



CDM: Recommendation form for Small Scale Methodologies (Version 01.1)

(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 April 2013, SSC WG 40
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification on a combination of methods for determining energy savings under AMS-I.J
Indicative methodology to which your submission relates <i>(refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable:</i>	AMS-I.J “Solar water heating systems (SWH)”
Name of the authors of the query:	Joslin Andrews Institution: Deloitte Consulting (Pty) Ltd josandrews@deloitte.co.za

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:

Approved Methodology Small-Scale (AMS) I.J for Solar water heating systems allows for the selection of one of the following options to determine energy savings that result from the project implementation:

- a. Model based method
- b. System metering method
- c. Stipulated energy saving method

The methodology states specifically that only one of the options can be selected. No explanation is provided to justify the reasoning behind only being able to select one option. Is this only one option per project or one option per solar water heater type?

We are developing a project which involves the installation of solar water heaters in low, middle and upper income households in South Africa. The aim of the project is to reduce greenhouse gas emissions through the rollout of solar water heaters on South Africa. South Africa has the ideal solar radiation for solar water heaters, but by December 2010, only 30,974 solar water heaters had been installed under the current rebate programme offered by the national electricity utility. Part of the reasons for this is the cost of the solar water heaters in terms of capex and opex. The project will assist in reducing the cost and it will also assist in alleviating other barriers.

For middle and high income households, we would like to use the stipulated energy savings approach to use the most conservative approach and to reduce the amount of monitoring required for the project. The stipulated energy savings approach already takes into account the use of back-up electricity from high pressure solar water heating systems as per the clarification considered in SSC WG 34. The installations in the middle and high income households meet the criteria as set out in the stipulated energy savings approach.

Installations in low income households do not meet the criteria as set out under the stipulated energy savings approach. This has to do with the angle of the roofing in low income households. It is not always possible for the tilt and orientation of the solar collectors to be +/- 45 of due equator and +15 to -25 degrees of latitude; respectively. We cannot change the roofing in low income households to allow for the installations to meet the criteria in the stipulated energy savings approach. Hence, we would like to use the model based method for low income households as the installations meet all the criteria in the model based

method. We also use the RETScreen model as stipulated in the methodology.

In summary, we would like to be able to use two methods for the project – the stipulated energy saving method for installations in middle and upper income households and the model based approach for installations in low income households.

We would be able to clearly tell the difference between low income and middle and upper income households. In South Africa, low income households are households that are built by Government.

In terms of this project, low income households refer to households that earn less than R6,000 per month¹. The houses must be grid-connected as a requirement for being part of this project. This would be houses built under the Reconstruction and Development Programme (RDP)². These RDP houses are government subsidised houses that are built to replace shacks³. Low income households would use electric stoves or electric kettles to heat water⁴. Only 25.9% of these households have geysers according to a study done by the Department of Energy⁵.

According to the Department of Energy, middle and high (upper) income households earn more than R6,000 per month. Most of these households use a conventional electric geyser for heating water. The electric geyser penetration in middle income households is 75.9%. In high income households, 98.4% of the households have electric geysers. Installation in middle and upper income households will replace an existing electric geyser.

Hence, income levels and existing water heating appliances will be used to differentiate between the types of households. We can also differentiate between the households as middle and upper income households will have high pressure solar water heaters installed. Low income households will typically have low pressure solar water heaters installed. In addition, RDP houses are all classified as low income households in accordance with Government and this is a second check on the classification of households.

The stipulated energy savings approach for middle and upper income households will be conservative as the savings are conservatively calculated. The use of the model based approach will at least allow for low income households to get solar water heaters under this project. The model based approach will also make use of conservative input parameters for the calculation of the energy savings.

We have attached a draft of the project (which is a Programme of Activities). The draft F-CDM-SSC-PoA-DD is attached for information. Please note that this is not the final PoA. Also note that the PoA covers both solar water heaters and heat pumps. We are only concerned about the solar water heaters in this request.

Recommendation by the SSC WG:

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

Please refer to paragraph 35 of the meeting report of the SSC WG 40
<http://cdm.unfccc.int/Panels/ssc_wg>.

¹ South African Department of Energy. 5 November 2009. Draft South African National Solar Water Heating Framework and Implementation Plan. Available online from, http://sessa.org.za/resources.s3.amazonaws.com/SWH_DoE_High_Level_%20Framework_Workshop_5Nov.pdf. [Accessed 26 March 2012]

² Omeida Trading. Help us do Away with Shacks in South Africa. Available online from http://www.omeidatrading178.co.za/low_cost_housing.htm. [Accessed 26 March 2012].

³ Omeida Trading. Help us do Away with Shacks in South Africa. Available online from http://www.omeidatrading178.co.za/low_cost_housing.htm. [Accessed 26 March 2012].

⁴ South African Department of Energy. 5 November 2009. Draft South African National Solar Water Heating Framework and Implementation Plan. Available online from, http://sessa.org.za/resources.s3.amazonaws.com/SWH_DoE_High_Level_%20Framework_Workshop_5Nov.pdf. [Accessed 26 March 2012]

⁵ South African Department of Energy. 5 November 2009. Draft South African National Solar Water Heating Framework and Implementation Plan. Available online from, http://sessa.org.za/resources.s3.amazonaws.com/SWH_DoE_High_Level_%20Framework_Workshop_5Nov.pdf. [Accessed 26 March 2012]

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 (SSC WG) of the CDM Executive Board would like to thank the author for the submission.

Paragraph 10 of the methodology states that energy savings shall be determined using one of three methods (i.e. System Metering, Model Based Method, or Stipulated Energy Saving Method) and that the choice of a method shall be made ex ante and specified in the PDD and cannot be changed during the crediting period.

The SSC WG agreed to clarify that the same savings determination method does not have to be used for every solar water heating system in a project or CPA, but the same method has to be used for every project that has been defined a-priori to have specific and unique characteristics in terms of the application or type of SWH system. For example, one savings determination method may be used for low-income households and another method used for middle- and upper-income households if very specific criteria for defining each type of household are defined in the PDD.

Signature of SSC WG Chair: Mr. Martin Cames

Date: 19/04/2013

Signature of SSC WG Vice-Chair: Mr. Washington Zhakata

Date: 19/04/2013

SECTION TO BE FILLED IN BY THE UNFCCC SECRETARIAT

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History of the document

Version	Date	Nature of revision(s)
01.1	12 April 2012	Editorial changes to include new logo and other improvements.
01.0	2005	Initial publication.
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