.

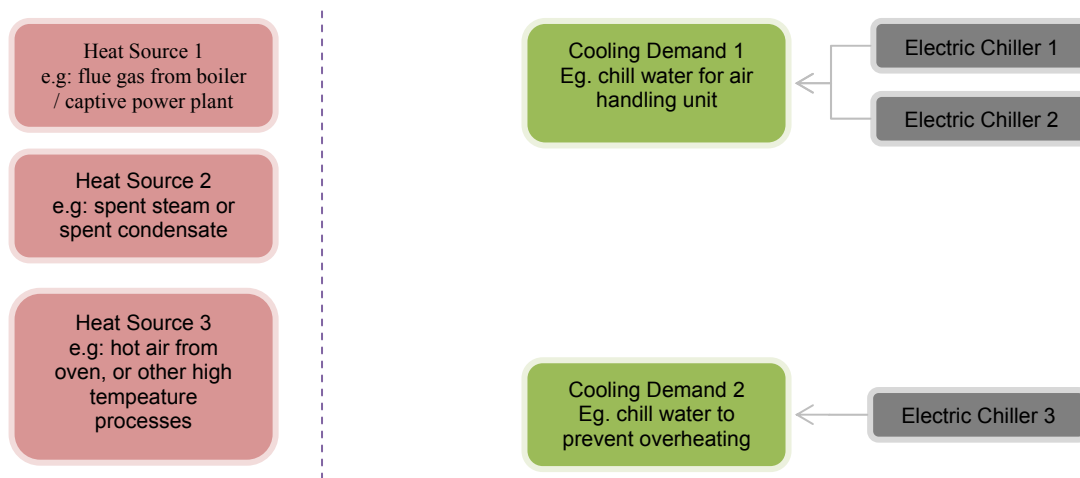
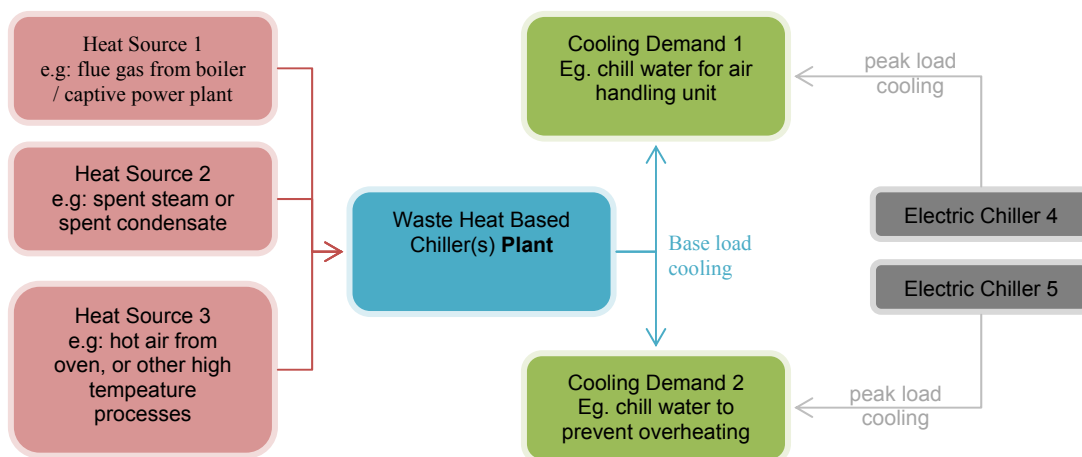


Illustration of Situation with the Project



The “Project” introduces a “waste-heat based chiller” consisting of: (a) waste-heat recovery measures (waste heat boiler, heat exchangers of various types, and associated auxiliaries); (b) heat-driven chillers (absorption chillers)

With the commissioning of the Project, the Project becomes *the primary supplier of chill water demand*, significantly reduces / substitutes the operation of the baseline electrical chiller(s). With the Project, one of this situation may apply to the existing electrical chiller(s):

- (i) They may become stand-by equipment(s) to the Project Equipment, or
- (ii) They may be operated primarily to supply peak load demand, or

(iii) They may be replaced entirely with smaller new chiller(s) to supply peak load demand;

Recommendation by the SSC WG:

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

Please refer to paragraph 26 of the meeting report of the SSC WG 33

<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 AMS-II.H is intended for project activities that promote energy efficiency accomplished through integration of a number of energy utility components - electricity, heat/steam/hot air and cooling into a centralized utility - CCHP or CHP installation and not for project activity which involves installation of waste heat based chillers that partially displace electric chillers. Thus, the SSC WG was of the opinion that the proposed changes to include project activity involving recovery and utilization of waste heat solely for cooling purposes may not be in line with the concept of AMS-II.H due to the following reasons:

- Utilization of flue gas which is a waste-product of energy generation process cannot be considered as stand alone utility component and its utilization for cooling purposes is not a measure of integrated/centralized energy efficiency. The heat embodied in the waste flue gas under the project circumstance is only recuperated to serve as a driver for the chilling system, thereby replacing the way the energy is supplied in the pre-project scenario, with savings in energy and reduction in GHG emissions;
- The emission reduction calculations in AMS-II.H include all baseline and project emission sources associated with the generation of the electricity and heat and also from the cooling, whereas the proposed displacement of the electric chillers with absorption ones may be confined to the electricity consumption for cooling purposes, which may not capture all emissions that are attributable to the project activity. Thus, emission sources associated with the possible increased production of the waste heat used for the operation of the absorption chillers may be omitted depending on how the project boundary is established;
- A procedure for demonstrating that the waste heat sources are vented off in the baseline may be needed. See for example relevant provisions in AMS-III.Q;
- It shall be ensured that the waste heat utilized by the chillers is not derived from a source of heat that meets other process related energy requirements in the facility, but such procedure is not provided in AMS-II.H;
- The installation of the waste-heat based chillers may be in industrial facility or in commercial building, however the AMS-II.H is only applicable to industrial facilities and a new methodology AMS-II.K was approved for installations of CHP and CCHP in commercial buildings.

The SSC WG agreed that a new Type III methodology combining elements from AMS-II.H quantifying the emission reductions for displacement of electricity based chillers and provisions of AMS-III.Q pertaining to the utilization of waste energy may be needed to cover the underlying project activity.

Signed by the Chair, Ms. Fatou Gaye

Date: 25/08/2011

Signed by the Vice-Chair, Mr. Peer Stiansen

Date: 25/08/2011

Information to be completed by the secretariat

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