



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:	29 April–02 May 2009, SSC WG 20
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Applicability of AMS-II.D for project activity using low energy intensive alternative raw material
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.D version 11
Name of the authors of the query:	Mr. Sanjay Bahl Institution: India Gypsum Limited sanjay.bahl@saint-gobain.com

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:

The Project proponent has developed a novel technology to manufacture phospho gypsum based plaster as compared with cement based plaster. Phosphogypsum is a waste-product generated in the manufacture of fertilisers and safe disposal of Phosphogypsum is an environmental concern worldwide. Lack of methods of alternate use of phosphogypsum has lead to accumulation of phosphogypsum deposits. The webhosted PDD is attached herewith for your reference.

Cement plastering are predominantly used as walling material by the construction sector in India. The process of producing cement involves consumption of electricity, fossil fuel (mostly coal) and CO₂ emission due to calcination process.

Gypsum plasters are alternative building materials to the traditional cement plastering and are substitutes to the traditional cement used for construction. Production process of Gypsum plaster is energy efficient and does not involve calcination step which emits CO₂ and also minimizes the usage of electrical energy and burning of fossil fuels as required in the cement production, ultimately contributing to the reduction of greenhouse gas emissions.

Also the project activity intends to replace the usage of cement for plastering purpose there by avoiding the high energy intensity cement which would have consumed fossil fuel and its related GHG emissions.

The emissions from Gypsum plaster manufacturing process are from two sources:

- Electrical Energy Consumption
- Thermal Energy Consumption

When compared with the cement making process, carbon dioxide emissions result both from energy use and from the decomposition of calcium carbonate during clinker production. The emissions from cement manufacturing process are from three sources:

- Electrical Energy Consumption

- Thermal Energy Consumption
- CO₂ due to calcination process

The project proponent have applied AMS II.D (version 11) to the above described project activity. The project covers three forms of savings as compared to cement manufacturing:

- Electrical Savings
- Thermal Savings
- Process related CO₂ savings (calcination benefits)

The methodology clearly covers emissions related to electrical and thermal energy savings. It is rational to compare emission related to complete manufacturing process when one compares emission reduction. There are two successful precedent under the same methodology:

- **India - Vertical Shaft Brick Kiln Cluster Project (UNFCCC Ref: 0582)**

- The project activity aims to improve the thermal performance of the brick manufacturing units in selected clusters of the country, especially in the states Chattishgarh, Madhya Pradesh, Rajasthan and Orissa, through introducing the Vertical Shaft Brick Kiln (VSBK) technology. This technology is both cleaner and more energy efficient than the clamp technology, which is commonly used by the brick manufacturers
- Savings considered were considered over two different technology over complete manufacturing keeping the final service or product same
- This project is similar to project of with India Gypsum Limited of Phospho Gypsum Plasters manufacturing

1. Methodology applied

2. Energy savings

- The total amount of energy saving by the project is estimated as the difference in the thermal energy consumption of the VSBK technology and that of the technology that otherwise would have been used to manufacture burnt clay bricks.

- **FaL-G Brick and Blocks Project No.1 (UNFCCC Ref:0707).**

- Burnt clay bricks are predominantly used as walling material by the construction sector in India. The process of producing these bricks involves consumption of fossil fuel and denudation of fertile topsoil. FaL-G bricks and blocks are alternative building materials to the traditional burnt clay bricks and are substitutes to the traditional burnt bricks used for construction. Production process of FaL-G bricks and blocks does not involve sintering and thus completely eliminates the burning of fossil fuels as required in the clay brick production, ultimately contributing to the reduction of greenhouse gas emissions.
- Savings considered were considered over two different technology over complete manufacturing keeping the final service or product same
- This project is similar to project of with India Gypsum Limited of Phospho Gypsum Plasters manufacturing

1. Methodology applied

2. Energy savings

- The total amount of energy saving to be achieved by the project is estimated as the difference between the energy consumed for production of certain volume (m³) of bricks and blocks produced in the project and the energy that would have been consumed for production of an equal volume of clay bricks. Thus phospho gypsum based plaster manufacturing – project activity is similar to the above

mentioned cases.

The PP has calculated emission reduction reductions of phosho gypsum plaster manufacturing over cement manufacturing taking into account savings from three sources described above and would like to seek clarification for :

- a. Applicability of AMS II.D to the project where savings occurs due to displacement of equivalent cement (for plastering by Gypsum Plaster
- b. Consideration of CO₂ benefits due to calcination under AMS II.D methodology

Recommendation by the SSC WG:

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

Please refer to paragraph 33 of the meeting report of the SSC WG 20
(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.D is not applicable to the described project activity as the methodology does not include guidance on consideration of leakage emissions and baseline definitions for the cases involving changes in raw material/product. It is understood from the submission that the project appears to involve energy savings due to some combination of making a new product and changing the materials used in the process of making the new product. Both of these could cause leakage or require baseline definitions that are not covered within the approved methodology AMS-II.D.

For example, the methodology does not address issues such as upstream emissions (leakage) due to the possible use of alternative material by users who would use the new feedstock material which is now consumed in the new project (e.g., phospo gypsium and other additives which may have market value), especially where the material is not abundant.

The SSC WG also noted that the proposed project involves different products in the baseline and project cases. And as such the requirements of the same service level to be provided by the final product as the baseline product cannot be confirmed through AMS-II.D as it does not include guidance in this regard.

The submission author may wish to consider using, modifying or preparing a Type III methodology, perhaps considering AMS-III.Z as a model. However, if a new methodology or methodology amendments are submitted, the author should also address the issues raised in the recommendation provided by the Methodology Panel with respect to submission NM0249 (Reduction in Emissions in the Manufacture of Phospho-gypsum-based Gypcrete Wall Panel), which is of very similar project type to the one described in this query.



Signature of SSC WG Chair

(Hugh Sealy)

Date: 02/05/2009



Signature of SSC WG Vice-Chair

(Peer Stiansen)

Date: 02/05/2009

Information to be completed by the secretariat

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