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:	19–22 October 2010, SSC WG 28
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Consideration of fugitive emissions due to operation of pre-project 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:	Saktiyo T. Nugroho Institution: PT. Manunggal Energi Nusantara (MEN) saktiyo.nugroho@men.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:

BACKGROUND OF THIS QUERY

The project under discussion is a registered project, with UNFCCC registration number 2220. The scope of project activity is the installation of a CCHP unit, consisting of gas engines and absorption chillers (**'Project Chillers'**) operated by an independent ESCO, selling chillwater and electricity to a textile spinning facility. The Project has been fully implemented exactly in accordance with the design specification as outlined in the PDD, and the project proponent has published a monitoring report for the first six months of its operation.

At the time of installation, the chillers were state-of-the-art units and its commissioning wasn't entirely smooth resulting to an operation level below its design capability throughout the first monitoring period. Moreover, lack of local availability of a component in the CDM instrumentation unit (associated with the chillers) deemed the data quality insufficient for request to certify emission reduction from chillers' output. Thus, despite the fact the the Project Chillers have been delivering chill-water to end-user (Argo Pantes Bekasi) within the reported period, the project developer chose not to claim any emission reduction related from the generation of the chill-water.

The inability of the Project Chillers to operate fully within the reported period, resulted to the end-user (who is a separate legal entity) to partially operate its existing electrical chillers. These chillers (**'pre-Project Chillers'**) are using R-11 refrigerant, which is an Ozone Depleting Substance (ODS) and its import are banned by Indonesian law beginning 2007, although its usage are still legal until today[1].

During technical review of verification report, TUV-NORD raises question concerning the operation of these pre-Project Chillers on the basis that (a) this is not part of the project plan and (b) the refrigerant of the baseline chillers (R-123) has a lower GWP than R-11. The combined operation of both the Project Chillers and the pre-Project Chillers, in TUV-NORD's view - constitutes an additional emission associated with fugitive R-11 emission from the operation of the pre-Project Chillers. Subsequently, TUV-

[1] According to Ministry of Environment's website, Indonesia is a not a producer of ODS refrigerant. All, ODS refrigerant are obtained via cross-bordered import, and thus control of substance import stops all end-users to obtain fresh ODS refrigerant.

NORD requested the project participant to quantify fugitive R-11 as an emission and deducting it from the reported emission reduction as a leakage or project emission in the monitoring report.

QUESTIONS We believed that TUV-NORD's request is not relevant in our case. Following a prolong argument, we would like to get a view by the SSC-WG, *if the operation of **pre-Project chilllers** constitutes as an emission source that needs to be considered as a leakage or project emission and further deducted from emission reduction to be certified*, considering that:

(a) The project activity does not result in an increase of emission within or outside the project boundary.

1. Guideline contained in EB34, paragraph 17, stipulates that leakage emission needs to be considered in situation where the project activity results in an increase of emission outside the project boundary.
2. Within the reported period, the operation of the Project Chiller (which is fuelled by waste-heat and uses zero GWP refrigerant) has partially reduced the operation of the Pre-Project Chillers. In equivalent kwh, the Project Chiller is estimated to have supplied 49% of the chill-water needed by the end-user.
3. Due to the lower operational load of pre-Project Chiller as described in point 2, the fugitive R-11 emission from the operation of pre-Project Chiller would have been higher if the Project Chillers are absent. Subsequently, the project activity results in a net reduction of R-11 fugitive emission associated with the operation of the pre-Project Chiller.

In view of the definition of leakage as given in point 1, the fugitive R-11 emission is not a source of leakage (or an additional project emission as demonstrated in point (b) below) and thus its exclusion from Emission Reduction calculation constitutes a justified and conservative approach, rather than an increase of emission as suggested by TUV-NORD's technical review team.

(b) Fugitive refrigerant (R-11 and/or R-123) emission has been excluded as an emission source during PDD development & validation, with principal of conservativeness for baseline setting. The exclusion is fully in compliance with the methodology AMS.II-H, as outline here:

1. In response to the imminent import restriction of R-11, the **Baseline Scenario** is 'an installation of new, more efficient electrical chiller, using legally obtainable refrigerant'. The legally available refrigerant was set as R-123 based on quotations from two suppliers of electrical chillers and consultation with statutory law.
2. Subsequent to **Baseline Scenario** defined in 1, the Baseline Chiller is set as 'a new electrical chiller that can deliver the same service as the Project Chiller, but using R-123 as refrigerant, which has a lower GWP than R-11'.

   The Baseline Chiller is therefore a hypothetical chillers that has never been purchased nor operated by neither the project participant nor its end-user. This is inline with the baseline selection process as stipulated in the adopted methodology (AMS-II.H, p.11 (c) (ii)).
3. The fact that R-123 has a lower GWP compared to R-11 is immaterial for consideration of leakage or project emission, since:

   (i) the project is not claiming *baseline* emission from fugitive R-11 or R-123. Calculation of leakage or project emission for the same emission source without calculating the baseline emission always results in a negative (and technically incorrect) emission reduction for the source.

   (ii) the running of R-11 does not results in an increase of emission as elaborated in (a).

(c) In the recently approved AMS.II-K (which is similar in nature to AMS-II.H), the fugitive refrigerant emissions are totally excluded from considerations of emission reduction. AMS-II.K, even goes further to allow the operation of pre-project chillers to supply balance of the demand not met by the project activity and to provide back-up for the project activity.

Recommendation by the SSC WG:

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

Please refer to paragraph 13 of the meeting report of the SSC WG 28 <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 noted that the clarification is in the context of a project under verification and there is disagreement between the PP and DOE on the treatment of refrigerant emissions whether the operation of pre-project chillers constitutes as an emission source of CFC-11 as a leakage or project emissions and discounted from emission reductions.

The SSC WG agreed to clarify that the issue is not under the purview of the SSC WG and the project proponent may follow the appropriate procedures adopted by the Board related to registered project available under <http://cdm.unfccc.int/Reference/Procedures/index.html>.

Signed by the Chair, Mr. Peer Stiansen

Date: 22/10/2010

Signed by the Vice-Chair, Mr. Hugh Sealy

Date: 22/10/2010

Information to be completed by the secretariat	
SSC-Submission number	SSC_459
Date when the form was received at UNFCCC secretariat	22 October 2010
Date of transmission to the EB	22 October 2010
Date of posting in the UNFCCC CDM web site	22 October 2010