



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:	15–18 June 2010, SSC WG 26
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification on the treatment of back-up unit for establishing the installed capacity under AMS-I.C
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-I.C “Thermal energy production with or without electricity”
Name of the authors of the query:	Jung, Jae Su / Kim, Mi-yeon Institution: Ecoeye.Co.Ltd. / Korea District Heating Corp. civilenvi@ecoeye.com , kmy97@kdhc.co.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.

Original text from PP:

1. Background

The project is designed that the project participant (Korea District Heating Corp.) provides hot water through district heating system as two installed boilers. The project applied AMS-I.C methodology because the project is to reduce GHG by replacing LNG to LFG captured and refined from Daegu Bangcheon-Ri Landfill.

Daegu Bangcheon-Ri Landfill site is already registered as the CDM project (Ref. 0850: Daegu Bangcheon-Ri Landfill Gas CDM Project). Daegu Bangcheon-Ri Landfill Gas CDM Project claimed only methane avoidance through destruction of CH₄ gas. PDD is considered regarding LFG fuel displace Phase 2 project will be conducted by Korea District Heating Corp.

The following contents describes about implementation of the CDM project in the PDD(page 10-11).

“Promoting the project which is producing thermal energy displaced from other sources by Korea District Heating Corp., including new methodology development, is going to be followed as phase 2 project by this project activity.”

So, Korea District Heating Corp. separately is pushed forward “Fuel switch from fossil fuel to renewable energy for thermal energy in Korea District Heating Corp.” as other CDM project.

Project participant requests to clarify applicability of AMS-I.C regarding the back-up unit.

2. Applicability Check of AMS-I.C

The capacity of hot water boiler for being supplied LFG is 39.5MW_{th}/unit each. Main boiler and Back-up boiler were installed two kinds of burners to use both LFG and LNG. Back-up boiler was installed to provide stable supply for increase of providing energy, and maintenance.

quantity from Daegu Bangcheon-Ri Landfill doesn't exceed the capacity of the boiler during the crediting period.

The purpose of an additional LFG boiler installation is as follows.

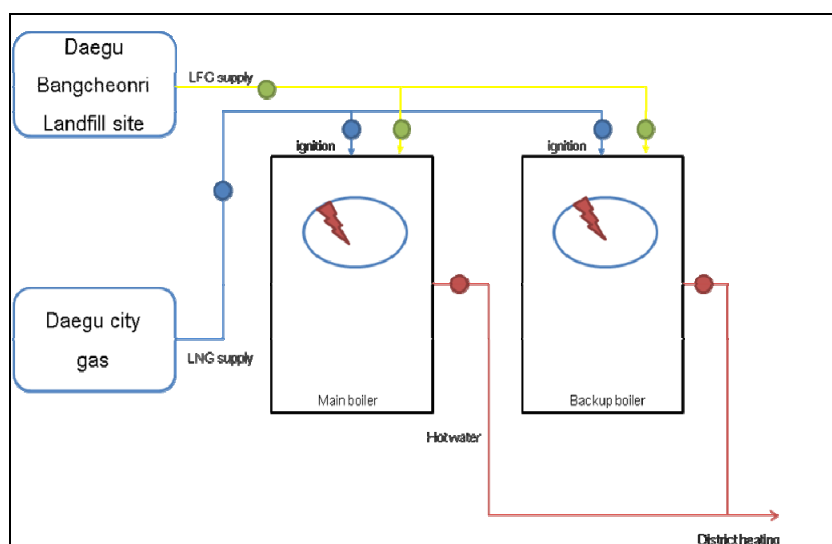
- Main boiler for Stand-by

- √ Installed for maintenance or emergency situation of main boiler
- √ Project participant is using fossil fuel (B-C) to produce thermal energy for other district heating. If project activity is occurring in the absence, other equipment using fossil fuel (B-C) have to operated. It is lead to more GHG emissions.
- √ If project activity is occurring in the absence, captured and refined LFG is discharged to atmosphere.

- Additional boiler installation for increased hot water demand

- √ There is no chance of operating all boilers at the same time and the capacity of LFG supply can't operate two boilers at a time.

The following figure describes system diagram of project activity.



The project activity is all met excluding capacity requirements of Back-up unit/system from installed capacity of small scale project proposed by SSC-336.

Conditions	Review	Notes
(a) The back-up unit(s)/system(s) are included in the boundary and operated in substitution for the main unit(s) only, with no simultaneous operation;	Main boiler includes Back-up unit which is the same as a boundary and operates Main unit according to LFG inflow now.	OK
(b) The back-up unit(s)/system(s) in total have an output capacity less than or equal to the main unit(s);	Back-up unit and main boiler have same output capacity (39.5MW _{th}).	OK
(c) No emission reductions are attributed to any operation of the back up unit(s)/systems(s) during the crediting period;	No emission reductions are claim caused by Back-up unit.	OK

(d) The energy generated by the main and back-up unit(s)/system(s) flows through 'common systems' (e.g., steam header, electrical bus bar etc.); the 'common systems' shall have a capacity limit such that it allows only transmission of the input/output at any given time from either the main or back-up unit(s)/system(s), i.e., only input/output either from the main or from the back up unit/system (but not from both) can be transmitted at any given time;	Hot water is supplied to near customer through a pipe that is produced by Main boiler and Back-up unit.	Review
(e) The energy output from the main unit and the backup unit(s)/system(s) shall be continuously metered separately with calibrated equipment.	Produced hot water is separately measured by measuring equipment.	OK

In this case (d), the capacity of common system is designed for supplying hot water produced by two boilers. It is considering increasing hot water demand. It is judged that joining Main boiler and Back-up unit point is common system.

If use of Back up boiler using LNG increases by operating two boilers at the same time, it isn't calculated at Emission Reductions. Because baseline scenario of project activity is conservatively applied to installation LNG boiler for district heating.

3. Clarification on the applicability of AMS-I.C

It is impossible to operate two boilers using LFG at the same time because maximum of the expect quantity from Daegu Bangcheon-Ri Landfill doesn't exceed the capacity of the boiler during crediting period.

And no emission reductions are claim caused by Back-up unit operation. Therefore one boiler is regarded as a Back-up unit.

Then the project requests clarification which is including both Main boiler and Back-up in the physical boundary and it is wondering whether it is possible to apply the small scale methodology when the project estimates the installed capacity except for Back-up boiler capacity.

Recommendation by the SSC WG:

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

Please refer to paragraph 12 of the meeting report of the SSC WG 26
<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 did not agree that there is justification for relaxing the criteria defined in SSC_336 for excluding stand-by (or backup) unit(s)/system(s) from consideration in the determination of installed capacity limits and debundling check. The author indicates that their project does not comply with criteria "d":

"The energy generated by the main and back-up unit(s)/system(s) flows through 'common systems' (e.g. steam header, electrical bus bar etc.); the 'common systems' shall have a capacity limit such that it allows only transmission of the input/output at any given time from either the main or back-up unit(s)/system(s), i.e. only input/output either from the main or from the back up unit/system (but not from both) can be

transmitted at any given time.”

Therefore, both boilers shall be considered in the determination of installed capacity limits and debundling check. That “maximum of the expect[ed] quantity from Daegu Bangcheon-Ri Landfill doesn’t exceed the capacity of the boiler during crediting period” is not sufficient to ensure that both boilers will not be operated at the same time (violating criteria “a”) to meet existing, or the potentially implied, increases in hot water demand. The project proponent may still consider the project, if it exceeds the small-scale limits, as a large-scale project.

Signed by the Chair, Mr. Peer Stiansen

Date: 18/06/2010

Signed by the Vice-Chair, Mr. Hugh Sealy

Date: 18/06/2010

Information to be completed by the secretariat

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